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Mūne as a culinary heritage and vector of territorial development in Lebanon: The socio-spatial dynamics of the preservation of traditional "mūne" foods by women cooperatives, an application to the case of the Beqā' Valley

Rita Jalkh

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THÈSE

Pour obtenir le grade de
Docteur

Délivré par UNIVERSITÉ PAUL-VALÉRY MONTPELLIER 3

Préparée au sein de l'école doctorale 60
Et de l'unité de recherche UR LAGAM

Spécialité : **Géographie et Aménagement de
L'espace**

Présentée par **Rita JALKH**

Titre :

**Le Mûne comme patrimoine culinaire et
vecteur de développement territorial au
LIBAN :**

**Les dynamiques socio-spatiales de la
conservation des aliments traditionnels « mûne »
par les coopératives de femmes, une application
au cas de la vallée de la *Beqā'***

Soutenue le 2 décembre 2022 devant le jury composé de

M. Marc DEDEIRE, Professeur, Université Paul-Valéry Montpellier 3	Directeur de thèse
Mme Mélanie REQUIER-DESJARDINS, Administratrice Scientifique Principale, CIHEAMM-IAMM	Co-directrice de thèse
Valérie ANGEON, Directrice de Recherches, INRAE Avignon	Rapporteure
Claire DELFOSSE Professeure, Université Lumière Lyon 2	Rapporteure
Patricia PUGLIESE, Chercheuse, CIHEAM Bari, Italie	Examinatrice
Stéphane GHIOTTI, Directeur de Recherches, CNRS	Examineur
Salem DARWICH, Professeur, Faculté d'Agronomie, Université Libanaise	Examineur





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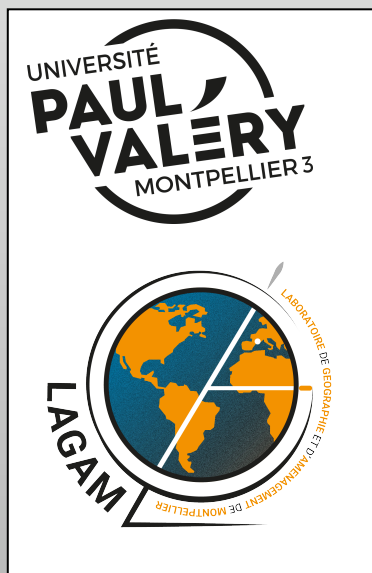
Examinatrice

Stéphane GHIOTTI, Directeur de Recherches, CNRS

Examineur

Salem DARWICH, Professeur, Faculté d'Agronomie,
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Examineur



Title in English

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Titre en français

Le *Mūne* comme patrimoine culinaire et vecteur de développement territorial au LIBAN : Les dynamiques socio-spatiales de la conservation des aliments traditionnels « *mūne* » par les coopératives de femmes, une application au cas de la vallée de la *Beqā'*

*“Mettons en commun ce que nous avons de meilleur, et enrichissons-
nous de nos mutuelles différences”*

— Paul VALÉRY

*Ideas so grand
Poets strain to compress
Life into sound bytes*

— *A Haiku Ode to Cooperatives*
Brian Ladd and Bruce Fast
The Cooperative Movement
Globalization from Below

Note on transcription

The transliteration of the Arabic language in this dissertation is performed following the “*Manuel du parler arabe moderne au Moyen Orient*” by Jean Kassab, 1987. The same method of transcription is used by Aïda Kanafani-Zahar in her book “*Mūne, La conservation alimentaire traditionnelle au Liban*”, 1996. Examples of the applications include representing the Arabic letter ش by š which is pronounced as “*sh*” such as šanklīš; and the letter ġ by ġ which is pronounced as “*gh*” such as in burġol. Other examples include ح by ḥ , ع by ‘ , and the intensifying of a specific letter is represented by an upper line punctuation over said letter such as with the word mūne.

Abstract in English

Economic development approaches are increasingly entailing local geographic scales and encouraging the mobilization and organization of territorial actors given local conditions and resources. Lebanon is a country facing frequent uncertainty with recent economic and social difficulties. Its popular cuisine may play a key role in its development and that of its rural space. In fact, that cuisine incorporates a traditional cultural practice called “*Mūne*” which consists of the preservation pantry foods, historically used to ensure household nutrition. Today, rural food cooperatives are engaging in that practice using agricultural produce from local farmers and are employing women. Despite strong internal and external challenges, they remain attractive actors as their principles of collective benefit, participation and democracy form a strong link with sustainable development goals. This study analyzes the status of food cooperatives in a major agricultural region in Lebanon, the *Beqā’* valley, that produce *mūne* foods. Findings first position *mūne* as more than a simple activity of food preservation but which transcends to larger dynamics that make into a unique tool that could form the basis for socio-economic cycles inside and outside the territory. The findings also categorize these cooperatives in four classes with varying characteristics in the structure, spatiality, extent of received external support, and conformity. They show that with *mūne* as a culinary heritage resource, cooperatives exhibit strong rural-urban linkages with spatial dependencies on local farmers versus urban markets for trade. The forces at play are seen to include different forms of (inter-territorial) geographic and (extra-territorial) organized proximity which originate from sources exterior to the territory and which stimulate the mobilization of these cooperatives. These two forms of proximity in addition to temporary joint venues explain the logic of interaction and in turn result in the embeddedness of the cooperatives as an output. Food cooperatives can thus be considered as embedded both in their territory (natural) and in their relations (socially inter-territorial and extra-territorial) with the driving force being the cultural significance of traditional preserved *mūne* foods. Hence, we can assume a protection of culinary heritage is needed with scalable contribution to food security and needed local development given major recent setbacks in Lebanon.

Résumé en Français

Les approches du développement économique impliquent de plus en plus des échelles géographiques locales et encouragent la mobilisation et l'organisation des acteurs territoriaux en fonction des conditions et des ressources locales. Le Liban est un pays confronté à de fréquentes incertitudes avec des difficultés économiques et sociales récentes. Sa cuisine populaire peut jouer un rôle clé dans son développement et celui de son espace rural. En effet, cette cuisine intègre une pratique culturelle traditionnelle appelée "*Mūne*" qui consiste en la conservation des aliments en garde-manger, historiquement utilisés pour assurer l'alimentation des ménages. Aujourd'hui, des coopératives alimentaires rurales s'adonnent à cette pratique en utilisant les produits agricoles des agriculteurs locaux et emploient des femmes. Malgré de forts défis internes et externes, ces coopératives restent des acteurs attractifs car leurs principes de bénéfice collectif, de participation et de démocratie forment un lien fort avec les objectifs de développement durable. Cette étude analyse le statut des coopératives alimentaires dans une

région agricole majeure du Liban, la vallée de la *Beqā'*, berceau aliments traditionnels *mūne*. Les résultats montrent d'abord que le *mūne* est plus qu'une simple activité de conservation des aliments, mais qu'il transcende des dynamiques plus larges qui en font un outil unique pouvant servir de base à des cycles socio-économiques à l'intérieur et à l'extérieur du territoire. Les résultats de l'étude ordonnent également ces coopératives en quatre catégories présentant des caractéristiques différentes en termes de structure, de spatialité, d'étendue du soutien extérieur reçu et de conformité. Ils montrent qu'avec le *mūne* comme ressource du patrimoine culinaire, les coopératives présentent de forts liens ruraux-urbains avec des dépendances spatiales vis-à-vis des agriculteurs locaux et des marchés urbains pour le commerce. Les forces en jeu comprennent différentes formes de proximité géographique (interterritoriale) et organisée (extra-territoriale) qui proviennent de sources extérieures au territoire et qui stimulent la mobilisation de ces coopératives. Ces deux formes de proximité, en plus des lieux communs temporaires, expliquent la logique de l'interaction et aboutissent à l'ancrage des coopératives. Les coopératives alimentaires peuvent donc être considérées comme ancrées à la fois dans leur territoire (naturel) et dans leurs relations (sociale inter-territoriales et extra-territoriales), la force motrice étant la signification culturelle des aliments traditionnels conservés de type *mūne*. On peut conclure qu'une protection du patrimoine culinaire est nécessaire, avec une contribution évolutive à la sécurité alimentaire et au développement local nécessaire, compte tenu des récents revers majeurs du Liban.

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List of Abbreviations

%	Percentage
°C	Degree Celsius
AAR	Atayeb Al Rif (Rural Delights) Cooperative
AOC	Appellation d'Origine Contrôlée
BoD	Board of Directors
CAP	Common Agricultural Policy
CAS	Central Administration of Statistics
CDR	Council for Development and Reconstruction
CNM	Clauset-Newman-Moore
CNRS	Centre National de la Recherche Scientifique
DGoC	Directorate General of Cooperatives
DOC	Denominazione d'Origine Controllata
du	dunum
ENRD	European Network for Rural Development
ESFD	Economic and Social Fund for Development
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
FCCIAL	Federation of Chambers of Commerce, Industry and Agriculture in Lebanon
GDP	Gross Domestic Product
GMP	Good Manufacturing Practices
GN	Girvan-Newman
ha	Hectares
HACCP	Hazard Analysis and Critical Control Points
ICA	International Cooperative Alliance
ICH	Intangible Cultural Heritage
IDAL	Investment Development Authority of Lebanon
IDICO	Directory of Exports and Industrial Firms in Lebanon
ILO	International Labour Organization
IYC	International Year of Cooperatives
Km ²	Square kilometer
LAG	Local Action Groups
LARI	Lebanese Agricultural Research Institute
LBP	Lebanese Pounds
LFC	Lebanese Federation of Cooperatives
LIBNOR	Lebanese Standards Institution
m	Meters
mm	Millimeters
MDG	Millennium Development Goals
MoA	Ministry of Agriculture
MoE	Ministry of Environment
MoET	Ministry of Economy and Trade

MoEW	Ministry of Energy and Water
MoF	Ministry of Finance
MoFAE	Ministry of Foreign Affairs and Emigrants
MoI	Ministry of Industry
NAS	National Agriculture Strategy
NGO / (i)NGO	Non-Governmental Organization (international)
NUCC	National Union of Cooperative Credit
OCDC	U.S. Overseas Cooperative Development Council
OECD	Organization for Economic-Co-operation and Development
PDO	Protected Denomination of Origin
PGI	Protected Geographical Indication
SACCOs	Savings and credit cooperatives
SDGs	Sustainable Development Goals
SME	Small to medium enterprise
SNA	Social Network Analysis
UAA	Utilized Agricultural Area
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNHCR	United Nations High Commissioner for Refugees
UNOCHA	United Nations Office for the Coordination of Humanitarian Affairs
USAID	United States Agency for International Development
WHO	World Health Organization
WIPO	World Intellectual Property Organization
WT	Wakita Tsurumi
WTO	World Trade Organization

GENERAL INTRODUCTION

This doctoral study is based on investigating the culture of traditional food preservation in Lebanon known as *mūne*. The study specifically targets *mūne* foods which are produced by rural and mostly women-owned food processing cooperatives located in the predominantly agricultural area in Lebanon; the *Beqā'* valley. *Mūne* is a familiar cultural concept in the Lebanese (and Arab) context, despite entering in no apparent state definition or strategy. It consists of the preservation of seasonal agricultural produce into shelf-stable pantry foods (Abu Ghyda, 2007) using techniques as drying, pickling, fermentation, concentration and distillation. These were historically practiced at a household and community level to preserve the various available cultivations in season as fruits, vegetables, herbs, cereals and dairy under local recipes into different sweet and savory foods like jams, pickles, herb mixes, dairy powders and others. Such methods allowed communities to ensure their daily nourishment by extending the shelf-life of the otherwise perishable produce within their vicinity (Massaad, 2017). These practices hence helped households attain better levels of food security and equally have the opportunity to stock and consume products that were out of season. By serving a primarily food security purpose, the habitual and annual preservation of foods gradually shaped consumption habits and built cuisine norm until finally “constituting a fundamental aspect of rural food” (translated from French) (Kanafani-Zahar, 1994, p. 1). Due to its pivotal importance, *mūne* became a cornerstone in the Lebanese household with clear evidence of a built knowhow, generational transfer, incorporation in the daily life and even architectural influence. The preservation of foods into *mūne* has also long been associated with a collective effort revolved around women, who are recognized to have played the role of transmission of knowledge throughout generations and therefore considered the protectors of this culture (Al-Ghazzi, 2001). Today, the production of *mūne* has shifted and evolved into an economic and consumer-based market sector. Household preservation practices have greatly decreased and are increasingly being replaced by more commercial and industrial producers. These producers have no obligation to retain traditional practices or ingredients and, by not being regulated, are seen to easily incorporate methods of mass production, unusual material and artificial ingredients that drift from tradition and authenticity. Yet, a segment of producers is progressively gaining more attention for being considerate of the traditional practices and recipes. These are cooperatives whose movement have been long known and appreciated at the global scale and whose entry into the Lebanese system began in the mid 1960s.

Cooperatives are a social model of businesses which differ from profit-driven companies by focusing on collective benefit, participation, solidarity and democracy. Cooperatives in essence revolve around 7 principles of cooperation including (1) voluntary and open membership, (2) democratic member control, (3) members' economic participation, (4) autonomy and independence, (5) education, training and information, (6) cooperation among cooperatives and

(7) concern for community. They are generally recognized by the International Labour Organization (ILO) as to “not only create and maintain employment and thus provide income, but also pave the way for broader social and economic advancement.” (Henry, 2012). The role of cooperatives has also been highlighted as contributors to the United Nations 2030 agenda for Sustainable Development Goals. Several success stories (Wanyama, 2016) of cooperatives around the world have been celebrated for their impact, especially in developing countries. Relevant examples include successful initiatives from Tanzania, Egypt and Ethiopia where agricultural cooperatives improved marketing, sales, income generation and the livelihoods of millions of farmers, thus contributing to the reduction in poverty. Others from East African countries and Arab states show how cooperatives helped improve gender equality mainly by enhancing women’s economic participation and social inclusion. A strong and apparent link was also presented in cooperatives relating to food security and good nutrition, and job creation and equitable growth; interestingly adding an element of preserving indigenous food crops. Many other cases exist around similar impact in the water and energy sectors, management of natural resources, waste management, sanitation, microcredits, etc.

In Lebanon, the Cooperative Association Law Decree No. 17199 was introduced in 1964. Since that time, the cooperative movement in Lebanon faced an unstable route and did not arrive to develop as anticipated, especially since the civil war started shortly after in 1975 until 1990. After that, a “boom” in the number of cooperatives was witnessed in the 2000s, justified as being following the end of the occupation in South Lebanon (ILO, 2018). Although the sector is not well studied in Lebanon overall, many challenges have been reported to face that unsteady movement. The Lebanese Ministry of Agriculture (MoA, 2020) itself and consultancy agencies such as McKinsey and Company (McKinsey & Company, 2018) for example report that cooperatives generally have a weak role in Lebanon. Out of the 1,238 total existing cooperatives in the country with 300 liquidated in 2020 by the Directorate General of Cooperatives due to their inactivity, only 1 in 3 is active. Almost half of the latter are agricultural cooperatives in which only 4.5% of Lebanese farmers are members (MoA, 2014). Cooperatives in Lebanon are also described to have an aging farming population similarly to the overall agricultural sector, and is said to be highly focused and dependent on obtaining funds and facilitated local sales through international donor support, have not yet succeeded in enabling and expanding farmer access to markets, and face inefficient institutional, regulatory and policy framework (ILO, 2018). On another hand, cooperatives have been – and still are – an attractive focus for rural development due to their ability to help meet development objectives of donors and their bridging with the local context, development agencies and donors. As an affirmation of their potential, in its 2020-2025 strategy, the Lebanese Ministry of Agriculture acknowledged the large cooperative sector in Lebanon and its high potential for development and organization (MoA, 2020). Within that strategy, the Ministry of Agriculture even dedicated a unique program (program 3.5 within Pillar 3) solely for the promotion and organization of cooperative work and farmers’ association within the value chains.

When considering the hidden and untapped potential of assets having a buildable cultural element, in this case the *mūne* preservation of food, and when coupled with strategic business entities such as cooperatives, one can start to appreciate how these two components can complement and synergize. For this reason, the study was based on these two considerable pillars. The third and last pillar was the territory which was selected to encompass the *Beqā’*

valley. The valley was selected for various reasons, most importantly due to its concentration of the main agricultural activities in the country, constituting the basis of seasonal production and supply any activity in food preservation. The *Beqā'* accounts for 57% of the total area used for cereal production in Lebanon, 36% of the total area used for fruit trees production, and 57% of the total area used for vegetables production. Together, the districts (*caza*) of Baalbek-Hermel and *Beqā'* both comprise of 43% share of cultivated land in Lebanon. Other than plant and tree cultivation, the *Beqā'* Valley is also a major production area for livestock mainly sheep (38%), goats (29%) and cattle (26%). By having this major production in the country, the valley is also home to a concentration of various industries. These are chiefly engaged in the production of food and the services sector, with the main dairy-production facilities and their skilled labor force as well as extensive presence of dairy farms covering 44% of farming land (Investment Development Authority of Lebanon). The agricultural setting and presence of workforces makes “almost every resident a farmer” (Bou-Antoun, 2014, p. 15).

Accordingly, the study focuses on the characteristics and possible specificities that *mūne* holds as a form of territorial resource in the agriculturally prominent area of the *Beqā'* valley in Lebanon. As such, the main objectives are to demonstrate how a historical preservation of food and its consumption that still exist today continue to form spatial and territorial logics. It is sought to show how economic activities, despite the lack of any regulation and differentiation, are built around these activities. Therefore, the framework enters within the concept of neo-endogenous and territorial development with the explanation of spatial operations and relations through proximity logics. Such concept focuses on local micro-economies which has been increasingly the subject of scientific discourse (Petrick, 2011; Quan & Nelson, 2005; Stöhr, 1980). It relates to the local, and more specifically territorial, levels of space and their place-based actors are progressively being recognized as economic grounds capable of reaching their own development routes. A strong belief is being based on the activation of bottom-up development originating from internal forces of specific territories (Lamine et al., 2012). Hence, this approach looks at smaller scale geographically distinct areas as fertile spaces for the building of economic activities. The latter is usually preferred when based on the identification, capitalization and sustainable management of differentiation factors – endogenous resources – within the local context, by the local players. The so-called “markers” are inclusive of factors not only relevant to the primary agricultural and food sector, but have been noted to incorporate languages and dialects, folklore, arts and drama, archeological sites and landscape components (Swyngedouw, 2004) under an overall cultural approach equivalent to a territorial identity. Hence the origin of “culture economy approach to development” (Ray, 2001) which is thought of as the localization of economic control within a certain territory, valorizing its cultural resources within its local network of actors. This is how a neo-endogenous approach to development can be considered as the creation of suitable conditions which stimulate local initiatives within general directed guidelines; a manifestation both the “from above” and “from within” (Ray, 2001). Not without its own set of challenges and needed adaptation, Pecqueur (2013) for example acknowledges that the emergence of territorial development as a potential solution to the changes in the global economy applies to industrialized economies as well as developing countries. Yet, he clearly states how each local context requires a holistic approach of public action, which in turn raises itself wider than the

simple, yet necessary, capability of the state and regulatory policies, but for the needed mobilization, structure and coordination amongst actors.

Accordingly, this study builds on approaches that would help describe the specificities of the typically cultural *mūne*, its socio-spatial dynamics and those related to its producers, food processing cooperatives, within their territories and their relations together. The two main research questions mobilized in this study are:

- To which extent would the culture of *mūne* production be considered as a specific territorial resource at the level of the *Beqā'* Valley?
- Does the production of *mūne* through its main territorial producers translate into a spatial and territorial system and if so, in what way does that take shape?

In order to best answer these questions, the study put together a methodology which is inclusive of descriptive and empirical analysis. On one hand, an in-depth investigation of literature was conducted to frame *mūne* as a culture and build the understanding behind its practices and specificities. On another hand, the methodology aimed to identify the entire network of food processing cooperatives that engage in the production of *mūne* foods in the *Beqā'* valley. That was performed by acquiring the official list of cooperatives and its inspection, sorting and contacting of cooperatives individually to ensure that their activities were ongoing at the time of the study. 40 cooperatives were identified and mapped from that step. Two questionnaires were also formulated. The first consisted of a series of 18 questions that aimed to understand the different aspects of operations of cooperatives in four main themes which are 1) structure, 2) spatiality, 3) external support, and 4) label and conformity. These served the basis for the first data treatment and analysis which is a categorization step aimed at identifying the typologies of food cooperatives in the *Beqā'* valley and understand in what way they are similar and what differentiates them from each other. The second questionnaire consisted of 12 questions that aimed to build an understanding of the nature of relationships that exist between the food cooperatives using Social Network Analysis (SNA). The data treatment and analysis helped frame the different types and intensities of relations that exist internally to the network between the different cooperatives. As an output, the dynamics of these relations were visualized using sociograms which are complex graphs based on nodes representing actors and links representing the connections between them.

Additionally, I used my own experience in the field to help structure the divisions and observations presented in this work. I have been working with women cooperatives who produce *mūne* foods since 2013 through Atayeb Al Rif (Rural Delights) Cooperative (AAR) which itself is a marketing cooperative and hub of over 40 women-owned cooperatives, many of which are located in the *Beqā'* valley. My engagement is mainly in the development projects that are acquired by AAR from international donors and other development agencies from Lebanon and which serve to optimize the production processes of rural women cooperatives across the supply chain and provide them with services they need to attain the market. In these past almost 10 years of working with *mūne*-producing women cooperatives, I have seen how food preservation is a valuable link to heritage and identity but is one which holds immense potential for socio-economic development of rural territories around the country. However, I have also experienced how this culture remains sadly highly unregulated and rather inefficient. I have seen how, despite the valuable characteristics that *mūne* holds, it is still not officially recognized and is not provided by any means of differentiation which risks its protection and

sustainability. This was a main reason why I chose to engage in this doctoral journey hoping that the framing provided in this work would help reveal the comparative advantages that exist. Yet, I should mention that many challenges were faced during the realization of this work. First, specific information on food cooperatives in the *Beqā'* valley is not elaborated, knowing that reports are mostly focused on the agricultural sector and its cooperatives across the country with extension mentioning women food cooperatives. However, there is no clear distinction in their geographic locality or production activities. In fact, many geographic borders in Lebanon remain unclear and that it at both the country's international borders and internally in the division of spaces. There are still spaces which are disputed amongst municipalities. There is also no one unified official identification or assigning of spaces into urban, peri-urban, or rural areas in Lebanon but rather each institution does that differently. These gaps could be the reason why the Lebanese National Cooperative legislation could not properly or completely enact the geographic delimitation of cooperatives at the level of villages as it states. In fact, an in-depth reading and critique of the law was also added in this work to highlight such legislative issues. These issues posed limitations when attempting to understand how the cooperative sector is constructed in Lebanon, but many discrepancies were instead revealed. Although the official list acquired from the Directorate General of Cooperatives did contain divisions, these were unclear at sectoral activities specifically for food processing. Besides the name, there was no other way to identify food processing cooperatives since they were joined together with others as artisanal, services, marketing, cultural, and other types of cooperatives; knowing that I prefer not to call them categories since categorization is not mentioned nor reflected in the legislative text. Instead, it seems to be formulated mostly for agricultural cooperatives. This is why in an attempt to overcome the challenges of identifying cooperatives, the list was refined through phone contact with each of the registered cooperative listed under the desired (but mixed) food processing category. This contact was performed to reduce errors related to the official list and was thus needed to verify the cooperatives' manufacturing of the intended traditional food products, to ensure their active status at the time of the study and finally to compile the total number of said operational food cooperatives in the territory. The study was also coincided with two unfortunate events; the onset of the global COVID-19 pandemic and the economic crisis which started in Lebanon by end 2019. Both have had serious repercussions of the economy and daily life of the entire population and created challenges in outreach and accessing the field. The post-2019 context in Lebanon has also greatly changed and is subject to ongoing developments which also raised inaccuracies especially in the financial status of cooperatives. The food cooperatives were contacted to schedule suitable dates for the interviews that took place between August and December 2019 and the financial discrepancies are mentioned in the analysis. It is also important to mention the underdeveloped foundation of data in Lebanon which complicates accessibility, transparency and accuracy of reliable figures. Other limits finally include internal factors related to the capacities of cooperatives in recordkeeping and documentation.

This dissertation is structured in three main parts. The first part consists of introducing and framing the culture of traditional food preservation in Lebanon, *mūne*, and its positioning as a strategic but unregulated asset. It begins in Chapter 1 with an introduction on food preservation generally and passes to the ways in which food preservation took shape in Lebanon. It then describes the historical significance and evolution of that practice in more contemporary times.

In Chapter 2, the territory of the *Beqā'* valley is addressed in its position when it comes to the production and consumption of traditional foods and its importance as an agricultural producer given that *mūne* foods are essentially an agricultural processing practice. More importantly, this chapter aims to describe its conditions at the geographic, natural, and productive aspects. Chapter 3 then moves on to frame the *mūne* foods as a carrier of culture and identity and mobilizes the theoretical framework and elaboration on the multiple functions and dynamics of that culture. The second part is dedicated to cooperatives generally in terms of their theory, global movement and their position in Lebanon. This second part will aim to reveal the typologies of food cooperatives operating in the territory according to four themes. In this part, Chapter 4 introduces the cooperative model and movement globally and in Lebanon. It also dissects the legislative text that directs the national movement along with the context in which cooperatives are positioned prior to and after the 2019 economic crisis. Chapter 5 then explains the methodology of extracting the typologies of food cooperatives in the *Beqā'* valley from the categorization step and provides a structural division for their characterization. This characterization is based on four themes (structure, spatiality, external support, and conformity of center and labels) and will allow to explore the characteristics of each class. Finally, the third part entails the Social Network Analysis approach that was used to describe the relations within the network of food cooperatives in the *Beqā'*. Chapter 6 provides an explanation on the theory behind SNA along with the terminologies required for that understanding. The final Chapter 7 addresses the second part of the methodology in which SNA was carried out, the visualization of the findings and their presentation, and finally the conceptual framing and compiles how the *mūne* and cooperatives in the *Beqā'* valley are positioned accordingly.

PART ONE

AN ATTEMPT AT FRAMING THE UNRECOGNIZED GEO-CULTURAL TRADITION OF FOOD PRESERVATION IN LEBANON AS AN UNTAPPED ASSET

In Lebanon, food has always played an important role in shaping the local culture with the Lebanese cuisine gaining a worldwide reputation. In fact, that cuisine incorporates a traditional practice called "*mūne*" which consists of a group of preserved pantry foods, historically used to ensure household nutrition. It mainly refers to the action of collecting the available surplus of seasonal harvest cultivated according to every area and to preserve it using traditional techniques and recipes passed down from one generation to another. Enriched by the diversity of agricultural produce of the country, the shelf-stable preserves would be prepared using processes as drying, fermentation, concentration, pickling and others. These would then be stored as pantry foods for the remaining off-seasons or non-productive days of the year. The range of preserved foods is diverse being highly dependent on the agricultural environment, and includes products such as jams, pickles, dairy, herbs, grains, legumes and dried fruits and vegetables. Yet, the *mūne* involves a larger understanding than the simple techniques and recipes applied. It consists of a rounded and rich system that not only incorporates skill and techniques, but is based on tradition and reputation, mobilizes communities and social cooperation, and dedicates a key role played by women.

This opening part aims to provide a first understanding of what *mūne* is, its basis on tradition and community, and evolution with time. It will begin in Chapter one by anchoring the analysis on the Lebanese cuisine in which preserved foods constitute a pivotal ingredient and are what provide the distinguished taste in many popular dishes. It will demonstrate how food created strong social dynamics both within households and at the level of entire communities. Evidence of the significant position that food holds will be shown through its effect on architecture, linguistics, and even behavior. This first chapter will next move on to show how what started as a household means of ensuring nutrition has now shifted into a feasible economic activity that has visible marks and dynamics in the market and is sustaining entire livelihoods. We will explore the producers of *mūne* today which are small producers and specifically cooperatives who have in turn retained a link to tradition and village life. Chapter two will be dedicated to describing the peculiarity of the study territory; the *Beqā'* valley. Being a predominantly agricultural region, one of the backbones to the sector in Lebanon, this chapter will pay special attention on what makes the *Beqā'* valley so unique in the sense of both quantitative and

qualitative characteristics. The socio-economic status will also be elaborated in that chapter to contextualize the pre-and post-2019 crisis at the local and national levels. Finally, this Part will end in Chapter three which will conceptualize food in culture while positioning *mūne* in that perspective. A focus will be given on how, despite being a familiar and appreciated notion in its context and amongst people's everyday life, the sector of traditional foods in Lebanon is not regulated and does not seem to be clearly recognized amongst official bodies. Only a handful of publications mention its existence and the concept of *mūne* does not appear to be the basis in any tangible official definition or strategy, nationally or otherwise. This leaves the idea behind *mūne* largely ambiguous, subject to several interpretations, and makes the approach of explaining it clearly and fully more challenging. This is why this part shall attempt to put forward the characteristics and specificities of food preservation that differentiate the tradition in its local and national, and even supra-national contexts in certain instances. Habits in food production, preparation and consumption are not bound to administrative and country borders. They are rather like a spectrum that gradually transitions and retains customs that could entail commonalities with neighboring countries or that have been retained as a result of historical entry, trade, or foreign rule. The characterization of traditional food preservation is especially important in a country such as Lebanon since, despite having a rich history and strategic positioning, the Lebanese market remains dominated by large industrial and commercial producers compared to small producers and cooperatives. This part will attempt to highlight how the tradition of *mūne* continues to play a key role in the local gastronomy and how its essence and dynamics can become considered as a concept in its own right. The important issue of recognition, protection and sustainable valorization of that concept along with possible certification will also be raised, especially since the entire concept sprouts from reputation and collective memory. The relationship with culinary heritage remains one of the few strong links tied to tradition within a volatile and unstable atmosphere such as in Lebanon. The significance of its protection and mindful valorization will be linked to possible construction of a parallel agri-food value chain which in itself could potentially contribute to the declining economic life in Lebanon.

CHAPTER ONE. FOOD PRESERVATION AND HOW IT MATERIALIZED IN LEBANON

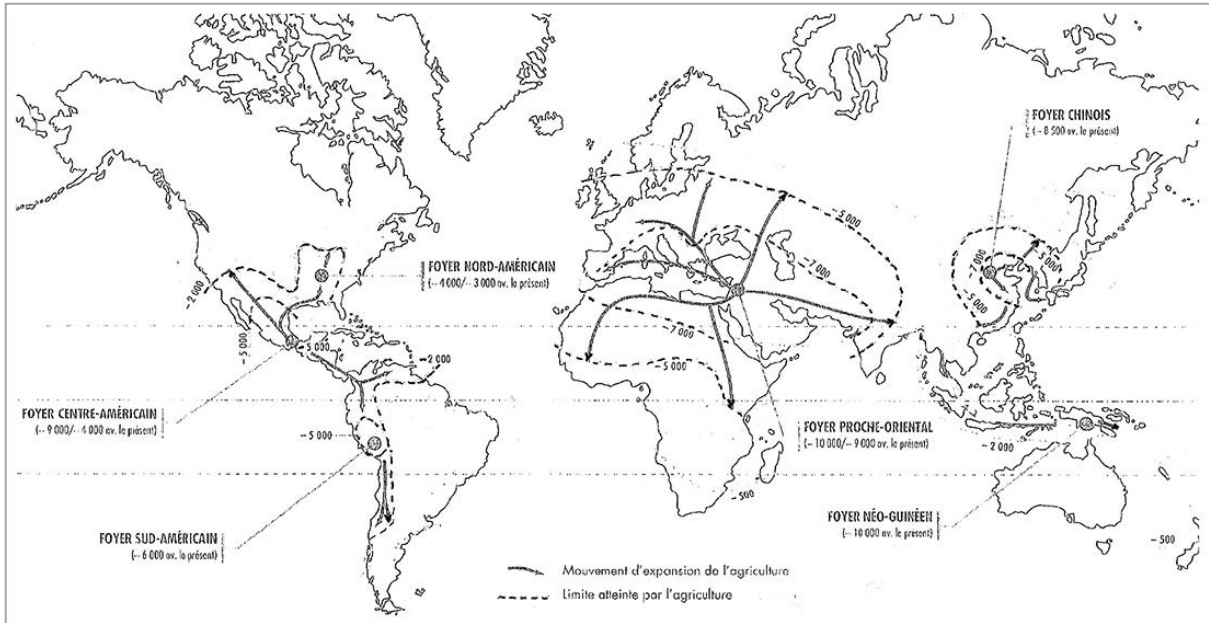
Food preservation is an ancient activity that has been practiced by countless civilizations and societies. It has taken different shapes around the world emerging from hundreds if not thousands of years where human beings have developed ways to keep their food longer. The same goes for Lebanon specifically and the region of the Near East generally which stands at the origins of the agricultural revolution, domestication, and the organization of humans in societies. This first chapter serves to introduce the typical form of food preservation in Lebanon called the *mūne*. It is an ancient and very traditional practice (refer to definition in section 3.1.1.2) that started in the mountain regions of Mount Lebanon as a form of food security to survive winter times when villages became isolated and cut off from sources of food. Given that farming was the source of livelihood for the majority of rural dwellers, farming families would normally consume what was in season but more importantly would preserve their produce whether from plant or animal origin into preserves. They used what was available to them and what was grown around them. Men would farm the lands whereas women would prepare and preserve the harvest. Therefore, the preservation of food into *mūne* is a typical activity for women in Lebanon but it is an activity which was performed at a community level. This chapter elaborates on these points and positions the *mūne* preservation within the culinary heritage and typical Lebanese cuisine which has grown very popular today. It will show how women play the key role in that practice and how seasonal harvest organized entire communities year-round. Certain depictions will also be explained such as description on the different categories and examples on their production and typical storage practices. This chapter will equally show how food preservation was so rooted in communities and families that it has had impact on architecture and affected not only how people constructed their houses but on the relationship between man and their surrounding environment. Next, the chapter will show how food preservation evolved into today and how it has become an economic activity with market dynamics that is being adopted and appropriated by businesses, mostly small producers that retain traditional practices but those that have been modernized in terms of standardization and food safety measures. Such of these producers are cooperatives, the main actors involved in this study. This chapter will build its understanding on different literature, personal observation, and conceptual frameworks. In specific, the information on traditional preservation is collected from the very few relevant books I was able to find. These rarely address the topic in its theory and socio-cultural aspect, and many are indirectly linked as by being a documentation of grouped recipes and observations by authors of cookbooks. These were hardly dedicated fully for the subject and some provided partial or indirect insight as part of other cultural or culinary topics they addressed. Some also covered content for Lebanon solely or were at a larger scale such as that of the Middle East or the Levant for example. I attempted to rely on written work whenever possible and to provide additional support from my personal experience when needed. That was useful for me in filling information gaps since

I have been working with cooperatives that specifically engage in these types of traditional preservation since 2013.

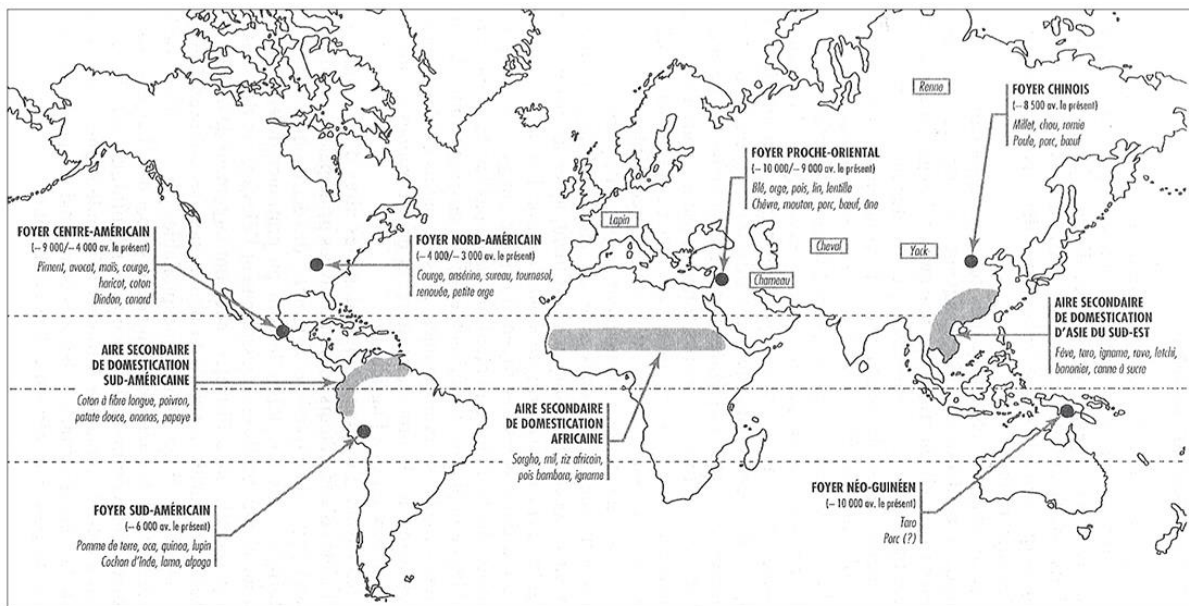
1.1. THE PRESERVATION OF FOOD – HISTORY, PURPOSE AND GLOBAL TRENDS

1.1.1. A historic perspective on food preservation

Since prehistoric times, humans have understood the importance of keeping food for as long as possible. Early humans quickly learned that any surplus of food would go bad if not preserved and that there were significant times where food was not available. Preserving and storing foods meant better chances at survival, reduced efforts dedicated to constant gathering of food and hunting, and having emergency stocks of food made available for times of shortages or need (Joardder & Masud, 2019). Preserved food is storable and transportable. With the introduction of agricultural societies around 10,000 years ago in the Levant (today east Mediterranean- Lebanon, Syria, Palestine), permanent settlements, farming and domestication became common practices. Hunter-gatherers searched for food, but settlers grew food. It is in these areas of the Levant where the first plants were domesticated and are still staple consumptions to this day by its populations; wheat, barley, and lentils (Bopp, 2019). This region of the world is designated as the *Near Eastern expansion center*, one of the four primary *centers of origin of the Neolithic agricultural revolution* during the new stone age era around 9,000 and 10,000 years ago (Mazoyer & Roudart, 2006) (Map 1 and Map 2). The region is the center of the broader part of what was known as the Fertile Crescent from which agricultural spread originated and expanded into Europe, Africa and West and Central Asia. The Near Eastern center is recognized as a main nucleus where prehistoric hunter-gatherer human groups organized themselves into farming societies that domesticated plant and animal species. With increased number of settled populations, surplus of crops became a necessity for sustenance and survival. Food storage, their protection from deterioration and insects and the understanding of spoilage became an equal need. Advanced civilizations faced times of famine and times of plenty. Slight fluctuations in weather conditions, precipitation, temperature or a sudden hailstorm on flowering buds in spring could tip the delicate balance and have devastating, or fortunate, results on harvest. The preservation of surplus harvest is therefore a natural reaction of human's behavior that evolved towards their food. This pivotal attitude remains a constant fact which has maintained the viability of entire societies. Normally, people started using means that were available to them in their surroundings to preserve fresh produce and meats that were equally accessible around them. They used what they had at hand. They attempted to mimic nature in its ways and use its power for their advantage. Continental and polar climates have temperatures that commonly fall below zero, food froze easily. Meats were the chosen staple to be frozen as it held more fat and energy, and energy is precious in the freezing harsh conditions. In regions with dry climates, fruits, vegetables and seeds were dehydrated in the hot sun. When salt was accessible, meats and fish were cured. Smoking was performed in caves. Many more examples exist.



Map 1: Centers of origin and areas of extension of the Neolithic agricultural revolution. Source: (Mazoyer & Roudart, 2006), [in French]



Map 2: Centers of origin of the Neolithic agricultural revolution and secondary areas of domestication. Source: (Mazoyer & Roudart, 2006), [in French]

With time, human’s daily interaction and experience within their environment gave rise to different preservation and storage techniques such as drying, fermentation and pickling (Figure 1). These were mostly the result of trial and error or even lucky accidents. In the 1800s, canning was developed as a response to Napoleon Bonaparte’s challenge that would award the inventing of a way in which food would be preserved for long voyages to feed his army. He famously said ‘*an army marches on its stomach*’ (Hill et al., 2011, p. 232). Ultimately, food preservation techniques matured and got increasingly refined after being repeatedly passed down from one generation to another. Practices eventually evolved geographically, with each region adapting its food to its own set of conditions. What cultivations they grew. What animals

they domesticated. What skills they learnt. What they were good at. And even what beliefs they had. Over thousands of years later created a mosaic of techniques and foods used by cultures around the world, each with its own set of characteristics, conditions, techniques and story. The United Nation’s Environment Programme (UNEP) in one of many to celebrate this diversity and acknowledge its varying indigenous richness. In one of its online press releases in 2013, UNEP provided several of these examples (UNEP, 2013). In the Mongol Empire, a traditional method of meat preservation called *borts* was used to concentrate beef protein into long strips that were hung and dried under the roof of a yurt. This method was used by General Ghenghis Khan and his troops, and it is said that the meat volume of an entire cow could be shrunk into the size of a human fist. *Borts* was usually shaved into hot soup and allowed the nutritious sustenance of nomads and travelers over long distances without the need for any particular storage conditions. Turkish horsemen of Central Asia placed slabs of meat in pockets on the sides of their saddles, which would become pressed while they rode. This form of meat preservation is believed to be the precursor of today’s Italian pastrami as the Turks refer to the term ‘*pastirma*’ which is the literal translation of ‘being pressed’. On a further northern side of the earth, a traditional Inuit winter food from Greenland was made by preserving small birds that resemble penguins, called Auks, in the hollowed body of a seal. This method was called *Kiviak* and consisted of wrapping hundreds of auks in a seal skin, carefully removing any air, sewing the skin shut, and storing it in the permafrost layer for seven months to ferment before it’s dug up and eaten usually at celebrations. Indigenous groups in Brazil originally fermented and matured cassava, regionally known as *Yuca*, into a ground *Farinha* flour which is still a popular staple food today. *Ghee* is a type of butter that was used by Bedouins and desert people that can be kept for long times without refrigeration and is made by boiling and filtering butter.

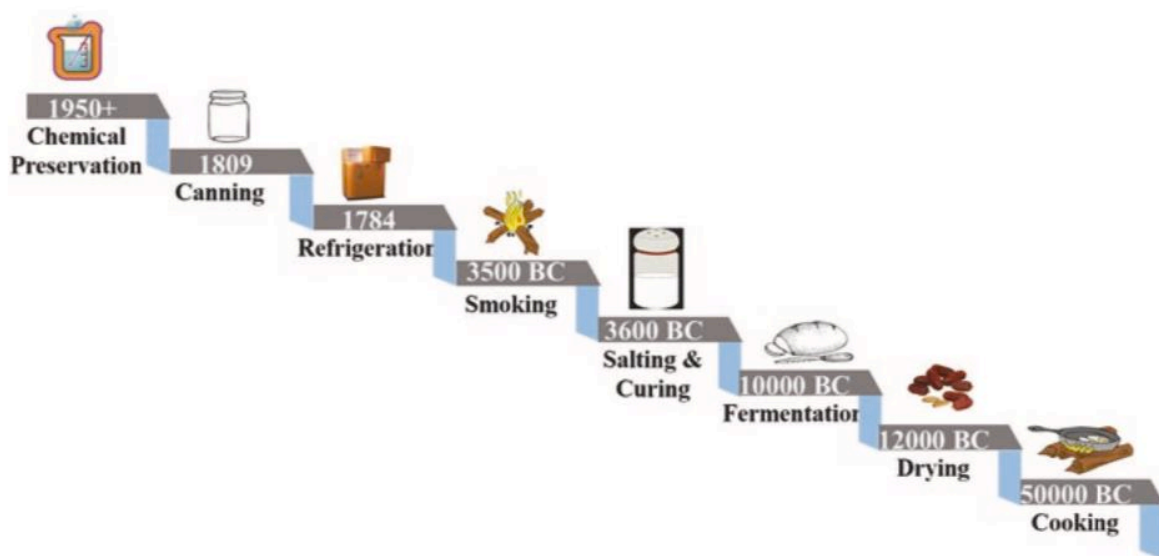


Figure 1: Evolution of food preservation techniques with time. Source of illustration (Joardder & Masud, 2019)

1.1.2. Why is food preserved

The common underlying factor of food preservation has always remained the same; the control and slowing of spoilage. If ingested, pathogenically spoiled food could result in

poisoning and serious health implications or even death. Even in today's complex and developed world, the World Health Organization (WHO) estimates that around 600 million cases, 1 in 10 people, of foodborne poisoning occur annually worldwide with no less than 420,000 deaths¹. This lesson must have surely been learned early on by humans who have clearly applied measures to extend the shelf life of foods since the earliest societies. Food is, just like us, an organic biological material. Spoilage is inevitable. Yet, deterioration does not necessarily only mean causing disease. According to Singh and Anderson (2004), food spoilage can be defined in several ways. It generally means when food becomes undesirable for human consumption. This could refer to developing unacceptable characteristics such as changes in color, texture, aroma or flavor. This could also refer to the loss of nutritional value such as in vitamin content and no longer conforming to the declared label. Most serious deterioration would certainly be in the safety of the food and when deterioration may cause food poisoning to the consumer. This is why indicators of quality and safety were developed and referred to as the shelf-life of the food product. Food deterioration can be caused by different forms of microbiological, chemical, enzymatic or physical sources. This is due to having elements internally or externally to the foodstuffs that would be favorable for the introduction, proliferation or development of characteristics regarded as spoilage. Dried grains could become infested with insects, so certain populations use ash to deter the pests. Crops cultivated in soils containing heavy metals would absorb these contaminated elements and would get transferred to humans after ingestion. The natural biochemical reactions that take place in fruits and vegetables after harvesting and which are catalyzed by enzymes that normally lead to the ripening of produce are even considered as deterioration when texture, flavor, color and other characteristics are altered from their optimal level. The most common form of spoilage remains due to microbial growth. The WHO states² that more than 200 food-borne pathogenic diseases can be caused by food or water containing harmful bacteria, viruses, parasites or chemicals. If ingested in adequate quantities, these pathogens, would either multiply themselves inside the human host and cause the disease due to their biological presence or due to the release of toxins inside the body; or would have had the pathogen already established in the food rendering it contaminated by the secreted toxins prior to ingestion (Bintsis, 2017). These two pathways are respectively referred to foodborne infection and foodborne intoxication. As a response, many forms of control and regulations have been developed and still are evolving around the world. The two main systems that embody the regulation of food safety would be the international standard organization, Codex Alimentarius, and the preventive management system of the HACCP (Hazard Analysis and Critical Control Points) (Henson & Caswell, 1999). These systems have been developed in our modern contemporary world. But historically, people experimented, learned, and developed techniques that would successfully preserve foods by manipulating the conditions that cause deterioration. The main elements, mainly that proliferate the growth of pathogenic microorganisms, relate essentially to the water activity, temperature, pH, and oxygen. Preservation techniques target the conditioning of foods in one or more of these elements. They either work on reducing free unbound water (for example by dehydrating with salt or by adding sugar), on temperature by cooking, on pH by adding acids such as vinegar

¹ <https://www.who.int/activities/estimating-the-burden-of-foodborne-diseases>

² <https://www.who.int/news-room/fact-sheets/detail/food-safety>

for instance, and on oxygen such as with canning. These forms of control anciently entailed techniques such as drying, fermentation, pickling, acidifying, salting, jams/sugaring and others. Today, more technologically advanced forms of preservation have been developed. These include methods such as the introduction of refrigeration and freezing, vacuum packaging, canning, modified atmosphere packing, addition of preservatives and others. Yet, one should also be aware that not all microorganisms are pathogenic in nature or would only result in the detrimental spoilage or illness. In fact, many microorganisms are useful and have been used for thousands of years. Fermentation is one of the preservation methods that depends on the existence of beneficial microorganisms. The metabolic process of fermentation consists of converting organic material in foods or beverages, such as sugars, into acids, gases and alcohol. One species of yeast, scientifically called *Saccharomyces cerevisiae*, is probably the most notable and imperative example. This species of yeast is commonly known as brewer's yeast or baker's yeast and has been pivotal in winemaking, brewing, and baking as the main fermenting agent. The use of *Saccharomyces cerevisiae* dates back to thousands of years attributed to the production of numerous essential foods and is still considered as one of the most valuable species in industrial application today (Parapouli et al., 2020). A complex system of millions of beneficial microorganisms also already exist inside our bodies. This is most notably known as the human gut microbiota. These forms of microorganisms have colonized the human gastrointestinal tract and co-evolved with their host in a beneficial relationship that continue to support human life. The gut microbiome plays important roles in human health and mainly in maintaining the integrity of the gut, synthesizing essential vitamins up to half of the daily requirements of Vitamin K, providing protection against pathogens and serving as an overall booster of the immune system (Thursby & Juge, 2017).

1.1.3. Food commodities in today's consumerism world

Historically, people were obliged to preserve their food out of necessity. Today, the preservation of food has taken a commodity aspect. Just like any commodity in general, the processing of food and their preservation enters the market dynamics of every country. People today consume certain food products because they feel like it. Although producing adequate quantities of food to suffice the planet's growing population is still a serious challenge today, people have developed a sense of taste. They consume products that they like and enjoy, and not because they particularly need to. This comes as a result of a developing world in which consumerisms evolved from the desire to adopt higher living standards. A particular factor was the increase in the household income. According to Grigg (1994), the average calorific intake per capita prior to the nineteenth century were low as attributed to lower agricultural production. These however changed and the calorific intake began to increase in Western Europe and North Africa as a result of population growth and consequent faster increase in agricultural production. This made food more readily available and especially when trade in agriculture expanded. International trade in Western Europe was clearly seen at an increasing trend by the mid-nineteenth century with the import of cereals, meat, dairy products, livestock feeds, tropical beverages and oilseeds (Grigg, 1994). The natural response to the initial consumption explosion at the time was to meet the needs of the growing populations and their preference in the industrialization of food itself. Towns and cities no longer needed to produce

their own food. People were able to get jobs in manufacturing and industries whereas global food production and trade routes developed, and food got increasingly imported. The wealthier consumers got, the more their food structure changed as they demanded food not only for basic nutrition but also for pleasure, culture, social considerations, and prestige (Gracia & Albusu, 2001). Agriculture intensification, technology and mechanization maximized productivity and output while improvements in infrastructure facilitated and made transport less costly (Grigg, 1994). Despite the timid increase in its earliest stages, international trade boomed after the 1960s and during which crop yields registered extraordinary increase with the ‘Green Revolution’ period. Since then, food production has been increasing exponentially and even faster than actual production of food (Ercsey-Ravasz et al., 2012), reaching 23% of world food production destined for human consumption being traded on the international arena by 2014 (D’Odorico et al., 2014) compared to only 12% in the 1980s (Grigg, 1994). Agriculture became subject to polarization with global super-producers and specializations emerging. Production of food intensified, utilized synthetic ingredients and became increasingly standardized to optimize productivity, uniform output and stabilize supply. This created food which was ‘fast’ and ‘industrialized’ (Fernández-Armesto, 2002), only to be met with outlets encouraging quick mass consumption as supermarkets and fast food stores. Basically, any unrefrigerated item found on a supermarket shelf could have been looked at as a preserved or processed food which is shelf stable. Preserved foods have progressively become commodified, mostly losing the sense of place and ethnicity. Foods have been generally produced in a delicate balance, or compromises, with cost, revenue and quality becoming the rule of the game amongst macro-scale economies, global trade, and open markets. Food became less linked to its place of origin. It became factory-made and mass produced. Food became progressively dehumanized and subsequently emerged as the subject of *globalization* (Inglis, 2009), *supermarketization* (Reardon et al., 2005), and *McDonaldization* (Ritzer, 2011). Free markets and global trade routes have drastically molded the way people consume foods around the world. In fact, many of the foods we buy today could be grown in one country, processed in another, and packaged in an entirely different third place. Megastores, large-scale retails and fast food chains have also sprung up even in the most rural of territories. The foodscape, i.e. environment where one is exposed to food (MacKendrick, 2014), of entire generations has been distanced from that of their ancestors. Inglis (2009) describes the contemporary food condition as different from a century ago mainly in four aspects. These are a) a global but not fully integrated system of food production and distribution, b) a system that has become an unchallenged source of concern and crisis with respect to the health of humans, animals and the planet, c) a marked homogenization of food and cuisine tendencies compared similar to the ‘global McDonaldization’ in reference to the global fast food chain McDonald’s, and d) a perceived opposition to that homogenization in the form of growing movements stressing on tradition, authenticity, and ‘rediscovery’ of ‘real’ ingredients. What started at the origin of diets that characterized nations and territories gradually but quickly faded with time and got replaced by a hyper-commodified homogeneous global food production. If a crisis hit one side of the planet affecting supply, then the opposite side of the planet would go hungry. No more evident where that statement became recently true with the widespread onset of the COVID-19 pandemic by early 2020. Even in its early stages, the pandemic exerted immense pressures on the provision of foods mainly by interrupting primary production output and global trade routes. This quickly

raised serious threat on the food security of billions of people and especially of those in the global South, the food-import dependent Middle East and the chronically food insecure Africa (Zurayk, 2020).

The dynamics of contemporary food production and consumption therefore developed varying market demands and preferences with time. The analysis of food consumption in Europe between the late 1980s and early 2000s was analyzed by Gracia and Albisu (2001). They showed that not only were people eating more quantities, but there was an emerging shift in the structure of consumption where people are increasingly inclined to consume foods away from their homes. Despite varying trends depending on the context, history, and evolution paths of each European country, a general increase in the consumption of processed and convenience foods, such as processed meats and snacks, was noticed. The same source also showed that the increased proportion of women in the labor market increased household income but also decreased available time for cooking. This was attributed with the consumption of more frozen and ready-to-eat foods. The demands in today's markets have therefore drastically changed and will most probably continue to evolve and change. This is because consumers are the final determinant. They shape markets and drive production according to their preferences and demands. Their behavior, perception and decision-making processes are therefore probably the most important factor to be considered. Changing consumer attitudes directed by changing and rapid lifestyles, increased participation of women in the labor market, technological advancements, are all reasons that could be associated with new consumption habits.

Yet, within a highly connected world, consumers have become more exposed and more informed. A reemerging interest in locality, spaces, and origin can be seen (Inglis, 2009). People have become more aware and conscious about their health and are questioning the quality, social ethics, and environmental impact of the ingredients that enter in and on their food. The more knowledgeable, the more critical they become. In a study by Click and Ridberg (2010), interviewees who were preserving foods for their household consumption were asked of the motivation behind that decision. The most frequent answer registered was that they could "know and control what's in my food". This demonstrated a clear distrust of some consumers with regards to the ingredients and practices of today's industrial manufacturers. Therefore, in its different elements, food consumption is still witnessing a changing dynamic that has been returning back to what is *natural*, *traditional*, and *healthy*. Various food trends have also emerged, such as consuming organic, vegan, fair trade, and keto. These emerged from consumer inclinations to shift towards the adoption of healthier, more natural, environmentally friendly and socially conscious lifestyles. An everchanging world will probably always affect the way we eat. But original dishes, techniques and foods will also probably survive and will remain part of the original food discourse. Kwik (2008) refers to that understanding as 'Traditional Food Knowledge' in which the culture, techniques, skills and traditional beliefs of food provisioning can be transferred from one generation to the next. She also stresses on how traditional food knowledge can assert cultural identity of groups and how their transmitting can contribute to the food safety and personal nutrition of specific communities.

Box note 1: Notion of quality

There is a growing attention on the notion of ‘*quality*³’ and what constitutes high-quality foods. The article by Gracia and Albisu (2001) dissects the demand of consumers for quality in 6 aspects. Their analysis mentions that improved quality can be perceived in the different aspects of consumer needs met by the products. This could be achieved through channels as product development in (ex. taste versus calorific value), improved packaging (ex. reduced single portion size), convenience (frozen or ready-to-eat), origin of production (enhanced relationship with nature and geography; territories), health considerations (prevention of diet-related diseases), and safety (food-borne risks). The authors also conclude that *practice* and *local specificity* are as important as the ‘natural’ aspect of the food (meaning minimal processing and deviation from their natural form) and global forces in the making of quality. Such characteristics enter in the building of what is considered the idea behind ‘high-quality’ products which characteristics are preferred by consumers to be locally sourced, follow short supply chains, are environmentally friendly (have minimum impact on the environment such as in the application of pesticide), and are available directly from producer to consumer through farmers markets. These are similar observations also mentioned by (Parrott et al., 2002). These are therefore qualities that are explained by the ‘heightened reflexivity’ of consumers when it comes to the two factors of food; their intrinsic qualities and those that arise from production and processing methods. Quality is therefore constructed socially and is subject to continuing change in the way of approaching its measurement and significance which are themselves linked to socially re-evaluated constituents as organoleptic qualities, tradition and authenticity, and health (Winter, 2003).

1.2. TRADITIONAL PRESERVATION OF FOOD IN LEBANON – THE *MŪNE***1.2.1. A glimpse on the Lebanese cuisine, history, habits and spread**

One cannot begin to explain the significance of food preservation in Lebanon before describing the diversity and habits involved in the Lebanese cuisine. The interest in beginning with an elaboration of the cuisine is that when literature topics usually address the Lebanese cuisine, they do not only factor the diversity of recipes and local dishes but present them simultaneously in parallel with cultural identity, hospitality, and mobility. Food and culture move hand in hand in a country like Lebanon. When Lebanese people want to express their hospitality, they do so with food. People identify with food, feel comfortable socializing around food, and have even held onto that food during the several waves of immigration. The Lebanese

³ Words in Bold and/or Bold Italic represent keywords I would like to emphasize, such as keywords and key phrases.

cuisine has grown today into a popular menu that has just as a strong reputation internationally as it does in its country of origin. It has grown so popular that certain authors have stated that even when other Arab restaurants open abroad, they would call themselves Lebanese, and when a Middle Eastern buffet is prepared, the dishes are usually Lebanese (Roden, 2008). It has even been compared to the same category of local cuisines that have gained global popularity as the Chinese and Japanese cuisines (Gheorghe & Bulin, 2014). A diversity of authors have published many books and content around the Lebanese cuisine, from cookbooks to travel guides and researches developed by chefs, food writers, sociologists, anthropologists and other scientists. They **associate the cuisine with a rich social life and entrepreneurial spirit** of the Lebanese people. They also link it to people's resilience in the face of their hardships and their clear tenacity in their attachment to their food. There is even an old adage that goes: "*Throw a Lebanese to the sea and he will come out of it with a fish*" (Abdallah & Hannam, 2016, p. 133).

The Lebanese cuisine, generally similar to those of the Middle East, is specifically based on that of the Levant, an ancient name given by Venetian merchants to the region that includes modern day Lebanon, Syria, Jordan, and Palestine (K. Dib, 2016). The region was also known by other names such as the 'Shamlands' or 'Al-Mashrek' by the people of the Arabian Peninsula, and as 'Proche-Orient' by the French for the past two centuries in reference to the direction where the sun rises (K. Dib, 2016), or as 'Greater' or 'Historic' Syria (Zubaida, 2000). It would be unjust to delimit yesterday's culture within today's negotiated national boundaries. It is important to stress on that note since the official borders of many countries in the Middle East today are much more recent compared to its ancient history. Today's frontiers of Lebanon themselves were defined on 1 September 1920 with the declaration of the Greater Lebanon state. That came as a result of the Franco-British partition of the Middle East after the Sykes-Picot Accords of 1916 broadly divided the former Ottoman Arab provinces between French and British zones (Traboulsi, 2012). Before that, food and culture were present rather more fluidly. **Food and habits associated with it served as a marker** that differentiated the various groups inhabiting the Middle East and formed sort of social boundaries. These were factors of the varying dimensions that coexisted such as religion, social norms and economic standing. Zubaida (2000) states that a common vocabulary of food seemed to have crossed borders but that did not assert any cultural homogeneity. He considers that the emerging modern states are in fact based on historically long-standing cultural and territorial entities as Egypt, Iran and Turkey; but that these themselves exhibited considerable regional and communal variation. In areas where Christian communities existed for example, such as in the Levant, a stronger association with alcoholic drinks was found such as the 'arak (distilled anise drink indigenous to the eastern Mediterranean (Zurayk & Rahman, 2008)) with *Mezze* (assortment of appetizer-like plates) in Lebanon (explained later in this section). There are accounts in the same source where the themes of Muslim cuisine were adopted by neighboring Christian and Jewish communities but included their own variations on them. In the days of the Ottoman rule, it seems that Turkish food was accessible only to the prosperous and financially capable upper classes, but that did not appear to be the rule in the Levant (Zubaida, 2000). The Levant people rather preferred to economize on the consumption of meat. The preparation and serving of coffee (probable origin of the term being the Arabic equivalent *qahwa*), was an important ritual by Bedouin nomad communities comparable to the tea ceremonies of Japan. Their adoption was strongly associated by many ethnographic records following the gradual introduction of

coffee in the 16th century to Egypt, Anatolia, and Iran from the probable source of discovery in Yemen around the 13th century (Tapper, 2000). These small differences within the greater intersecting space of ingredients and practices emerged such a rich gradient that in fact helped retain a degree of specificity. This is the case of the Lebanese cuisine which, in addition to its internal diversity, became more singular with modern times, social life, and especially with its international spread; these dimensions altogether forming it into a recognized distinct category on its own.

The rich and diverse agricultural production of that region of the world is only one part of the story. The Lebanese cuisine is usually described in its reflection of the past, and its past has witnessed a long history. It can be said that the **local food around the country is as diverse as the many civilizations and occupations** that have passed through. Some left their traces in the form monuments and artifacts while others on religions transcending into social habits and influence on food. With the Byzantine Empire for example came Christian orthodoxy and the array of meatless vegetarian meals for leant are still consumed to this day. The arrival of Arabs and Islam brought with it the Levantine Muslim cuisine existing today (Roden, 2008) and dietary rules such as the *Halal* (what is permissible) and the *Haram* (what is forbidden). Lebanon today homes 18 distinct religious sects within the Christians, Muslims, and Druze faiths (Faour, 2007); each with its own set of beliefs, customs and habits. Just as the country, the cuisine itself can be described as a ‘melting-pot’ that personifies indigenous synergies (K’araki & Ogle, 2011) which evolved from influences of successive eras such as those of the Egyptians, Assyrians, Babylonians, Persians, Greeks, Romans, Byzantine, Arab, and Turks. In the book ‘Food, Cuisine, and Cultural Competency for Culinary, Hospitality, and Nutrition Professionals’ which addresses cuisines from around the world, chapter 51 is dedicated entirely to Lebanon (Massad, 2011). The author of that chapter, Susan J. Massad, provides a history of the food within the local culture. She begins by mentioning the first settlers in Lebanon, the Phoenicians, who arrived around 3,000 BC and whose name was attributed to the renowned purple dye at the time that was extracted from the Murex mollusk known as Tyrian purple in links to the city of Tyr. The Phoenicians were well-known traders that have dominated the Mediterranean and created colonies with some of the most ancient cities still inhabited today as Beirut, Byblos, Sidon, Tripoli and Tyr in today’s Lebanon and Carthage in today’s Tunisia. They were the first to establish major maritime trading routes between the East and West exchanging goods that included dried and preserved foods along with mainly spices, grains, and wine. The chapter continues to explain how the arrival of the Crusaders in the 11th century carried with it a Western influence on the region. After that, another major event was the foreign rule of the Ottoman Empire which extended for over 400 years from 1516 to 1918 and was succeeded by the French mandate following the fall of the Empire after World War I from 1920 to the independence in 1943. This has in itself produced many intersections in ingredients and meals still consumed to this day, linking similarities between the old history shared between the countries subjected to Ottoman rule at the time (Lebanon and its neighboring Syria, Palestine and Jordan) and common cooking with today’s Turkey. From the Ottoman Turks, typical examples include the use of strong coffee, pickled vegetables, baklava sweets, lamb meat, and certain spices and nuts, while the influence of the French can be seen more pronounced in Lebanon in the form of cheese, pastries and desserts such as croissants, flans and caramel custard. Indeed, these dynamics opened the Lebanese table to further Western

influence especially with the introduction of Western missionary schools and universities. The cuisine ultimately shaped itself into a distinguished merge between East and West, traditional meals with a modern twist, and the preservation of these meals is still well maintained to this day (Hwalla & Khoury, 2008). Despite some similarities with other Middle Eastern cuisines, the majority of authors usually proudly categorize it in a separate cuisine on its own (Abdallah & Hannam, 2016).

One of the features that distinguishes the Lebanese cuisine is its **integration of many habits and customs** that differ with the geography, social context and faith-based customs, and even with seasons and location. The menu differs for example when one visits a restaurant or when meals are prepared at home, if one lives in the mountains or on the coast, or if one is dining at a Christian or Muslim household. An incredibly rich regional variations exists in such a small country so much so that entire books have been developed in attempt to describe it. Some have been even written only on specific components of that kitchen such as the appetizer-like food presentation called *the Mezze* (Basan, 2018; Hage, 2018; Kanafani-Zahar, 2020), the famous oven-baked flatbread breakfast topped with herbs *mano'uche* (Massaad, 2016), bread (Kanafani-Zahar, 1997), the national drink *'arak* (El-Asmar, 2021; Karam, 2008), and wines (Karam, 2005). The Mezze for example is the custom of food presentation, which is typically experienced in restaurants or on a smaller scale in Sunday family lunches. *Mezze* can be described as an assortment of small hot or cold plant or meat-based dishes, similar to hors d'oeuvres or finger food, that are presented throughout the dining event and shared by the table. The number of these small shared dishes could reach a staggering number which could easily surpass 50 or even 100 plates (Massad, 2011). The medley of mezze usually consists of certain dishes that almost never change, such as the famous *tabbūle* [parsley, tomato and *burgol* (cracked wheat) salad] or *fattūš* salad [mixed greens, vegetables and fried bread], *hummus* [chickpea] or *mutabbal* [eggplant] dips, stuffed grape leaves, cheeses, roasted nuts, fresh vegetable platters, pickles and olives, stuffed savory pies called *fatayer*, stuffed meat pies called *kibbé*, bread (flatbread, fresh oven baked pita, or thin *markouk*) and many more. The dishes would be usually served alongside the national alcoholic beverage of Lebanon from Ottoman origins then Levant adaptation (Zubaida, 2014) called *'arak*, which is a distilled spirit from anise and grapes that has a translucent color but turns milky white when mixed with water and usually added with a single ice cube. Being a **pluralistic country**, alcohol is not prohibited in Lebanon but is not consumed by all sects out of religious dietary restrictions. This is another reason behind its multiplicity. Mezze can be considered as a meal in its own right. Yet, typical restaurant dining experience starts by presenting the cold mezze, followed by the hot mezze, then the main assortment of meat usually grilled skewers (or fish), and finally dessert which consists mostly of fresh fruits in season and ending with Turkish coffee. The Mezze cannot be simply reduced to a specific number of meal courses, but it is rather a series of dishes that are continuously being plated and presented to the dining table with no extended cuts in between serving. The dining experience, usually lunch or dinner, even extends for hours during which the attendees use the opportunity to socialize around the long rectangular tables with the host usually seated at the end of the table. During that time plates would be continuously served eventually jostling for space or even getting stacked on top of each other (Massad, 2011). Given the sheer quantity of plates involved in mezze, recent red flags have been raised in its relation to food waste being generated by restaurant diners. A study by Chalak et al., (2021) considers

that certain variables such as income versus price range and number of people at a table are main determinants that affect the quantity of waste generated. Being primordially a shared meal experience, they found that the more people present at a table, the less waste was generated. This is probably a desired tendency by the Lebanese people since when the occasion of a large mezza is involved, so are the gatherings of friends and families. The authors equally stressed on the absence of any form of official action by the government and have proposed control measures like food donation and positive-negative sanctions that would encourage restaurants and consumers to reduce waste. The tradition of Mezza remains a strong form of representation, identity and socializing event in by itself. It was described by Claudia Roden (2008, p. 240) as an ‘art of living’ with the drinking of ‘*arak*’ as the philosophy behind it. It is this mezza tradition upon which the international Lebanese menu is based.



Photo 1: A typical assortment of Lebanese Mezza dishes. Photo credit (LaBan, 2021)



Photo 2: Two men enjoying mezza at a restaurant in Beirut's Raouche quarter, Lebanon in 1974. Photo credit: Old Beirut Lebanon Instagram page (@oldbeiruthlebanon)

The menu in restaurants is usually standard and includes a set of habits in by itself such as the Mezze. It is however the **home-based cooking in city and village households which is highly versatile** and features varying versions of meals depending on location. Road networks previously were not well developed. Transportation was difficult and that made villages that are generally mountainous fairly isolated from each other. People had to use what was available around them and therefore maintained the individuality in their kitchens (Roden, 2008). This is why one would find many versions of the same meal depending on the town or village. The sloped lands were terraced and cultivated with wheat, olive trees, vines, mulberry trees for silkworm, fruits, and others. Meat was expensive, and so it was carefully cooked and preserved in fat, known as *quarma*. People relied for the most part on plant-based and vegetarian meals. With Lebanon's narrow coast shoreline close to two rugged mountain ranges separated by the *Beqā'* valley, a highly diverse range of microclimates exist. With this came an even more diverse agricultural cultivation and adaptation of cuisines which was further multiplied due to the fact that inhabitants of different faiths were, and still are, geographically distributed. The city of Beirut was mainly resided by Sunni Muslims and Greek Orthodox, the mountain with Christian Maronites and Druze, and the hinterlands and South with Shiite Muslims. Mountain dwellers for example relied on *burgol*, which is cracked parboiled wheat, while city residents used rice. Some consumed alcoholic beverages, while others did not. Some celebrated Christian holidays and dietary rules such as lent, while others followed those of the Muslim religious customs such as Ramadan fasting and *Eid Al Adha*. Certain towns became known for their specialty meals, such as in the *Beqā'* valley's *Zahlé* for its *Kibbé Zahlaweieh* (grinded meat and *burgol* blend) and Baalbeck for its *Sfiha* (meat-stuffed pastry in bite sizes), the Mediterranean coast for its fish as Beirut's *Samke Harra* (spicy fish) and Tyr's *Saādiyat-alSamak* (rice and fish), and the mountain cooking as Ehden for its *Kibbé Zgartawīe* (oven cooked meat and *burgol* blend), Deir Al-Kamar's *Fatet Batinjen* (yogurt topped eggplant and fried bread), and Dhour Choueir's *Šīš B'arak* (ground beef stuffed dough balls cooked in yogurt) (Massad, 2011). It is generally the meeting between the Ottoman urban city diet and that of the rural mountain villages that resulted in the Lebanese cuisine we have today. In that essence, the preservation of food was key in the diet of mountain residents. As we will see later in more detail, it was not enough to cultivate and consume seasonal produce, but their preservation was pivotal for the survival of households during the winter season. Any surplus that was collected from the season's harvest was preserved into what consisted of that year's *mūne* to extend its shelf-life and stored to be eaten later when needed. With the migration of people from the mountain to the newly cosmopolitan city of Beirut by late nineteenth century (Roden, 2008), urban residents became more exposed to the culture behind food preservation, the *mūne*. These products became a desired delicacy. The dynamics of the cuisine relied on locales, exhibited a strong relation not only to the *terroir*⁴ but transcended into the social fabric of people's everyday life.

⁴ The concept of *terroir* is debatable and could entail several elements such as link to origin, typicality, history, authenticity and legality (Spielmann & Charters, 2013). Here, I will follow the explanation by Zurayk and Abu Ghyda (2009) which they used to describe Lebanese products based on the understanding that local products are related to traditionality and are associated with territory, quality and reputation as a form of geographic origin.

The Lebanese household cuisine generally includes **typical ingredients of the Mediterranean diet** which is associated with good health impact (Hwalla & Khoury, 2008). The backbone of the diet relies on plant-based ingredients as fruits, vegetables, cereals, potatoes, legumes and seeds; low consumption of meat, minimally processed foods, olive oil, dairy products, and wild edible plants. Main similarities and adherence of the Lebanese diet to that of the Mediterranean diet was in fact analyzed by Naja et al., in 2015 through what they referred to as the Mediterranean diet index. The Mediterranean diet is normally that which is described to strongly incorporate dominant cultivations such as olive trees, is low in saturated fats, high in vegetables, leafy greens, fruits, cereals, nuts, and legumes, moderate in fish, meats, and dairy, and low in eggs and sweets (Davis et al., 2015). The results of the study show in fact that the Lebanese diet exhibited significant correlation with that of European Mediterranean diet with common baselines of ingredients being in fruits, vegetables and olive oil (Naja et al., 2015).

A major reason behind the success of the Lebanese cuisine is attributed to the **vast immigration of the Lebanese people** who have spread the food culture with them. Emigration from Lebanon is a widely discussed topic and it is said that every family has been touched by immigration which has been recorded since the nineteenth century. The size of the diaspora is not exactly known since several generations have been born from Lebanese immigrant parents abroad, but it is generally estimated at more than triple the number of national residents (Skulte-Ouaiss & Tabar, 2015). What is remarkable though is that Lebanese immigrants and attached to their home country and many visit regularly. According to Roden (2008), Lebanon in the 1960s witnessed a period of calm during which investment and entrepreneurship flourished and the restaurant business took off. With the onset of the civil war in 1975, many of those businesses closed and opened abroad. A serious wave of migration also occurred during that time and, with immigrants holding onto their culinary heritage, tended to open restaurants and food establishments abroad as well. It is estimated that 40% of the population, equivalent to 990,000 individuals, emigrated from the country at the time (Tabar, 2010). According to K'araki and Alfred (2011), in Australia for example, Lebanese food has become omnipresent, permeating the culinary fabric and becoming the de facto face of Middle Eastern food. The authors proposed a raw form of a rubric of authentication. They considered that it would evaluate the authenticity and ethnicity of the Lebanese cuisine in an attempt to aid its marketed identity and character as well as for its 'proper' assembly in foreign countries. The authors based their rubric on the PIPS index (presentation, ingredients, preparation, and service) and used what they believed are the quintessential characteristics of the Lebanese food they found in literature. In the United Kingdom (UK), around 16,000 Lebanese-born immigrants were last censused in 2018 (ONS, 2018) and in the UK, Lebanese migrants are usually classified as either pre- or post-Civil war. The main difference between the two is either migration initiated by the desire to seek a better lifestyle or fleeing political turbulence (Abdallah et al., 2019). Migrants of Lebanese origin are generally said to have a sense of "**Lebaneseness**" describing their attachment to their homeland culture and food (Abdallah et al., 2019; Rowe, 2012). In a study by Abdallah and Hannam (2016), questions on cultural identity, mobilities and hospitality were asked to Lebanese immigrants owning food businesses in London and specifically with regards to the ways in which they have tried to 'fix' their perceived authenticity of the homeland cuisine abroad. The authors cited that Lebanese migrants abroad even hold onto their food traditions

arguably more than Lebanese do so back in their country, and that Beirut has become ‘Westernized’ in its restaurants. In support to that statement, the authors recorded responses from their interviewees stating that the preservation of the Lebanese traditions were key to the success of their food businesses. One of the respondents interestingly mentioned how this presentation of the ‘Lebanese experience’ even became popular with non-Lebanese customers. Amusingly, Lebanese descendants in New England according to Amy E. Rowe (2012) assert on identifying themselves as American *except* when discussing, preparing and enjoying food enters the picture. She also comments on how certain competition in the preparation and spicing of meals would occur between the usually first-generation migrants since techniques differ depending on the village of origin. In Homsey and Sandel’s (2012) study, they observed members of an ancestral Lebanese community in central United States’ flatlands. They noted on how even on a typical American occasion, Thanksgiving, the quintessential menu *the turkey* would be laid on the dining table next to homemade Lebanese dishes as the *kibbé* and *laban* (yogurt). Even that *laban* would be made from a generations old starter brought from Lebanon and that food would be prepared in ‘the right Lebanese way’. Even in dialect, although members of that community have lost their fluency in the Arabic language, the authors found that many original words have been retained specifically in reference to food index and deeming it as an embodiment of generational cultural transmission. They questioned the community on what it means to ‘be Lebanese’ and what they found is a strong essential connection rooted in a code of food and tradition. They say “*Serving food to family, friends, and guests plays an integral role in the identity of the Lebanese. Thus, food and drink are key everyday concerns that are part of what it means to be and act as Lebanese. And these activities that were invoked and interpreted as what it meant to “be Lebanese.”*” (Homsey & Sandel, 2012, p. 66).

This spirit of *Lebaneseness*, whether nationally or abroad, has always characterized its people as humble and generous, who open their homes and tables for visitors at any time. Hospitality and entertaining visitors is an important feature for the Lebanese people, and their expression of that is usually communicated through food; the proud displaying of their roots, heritage and villages. The village life remains the symbol of Lebanese heritage. It is the anchor upon which the Lebanese folklore was built; and in which food is a centerpiece. Rarely would the Lebanese folklore and traditional life be mentioned without its food. I quote Kamal Dib (2016, p. 162) who said:

[Translated from Arabic]

“These details appeal to children, even if they were born in the city and do not know the tales of the village. Because the city is innovation and modernity, and the village is the basis and roots. Everything in the village suggests play, adventure, family affection, delicious fruits, simple and good-tasting food, including bulgur, green beans, eggs, yogurt, quarma, kīshk, and za’atar, and poverty accompanied by pride and magnanimity.”

1.2.2. The main idea and original purpose of preserved *mūne* foods

I decided to start this section with clippings from Aïda Kanafani-Zahar’s book “*Mūne, La conservation alimentaire traditionnelle au Liban*” (1994, pp. 11–14). It is an exceptional book,

written completely on the subject of *mūne* and provides an incredibly rare and valuable description on its typical practice for the Lebanese village. These clippings specifically draw a good picture on the way village life in Lebanon was cyclic and depended on the changing seasons year-round to plan and prepare certain tasks. The author cites proverbs commonly used at the time by villagers, and which some survive to this day, and uses them to reflect how these tasks were guided by indicators from the nature around them or from religious feast dates. Supported by her own observations, she demonstrates how cultivating the land, harvest and preservation of food were a key purpose of villagers and an entire way of life.

[Translated from French]

Summer is a period of life in the outdoors characterized by the production and storage of *mūne* (reserves). With winter, life settles at the inside of the house and the reserves are consumed.

The period of life outdoors begins in March: "In March, bring your cows out!"; [...] "In March, the *mūne* becomes expensive (runs out)"; plowing resumes.

The change to good weather is announced by the size of the fig leaf and the croaking of the frog: "When the fig leaf is as big as a duck's foot, you can sleep without covering yourself"; "When the frog begins to croak, the cold ceases being harmful".

"The rain of *nawwār* (May) provides provisions for the farmer and his cows".

At the start of the harvest, the reserves, exhausted, must be reconstituted to avoid famine: "The great hunger is with the new sheaf". At the beginning of the *mūne*, the wheat is harvested and husked on the threshing floor: *awwal l-mūne*, *awwal l-baydar*. [...] "With July begins the harvest, prepare your *kwēyir* (silos) for the new *galle* (harvest). [...]"

"August is the cook of grapes and figs". This date marks the beginning of a transitional period, between life on the inside and life on the outside: "The Feast of the Transfiguration (August 8 in the eastern calendar) says to summer: go away!".

The end of the outdoor period is marked by the storage of most foods: "In September, stock up for your children and put your mind at ease!" [...] The end of the *mūne* is the *īd ṣ-ṣalīb* (September 14: Feast of the Exaltation of the Holy Cross). After this feast, [...] plowing begins with the first rains of autumn and the plows as well as the seeds are therefore prepared.

After this period, the cold sets in, people gather around their homes in peace, because their homes are full of provisions that will allow them to get through this critical period. [...] "When wheat, fats and oils, *burgol* and wood are present, the mind is at peace."; "In December, remain tranquil in your home, in your salt and in your oil".

During periods of extreme cold in winter, with snow blocking the roads and winds paralyzing life outside, the *mūne* is essential. [...] During the winter - period of food shortage - agricultural activities are reduced, and women find more leisure for domestic activities. They devote themselves to manual crafts, make basket trays, knit and various needlework.

The *mūne* (could be written in many ways as *mouneh* or *mouni* and pronounced as *mouné*) **is a collective term referring to a group of traditionally preserved foods produced seasonally and stocked as pantry reserves.** One could say that these are a major factor behind the popularity of the Lebanese cuisine since they constitute backbone ingredients used in many popular dishes and add to their distinctiveness. The famous *tabbūle* salad has bulgur (cracked wheat), olive oil and sometimes pomegranate molasses (*debs rumman*). The main ingredient

in the famous *mano'uche* is the dried *za'atar* herb mix. A mezze table would commonly have a plate of *makdūs* (oil pickled eggplants stuffed with chili, walnuts, garlic). A typical winter breakfast is the *kīshk* soup (fermented dried *burgol* with one or more dairy derivatives). The *mūne* is not only a group of preserved foods, nor is it a group of techniques or recipes. Describing the *mūne* as the simple act of preserving food would be an undermining to the essence of what *mūne* really is. As this part will show, the *mūne* is a culture or could even constitute a concept on its own with associations showing in social behavior, language and even architecture. It is a reflection of an entire lifestyle, habits, and norms of rural household hospitality. It embodies a geography of diversity with regional specialties. It enters in the social fabric of Lebanese village families and paints a vivid picture of community effort, of women as the key player and building block of household society, of vigilant careful planning, and as a means of survival, hardship, history and plentifulness.

Despite being a familiar and commonly used notion in the Lebanese (and Levant) context, there is no straightforward way to define or explain what *mūne* is. It is a term that is widely used in every Lebanese household, yet every person could articulate it in the way they perceive it. Some might refer to the preserved products themselves, as a collective name or label to the category of these foods without naming a specific one of them. Others might refer to the action of preparing them, or the room they are stored in, or reminisce on their historical past, how they were prepared and the proper way and time of eating them. What is not fairly uncommon is to hear village women to this day say in the early spring, 'I will start preparing this year's *mūne* soon'. Although the term is familiar among the public, there is no apparent state definition or clear strategy that capitalizes on *mūne*. A few available literature do however mention the notion and try to define it, always in regards to its correlation to heritage. A report by the Lebanon Ministry of Economy and Trade (MoET) for example marginally described *mūne* as "... according to the consumers, a product linked to the region of production, to the terroir where the product is produced and to the landscape which surrounds the place... The concept of "Mūne" arised many centuries ago, when the producers worked on preserving their products of origin in order to consume them during the wintertime" (Abu Ghyda, 2007, p. 3). Aïda Kanafani-Zahar defines *mūne* from its linguistic meaning as: [Translated from French] "The *mūne* - from the verb *māna*: to store - designates the ensemble of provisions obtained by traditional conservation techniques" (1994, p. 1). The few other sources describe *mūne* as the transformation of the seasonal spring-summer food produce into winter provisions (Feghali et al., 2022; Massaad, 2017; Pugliese et al., 2013; Roden, 2008; Zurayk & Rahman, 2008).

Rural residents of Lebanese villages in older times had a strong reason to preserve and store food; for survival out of fear. In the second of the four-series book, Nadyah Al-Ghazzi (2001) lists seven factors that drove people's constant fear of food disruption and which caused them to 'obsess' over finding hundreds of methods to preserve food that was available to them. These are 1) **environmental factors** such as periods of unforeseen droughts or shortages in water that could cause famine, 2) **geographic factors** that distance cities and villages from sources of water (rivers), agricultural supply, and urbanization at the time, 3) sudden shifts in **weather patterns** as heat waves or snow storms that would obstruct transportation and isolate villages completely especially mountainous ones, 4) **Economic factors** that come with economic insecurities or instabilities in trade and agriculture, 5) **Risks of war** given the strategic yet volatile geopolitical position of the region, 6) **Sieges** of large cities and small villages that have

been repeatedly encountered over thousands of years by foreign forces which made people on edge and staying ready for any occurrence, and 7) **Disease epidemics** which taught people that having a ready stored supply of food that would feed them for several months is a secure option in case any sudden uncertainties arise, and so would help avoid famine and malnourishment. The author adds an eighth and more modern reason for storing *mūne* foods relevant to today's conditions, and which is 8) the **entrance of women to the labor market**. She believes that the laborious preparation of meals is decreasing today given women are increasingly seeking employment. Being primordially a skill for women, working women have resorted to the preparation of *mūne* foods during their free time so that to facilitate the preparation of meals when needed.

These are therefore the broad headlines why rural households have been always readied with shelf-stable preserved foods that could be consumed over many months after their preparation. They were a typical means of survival that would ensure household nutrition in time of food insecurity or the unproductive winter season. The preparation of *mūne* was adaptable in the types of foods being preserved and depended on the different types of cultivations that were available to people around them. These were collected fresh and in-season for capturing the best lowest price during peak harvest for families who did not own land. The produce would then be preserved following techniques that people, specifically women, were skilled at. These were mainly techniques as pickling, fermentation, drying, concentration and distillation. These were followed in accordance to detailed recipes, ingredients and practices that were passed down from mother to daughter and that were used to preserve the available fruits, vegetables, herbs, cereals and dairy in season, and only a few included meat. Efforts would be even consolidated by communities and some tasks would be conducted by groups of women neighbors together, both to cooperate with each other but also functioned as encounters with rich social exchange. Examples of those will be provided in the following sections. Finally, after the tedious and long process that sometimes extends several weeks at a time even for one *mūne* product, and when the harvest season concludes, an array of tens or even hundreds of sweet and savory preserves would fill the home's pantry. They would range from bags of cereals and grains, to dried fruits, jars of jams and pickles, herb mixes, pots of preserved dairy recipes and many local specialties. Given that the entire cycle of *mūne* preparation was seasonal, then the range of end products were highly dependent on the where the communities that produced them were located and what cultivations were common around them. Mountain residents produced in different ways and using slightly different material than what people in the North, South or in the hinterland did. This gave rise to the varying specialties that would vary from region to region or even from one village to another, adding to the distinction and regional specificities that are already known in the Lebanese cuisine itself. The mountain village of Kfardebian for example was and still is recognized for its cultivation of apples and therefore the *mūne* in that area would include many preserves made from apples such as jams and vinegar (Massaad, 2017). The same applied to the coast that is more likely to preserve citrus and the *mūne* in those areas would normally include more items such as concentrated citrus syrups, distilled orange blossom water, or candied peel. Other regions are known for their apricots and figs would produce more quantities of fig and apricot jams, whereas certain fruits and legumes would be cultivated more generally and therefore would be found in the *mūne* pantries over the entire country (Kanafani-Zahar, 1994). So there remains a common

denominator for *mūne*, products that are universally prepared with every season, but regional adaptability normally exists as well (Massaad, 2017). It is ultimately the production and harvesting season that dictates what and when can be preserved. With the arrival of every season, villages, kitchens, rooftops and cellars would suddenly become much more lively, to ‘hustle and bustle’ as the phrase goes. Again, Nadyah Al-Ghazzi (2001) almost poetically puts that into words:

[Translated from Arabic]

“In summer, the vegetables and fruits ripen, to be subjected to very complex processes, with very precise rituals and secrets. If these rituals undergo any change, this would mean the spoiling of the preserved food in the future.”

(p. 144)

She continues to say:

*“In early autumn, the eggplant would have become white and very sweet
Grapes would have reached their highest levels of sugar
The figs would have ripened, small rainfed figs that are full of sweetness
The red hot pepper would have ripened
The villages become buzzing with work, and time becomes quick to come,
quick to leave,
Village kitchens get into full swing
In the villages, molasses are made, grapes are dried into raisins, and
grapes are made into vinegar
And the methods of making molasses (dibs), vinegar (ḥal), grape raisins
(zbīb), pomegranate molasses (dibs rummān), and others shall be
mentioned (remembered) as “The Levantine products made in the kitchens
of the Levant.””*

(p. 147-8)

It is true that the tradition of producing *mūne* foods is a practice not only common to villages in Lebanon but has also been recorded in other Levant countries as Syria, Palestine and Jordan. This is by no means a statement that categorizes *mūne* only for Lebanon, but the **Lebanese mountain village has been long known and widely recognized as a typical space for the preservation of food** (Aubaile-Sallenave, 2000; Roden, 2008). Not only that, but it was also a domestic division of labor where women were the main responsible party for the preparation of preserved *mūne* foods (Aubaile-Sallenave, 2000; Kanafani-Zahar, 1994). It is the habit that was dominantly present in these areas which probably evolved from the historical trajectory and conditions that faced them, especially in Mount Lebanon. Mount Lebanon is the western chain of mountains in Lebanon that face the coast and Mediterranean sea which is faced on the east by another mountain chain called the Anti-Lebanon mountain range and divided in between by the *Beqā'* valley; this study's territory in focus. Mount Lebanon is known for its rugged terrain with many high peaks and valleys that vary highly and quickly in altitude. This meant that during the older days, people in these mountains were fairly isolated from each other especially since the road networks were not well developed and would be blocked at times of

winter and snow. Villagers had to terrace the sloped lands around their homes to cultivate them and build cellars for their storage. They assigned specific corners of their homes to store *mūne*, usually called ‘the *mūne* room’ (*oudit al mūne*) or *namlīyeh* (*mūne* cupboard). The practice of food preservation was therefore a typical rural activity. It existed in rural villages that were relatively distant from urbanized cities, such as today’s capital Beirut or the north’s Tripoli, that provided the source of import, trade and food commodities. Given that *mūne* consisted of preserving foods, then people would use what was available to them therefore the cultivations around them and this is what gave the *mūne* its diversity, whether in the villages of Mount Lebanon or those of the rural *Beqā’*.

It is also worth mentioning that prior to the independence, Lebanon was subjected to **Ottoman rule**. During its long reign, administrative divisions were very different and often changed in accordance to negotiations, conflict, and agreements. Lebanon as we know it under today’s frontiers was divided differently thus many of today’s regions were subjected to different territorial affiliations, central administrations, trade, supervision and taxing systems; and ultimately shaping agricultural production and consumption. Mount Lebanon, different parts of the *Beqā’* valley, and Beirut all witnessed several changes in their belonging to separate administrations at different times in history. The main ones are when Mount Lebanon and the *Beqā’* valley’s central town of *Zahle* belonged to the *Mutasarrifiya* (a subdivision of the Ottoman administrative division *wilaya*). Other parts of the *Beqā’* valley were part of the *wilaya* of Damascus originally with the city of Beirut, but the latter later acquired its own *wilaya* covering the coastal length from Jaffa on the south to Latakia to the north in recognition of the booming rise of the city (Traboulsi, 2012). Whether because of the religious based hierarchy (*millet* system), the social ranking orders (*manasib*), central authority conflict with Istanbul, or internal conflict between the ruling families and factions driven by tax farming (*iqta’a* system), life in Ottoman Mount Lebanon was not very secure and witnessed many episodes of conflict (Traboulsi, 2012). This added to the uncertainties and risk of food insecurities of residents. Finally, the country somewhat passed through a transitional phase which also included episodes of clashes until it took shape in its modern form with the French mandate in 1920 and the final date of independence in 1943. In that phase, Mount Lebanon was considered the center from which the country initialized. Even the terms ‘Mount Lebanon’ and ‘Lebanon’ were used interchangeably by historians prior to the French mandate that set today’s frontiers (Collelo & Smith, 1989). Fawwaz Traboulsi (2012) correlates that disposition due to several but essential features, including a sizeable Christian majority, inclination to trade, and a long exposure to the West especially to Europe and the latter’s customary intervention in its internal affairs. Today, certain remnants of the Ottoman rule survive including for example some names of administrative divisions as the *caza* (district), positions as the *kaymakam* (sub-governor) and the *mukhtar* (village chief), land tenures as the *waqf* (properties donated to religious institutions) and *musha’a* (village common lands), and certainly in foods and drinks.

What is certain is that the **vigorous history and changing dynamics with time ultimately contributed to shaping the cuisine and the way food was preserved**. A unique story could possibly be written on the many different villages, each according to the history it witnessed, to its geography, and to its people. It is in a sense a narrating Lebanon’s geography of diversity but from the *mūne* perspective. The tradition, techniques, types and ultimate emergence of a

mosaic of variations in preserved *mūne* foods cannot be associated to a single factor or point in history. It is rather the result influenced by many local, regional and national factors, the most important of which are geographic, political, religious, societal and economic influences. So, what can be considered a *mūne* is not simply an obscure list of preserves, not only a set of skills, inherited recipes, or behavioral consumption habits. When looked at *mūne* in its entirety, it all together comes to an embodiment of a way of life. It is variable and fluid. Its whole is greater than the sum of its parts. In addition to its detailed technicality, one must also consider the valuable story behind *mūne*, its rich system that is based on tradition, reputation, social cooperation, communities and the leading role played by women. Today, there is no longer an urgent need to preserve and store foods. The preservation and storage of *mūne* foods nowadays became more or less a sociological act (Massaad, 2017). People love and consume *mūne* foods mainly because of the heritage significance, or maybe their appreciation of the authentic taste, or conscious effort to reduce waste. Today, the vastly changed conditions of life have greatly decreased household preparation of *mūne*. Although it is extremely rare to find a family that prepares all types of *mūne*, the practices does still exist but in a much smaller extent (Massaad, 2017). Today, technology has greatly advanced, women are seeking employment, lifestyles have become busier, people have migrated. What started as a household means to ensure nutrition has now shifted into a feasible economic activity that has visible marks and dynamics in the market. Today, *mūne* is being produced and traded in the market by new players. Small producers such as cooperatives, the main players in this study, are increasingly taking part in the production and sales of *mūne* despite being dominated by the conventional industrialized food sector. Yet, cooperatives are an extremely interesting actor to consider in this context since they are legal entities that are governed by the principles of cooperation, collective benefit, participation and democracy form a strong link with sustainable development goals.



Photo 3: An assortment of preserved *mūne* foods in glass jars and bottles. Photo credit: article in An-Nahar newspaper (Ajjan, 2021)

1.2.3. Typical examples of *mūne* foods, their preservation techniques and integrated links to space and community

1.2.3.1. Fruits, vegetables and legumes

Generally, the Lebanese diet highly incorporates fruits and vegetables more notably than meats. The location of the country at the edges between Asia, Europe and Africa contributed to its botanical diversity and made it a genetic center for many species as figs, olives, pomegranate and carob, as well as in wheat, barley, lentils and vetch (Zurayk & Rahman, 2008). The geography of the country added to its geo-climatic variations and its cultivations as well as different seasonal durations in its different regions. In the old days, meat was expensive and considered a luxury that came on special occasions only (Al-Ghazzi, 2001). A few heads of ruminants or cattle were raised next to rural households to supply milk and were slaughtered for consumption only in special occasions, feasts or for the preparation of one of the very few meat-based preserves the '*qawarma*' (lamb meat preserved in solidified fat). Hence, many of the preserved *mūne* foods mainly depend on the seasonal harvest of different fruits and vegetables. Normally, vegetables are grown generically in Lebanon without much specificity for each area. They have always been cultivated across the country being on the coast, open plains, mountain terraced slopes or greenhouses. The vegetable-based *mūne* is therefore very common and is less linked to a certain space, with the exception of a few. Vegetables and legumes are usually preserved in ways as fermentation or pickling whether in brine or olive oil while legumes could also be simply dried to store as grains. Fermentation and pickling are one of the common and basic techniques used which also touches on other ranges of *mūne* such as the *kīshk* (fermented dairy powder based on wheat *burğol* and milk or yogurt). Fermentation results from a complex metabolic process in which specific microorganisms, mainly lactic acid bacteria, produce metabolites and acids that reduce the pH and are capable to suppress the growth of other detrimental microorganisms. Fermentation is already a historic process that has been extensively and widely used for thousands of years for preservation and production, such as cheese-making, alcoholic fermentation in winemaking and brewing, and leavening of bread. Fermentation does not only implicate the preservation of food but also modified the chemical and physical characteristics of the food, creating new desirable aromas, flavors, and textures without greatly modifying the nutritional value (Kanafani-Zahar, 1994). In fermentation, the initial bacterial inoculum comes from the species found initially in the vegetables and legumes thus a specific character is realized depending on these species found. The foods preserved in these ways are called *kabīs* (from the verb *kabasa*: compress) and could include a large variety whether in brine pickles or olive oil, such as cucumbers, wild cucumbers (*mi'te*), eggplants, carrots, beetroot, turnips, cauliflower, green beans, olives, vine leaves (after cooking), tomatoes, and others (Kanafani-Zahar, 1994).

Fruits are usually prepared into jams, preserved in sugar syrup as compote, concentrated into fruit syrups or molasses or dried into pieces or paste. Space is probably more linked in the case of fruits compared to vegetables and legumes as a result of the natural distribution of crops in different geo-climatic conditions from which certain reputations emerged for certain regions. Massaad (2017) for example mentions how the area of Kfardebian in the high altitudes of Mount Lebanon became known for the production of apple-related products while coastal areas

processed more citrus. Similarly, the town of Bifkaya in Mount Lebanon is well known for its higher quality peach and thus the production of peach compote. Carob and the production of carob molasses is another example which is well linked to the Chouf district in the Mount Lebanon governorate. The region of Iklim al Kharroub owes its name to the renowned tree, *kharroub* meaning carob, and is a historical socio-cultural region nicknamed as the carob district (Zurayk & Rahman, 2008). Grapes and vine are also well known in the Lebanese *mūne* and history. Vines were traditionally grown on high trellises in mountainous regions to provide shade in summer as well as to utilize their leaves and fruit for drying into raisins, production of verjus from unripe grape juice, distillation into the traditional anis-based alcoholic beverage ‘*arak*, and others. Vine cultivation has also been long known especially in the *Beqā’* valley, this study’s territory, mainly with varieties for wine and ‘*arak* production. The valley is still today the most cultivated with vineyards. Jesuit priests started the practice and trade when settling in the town of Ksara in the 1850s, cultivating large plots of land. The story dates much back to ancient history when the Romans built the large temple for the God of Wine, Bacchus, in 250 AD in today’s Baalbeck (UNESCO-Beirut, 2013). Today, in the town of *Zaḥle* which is located at the entrance of the *Beqā’* valley from Mount Lebanon front stands a statue of *Erato* the muse of love poetry in recognition of the city’s reputation nicknamed as “the city of wine and poetry”. Certain local varieties of white grapes are also well known for the production of molasses which were traditionally used as sweeteners before the introduction of granulated sugar to Lebanon some 200 years ago (Zurayk & Rahman, 2008). These practices are well known in regions as Rachaya in West *Beqā’* and the production used to be performed collectively by families and communities, in celebrations that were essentially movable feasts (Zurayk & Rahman, 2008). Apricot jam has also a well-known reputation especially those originating from Northern *Beqā’*, the higher status of this product is linked to the high quality of its raw material, the Ajami variety of apricots which exists in Northern section of Lebanon.

Box note 2: Eggplant *Makdūs*

by (Al-Ghazzi, 2001; Massaad, 2017; MoA, 2008)

Makdūs consists of small eggplants that are stuffed with a mix of pepper, walnuts and garlic, and preserved in olive oil. It is a well-known form of *mūne* in Lebanon generally, but is particularly known in the *Beqā’* valley with its bordering to Syria where *makdūs* stems and is very popular. It is made from small eggplants, usually known as the striated *Kafarsusi*, but could also be made with white or lavender eggplants. These are first partly boiled and cooled under running water to retain their shape. The stalks are then removed, and the eggplant get slit lengthwise to create a pocket which is next salted and pressed overnight to expel its water. After that, the eggplants get stuffed with a mixture of red pepper (hot or mild), crushed walnuts, minced garlic and salt, and get neatly and tightly packed in a clean sterilized glass jar (in some areas known as ‘*atarmiz*). The jars are then left upside down, usually over a plate or clean surface, for another night to drain any remaining liquid. The final step would be to fill the jar with olive oil completely immersing the stuffed

eggplants. The jars at this stage are usually monitored for 10 days to replenish olive oil that might have been soaked progressively by the eggplants, making sure to keep the *makdūs* completely immersed in olive oil at all times to avoid spoilage. This type of preserved foods is the pioneer of *mūne* preparation in autumn, is nutritious, and is widely appreciated by people who, usually, consume it in the morning with bread and tea or at dinner and it is commonly found on the *mezze* tables.



Photo 4: A hermetically sealed jar (right) and plate (left) of *makdūs*. Photo credit: The Food Heritage foundation⁵

1.2.3.2. Wheat and cereals

Wheat and cereals have been cultivated since ancient times in Lebanon over thousands of years and the country is a genetic nucleus for some species of wheat, barley, vetch and others (Zurayk & Rahman, 2008). The *Beqā'* valley alone was known as the 'breadbasket' of the Roman Empire for its supply of wheat (UNESCO-Beirut, 2013). To this day, the *Beqā'* valley remains the lead producer in Lebanon, with central and west *Beqā'* (*Beqā'* governorate) producing 44% of the national total and the second section of the *Beqā'* valley, the Baalbeck-Hermel governorate, producing 14% (Tawk et al., 2019). But national production remains much less than consumption and imports are estimated to be multiple the size of national figures, around 3.5 folds (L. Chalak & Sabra, 2007). Wheat and cereals are essential to the Lebanese diet and are used in different forms, either alone as stored dried grains, pantry staples such as *smīd* (semolina), *burgol* (parboiled cracked and dried wheat), *tahīn* (flour) and *frīke* (green fire roasted wheat), or in various recipes for *mūne* (as *kish*). Many wheat and cereal-based ingredients are used in local dishes, some at certain occasions (such as the shelled wheat pudding called *amhiyeh* on St. Barbara's Day) or in the many types of breads and bakery. Wheat and cereal-based starches are a staple in the region and central in bread-making. The most common and renowned is the *pita* flatbread which is a common accompaniment to many meals and are available commercially and have even become internationally trendy (Luscher, 2020). Many other types of bread are also known and have been under the attention of Aīda Kanafani-Zahar who became interested in the tradition of their preparation during her

⁵ <https://food-heritage.org/makdous-a-healthy-pickled-delight/>

investigation of the *mūne* and food preservation practices. In her article (Kanafani-Zahar, 1997), she describes several types of homemade breads (*khobz*) that are produced exclusively by women in Lebanese rural towns. She diversified her observations on the towns of Younin (*Beqā'*), Baakline (Mount Lebanon) and Hsarat (mount Lebanon) that have different religious majorities. She showed different dough recipes, preparation techniques, and types of oven used to bake the breads from which the different bread names emerged. These were the *khobz tannour* (earthen oven), *khobz sāj* (metal sheet), and *khobz tābouni* (domestic oven). Another typical example of wheat-based *mūne* staple is the parboiled cracked *burgol*. This type of wheat preparation is not easily dated with some authors mentioning it could have entered the Levant diet with the Kurds rule over Egypt and Shamlands between the years 1183 and 1186 (Al-Ghazzi, 2001), while others date it as old as circa 3,000 – 600 BC in ancient Mesopotamia and one of the essentials of that region's diet (Ellison, 1984). The preparation of *burgol* begins by parboiling whole wheat grains in large cauldrons until softened (Figure 2a), followed by the drying of the grains which is usually performed by spreading on sheets under the sun, and finally by their grinding and sifting into several size grades and stored, historically, in terracotta jars (Figure 2b). In her book, Kanafani-Zahar (1994) cites Sigaut (1979) and mentions that four desired consequences are usually behind the parboiling of grains, which in the case of *burgol* does not modify its nutritional value significantly. These are 1) loss of germination power of the grain, 2) facilitated separation of the seed outer coats (bran), 3) the gelatinization of the starch which doesn't stick the seeds together upon cooking and retains hydro-soluble vitamins upon hulling which would have migrated to the center of the seed upon parboiling, and 4) the grain is 'killed' in the meaning that its biological processes are halted and stripped of its flora; all which help in the longer preservation. *Burgol* became a known staple especially in rural and mountain spaces and was used initially in place of the more expensive and at the time imported rice.

The *Beqā'* valley specifically is recognized for the premium quality wheat it produces (Al-Ghazzi, 2001). A favored variety of local wheat is the Salamouni (*Triticum aestivum* L. var. Salamouni also called locally *breiji*) and is usually preferred for local dishes and *mūne*. Zurayk and Abdul Rahman (2008) reported that this variety of wheat is one of the native land races of the *Beqā'* Valley and its cultivation is still centered in that area. They have found that the unfamiliar town of Ham in the Anti Lebanon mountains was established 800 to 900 years ago initially as a large wheat farm with the suitability of its soil and environmental conditions, but that cultivation of its lands with this wheat has been reduced from 75% in the 1970s to only 25% by the time their book was developed in 2008. They also report that wild mother plants even still grow wild today in regions of Ham, Aarsal and Nabha and this wheat was estimated to date back more than 5,000 years. Two major types of Salamouni wheat is found, the most common white, and the red. Although being a low-yield crop, the white Salamouni wheat is believed by farmers to be the best variety for the specific production of *burgol* and *kīshk*. Indeed, that characteristic was demonstrated by Toufeili et al., (1997) who conducted a comparative study on selected varieties of wheat which showed the superior qualities especially in processing. To this day, many rooftops become busy lined with white sheets by the end of summer for the drying and other preparation steps for *burgol* and *kīshk*, many times are performed collectively in groups by neighboring women.

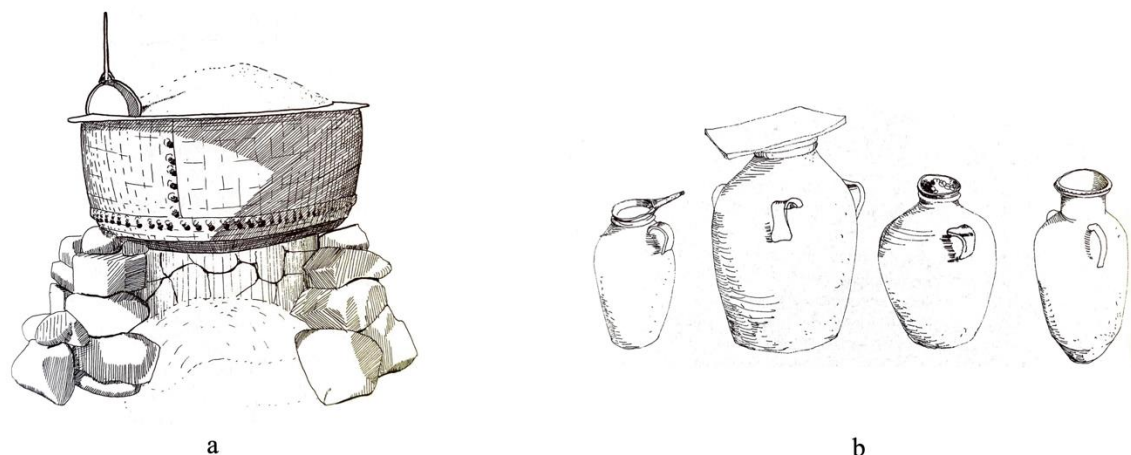


Figure 2: Illustrations of a) traditional cauldron used to parboil wheat for *burgol* production and b) a variety of terracotta jars used to store legumes, salt, *kīshk*, *burgol* and flour. Source of illustrations: (Kanafani-Zahar, 1994)

Box note 3: The story of *frīke*

by (Al-Ghazzi, 2001; MoA, 2008; UNESCO-Beirut, 2013; Zurayk & Rahman, 2008)

Frīke is wheat that is harvested at its early stages before maturity (green wheat) around April and May, that is flame roasted in straw fire then left whole or is cracked. The term comes from the Arabic verb *f'araka* meaning to rub, in reference to one of the steps where a rubbing action is performed to separate the roasted grains from the remainder of the charred bran, thistle and hay straw. *Frīke* is produced in several areas in Lebanon as the *Beqā'* and North but is especially known in South Lebanon (Jamal A'amel) and is also consumed in neighboring countries including Syria, Jordan, Palestine and Egypt. It is said that *frīke* was discovered by mistake around 2,300 B.C. after a burning field of young green wheat was salvaged by inhabitants of a Mediterranean village following the retreat of its attackers. The villagers discovered the grains after rubbing away the charred kernels and found that they have developed a desirable roasted flavor while retaining the greenish color of the young grains. *Frīke* can be cooked in a fashion similar to rice and can be similarly cooked and served with vegetables, poultry or meat. *Frīke* is still commonly consumed in Lebanon and especially in the Southern regions. *Frīke* has been the subject of many news articles in the past few years being labeled as the new 'supergrain' for its believed benefits^{6,7}. It's growing production and popularity is also noticed at an international scale^{8,9}. It is said

⁶ <https://www.nytimes.com/2019/08/23/dining/freekeh-recipe.html>

⁷ <https://www.wsj.com/articles/SB10001424052970203471004577141363042147218>

⁸ <https://www.greenwheatfreekeh.com.au/>

⁹ <https://www.masterclass.com/articles/learn-about-freekeh#quiz-0>

to be low in fat and high in protein, have a low glycemic index, contain an estimated double the amount of fiber than quinoa, as well as being rich in minerals as iron, zinc and calcium. Due to its growing acceptance, local production of *frike* has also been under the attention of several development projects recently in Lebanon in an attempt to increase its levels in the local market. Within the framework of these projects, *frike* production is being encouraged especially with women agro-processing cooperatives by providing new equipment that retain the safety of production (ICU, 2018; LIVCD/USAID, 2018).



Photo 5: Image of *frike* produced using traditional methods by a women cooperative. Source: Taken by the author in September 2015 at the Rural Delights offices

1.2.3.3. Dairy

Dairy products have also been notably preserved in the Lebanese *mūne*. Reasons for that was similar to the general idea of the practice, due to inconsistent supply of milk in the past or modern means of refrigeration, and their preservation produced diverse foods that would be stored for longer periods of time. Kanafani-Zahar (1994) gave an elaboration on the three types of milk used, which are from goat, sheep and cow. She mentions how goat milk was traditionally mostly used because at the time, traditional farming households grew and herded a few heads of goat next to their homes which in most of the cases was the indigenous breed called *baladi*. Goats in general and this breed in specific was preferred despite its low yield in milk since it was a robust, disease-resistant and adapted breed. Unlike other milk and meat producing animals, goats were also generally well habituated with the predominant available vegetation in Lebanon (wild shrubs, bushes and thorny plants) and required less nourishment, making them more preferable than sheep or cows. Yet rural households sometimes did keep a few heads of sheep, usually the fat-tailed *awassi* breed, or one or two cows. Milk sourced from the animals would be available in specific periods of time during the year as a result of controlled reproduction and thus the objective was to minimize loss of animals and maximize the yield in milk and meat. This is why reproduction was scheduled to coincide calving to times when vegetation was most abundant, meaning from December to May. Milk would then be subjected to one or multiple means of preservation as fermentation and-or preserved in olive oil or brine or would be dried. The fermentation would naturally turn the milk sour and produce

changes in flavor and texture which were ultimately desired characteristics. Typical dairy-based products for example include the *labneh*, *kish*, *šanklīš*, *white cheese*, and *arīše*. White cheese is rennet-made from unpasteurized milk after which the whey would be boiled to obtain *arīše*. *Labneh* is fermented yogurt that is strained through a cheesecloth into a thicker consistency comparable to cream cheese. *Labneh* can be served as is in a serving dish drizzled with olive oil or can be preserved in olive oil after their hand rolling into small balls around 2.5cm diameter that can be additionally flavored with herbs and spices. This type of preserve has been made by households in Lebanon for over 200 years and is considered as an important source of protein (Serhan & Mattar, 2017). Traditional recipes utilized goat cheese, which is today's more preferred and more expensive version of the product since cow milk is now also used (MoA, 2008). A special type of *labneh* specific to the *Beqā'* and the Shouf regions called *anbarīs* (in *Beqā'*) and *serdeleh* (in Shouf) is made by fermenting unpasteurized goat milk for several months in special clay pots that are permeable to air, thus prevent the pathogenic anaerobic proliferation, and that have drainage holes that would be progressively drained and replenished with milk (Massaad, 2017; Zurayk & Rahman, 2008) (Figure 3). These special clay pots are produced exclusively for the production of the *anbarīs* and *serdeleh* and required to be made skillfully and adequately to avoid the deterioration of the pot from the acid of the fermenting milk. This is why they were historically made in villages that were known for their skilled production of clay pots, specifically the villages of Beit Shabeb in the Maten region and Rashaya Al Foukhar in the *Beqā'* (Zurayk & Rahman, 2008). There is another type of fermented cheese that is specific to North Lebanon, mainly Eden, called *darfīe* cheese. This type of cheese was produced traditionally by goat herders from goat milk that is fermented in a goatskin pouch called the *darf* which its preparation alone was an entire process by itself (Zurayk & Rahman, 2008). *Šanklīš* is a type of yogurt-based round fermented cheese that is very popular in North Lebanon and the northern Syrian neighboring towns, and is the only mold ripened cheese original to the Middle East (Serhan & Mattar, 2017). It is believed to have originated from the compound word '*shan*' Kurdish meaning for a terracotta pot with a small opening and '*quareesh*' for the Bedouin word for fermented milk, in reference to the terracotta pots in which *šanklīš* is ripened (Al-Ghazzi, 2001). *Šanklīš* is made from skimmed yogurt that is heated, shaped in small round balls, dried and aged in one of two durations; for a few days (green *šanklīš*) or up to 16 weeks during which it gets colonized by the local microflora (especially *Debaryomyces hansenii* and *Penicillium*) that develops the end product's distinct characteristics in texture, flavor and aroma. It is the development of these microflora in addition to the *šanklīš* balls being covered by a layer of spices and herbs that help the shelf-life preservation of the product from spoilage (Serhan & Mattar, 2017; Zurayk & Rahman, 2008).

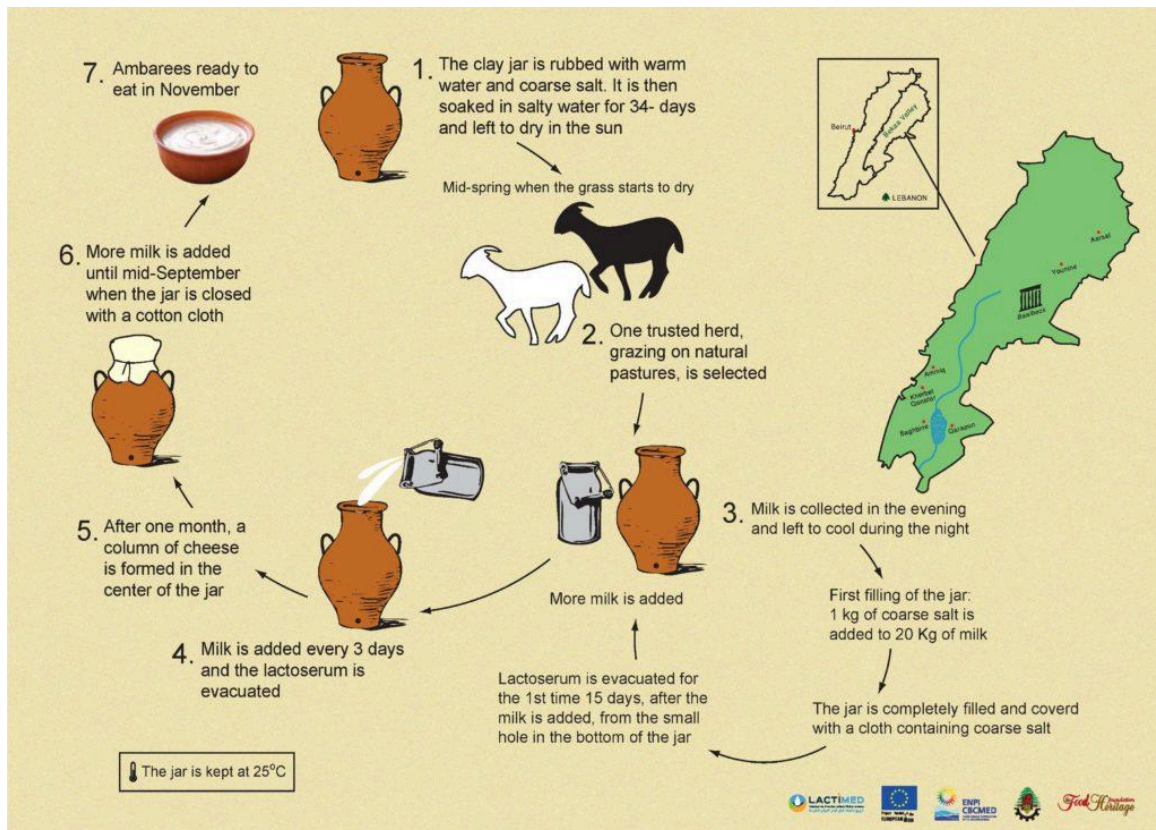


Figure 3: Infographic diagram representing the production cycle of anbarīs. Source: The Food Heritage Foundation website¹⁰

Box note 4: The collective effort of women in *kīshk* production

by (Al-Ghazzi, 2001; Kanafani-Zahar, 1994; Zurayk & Rahman, 2008)

Kīshk is one of the favorite and most typical preserved dairy foods in the country and the region, and particularly in the *Beqā'* valley and has existed in the region since the 10th century. It is not an exclusively dairy product but rather based on a mixture of dairy and wheat. It is a result of a labor-intensive and long process which consists of the fermentation of a mix of milk (yogurt or *labneh*) and cracked wheat (*burgol*) which are sundried and grinded into a fine white powder. Written recipes of *kīshk* date back to the 13th century and the practices of its production may vary according to the region which equally varies the taste from mild to strong mainly depending on the type of milk used and duration of fermentation. *Kīshk* can be made from cow, goat or sheep milk/yogurt. Less expensive commercial types are made usually from cow milk, however the *Beqā'* region is known to rely on goat milk which gives the *kīshk* a stronger pungent taste, considered as a specialty and an added value. Usually, the reputable *Salamouni* variety of *burgol* is preferred for *kīshk* having specific characteristics as being coarse, soft, and white/husk-less and known to grow in *Beqā'*. *Kīshk* is highly versatile, a staple amongst all social

¹⁰ <https://food-heritage.org/preserving-ambarees-english-brochure/>

classes and can be used to prepare several types of meals as soups, stews, and appetizers. Its usage to prepare the meals is relatively simple and requires the addition of water to dissolve the dried powder into varying consistencies and can be further flavored with additional ingredients. Its nutritive value is also an appreciated factor and the ingredients used to make *kīshk* are usually of the top quality. “The wheat heart is inside it, the best of the milk is in it” (Aubaile-Sallenave, 2000, p. 128). Rarely do Lebanese households spend the winter without a generous supply of *kīshk* in their pantries. The production process takes place starting July and is especially intensive between September and October of every year when goat milk is at its highest fat content, the sun is strong enough for drying, and *burgol* is produced after wheat is harvested. Fresh milk is not used in *kīshk* but rather the main ingredients are slightly different regionally and include wheat *burgol* (cracked wheat preferably of the *Salamouni* variety or lighter whitish-colored wheat), with *labneh* (strained yogurt), and/or *laban* (yogurt), *halīb tāli* (curdled milk fermented at room temperature), or *šnīn* (buttermilk). *Labneh* and *laban* are mostly used in areas belonging to the West *Beqā*, South Lebanon and Mount Lebanon, whereas curdled milk is used in central *Beqā* and buttermilk is used in villages that produce clarified butter. Usually, the more yogurt is used, the higher perceived quality and richness of the *kīshk*. Large grinds of *burgol* are also typically preferred more than fine grains for their ability to absorb more milk. Another cheaper recipe of *kīshk* also exists and is called *kīshk al khameer* (also known as poor man’s *kīshk*) or fermented *kīshk* which consists of fermenting *burgol* then sun-drying and grinding it into a fine powder. The usual preparation process of *kīshk* requires a series of lengthy steps in which women group together usually on one of their rooftops and collaborate in laborious steps which make good opportunities for a booming of this type of social activities in the *kīshk* season in villages. In summary, the production process of *kīshk* commences by soaking *burgol* in hot water, milk, or yogurt, then that soaked *burgol* gets sun dried for around 6 hours. After that, yogurt is added and kneaded over the *burgol* and not the other way around so that the consistency of the mixture is better controlled. This obtained mixture is usually called the *blīle* in reference to the soaking action. After that, the *kīshk* is left to ferment for a certain time in open containers or linen bags which subjects the mixture to air which speeds the fermentation process. During this open-air fermentation, the *kīshk* is considered more ‘sensitive’ due to the risks of contamination from the generated heat from the fermentation process. To deal with that, two measures could be applied. The first is to knead the *kīshk* and the second is to add milk, *laban* or *labneh*. This helps to reduce the temperature, soften the *burgol* and avoid the drying of the outer layer exposed to air, which better protects the *kīshk* from the proliferation of mold and deterioration. After a few days, the mixture gets transferred to jars and left to ferment slowly for 2 to 3 more weeks. *Kīshk* can be removed before the

completion of that fermentation period, and at that stage would be called the ‘green *kīshk*’. Women would be seen seated at their porches cracking walnuts and peeling and chopping onions to mix with green *kīshk* over with parsley, salt, garlic and drizzled with olive oil to be eaten. For the winter *mūne*, the *kīshk* gets completely dried under the sun after the fermentation process ends, then gets rubbed and sieved. These sequences of processes require a lot of time and effort, during which it is common for women to rotate in groups from one neighbor to another to assist in these steps. The rubbing process is called the *f’arak* and the women performing that task are called the *farrākāt* (plural for *farrākā*), who could commonly be in a group of 6 or 7. It consists of a specific technique in which the *kīshk* is rubbed in between the women’s palm of hands with the objective of separating the brain from the grain, endosperm and germ, and the reducing of the size into a flour of *kīshk*. The rubbing process is highly specific and even four specific sub-techniques of rubbing have been cited and which depend on the pressure exerted by the palms and fingers. It is even said that the quality of rubbing varies greatly from one *farrākā* to another. The rubbing process also depends on the humidity of the environment, for which is one of the possible reasons why the *Beqā’* valley’s distinctiveness is seen from its lower humidity than the remainder of the country. Other reasons for this specificity emerge from the characteristics of the wheat *burgol* used which depend on the varieties, the preferred *Salamouni* for example, and also heavily on the characteristics of the collected small ruminant (mainly goat) milk. Several rearing systems have been reported (Hamadeh et al., 2001) but from which many still highly depend on semi-nomadic/semi-sedentary and seasonal migratory transhumance practices during which flocks feed on local highland pastures, altitude between 1,100m to 1,800m (Massaad, 2017), in spring and summer, and revert to the coast or warmer regions during the winter.



Photo 6: (Left) Two women from the *Beqā’* valley performing the rubbing stage of *kīshk*, source: (Kanafani-Zahar, 1994), and (right) the different stages of the *kīshk* product, photo credit: Antonio Tahhan social media (@antoniotahtan)

1.2.3.4. Foraging, wild herbs and flowers

Foraging for wild edible plants is not a new practice in the Lebanese diet. It has in fact been long performed by women in rural villages who use their hereditary experience and knowledge of the land to collect seasonal wild plants or buy them fresh from local vendors. These would be normally added either fresh in salads or cooking, or dried and stored for later use, or distilled. Most common foraged plants include *sumac* (*Rhus coraria*), *qursa'aneh* (eryngo, *Eryngium creticum*), *shumar* (fennel, *Foeniculum vulgare*), *hindbeh* (chicory, *Cichorium intybus*), *a'akoub* (gundelia, *Gundelia tournefortii*), *na'ana'a barri* (wild mint, *Mentha longifolia*), *khubbaizah* (mallow, *Malva sylvestris*), *hummayda* (dock, *Rumex crispus*), *qasy'in* (sage, *Salvia triloba*), and many others (Marouf et al., 2015). Perhaps the king of foraged wild plants in rural Lebanon is the wild *za'atar* (*Origanum syriacum*, known as the Bible's hyssop). It is an endemic species to the Levantine region knowing that Lebanon has two species endemic to itself which the first (*Origanum ehrenbergii*) is used in condiments and the second (*Origanum libanoticum*) is used as an ornamental plant (Al Hafi et al., 2016). The strain is specific to the Middle East, is a 30cm short perennial shrub with fragrant cottony leaves and is different than those used commonly in the west which are the *Thymus serpyllum* (mountain thyme) and *Satureio hortensis* (wild thyme, known as oregano) (Zurayk & Rahman, 2008). *Za'atar* is stronger and more pungent form of thyme and is the main herb that is desirably wild picked (or cultivated), dried, grinded and used in a blend with sesame, sumac, and salt. As a word, *za'atar* can refer to either the aromatic herb separately or for its mixture blend. *Za'tar* can be used for flavoring but is more commonly consumed separately on its own by mixing olive oil and eaten either uncooked with bread or oven-cooked on a thin dough resulting in the famous “*manae'esh za'tar*” [phonetic for mā'nāē'sh zā'tār], plural for *mano'ucheh*. This particular herb is one of the most studied in Lebanon and has been recognized for its high concentration of essential oils with 121 compounds identified (Alwafa et al., 2021) that have fungicidal properties (Daouk et al., 1995) and were even proposed for use as bio-pesticides (Benelli et al., 2019). Besides the popular *za'atar* and sumac, spices in general are commonly used in the Lebanese cooking. This is mainly attributed to the significant trade in spices by the Arabs, who used to monopolize the trade and supply spices directly from the source of producing lands to the remainder of the ancient world. The dominance of the Arabs on that trade was so profound that Arabic was considered the language of traders, and Columbus took an Arab-speaking interpreter with him during his quest to sail West towards India (Salloum, 2012). Until this day, spices are used generously in local meals and include most commonly garlic, onion, ground pepper separately or in mixes [such as that called ‘seven-spices’ made out of a mix of ground sweet and hot paprika, cumin, black pepper, ginger, turmeric, and cinnamon], cumin, sumac, allspice, cinnamon, turmeric, and *za'atar*.



Photo 7: A bowl of za'atar mix (ground za'atar leaves, sumac, toasted sesame seeds, and salt) with olive oil and bread for dipping. Photograph taken by the author at a food event in Lebanon in July 2016.

Box note 5: Mazahr and maward, the alembic distillation of flower waters

by (Kanafani-Zahar, 2016; Zurayk & Rahman, 2008)

Distillation is a very common practice performed in Lebanese villages that became popular with the introduction of the traditional copper alembics called *k'arakeh* or *anabeek* during the Umayyad caliphate (AD 661-750). These are used to distill fragrant and aromatic water from various flowers and herbs especially rose (exclusively from the *Rosa Damascena*) and bitter orange blossom (known as 'bigarade' or 'busfeir' or Seville oranges, *Citrus aurantium* L.). The town of Qsarnaba in central *Beqā'* for example is famous amongst connoisseurs for its best *maward* (distilled rose water) in the country, while the town of Magdūsheh near Sidon is known for its 300 families who are specialized in the production of *mazahr* (distilled orange blossom water). These two products are known to be used as flavorings in common Arabic sweets and desserts, with rose water such as in baklava and *ma'amoul*, and orange blossom water in sugar syrups, pastries, and beverages. Prior to the discovery of their value in fragrant distillation for personal consumption only 300 years ago, roses were originally grown in Lebanon as hedge borders for cultivated plots to inhibit the entry of any livestock animals and their damaging of crops. After that, and under the Ottoman Empire, the production grew and spread to other regions in Asia, Europe and Africa. Today, production still takes place during the blooming season of the Damascus rose between May and June of every year, but quantities are still limited especially since the price of *maward* is relatively much less than *mazahr*. Besides making *maward*, rose petals can also be made into jams and to produce a popular concentrated rose syrup. The bitter orange trees from which *mazahr* is

distilled is usually grown in orchards on the Lebanese littoral coast extending to the neighboring Syria to the north and Palestine to the south. Back in the old days, the tree was even used as part of the landscape planted on the sides of the road around Sidon and Beirut. It is very common for passersby to encounter the fresh fragrance of the blossoms during the blooming season during which many people return to their hometowns in the North and South for picking. The town of Maġdūšeh is known to be specialized in the production of *mazahr* and unlike other towns, its bitter orange trees are cultivated not for fruits but exclusively for the distillation of blossoms. Growers in that town even adopt specific practices to increase the yield of blossoms by clipping any setting oranges in the summer. The reason behind that practice is by preventing the tree from producing fruits and devoting its energy for the production of blooms instead. *Mazahr* is used in a variety of ways for food and non-food usages. It is sometimes simply added to water, lemonade, coffee or tea, or in more elaborate recipes of desserts and pastries, and petals could also be made into a rare and expensive jam that is added as a decorative topping to milk-based sweets. Written recipes using *mazahr* in a dessert in the city Baalbeck, believed to be *malban*, have been recorded by the geographer al-Muqaddasī since the 10th century. To this day, *malban* is still made from starch, sugar and *mazahr*. Other than its fragrant addition in local recipes, *mazahr* is even used as folk medicine by being sprayed on the faces of people who have fainted or are feeling dizzy and stressed, or a few drops are given to babies to ease cholera or is even sometimes used as a body fragrance by some people.



Photo 8: (Left) Woman from Maġdūšeh picking bitter orange blossom during the harvest season, and (right) gallons of distilled *mazahr* (orange blossom water). Photo credit: (Massaad, 2017)

1.2.3.5. Olives and olive oil

As olive trees are chiefly found in the Mediterranean including Lebanon, the olive fruit and its oil has always been present as a center role in a Lebanese kitchen and are significantly consumed majorly raw, drizzled uncooked over foods, or as cooking oil. More than 12 local and foreign varieties of olives being produced and mostly locally consumed across Lebanon (L. Chalak & Sabra, 2007) with extensive presence in North and South Lebanon, on a lesser extent in Mount Lebanon and more recently in North *Beqā'*. The average age of olive trees in Lebanon is estimated at 150 years and the sector is said to occupy 563 km² for the cultivation of olive trees, equivalent to 5.4% of the national territory or 8% of the total surface area of agricultural land (IDAL, 2017b). North Lebanon is the lead producer at 41% of national production volume followed by southern Lebanon (consisting of the governorate of Nabatiyeh and the South) at 36%. Four major varieties are mostly cultivated locally in Lebanon, the “*Baladi*” (meaning ‘local’ in the Arabic language or autochthonous in probably reference to varieties selected locally), “*Ayrouni*”, “*Smoukmok*” and “*Souri*” and centennial trees can still be found growing to this day in certain areas in the country which reflect the age and importance of the tree (L. Chalak et al., 2015). However, there is a prevalent confusion for the local nomenclature of the olive varieties grown in Lebanon which has made it difficult to characterize and protect the gene pool. Chalak *et al.*, (2015), performed a study specifically for that reason and their findings suggest that the an important role of olive domestication of the Eastern Mediterranean was in fact played by the historical olive trees of Lebanon. They also found that the local trees were selected locally during the early stages of growing and that recent varieties have been introduced but only in modern orchards belonging to the *Beqā'* valley. The production of olives and subsequently olive oil fluctuates on an annual basis for which Dib (2021) states the reasons being due to 6 main reasons. These are 1) having trees mostly rain-fed therefore subjected to the effects of climate and specifically temperature and precipitation, 2) farmer practices mainly in terms of harvesting time and extraction methods, 3) traditional practices adopted by small farmers who represent the majority (77%) of producers in the country, 4) heavy alternate bearing phenomena in which olive trees tend to bear maximal fruits in bi-annual cycles causing one high-yielding year followed by low-yielding year, 5) high production costs, and 6) inadequate implementation of standardized guideline measures such as Good Manufacturing Practices (GMP) and storage practices.

Lebanon also has a reputation amongst Arab countries for producing high quality artisanal oil despite its much smaller scale of production compared to other producing countries as Spain and Italy (LIVCD, 2014). Olive oil is probably one of the very few traditional food commodities that can be identified as being exported, mainly destined to the United States and Saudi Arabia. Yet, it is still dwarfed compared to other Middletonian countries capturing no more than 6% in any of the largest export markets, while it still imports over 2,000 tons annually mostly (88%) from Syria (LIVCD, 2014). Lebanon has also been member in the International Olive Council since 2016 and the olive oil and olives sector are standardized under the Lebanese Standards Institution (LIBNOR). This regulation makes the product attractive for both producer (due to the higher price) and consumer (due to the higher quality), especially if labeled as “extra virgin olive oil”. At the level of domestic production, olive oil may be one of the most popular products which still retains a household production where

families return to their hometowns during the harvest and extract olive oil in local mills rather than purchasing. Some families that even reside in Beirut are noticed to flock back to their rural hometowns to participate in the harvest season between September to December. This is probably why this sector could be engaging members of the younger generation more than any other, as they still seem to accompany their families in these tasks. Usually, both black and green table olives are consumed in Lebanon but the Lebanese market for now is more concerned with olive oil than table olives. It is reported that almost 70% of all olive production in Lebanon is destined for the production of olive oil out of which 30% is extra virgin (IDAL, 2017b) and the remaining for table olives. Additionally, the market is growingly competitive and around 544 oil mills are registered in Lebanon with 110,000 olive farmers and growers. Both commercial and residential olive growers across Lebanon are known to be linked to a central milling station of a close proximity in the region that collectively conducts the processing into oil for many of the incoming beneficiaries of that service. Milling in Lebanon may take place using two methods: traditional, using large disk rollers and presses, versus the more modern and mechanized mills. Olive mills could be owned by individuals, small farming enterprises or agricultural cooperatives, and are known to have an established network of growers in their corresponding regions who are recurrent. It is also common for milling stations in Lebanon to accept in-kind payment under the form of olive oil as a product rather than monetary cash. In these cases, this in-kind olive oil is utilized by some cooperatives that own olive mills as a product for selling in their own market. At the level of domestic consumption, the country is considered as a lower consumer than others averaging around 4.3L per capita compared to 10L in Greece and 20L in Italy and Syria (IDAL, 2017b). Nevertheless, the supply of the local market is sourced from local producers sold directly to consumers in premium prices due to the preference of the Lebanese to purchase from local sources and in bulk, usually from a trusted family or neighbor with whom there is an established relationship (LIVCD, 2014). There has also been notes on the Lebanese consumers paying lesser attention to the distinguishing grade of the oil (virgin or extra virgin) but focus on the ‘trusted’ or ‘authentic’ character instead. Given these conditions, the preference tends towards bulk packaging of olive oil either large glass gallons or stainless steel tanks of an average weight of 16Kg enough for a household’s yearly supply. This is a probable reason why mills would usually prefer the selling of bulk as well directly to individuals and lesser extent to middlemen and traders. However, this hasn’t stopped the introduction of olive oil in smaller portioned glass bottles which can be found in regular supermarkets especially in cities.



Photo 9: A traditional olive oil stone mill in the town of Btaaboura in Al Koura North Lebanon being used to grind olives into a paste prior to pressing. Photo credit: Anthony Rahayel YouTube channel¹¹

1.2.3.6. A brief on seasonality

The entire cycle of preparing *mūne* is completely dependent on the seasonality of harvests. When sufficient quantities of a produce becomes available with the start of their harvesting season, people would liberally consume the quantities they need and would understandably preserve the surplus using generation-old techniques and recipes they know for days when food is not as available. The diverse geography in Lebanon meant that people were able to cultivate and grow a large variety of food. Seasonality and varieties of cultivation are therefore what constitutes the core of raw material being used. Different authors have approached their writing on *mūne* in different ways. Aïda Kanafani-Zahar (1994) for example constructed her book (*Mūne, La conservation alimentaire traditionnelle au Liban*) based on the different preparation techniques (fermentation, sun-drying, concentration), categories (dairy, legumes, grains, oilseeds, herbs), and roles of communities and individuals. Others as Barbara Abdeni Massaad (2017) constructed their approaches based on the seasonality and the habitual *mūne* productions around the year. It is this extract table below onto which the general idea of the cyclic seasonality is presented although some variations could be encountered according to the geographic location, overall climatic conditions and seasonal variations around the country.

Table 1: A brief non-exhaustive list of seasonal agricultural *mūne* produce. Source: (Massaad, 2017)

Month	Typical produce season
March	Pickling, Eryngo, green almonds, green thyme, green unripe plums, Gundelia Tumbleweed, <i>Akub</i>
April	Honey, Goat dairy, orange blossoms, jams and jellies, syrups and marmalades, peas, rosemary
May	Damascus rose, <i>frīke</i> , green unripe walnuts, crabapple, garlic

¹¹ https://youtu.be/89bSIx_E5B4?t=134

June	Drying fruits and vegetables, wild <i>za'atar</i> , apricots, cherries, chickpeas, fava beans, wildflowers, grape leaves, pine
July	Cucumbers, green beans, green unripe grapes, mallow, marjoram, mulberries, sage, wheat
August	<i>Sumac</i> , sun-dried tomatoes, sesame seeds, basil
September	Apples, carob, cow dairy, eggplants, figs, green olives, raisins, sheep and meat preservation
October	Black olives, pomegranates, grapes, myrtle
November	Quince, pumpkin, grapes, beetroot
December	Grapefruits, turnips, carrots
January	Bread starter, mandarin
February	Bitter orange, lemon

1.2.4. Traditional storage practices of *mūne* foods

The preservation of food in Lebanon is a practice that has been adopted down many generations and families relied on that source of food during times of need. The preparation and storage of these foods was kept close and tightly incorporated space for these purposes within each household. Preserving foods played such a central role for families and communities' daily lives that entire sections of homes were dedicated for their preparation and storage. This section will bring forward the effect that *mūne* foods had on the architecture and construction of traditional homes, common storage practices that were followed, and other evidence from the daily lives of rural families.

Traditional rural dwellings in Lebanon were built in a way that approached human to their land and food, with their **homes becoming an integral space that approached a close interaction between humans and their land, food and animals**. Given the long history that the country witnessed, many eras have left its touch on the architecture of the Lebanese house. Variations also existed at the time according to location and social status. In his book, Friedrich Ragette (1980) mentions that in its simplest form, a traditional Lebanese house was a shepherd's shelter, or growing more sophisticated into a peasant's home, village house, or more luxurious dwellings for the richer upper classes. Ragette also provided details that distinguished the construction of homes depending on their geographical location and surrounding climatic conditions. He for example stated how homes located in the mountains would require thermal insulation against low temperatures either partially or all-year round, heating, shading during summer and ventilation against the high humidity. Houses built in the planes of the *Beqā'* on another hand would not require much ventilation due to the lower humidity. They would instead need protection from the north-southern winds generated by the nearby mountains, as well as protection from the sun and thermal insulation which would compensate for the low night temperatures by storing the daytime heat in the mass of the construction. Traditional Lebanese homes normally consisted of three sections; the *dār* (living space), and interestingly a separate *ħzēne* or *beit el mūne* (food storage, *mūne* chamber), and a lower level adjoined space with a cooler mean temperature called a *kaboo* which was used as an animal shelter, storage of feed, firewood and tools (UNESCO-Beirut, 2013). Other names for the *kaboo* included *bēkie* or *zrībe* (Kanafani-Zahar, 1994). Friedrich Ragette's (1980) description divided

these spaces in two; a ‘living’ section and a ‘services’ section which incorporated the animal mangers (*ma’laf*), fodder storage, mud-brick or basket-like wooden grain silos (*kuwwārāt*), and chicken coops along with access to that space from the rear outside or the top. Nadyah Al-Ghazzi (2001) states that the purpose of dedicating a separate room specifically for the storage of *mūne* foods served to create a space with specific conditions, mainly ventilation, cooler temperatures, and protection from heat. She also mentions how the lower level *kaboo* was also ready to house bulky bags of wheat, large oil jars, flour and *burgol* bags, cans of chickpea, fava beans, and lentils, along with the terracotta labneh and other glass jars (*‘atarmiz*). For easier access, the *kaboo* was provided usually with two entrances facing each other accessible by stairs, or just one stair entrance, but had a window overlooking the general courtyard for ventilation purposes. Homes also usually had an outdoor common terrace space called *stayha* or *maṣṭabe*. The roof (*sath*) was made of mud, pebbles and a layer of branches that would be leveled with a stone roller (*maḥdale*) after rain to seal gaps and prevent water from seeping inside (Kanafani-Zahar, 1994) (Figure 4). It should also be noted that Lebanon is also known for its traditional homes with prominent red bricked rooftops, and that building material evolved, and mud or clay material was subsequently replaced by cement. What is important is highlighting how the space in rural dwellings was constructed and used strategically for sustaining domestic food preparation, preservation and storage. The living space (*dār*) was for example used for the initial preparation of foods before the actual preservation steps. The outdoor terrace (*stayha* or *maṣṭabe*) was used for spreading and drying of many foods as grains, pinecones, nuts, *kīshk*, and others. The roof (*sath*) was similarly a highly used space for tasks as shelling, cleaning and sorting of legumes, sifting of *burgol*, separating and sieving *za’atar* leaves and sumac, rubbing and sieving of *kīshk*, etc., which would regularly mean collective effort of women in groups and or individually (Kanafani-Zahar, 1994). As for the *ḥzēne* or *beit el mūne* (*mūne* storage chamber), it was normally a divided space that juxtaposed the general living space and was smaller in size, normally more lengthy (3.5 to 4m) than wide (around 1.5m excluding the depth of the silos) and around 2.5 to 3m high. Aida Kanafani-Zahar’s book (1994) provides a detailed description of that space (Figure 5). She described how it included larger and smaller types of silos referred to as *tawābīt* (plural for *tābūt*) which were fixed rectangular structures used for the bulk storage of cereals, wheat, barley and maize (possibly up to 500 kg to 1 ton if large), and *kwēyir* (plural for *kwāra*) which were the smaller mobile version incorporated into the fixed *tawābīt* and used for the storage of legumes, *burgol*, salt, flour, *kīshk*, etc. She also believes that the association of the terminology of the word *tābūt* to its literal meaning of the word tomb is symbolic the agricultural life cycle that are expressed in various cultures around the Near East and North Africa. She represented that symbol in the association between life, fruitfulness, abundance and death with acts such as sowing, plowing, harvesting, preserving and eating. Kanafani-Zahar continues to detail how the silos were subjected to regular maintenance which was mostly carried out solely by women on an annual basis for protection against infestation. Additional measures of protection against infestation were also taken by introducing one or two cats to every household that roamed freely between the inside and outside of houses through a pet door in the main entrance. The general maintenance of the remainder of the household was carried out by both women and men, which that cooperation was referred to as *ōne*, the same terminology used for cooperating neighbors during collective assistance. These silos were at a certain period of time, mainly during the

Ottoman rule, made hidden in double partitions within walls fitted with a hole at the top (UNESCO-Beirut, 2013). These structures secretly keep grains hidden from sudden inspections and confiscation by the foreign troops. One of the houses built in that way and that represents the traditional Lebanese architecture during the 19th and early 20th century was turned into a museum in the town of Terbol in the central *Beqā'* valley, called the Terbol Museum.

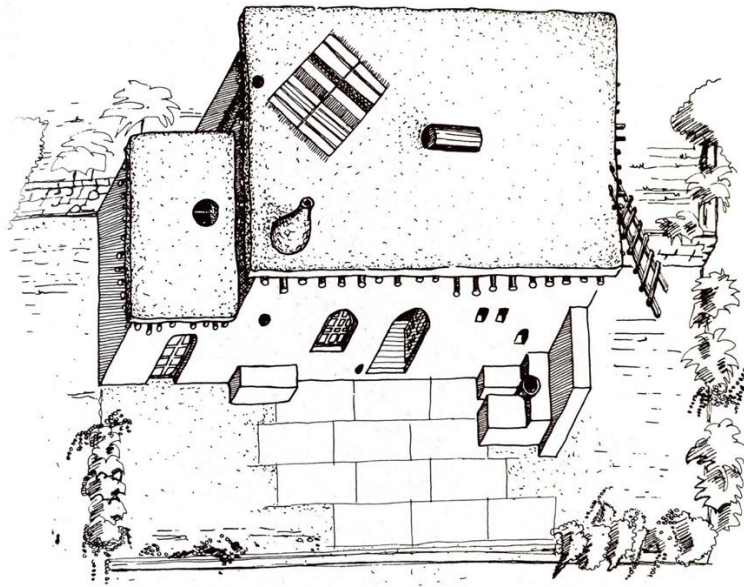


Figure 4: An illustration of a typical traditional Lebanese house in Younin (northern *Beqā'* valley) as depicted by Aïda Kanafani-Zahar showing the general living space (*dār*), the *mūne* room (*ḥzēne*), an animal shelter (*bēkie*), a bread oven called *tannūr*, the flat roof with a stone roller (*maḥdale*), two drying sheets (*ṣu'af*), and chimney (*madḥane*). Source of illustration: (Kanafani-Zahar, 1994)

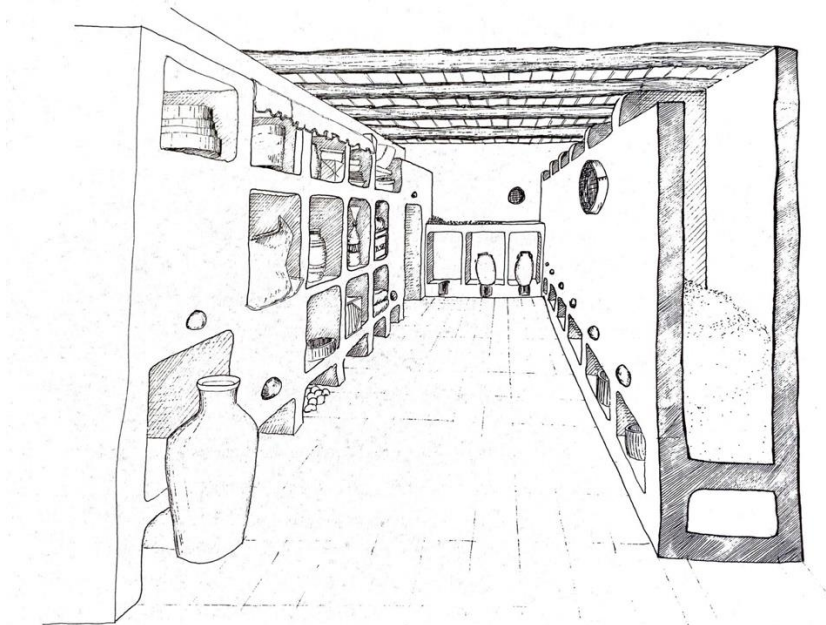


Figure 5: An illustration of a *mūne* room (*ḥzēne* or *beit el mūne*) depicted by Aïda Kanafani-Zahar showing the *tawābīt* silos on the right, the openings on the left where the smaller *kwēyir* were placed, and at the inner end where jars were stored. Source of illustration: (Kanafani-Zahar, 1994)



Photo 10: (Left) A black and white photograph of a traditional Lebanese village house, source (Alamuddin R.I.B.A, 1996), and (right) a photograph taken at the Terbol museum showing the traditional houses of the 19th century, source (UNESCO-Beirut, 2013).

During her investigation, Aïda Kanafani-Zahar (1994) also detailed the storage of non-dry *mūne* foods which used to take place in terracotta jars for the most part as well as pottery. These types of containers made from clay and reflect an additional layer of relationship with the land were preferred for their multiple purposes. She mentioned these purposes of terracotta jars and containers being their insulation ability and therefore protecting the preserved food from sources of deterioration (heat, humidity and light), and retaining desirable organoleptic qualities. Different forms, sizes and dimensions of such containers existed but the main difference was whether they were glazed or not. *Mūne* foods that were subjected to cooking or that contained liquids were stored normally in glazed jars whereas dry foods such as *kīshk* and seeds were kept in non-glazed ones. The general rule was to use one type of food within each container for precaution. Yet, if properly treated to clean the walls, some jars could be used alternatively with other foods. This is performed to reduce the risk of contamination or as a form or treatment for new jars. The technique utilized a base mainly an ash solution or an acid as they which would be boiled, cooled, and the clear solution was used to immerse into the jars for several days, after which the jars would be rinsed and left to dry before usage. Other forms of maintenance were also applied to fix slightly shipped or cracked jars or their aromatization. In addition to the separate *mūne* room that was in the past constructed inside households, Lebanese kitchens were also provided with food storage cabinets that were called *namlīeh*, a term that can still be heard to this day. As its name suggests, this type of storage cabinets were used to protect foods from ants (*naml* is the literal translation of ants in Arabic). The *namlīeh* consists of a wooden cabinet installed with mesh doors within which food and *mūne* would be kept protected. These cabinets were used up until the 1950s in Lebanon prior to the introduction of modern refrigerators (Al-Ghazzi, 2001). Today, the existence of separate storage rooms for the *mūne* has highly decreased amongst the advancement of housing construction, urbanization, marketization and decreased domestic consumption (Al-Ghazzi,

2001), and the use of terracotta and pottery was also replaced by new or repurposed glass jars (Chammas & Yehya, 2020). Yet, their remnants and today's continued forms of production and consumption do still remain as important constituents of memories that announce these traditions.



Photo 11: Photograph of a traditional *namlīeh* cabinet used in the past to store foods and *mūne* in kitchens. Photo credit: Beirut Heritage Facebook page (@BeirutHeritage)

1.2.5. Domestic division of labor, collective cooperation and the central role of women

The process of food preservation into *mūne* engages a complete cycle that begins from primary agricultural production and passes through a series of intricate steps of preparation and treatment based on hereditary recipes and practices that themselves mobilize whether individuals or entire communities. Above all, the preparation of *mūne* foods has been long known to be a women-centric activity and the role of women generally within household in Lebanon has always been imperative. The conventional division of labor within families in Lebanon since the past has been with men as farmers cultivating the land and with women taking on the general family obligations, childcare, daily housework and assisting in its seasonal maintenance. Most importantly in this case is that the preservation of food was performed solely by women (Al-Ghazzi, 2001; Kanafani-Zahar, 1994). This not only included the preservation of seasonal foods cultivated by the man but also her holding of the responsibility of her household's general food management, assisting the man in primary field agriculture (mainly during seeding and harvesting), and purchasing needed food commodities. Women controlled and decided on the types and quantities of foods that were to be purchased and on the rate of consumption as well. The women's skills in *mūne* production was passed down in generations. Women learned from their mothers as their mothers learned from their grandmothers, as so on. As Aïda Kanafani-Zahar (1994, p. 213) describes: [translated from French] “*The implications of indoor storage for women's role and power within the family unit*

are significant, as they have free access to household resources and manage them according to family needs without the control of men”; and her quoting of a man in (1994, p. 216): “A woman contributes in the same way as a man to the family’s riz’ (riz’: the productive wealth, land and animals”. In terms of *mūne* production, given that that production rises quickly during the harvesting season, women have also been documented to cooperate together in groups and consolidate their efforts in aiding each other, a term usually referred to as *ōne*. Not only that, but it fed into a greater cooperation within entire communities and villages that would come altogether to for assistance. That cooperation would be fed by what people call the sense of *jirah* or the feeling of *neighborliness*, which is described as “[...] with a situation that is highly socializing. People know one another intimately. In many important situations they act as a group yet leave room for individual initiative. A genuine feeling of neighborliness, or *jirah*, prevails.” (Tannous, 1949). This coming together of communities and particularly women most certainly increased and optimized efficiency, with this mutual aid having constituted an important economic component. They would meet for example on the roof of one of the neighbors, women would prepare the utensils and needed work surfaces, and would perform collective tasks such as with *kīshk*. These occasions would also open the floor for rich social interaction and expression of hospitality. Hosting women would bring her aiding neighbors food and drinks, and their gathering would be filled with discussions and exchange of advice on their applied techniques in complex *mūne* foods such as with *kīshk* (Kanafani-Zahar, 1994). As a return to the thankful favor the assisted women received, they would themselves participate in the next round of groupings for the mutual aid of the next neighbor; no debt is left non-returned. The art of *mūne*, its heritage importance, and sense of community cooperation is so well known and in need of preservation that children’s books have been developed specifically for that purpose, such as the case below with the book titled: “The Days of *Mūne*” by Youmna Jazzar Medlej and Joumana Medlej (2009).



Figure 6: Excerpts from the children’s book "The Days of *Mūne*" showing (left) a grandmother (*teta*) explaining *mūne* to her grandchildren in front of a typical *namlieh* cabinet, and (right) two women cooperating in the preparation of tomato puree. Source: (Jazzar Medlej & Medlej, 2009)

Box note 6: The different components of *mūne* preservation that contribute to their uniqueness and specificities

When thinking about what constitutes the specificity of *mūne*, several points arise and should be mentioned. It is not only the traditional recipes that have been transferred down many generations what makes *mūne* so special, nor is it the skills and knowhow in the production processes alone, or the qualities of the raw material, or regional versions of the same *mūne* product, and so on. It is in fact all of the above, together in some cases, or separately in other cases. Sometimes it is one of these factors that plays the dominant quality, and sometimes it is another. Sometimes, it is also the combination of two or more of these factors together. For example, the *Beqā'* valley is reputable for the desirable qualities of its *kīshk* as seen in section 1.2.3.3. This is due to several of these factors mentioned. On one hand, it is due to the quality of its two main ingredients, milk (yogurt or *labneh*) and cracked wheat (*burḡol*), both of which gain their desirable quality from their surrounding *terroir*. The dairy products are preferred in most cases to be sourced from goats for use in *kīshk*, and the *Beqā'* valley has long been known also for the rearing of small ruminants. The milk in itself builds its desirable characteristics not only from the breed of goats but also from the feed that the animals graze during their transhumance routes during which herds are moved between seasons from lower altitudes of the valley in winter to higher altitudes in summer. As for the cracked wheat (*burḡol*), the *Beqā'* valley is also known for its long history over thousands of years in cultivating wheat such as the famous *Salamouni* variety. It has even gained a reputation in the cultivation of wheat, being named the breadbasket of the Roman Empire. On another hand, it is the geoclimatic conditions which also play a crucial role in the drying stages of *kīshk* which take a shorter time given the lower average humidity and stronger solar radiation (known as Direct Normal Irradiation). Finally, probably the two most important factors which are at the basis of *kīshk* are the recipes and techniques themselves, and certainly the skills of women which are mobilized to achieve the desired end product. An example would be the specific movements of the hands in the step called the *f'arak* in which the *kīshk* is rubbed in between the palms of the hands of *farrākāt* (a group of 5 or 6 specialized women) in order to reduce the size of the *kīshk* into a finer flour form.

Similarly, each item in the *mūne* pantry could be looked at and analyzed for their link with one or more of these specificity aspects. These can be considered as what gives the *mūne* their unique quality value and which can be aligned with one or more of the below elements of specificity.

Types and quality of primary agricultural produce. These could be in the form of for example specific characteristic of fresh produce or animal breed

byproduct that make them suitable and construct the quality of specific products (such as the variety, size and dimensions of the eggplants used in *makdūs* or the specific variety of rose used in rose water distillate known as *Rosa Damascena*) or endemic varieties preferred in certain cases (usually named *Baladi*).

Skills and knowhow applied in traditional preservation practices. These are practices and skills of women that have been transferred down and over generations and developed in ways to optimize the use of surrounding conditions and available resources. Basing on the definition provided by Moity-Maïzi and Bouche (2011), knowhow holds a heuristic value and can be understood as [translated from French]: “*the set of skills acquired, incorporated, transmitted, which manifest themselves in the technical act and which suppose the mobilization of many knowledge and representations*” (Moity-Maïzi & Bouche, 2011, p. 27). These would take shape in the application of specific knowhow in mastering skills (technical, physical, judgement and perception) related to the selection of raw material and ingredients, preparation, processing and storage; for their ensemble creating the end preserved *mūne*. An example would be the parboiling, drying then cracking of wheat to result in *burgol* or the smoking skills applied in the roasting of *frike* or the typical *f'arak* step in the production of *kīshk* as mentioned above.

Specific generation-old recipes with regional variations. This is different than the actual skills of preservation but rather relate to the combination of ingredients which when used together reveal a specific organoleptic and preservation quality to the end product. The base recipes can also slightly vary from one region to another which adds to the diversity and specificity. An example would be the different local ingredients mixed together to create the *za'atar* mix (*za'atar* leaves, sumac, toasted sesame seeds, and salt). Another example would be in the different types of milk, proportion and variety of wheat, and fermentation or drying times used in the production of *kīshk* in different villages.

Effect of local geo-climatic conditions. Given the diverse geography of Lebanon, it is normal to have varying types and qualities of agricultural production distributed around the country with slightly varying start and end dates of the seasons. The soil, water, temperature, humidity, and many other varying factors ultimately build on the end quality of produce. Typical reputations for the *Beqā'* valley's superior produce are for example in its grapes (table grapes and vineyards), apricots, *makdūs* eggplants, animal by-products, and many others.

Social settings and ways of consumptions. These are differences in customs and habits that arise from the diversity of social groups in the country such as religious differences for example and which have an effect on food consumption. Christian communities for example who consume alcoholic beverages perform additional seasonal *mūne* activities. These include for example the distillation of *'arak*, the eastern Mediterranean indigenous alcoholic drink based on anise and grapes. This beverage is normally consumed with the *Mezze* but not in Muslim communities.

1.3. EVOLUTION OF *MŪNE* INTO TODAY'S CONTEXT

1.3.1. Producers, consumers and inexistent regulation of *mūne* foods

The historical practices of preserving *mūne* foods from seasonal produce for the filling of domestic food needs in winter and times of uncertainty was a main condition for ensuring food security. It was a strong sign of autonomy in times where people little depended on the purchase of foods and restricted that to even in meats and bakery. Today, that culture still holds a strong presence yet in a different, but probably re-emerging, form. Domestic production of *mūne* in households has today greatly decreased as a result of several factors. These factors normally include internal exodus to cities for the seeking of employment and education, migration, technological advancements, increased imports of food, urbanization and the change of lifestyle. These on one hand decreased the proximity and weakened the link of individuals to their land, and made food readily available on another. Women no longer need to necessarily prepare their own food household's stock with food being available and accessible with the emergence of markets. Women have also been increasingly participating in the job market and that has contributed to that decrease. *Mūne* rooms and the *namlīeh* have today disappeared from everyday households. Certain steps in the preparation of *mūne* have also evolved and changed to incorporate electric grinders for example (machine grinding of *kīshk* instead of being done by hand through the *farrākāt*), raw material purchased from the market, terracotta jars replaced with glass and commercial plastic bags instead of silos. These facilitate tasks and greatly decrease preparation time although some women would still consider them as a lower quality than what they are used to (Kanafani-Zahar, 1994). The value behind today's *mūne* foods has become largely heritage, cultural and nostalgic. The link with the past gastronomy is not broken but it has evolved, and in the words of Barbara Abdeni Massaad (2017, p. 7): “[...] *“the grandmothers’ university” is alive and thriving, that wonderful institution through which age-old experience is passed on from mother to daughter, a family inheritance well worth preserving*”. What started as a means of domestic household production has today shifted into an active market oriented and economic activity. The consumers of *mūne* are still the same, meaning the majority of the population. Being majorly consumed in rural and mountainous areas which were far from centers of population concentration in cities and sources of import and markets, the consumption of *mūne* was said to have been carried with people from the rural to the urban environment. This phenomenon of internal, just as external, migration has continued up to modern times where especially in its years of conflict, a large population concentrated in the capital, Beirut (Esim & Omeira, 2009) with smaller and intermediary cities’

populations more than quadrupling between 1980 and 2016 (Lerner et al., 2013; Thapa & Murayama, 2008). Despite having little available research on consumer behavior (Hwalla & Khoury, 2008; Nasreddine et al., 2006; Tueni et al., 2015), it is strongly suggested that consumers have retained a strong palate to the traditional gastronomy and consume traditional meals (and their inherent *mūne* ingredients) on a regular basis at least twice a day (Tueni et al., 2015). This is how Beirut and other peri-urban zones can be considered as a breeding ground for traditional consumption habits up to this day. With Lebanon's small surface area of 10,452km², it is also likely that citizens retain a link to their proximal villages of origin and thus hold a potential customer loyalty. *Mūne* in cities were in the past also known for their gained popularity especially during times of war and uncertainty when people faced challenges in securing their food. That was true even in modern times when security threats and bombardment complexified electrical feed and that is when refrigerators were rendered unreliable for food storage (Kanafani-Zahar, 1994); a historical event being re-witnessed yet again today with the grave post-2019 economic meltdown. The same objective resonates; *mūne* as a means of autonomy and survival.

With evolution in the lifestyles and social habits of families in today's modern day, the presence of '*mūne* producers' have emerged, an opportunity seized by some industrial facilities even. Today, *mūne* produced domestically by women in their households, although it still does exist, has greatly diminished and is a disappearing practice. Even if rural women still produce *mūne*, they do not do so at the same pace, scale, or range anymore but rather produce only one or very few items (Massaad, 2017). Today, we can see *mūne* foods being produced elsewhere, by formal institutions including private industrial producers, small to medium artisanal enterprises and most importantly cooperatives. Describing the involvement and dominance of commercial industrialized (or mainstream) producers in such a traditional and specific cultural practice is difficult. What can be said for certain is that there are two types of producers to consider in this case. The first appear to conform to the cultural frame of *mūne* by retaining a strong link to the land, involve traditional but modernized (semi-industrial or semi-automated) production techniques, utilize local natural ingredients with ecological packaging without artificial additives, and rely mainly on women and their skilled knowhow. This is the case of cooperatives and some small-to-medium artisanal enterprises that tend to be more family-owned. The other type is that which includes private food producers that, could also possibly be family-owned, manufacture products in response to market demands to maximize profit while decreasing cost. This type of producers do not necessarily invest direct attention to or prioritize the retaining of traditional manufacturing techniques, do not rely on skilled workforce, could integrate highly technological and automated industrial machinery, are prone to produce off-season therefore not essentially relying completely not partially on local produce, use artificial additives or other atypical ingredients to increase product stability and shelf-life while possibly using non-conventional packaging as tin cans. In that sense, it is equally important to mention that the differentiation or fluidity to shift from the first type of production to the other is quite vague. This added layer of complexity comes from the structure of the Lebanese food production sector exists mainly because the economy has from one hand encouraged free markets and production but has from another hand disregarded clear categorization and protective legislation or standardization based on end product patrimonial characteristics rather than size and operations. This gives the opportunity for any productive

body to produce, import, re-pack, and re-sell food items with relative liberty with regards to the type of food products. But generally, reports estimate that 95% of businesses in Lebanon are considered as SMEs¹², because less than 100 individuals are employed, out of which a significant number of family-owned businesses exist (MoET, 2014). Food products are however legally subjected to the Lebanese Standards Institution (LIBNOR) which is a public institution established in 1962 and is affiliated with the Ministry of Industry. This institution¹³ is responsible for the preparation, publishing and amendment of national standards including foodstuffs. Yet, one should question the entire capability and efficiency of the Lebanese official institutions in monitoring and controlling the productive sector. The weak extent of control in regard to the food sector in general and the *mŭne* in specific has also allowed informal food producers (unregistered or having expired documentation) to engage in operations as well. The Directory of Exports and Industrial Firms in Lebanon (IDICO) lists productive industries in Lebanon according to one of three classifications: their sector, commodity, or geographic location, but not all three together. The directory considers the industrial facilities in which a minimum of 8 individuals work. According to their most recent statistical report on the industry in 2017 which is publicly available on their website¹⁴, they report that a total of 1,401 food and beverage facilities existed in the country in 2017, consisting the highest proportion 22.57% of the entire available industries. The report also details the geographic distribution in which the *Beqā'* governorate ranks second top in the number of food and beverage industries (257) after Mount Lebanon (602) but the former has the highest proportion with respect to other industries (40.6%). The reported figures and percentage proportions per governorate basis are found below in Table 2.

Table 2: Number and proportion of industries in the food and beverage sector in Lebanon per governorate. Source: (IDICO, 2017)

Governorate	Number of food and beverage industries sector	Proportion of food and beverage industries
Mount Lebanon	602	16.91%
North Lebanon	150	27.52%
Beirut	111	22.33%
South Lebanon	114	24.26%
<i>Beqā'</i>	257	40.60%

¹² Lebanon does not have an official definition for small to medium enterprises (SMEs). Various definitions were used by different entities of public and private sectors. The Central Bank (Banque du Liban) for example defines SMEs as enterprises by their annual turnover (less than LBP 15 billion). The Kafalat program defines SMEs on the basis of the number of employees (40 employees). A report by the Ministry of Economy and Trade (MoET) with support of the UNDP developed a definition for SMEs in 2018 under the Lebanon SME Strategy – A roadmap for 2020 (MoET, 2014). In that strategy report, a definition for SMEs was proposed on the basis of two factors; turnover and number of employees. The maximum thresholds that divide the categories by number of employee to annual turnover in LBP are; respectively: 1) micro-enterprises: 10, 500 million, 2) small-enterprise: 50, 5 billion, 3) medium-enterprises: 100, 25 billion, and 4) large-enterprises: over the latter threshold.

¹³ <http://www.libnor.gov.lb/CustomPage.aspx?id=20>

¹⁴ <https://www.lebanon-industry.com/home>

Nabatieh	77	27.90%
Baalbeck-Hermel	71	41.04%
Akkar	19	34.55%
Total	1401	

On another hand, the counterpart smaller artisanal producers are not as advantageously positioned. These producers are for the most part women food processing cooperatives that are registered as cooperatives and legally bound to the Directorate General of Cooperatives (DGoC) at the Lebanese Ministry of Agriculture (MoA). This type of cooperatives are the main subject of this study as they are reputable and known for their specialized production in traditional *mūne* foods in Lebanon and their employment of women (ILO, 2018). Cooperatives in Lebanon, just as internationally, are expected to operate as autonomous association of voluntarily united individuals having common economic, social and cultural needs. They also follow the 7 principles of cooperation adopted by the International Cooperative Alliance in 1995. These are (1) voluntary and open membership, (2) democratic member control, (3) members' economic participation, (4) autonomy and independence, (5) education, training and information, (6) cooperation among cooperatives and (7) concern for community (S. Smith, 2014). Although they have faced an unstable route in Lebanon, cooperatives today are becoming an increasingly more attractive organization for rural development due to their ability to help meet development objectives of donors, their mobilization of united groups, collective benefit and their bridging with the local context. These qualities become as important as ever today given the economic meltdown that the country has been facing since end 2019 and the urgent needs for structures that are able to enhance income generation and livelihoods, especially those of women. Yet, a long route of considerations should target the development of the cooperative sector especially since they are known to have a weak role in the economy, many are non-active (virtual), are not operating in compliance with the principles of cooperation, are polarized, and are vectors for attracting international aid and thus could be used as a political interference tool. More details on these issues will be addressed in Part 2 of this dissertation. What should be highlighted at this stage is the unique positioning of women cooperatives as specialized *mūne* producers. They are localized in typical agricultural settings around Lebanon with around 125 registered out of 1,238 (ILO, 2018). This type of cooperatives usually differs in configuration by centralizing production in an atelier-like workshop rather than the mass collection of products cultivated separately by a group of farmers, as in the case with agricultural cooperatives. Such food producing cooperatives are also noted to have varying infrastructures in terms of equipment, technological advancements and quality of production (ILO, 2018). In his PhD study on two specific traditional Lebanese products ('*arak* and orange blossom water - *mazahr*), Claude Challita (2010) also distinguished between two types of producers; also artisanal and industrial. He however took a slightly different perspective by considering that artisanal producers have a factor of self-consumption depending on their individual conditions and capacities, they are not well responsive to agricultural policy except with donations and do not always have the capacity to repay debts. He considers industrial producers as more technologically advanced, intensive and efficient, well connected upstream and downstream and a place of innovation and competition. In the

case of my study, I consider that both artisanal and industrial producers with market available products are both legally registered productive entities that are capable of performing a full production cycle for non-domestic consumption (adequately equipped although in much varying degrees), with upstream supplier and downstream market or consumer connections. The domestic producer-consumer are considered in my case individual of family-based households that are not legally registered and who could possibly be performing sales in informal channels. Some of the main factors to understand with regards to the difference between private producers and (artisanal) cooperatives' positions and their intersections in this case are:

- 1) Different legal registration and institutional attachment exists (cooperatives linked to the DGoC and MoA),
- 2) Private producers are much more dominant in the Lebanese market,
- 3) They have the liberty to produce foods whether in a traditional sense of practices or not given that no specific regulation or standardization exists that differential *mūne* foods from others. They can therefore use imported agricultural raw material that are not linked to the terroir or use artificial additives, and so on,
- 4) They have a higher working capital and production capacity generated from business profits of their pro-profit enterprise structure,
- 5) They have more exposure, access and reach to the general public since their products are available year-round and are dispatched in commercial outlets while that of cooperatives are not. Even when inspecting entries in the Directory of Exports and Industrial Firms in Lebanon (IDICO), it was noticed that only a few cooperatives are listed whereas many that were targeted by this study were not apparent. Even though few and rare descriptions of this type of women food cooperatives exist, much-needed fundamental information and exposure are still needed and therefore constitute a pillar objective in this study.

1.3.2. Typical market dynamics of *mūne* foods

Given that traditional *mūne* foods are typically seasonal and made by small producers, they are not normally found in conventional retail outlets. The reason for that extends from the inconsistency of supply that relate to conditions of the terroir from one hand and those of the producers from another. From the terroir side, the production season itself which is limited and extends over different periods of time depending on the harvest. Production also faces geographic and climatic variations that could affect yield and quality of the raw material caused by fluctuating conditions in temperatures, precipitation, etc. On another hand, small producers themselves have varying capacities, possibly adopting non-standardized practices that could ultimately result in end products that might have inconsistent qualities and organoleptic characteristics. These are all factors that should be considered when reflecting on commercial marketing outlets. Inconsistencies in quantity and quality are usually not preferred by mass retails such as supermarkets that tend to supply products in large stable quantities with homogeneous and standardized quality and in regular frequent rates to meet the demand of their consumers and maintain their shelves stocked. Another important point is that retails naturally prefer to maximize their profit margins and could greatly resist the integration of

products from small producers whose lack of economy of scale inhibit them from producing at low cost as large industries. This is even apart from the added-value price tag that should come with products of heritage and traditional knowhow such as *mūne* foods. But the rule is not absolute and traditional local foods are slowly but surely starting to become introduced in conventional market outlets (Pugliese et al., 2013). Organizations such as the ‘Terroir du Liban’ for example is a sales outlet of *mūne* foods developed by a local NGO called Fair Trade Lebanon, a member of Fair Trade International, La Collège Culinaire de France, and Association des Acteurs du Bien Manger. This type of sales body backed up by a non-governmental organization was able to establish its national reach by creating its own sales boutique in Lebanon while expanding to other local and national outlets as well as an international presence in Europe, GCC, North Africa and worldwide online platforms¹⁵. Other examples also exist such as Rural Delights (Atayeb Al Rif) Cooperative (AAR), which is a marketing cooperative hub mostly for rural women cooperatives that produce *mūne* in Lebanon with their brand ‘Lebanese Village Foods’ being successfully introduced to urban and peri-urban cities as well as internationally in certain quantities.

Traditional local produce and foods such as *mūne* made by small producers can be dispatched today in the local market in several channels. These are mostly non-conventional in the meaning that they do not follow the trail of mass-produced foods of commercial value chains. The most common channels adopted today include farmer’s markets (souks), seasonal food events and food fairs, direct sales from small producer to consumer using connections and social circles, and the newly emerging trend of social media and online sales. Generally speaking, Lebanese consumers today continue to revert to traditional food retailers unlike in other countries such as in Qatar where residents were seem to rely on large-scale retailers in the food chain; with differences being factored due to different ‘institutional landscapes’ (Seyfert et al., 2014). An article by Garçon and Zurayk (2011) mentions that although rural populations in Lebanon have been increasingly exposed to the ‘commodification’ of food for several decades, the patrimonial and cultural value of traditional foods is recognized and id reflected by the emerging number of boutiques opening in the urban city of Beirut as in the Hamra quarters. As mentioned in section 1.3.1, one should understand that the capital Beirut is a city where millions of people, most of whom are originally from the rural landscape, have resettled for employment. To this day, people retain a strong link to their hometowns, and this is where many rely for their supply of traditional *mūne* foods. Families regularly return to their hometowns not only for visits but also for the purchase of specific *mūne* foods from local producers who could include individual women they are familiar with or small producers if any. Kanafani-Zahar (1994) briefly reflected on that point when she mentioned that once a week, the head of the family would go and acquire a food basket as well as fruits and vegetables.

Traditional farmer’s markets known as souks are also a familiar space that is known for the direct sales of produce and *mūne* foods directly from producer to consumer. These spaces will be depicted as ‘Temporary joint venues’ (section 7.3.3) where a rich dynamics of social interaction is made possible with an underlying theme of authenticity, history, and food culture. These arenas are popular with consumers looking for trusted sources for their *mūne* foods as

¹⁵ <https://europe.terroirduliban.com/fr/pages/find-us>

they are considered where the products are handmade in accordance to traditional practices usually associated with *mūne* foods although labeling or certification is not always evident. In fact, a recent post-economic meltdown study by Gholam (2022) shows that not only are 62.3% of Lebanon households not able to trace the source of their foods, most producers themselves (67.4%) do not have or are not willing to invest in the acquisition of any certification. Despite these figures, the same study mentions that the general public in Lebanon has in fact with time tended towards organic agriculture and has been noted to be shifting towards tradition and authenticity. Yet, according to the same reference, the core notion of quality (section 1.1.3) is still quite debatable in the Lebanese arena and this is a probable reason behind the delay in the development of certified products and alternative food networks. Similar statements have been also echoed by Pugliese *et al.*, (2013) whose authors acknowledge that the ‘high quality’ factor of the food products is not guaranteed and that certain food safety outbreaks have, to a certain extent, negatively affected the reputation in some instances but that the actual and potential commercial value of these products remain very high. For now, farmers market and souks seem to suffice the attraction of loyal consumers interested in returning to authenticity and local heritage consumption. Even producers seem to be attracted to these venues as well. A PhD study by Rana Taher (2018) quoted a farmer’s preference to visit the weekly market in the South of Lebanon where producers can sell what they make. This study will further expand on this point as part of its analysis in later sections and will show how the main players in *mūne* production, cooperatives, similarly attend the same temporary sales venues. Farmers market and souks are temporary events that take place either in specific regular frequencies, usually weekly such as Souk el Tayeb, or are organized in special occasions such as high season periods as Christmas and in summer festivals. Organizers are also known to encourage this type of dynamic spaces where producers and consumers get to connect directly without the influence of middlemen. This therefore is usually hoped to maximize benefit for producers, expose consumers to local and traditional food sources, and aim for building a direct and sustainable relationship between the two. Souks have been reported to be a rich ground for the exposure of what is known as *Baladi* products which are sourced from local and usually rural origins (literal translation of *baladi* being ‘my country’), and therefore are mostly constituted of *mūne* foods. Another more recent addition to the exposure of foods and landscapes are what has grown to be known as rural tourism in Lebanon. These are activities, sites, trails, guesthouses or others that are organized and set up in rural regions as a form of attraction for urban dwellers. A study in 2017 showed that 70% of a pool of 436 Lebanese individuals residing in urban Beirut actually had a preference to integrate cooking and traditional food tasting should they plan any rural activities. But the study also showed that Lebanese visitors tend not to differentiate (or do not know the exact difference) between food as an activity and food as a service. Yet, along with sightseeing, wild-life observation, and wine tasting, food has been acknowledged as a safe, traditional, and authentic activity which has a strong position in rural tourism in Lebanon (Ghadban *et al.*, 2017).

“Baladi are the foods bought “from the village” by urban people returning to their region over week- ends; baladi are the “natural and healthy” eggs, dairy and honey coming from extensive farming in rural areas. The concept of baladi is widely known in Lebanon and the word,

albeit its meaning is far from being unequivocally established, seem to be the most appropriate term for local foods”.

(Pugliese et al., 2013, p. 3)

1.4. CONCLUSION OF CHAPTER ONE

This first chapter shows how the practice of traditional preservation of *mūne* food in Lebanon has a root link to tradition, culture, and village life which has evolved today into the market. It is not a commodity in the commercial sense but one which is rather in demand by the people who are still very aware, loyal and critical to its qualities. The preservation of *mūne* foods is on one hand linked to the natural heritage of the landscape and on another it has a dimension of heritage created by the human. What started as a means of survival by collecting the available surplus of seasonal harvest in every area and to preserve it using traditional techniques and recipes passed down from one generation to another. The preserves would then be stored as pantry foods for the remaining non-seasonal or non-productive days of the year. Yet, the *mūne* is a larger understanding than the simple techniques and recipes applied. It has dimensions that elevate the role of women domestically at historical times by managing and taking decisions in the way food was consumed and preserved, and socially by mobilizing communities and the interaction between them. The culture of food preservation exerted its presence on the landscape through humans adjusting, terracing and manipulation of the land to cultivate and survive, and also at the level of households which were constructed with food preservation in mind via the different storage units for example. Therefore, the act of traditional preservation of *mūne* foods is a physical manifestation of the cultural heritage which represents identity, community solidarity, and collective work, women engagement for the survival of rural households. It has the ability to unify the country in its familiarity and commonality, while it also has the ability to manifest in specific forms or special versions from slightly differing from one village to another or even from one home to another. It has the characteristic of being a universal identifier for the Lebanese culture while maintaining a level of local specificity.

CHAPTER TWO. THE POSITION AND CONTEXT OF THE TERRITORY IN RELATION TO TODAY'S *MŪNE* PRACTICES – CASE OF THE *BEQĀ'* VALLEY

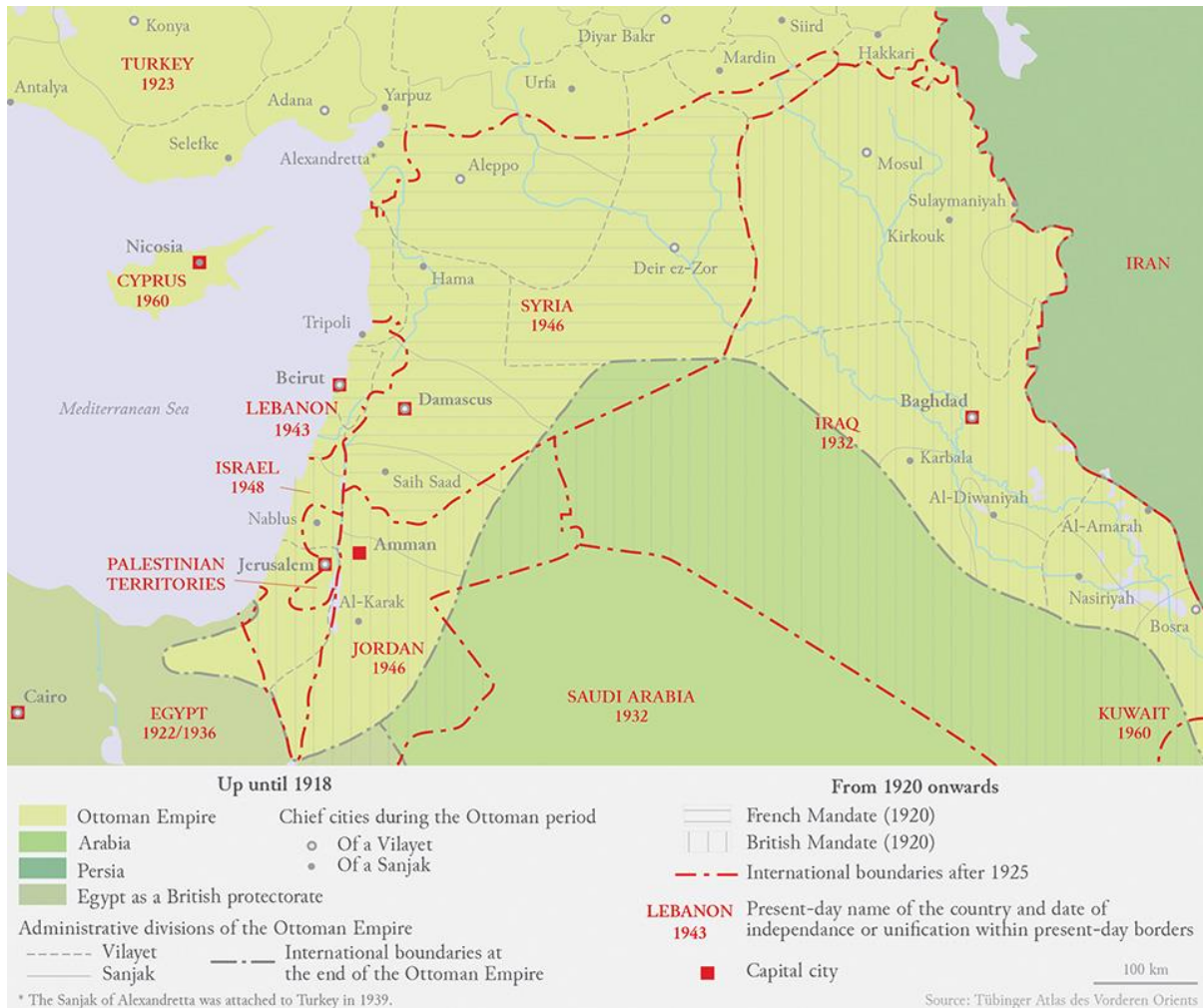
Traditional *mūne* foods are vectors of heritage and maintain to this day a direct link to the land and small local producers. It is a reflection of what the terroir has to offer, an assembled basket of seasonal goods that embody the skills and mastery of women. Given that fact, preserved *mūne* foods are a direct result of the surrounding territory and its local agricultural cultivation. *Mūne* is therefore to be considered as an agricultural (by)product procured directly from local produce in most cases. This section will provide a description of the *Beqā'* valley as the main territory in this study. From this chapter, the reader will be able to construct an understanding of what makes the *Beqā'* valley a suitable space for this study. The position of the *Beqā'* not only in relation to *mūne* will be considered, but rather in addition to other various reasons that make the *Beqā'* valley the first logical choice. These factors include having the *Beqā'* valley the main agricultural producer in the country (i.e. proximity to raw material and concentration of food processing activities), its geo-climatic conditions that could be differentiated from the remainder of the country (delimited natural landscape, temperature, humidity, microclimates, direct solar irradiation), its location being the longest border with the neighboring county (Syria), being the only terrestrial crossing abroad, having protected archeological sites, and others. This become more true since, as we have seen, the preservation of *mūne* foods in fact transcends local specificities on one hand, but also exhibit regional variations on another hand. Hence, both territorial and extra-territorial characteristics can be demonstrated. The *Beqā'* valley's history and relationship to traditional foods will also be explored in that sense. Finally, the socio-economic condition of the valley with respect to those witnessed nationally will be presented and especially in terms of the emerging challenges as a result of the post-2019 economic crisis. Together, the collection of these factors will form a holistic description of the territorial context and will justify why the *Beqā'* valley makes a suitable territory to explore under this study.

2.1. UNDERSTANDING THE STRATEGIC GEOGRAPHY OF THE *BEQĀ'* VALLEY

2.1.1. Some starting clarifications on the administrative divisions, disproportions and governance at the national level

As explained in section 1.2.2, Lebanon has had a long history in occupations, negotiations and conflict which resulted in often changes in its borders until its independence in 1943. It was under the Ottoman rule between the 16th and 20th century in which varying divisions commonly changed and applied with varying extent of autonomy as being ruled at the time by regional chiefs called *Emirs*. During the Ottoman rule, circulation was more fluid and taxes were collected for payment to the Sublime Porte. After the collapse of the Ottoman Empire,

the former Ottoman Arab provinces in the Middle East were broadly partitioned as a result of the Franco-British Sykes–Picot Accords of 1916 (Traboulsi, 2012). These were divided between French and British zones with France declaring the establishment of the Greater Lebanon state on 1 September 1920 which created today’s international borders (Map 3) of the Republic of Lebanon. To this day, some territorial division systems remain from the days of the Ottoman rule such as for example some names of administrative divisions as the *caza* (district), positions as the *kaymakam* (sub-governor) and the *mukhtar* (village chief), and land tenures as the *waqf* (properties donated to religious institutions) and *musha’a* (village common lands).



Map 3: Administrative and state boundaries in the Levant region between 1880 and 1948. Source: (Verdeil, 2019)

Today, Lebanon is divided in three main administrative levels. These are the (1) Governorates or *Muhafazats*: 8 in total, (2) Districts or *Cazas*: 26 in total and (3) **Municipalities** as local authorities. The *Muhafazats* and *Cazas* are represented in Figure 7. The *Beqā'* valley itself is inclusive of two *Muhafazats* (governorates of Baalbeck-Hermel and *Beqā'*) and 5 *cazas* (Hermel and Baalbeck in the Baalbeck-Hermel governorate and *Zaḥle*, West *Beqā'*, and Rachaya in the *Beqā'* governorate). Attention should be given not to confuse the *Beqā'* valley in its natural landscape (inland surrounded by two mountain chains) with the names assigned for the administrative divisions included at the *Muhafazat* and *Caza* levels.

The same applied to the names of the *Cazas* which are based on certain largest cities/towns such as *Zahle*, Baalbeck, Rachaya, and Hermel.

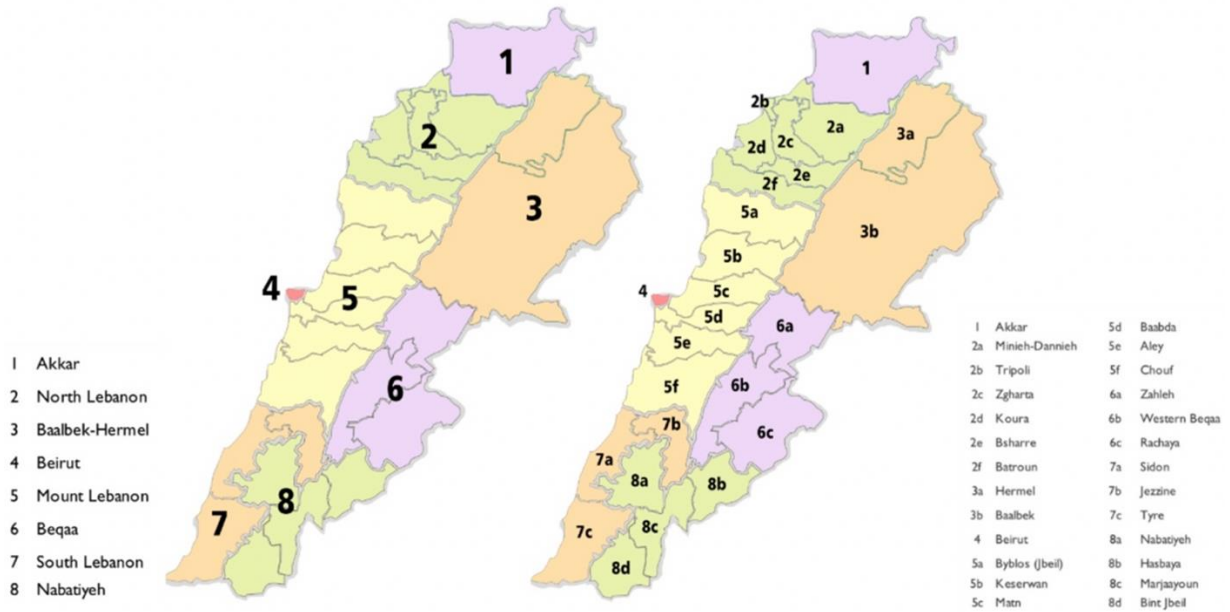


Figure 7: Contemporary administrative divisions of Lebanon with (left) Governorates or *Muhafazats* and (right) Districts or *Cazas*. Source: compiled by author from (Lebanese Arabic Institute, 2017)

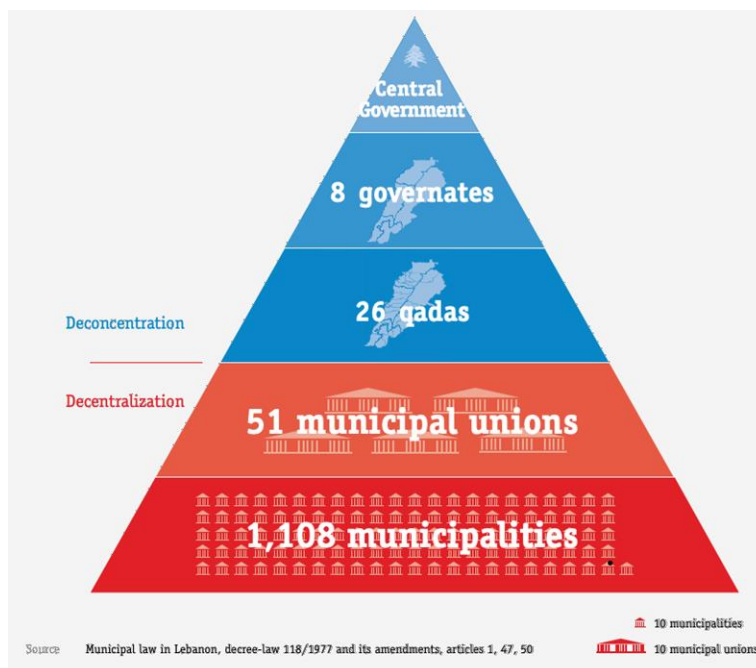
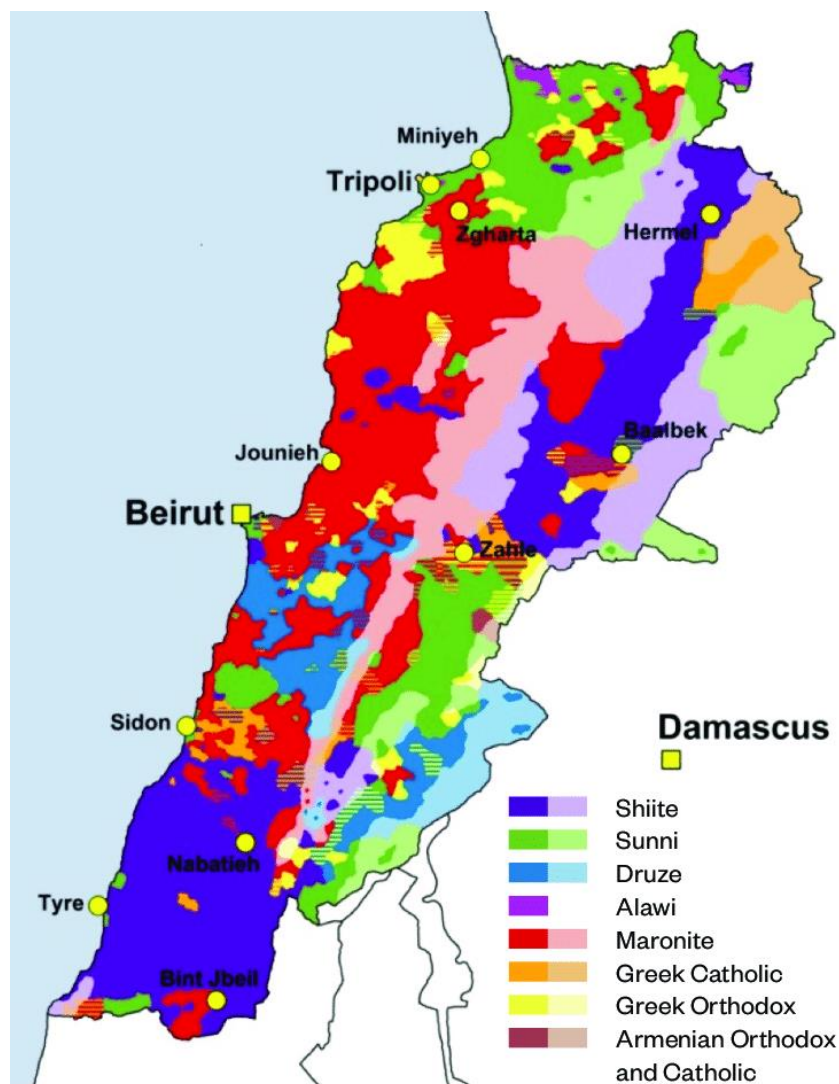


Figure 8: Structure of government tiers in Lebanon¹⁶. Source: (LCPS, 2015)

¹⁶ “Deconcentration consists of a regional representation of the central government where the Mohafiz and caimacam (used here as kaymakam) are appointed by decree of the Council of Ministers, while the mayors of municipalities are directly elected from the people, as defined by law. The municipalities are therefore considered the only autonomous elected body” (Darwich, 2018, p. 25).

When it comes to this administrative division, it should be noted that some challenges exist to this day. For instance, some *Muhafazats* and *Cazas* were created relatively recently such as the *Cazas* of Minnieh-Dennieh, Bcharri, Jbeil, Rachaya (in the *Beqā'* valley), Hasbaya, Nabatieh, and Bint Jbeil in 1954 while the *Muhafazats* of Akkar and Baalbeck-Hermal in 2003. These were created progressively after the independence in order to serve two objectives; on one hand the creation of new administrative jobs and on the other hand to improve the representation of various communities (Verdeil, 2019). Lebanon's demographics are in fact very diverse especially at the religious denomination level (referred to as religious sects). The distribution of these denominations is not left to chance and in fact has also been affected as a result of the country's past history and turmoil. In today's Lebanon, territories have still dominant religious characters and are even distributed according to that basis (Darwich & El-Moussawi, 2012). A map demonstrating that religious diversity is found in Map 4.



Map 4: Distribution of religious sects in Lebanon. Source: (Presler-Marshall et al., 2017)

This immense diversity is a fact that has been at the root cause (or used as a cause even to this day) behind many conflicts, mobilization of public opinions and movements, concentration and distribution of the population with time, even episodes of violence and international interventions. So much so that it was a highly influential factor in the 1975-1990 Lebanese

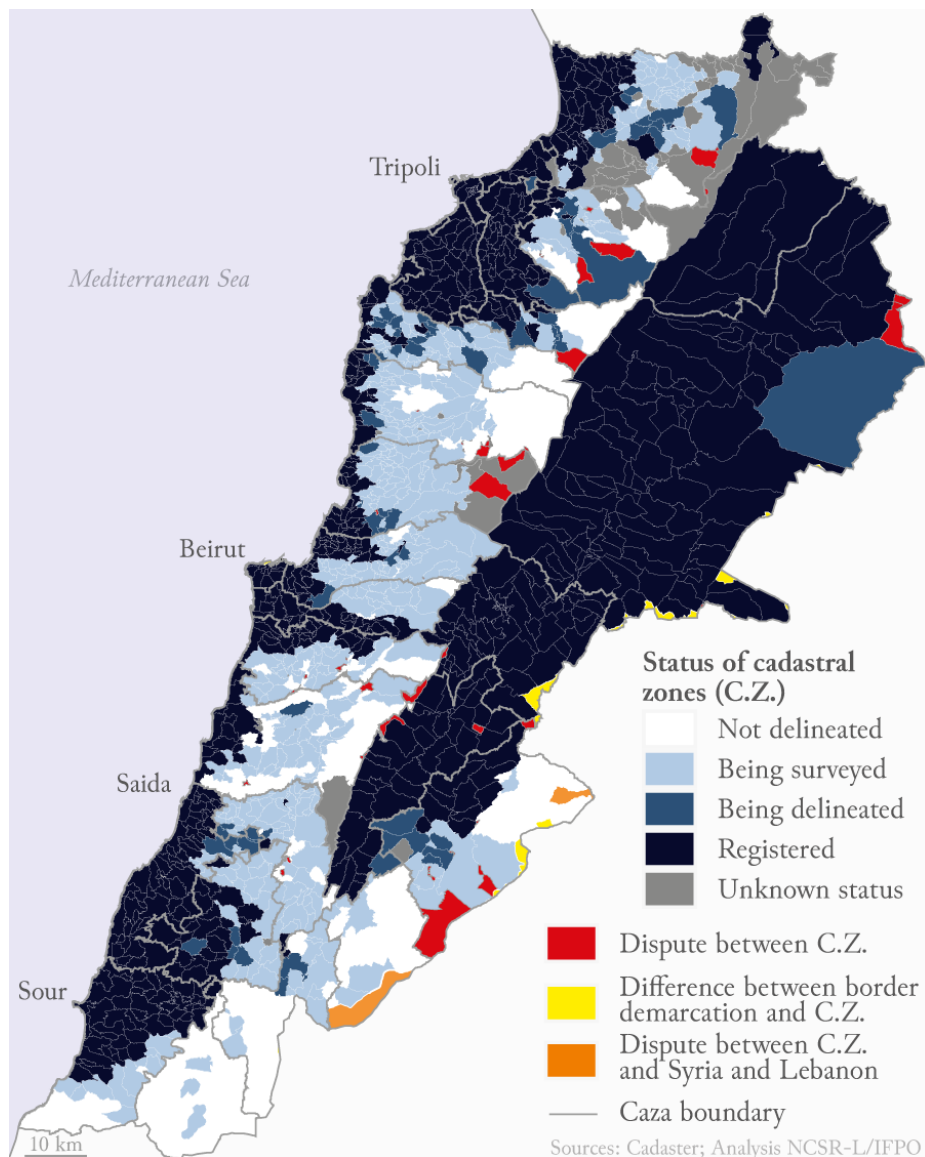
civil war and issuing of the *Taif* agreement in 1989 as a form of Muslim-Christian National Pact that designated reconciliation, ease of tension and return to political normalcy and balance of power¹⁷. In fact, the religious-based consociationalism system (could also be called political communitarianism) where the political power-sharing representation is based on religious sects and their demographic weight is not a new system of the time. It was solidified during the mandate of France to Lebanon in the 1926 constitution and is still applied to this day but it was first introduced in the Ottoman days by mid-nineteenth century as influenced by Europe and the powers of the political game at the time (Ghiotti & Riachi, 2013). This system created imbalances which complicated territorial management and land tenure with time. Because of that system, certain groups such as for example the Maronite Christian clergy in Mount Lebanon were able to collect vast property. In an article by Ghiotti and Riachi (2013), the authors cite sources which report that since the 16th century, the land classification and acquisition (or ceding) of land from noble families formed this *waqf* properties which by the 19th century cumulated to up to one-third or one-half of Mount Lebanon's cultivable land. Such issues and their unstable evolution with time have also been an unfortunate cause of dispute between actors (.ibid).

The territorial management of the country is therefore highly complicated by the religious-based consociationalism system that is believed to ensure representation. The current territorial division at the level of municipalities is also still not yet completed. During the French mandate of Lebanon, land registries were established based on cadastral zones that represent cities, towns and villages of the country. However, the Lebanese state to this day has not yet completed these cadastral zones. According to the United Nations Office for the Coordination of Humanitarian Affairs (UN.OCHA, 2017), the Cadastral Boundaries represent the geographic divisions of Lebanon as per the government. In the latest shapefile found on their website and used in the production of maps in this study, it is mentioned that the total number of Cadastral Boundaries that Lebanon holds is 1623. Each boundary could include 1 or more villages or municipalities; or 1 or more cadastral boundaries could represent one municipality. According to the General Directorate of Land Registry and Cadastre¹⁸, four decisions constituted the foundation upon which the reform of real estate and agriculture took place, and which served to harmonize the legal status and transactions. These were selected as due to a lack of trust of banking and financial institutions in the former Ottoman registry of property called the "*Daftar Khana*" (record room). These are the decisions no. 186, 189, 188 of 1926 and legislative decree no. 12 of 1931, noting that since then adoption, certain amendments were carried out, the latest of which the website mentions were back in 1983 (amendments no. 44, 45 and 46 of 20/04/1983). Therefore, to this day, certain areas in Lebanon to this day remain without delineation whereas others have not been validated or officially registered and some remain under dispute (Verdeil, 2019). These disparities are shown in Map 5. Even the national boundaries of the country remain unofficial and disputed, both in territory and maritime fronts

¹⁷ Lebanon is a parliamentary democratic republic. An important constituent of the post-civil war reform was the adoption of the consociationalism power sharing system that assigned the three highest offices on the basis of religious affiliations: the president as a Christian Maronite, the Speaker of the Parliament as a Muslim Shiite, and the Prime Minister as a Muslim Sunni.

¹⁸ <https://www.lrc.gov.lb/en/content/historical-overview#overlay-context=ar>

with Syria to the north and east, and with Israel (Palestinian territorial conflict) to the South. Since the French mandate of Lebanon and Syria, about 80% of the border was demarcated between Lebanon and Syria and 71 ground points were positioned between Lebanon and Palestine (Abdel-Kader, 2012). After the independence, the completion of the demarcation was never fulfilled. Ambiguity and disagreement on 36 points remain on the border remain in areas as the Ghajar village and Deir al-Ashayer on the Lebanese-Syrian border along with the Kfar-Shuba Hills and the Chebaa Farms on the southern border with Israel (.ibid). The southern border has been patrolled by the UNIFIL (United Nations Interim Force in Lebanon) since 1978 and headquartered in Naqoura as a peacekeeping mission. The UNIFIL follows the Blue Line of the year 2000 which was determined following the withdrawal of Israel from South Lebanon. Most recent negotiations (and disputes) have been taken up in attempts to delineate maritime borders following the discovery of natural gas reserves off the coast of the Eastern Mediterranean. These ambiguities not only affect the sovereignty of Lebanon in its international borders but have been zones of frequent conflict and violence that have greatly contributed to instability over the years.



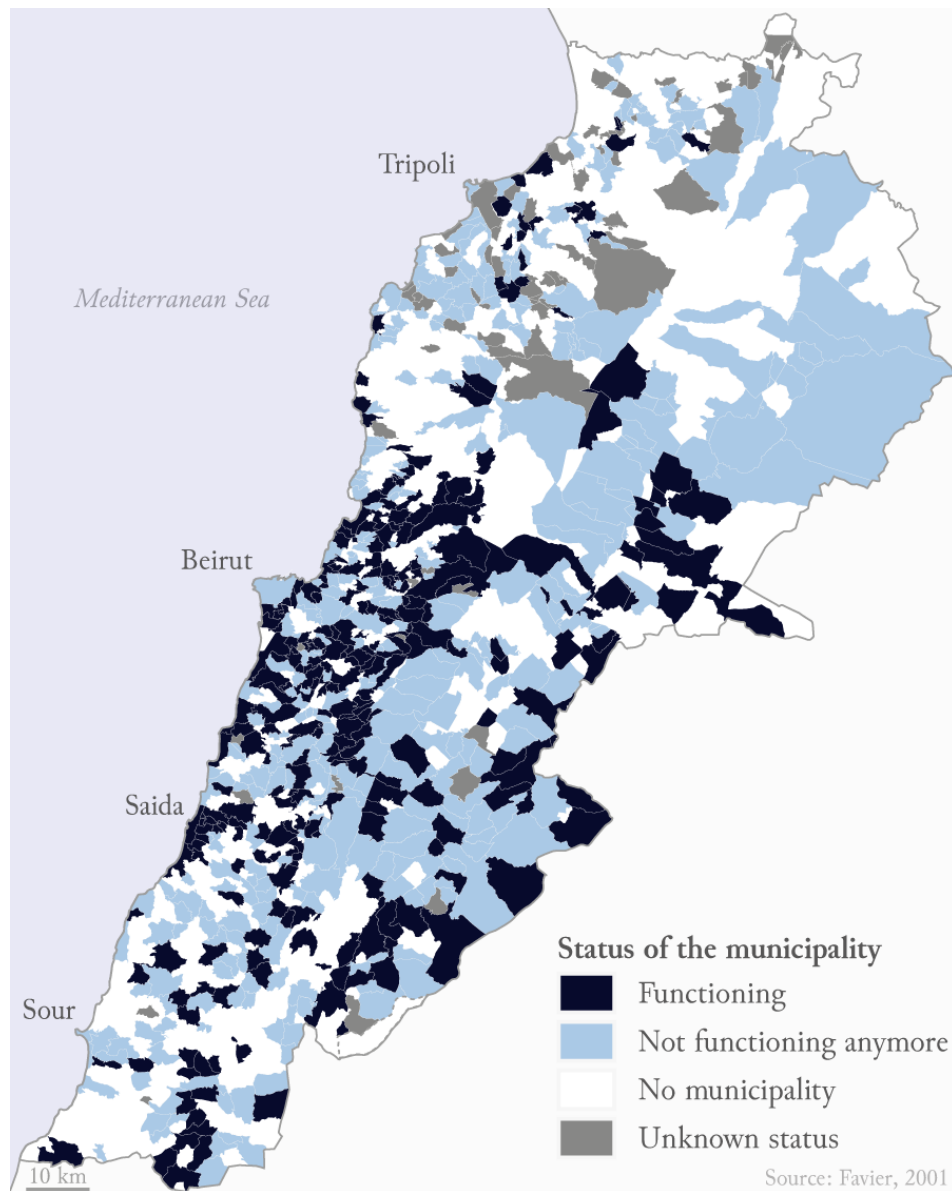
Map 5: Land registration and cadaster in Lebanon. Source: (Verdeil, 2019)

Further complications in the management of territories in Lebanon are raised by the fact that some administrations are operated under the authority of the *Muhafazat* (with the *Muhafez* as the head of authority) whereas others are operated under the authority of the *Caza* (with the *Kaymakam* as the head of authority). Another layer is added by the process from which municipalities are created. The process constitutes of the residents of a certain area raise a request to create a municipality. Today, certain areas in Lebanon do not have a municipality and this thus raises a serious challenge in the access of the population to the basic administrative local authority (Verdeil, 2019). In the case where a municipality is not found, the territory becomes under the direct authority of the *kaymakam*. The functioning of municipalities is disproportionate with many being inactive or being frequently dissolved while awaiting re-elections for significant periods of time. This reality is visualized in Map 6 which represents the functioning status of municipalities as published by the most recent edition of the Atlas of Lebanon but which is noted to reflect the functionality before the 1998 elections (Verdeil, 2019). Today, certainly more municipalities are functioning, but their status and number is always changing. Many are quite unstable and could quickly become risked with deadlock, especially those of smaller towns, from reasons ranging from personal disagreements, to regional and national instabilities.

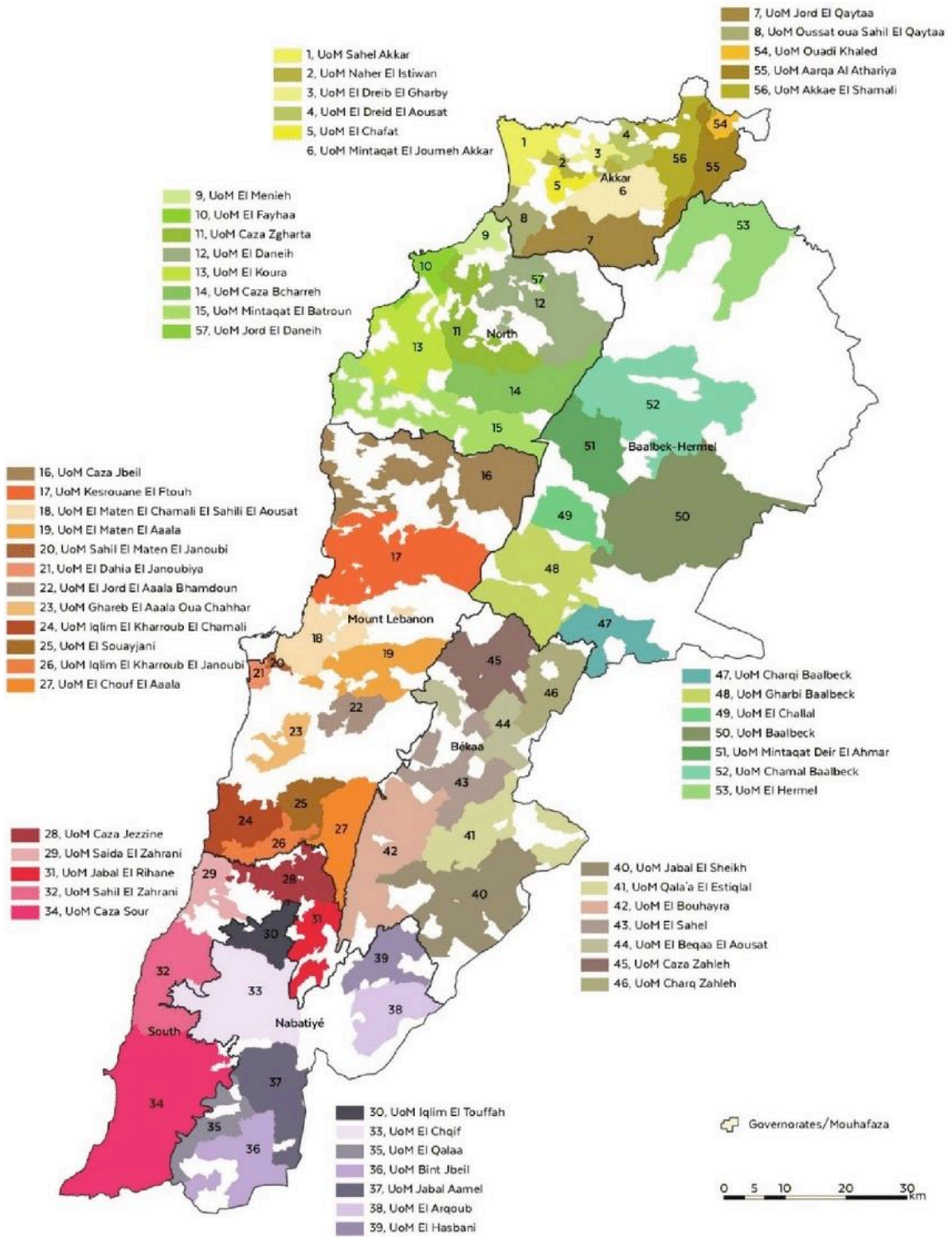
Most recent estimates are at 1,001 municipalities compared to 1,547 towns. These figures are shared by the IMPCT platform (Inter-Ministerial and Municipal Platform for Assessment, Coordination and Tracking) which is an e-governance platform owned by Lebanon's Central Inspection to digitalize access to data and which became widespread during the COVID-19 pandemic to aid in immediate crisis response¹⁹. The number of municipalities in Lebanon when compared to its small surface area and with respect to other countries is very high. For over 1,000 municipalities in Lebanon for a surface area of 10,452 km² is met with 452 municipalities in Croatia for a surface area of 56,594 km², 336 municipalities in Finland for a surface area of 338,424 km², and only 40 municipalities in Cyprus for a surface area of 9,250 km² (LCPS, 2015). The other serious matter is in the low financial and structural capacity of municipalities. The Lebanese state in fact allocates only 6% of public spending on municipalities which is much lower than other countries (24% in France, 42% in Switzerland and Norway, and 56% in Finland) and is faced by only 30% rate of collection by the municipalities of the allocated budgets (.ibid). As for structural constraints, these include issues as low staffing (400 municipalities have only one employee have 87% have less than 6), low number of registered population (70% of municipalities have less than 4,000 registered residents), and even the relatively old age of mayors (30% over 64) (.ibid). But to compensate these challenges, municipalities were allowed to coalesce in Unions of municipalities in order to partake in projects that surpassed the capacities, financially and technically, of separate municipalities alone. The decision for that was the act of 30 June 1977 and also considered the management of larger urban and sectoral projects such as the establishment of firefighting stations, slaughterhouses, sewage networks, road safety, and others (Darwich, 2018). The establishment of unions started slow especially during the civil war period and they resumed progressively after 1998, the first post-war municipal elections, to reach 53 in 2016 (.ibid) but also their reach to this day does not cover the entire Lebanese territory (Map 6).

¹⁹ <https://impact.cib.gov.lb/home>

Finally, it is worth mentioning that the complication and ambiguities in the administrative boundaries have serious implications not only on the management of territories from the central government down to local authorities, but the other way around. It makes it difficult for the population to understand the clear mechanisms of participating in the development of their territories, which is a pivotal point in this study. Moreover, given that the main actor targeted by this study are cooperatives that are territorially based and should serve the local population, these complications are trickle down to inaccuracies in these matters as well. More information on that issue is raised in section Map 7.



Map 6: The functioning status of Lebanese municipalities before the 1998 (first post-war) municipal elections. Source: (Verdeil, 2019)



Map 7: Unions of municipalities of Lebanon as of October 2017. Source: (Darwich, 2018)

2.1.2. General insights on the topography and geoclimatic conditions of the *Beqā'* valley

The *Beqā'* valley is a natural fertile plateau located between two mountain ranges (the Mount Lebanon mountain range to the west and the Anti-Lebanon mountain range to the east) in the inland of today's Lebanon. Geologically, it is the uppermost section from which the Great Rift Valley (Cobban, 2019), which is a 7,000 km stretch of trenches and rifts that formed around 35 million years ago commencing in the north from the *Beqā'* valley and extending down to the Mozambique in Africa. The northern section of the Great Rift Valley is referred to as the 'Lebanese section of the Dead Sea Transform', and which is a fault line that separates the African tectonic plate from the Arabian plate. It is also suggested that Levant basin could possibly be considered as having its own plate which in fact has a restraining bend which geologically resulted in the formation of the Mount Lebanon and Anti-Lebanon mountains and the *Beqā'* valley as the plateau in between them (Hancock & Atiya, 1979).

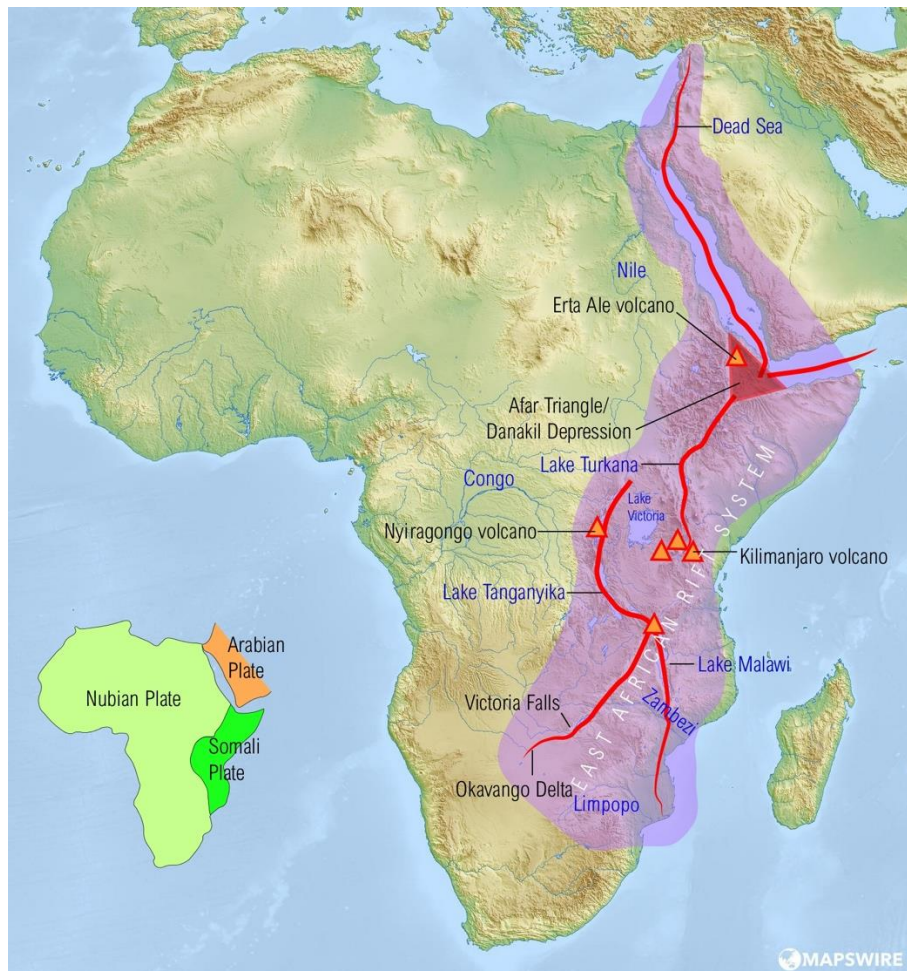


Figure 9: Map showing the extent of the East African Rift starting with the Dead Sea Transform commencing from the *Beqā'* valley at the northernmost point. Source: (Bonne, 2020)

The *Beqā'* valley is one of the four main topographic units in Lebanon, a small country of 10,452 km² found on the Eastern Mediterranean, and these include (Map 8) 1) A coastal plain consisting of a long narrow and flat littoral stretch of the coast facing the Mediterranean sea averaging 3 km wide and reaching 6 km at its maximum point in the north. The capital Beirut

is located at the midpoint of the coast and the coastline is where the majority of cities and urbanized zones are found, 2) a rugged mountain range on the west called the Mount Lebanon range that runs parallel to the coast and peaks at Qurnat Al Sawda at 3,000 m of elevation and averages 2,000 m, 3) the *Beqā'* valley itself as the middle fertile plateau at 30 km east of the capital Beirut and today's main agricultural producer of the country, and 4) the second mountain range to the east called the Anti-Lebanon and are the natural eastern border with Syria. These different units give the country an immense diversity and which in its generality is characterized by its rugged nature and therefore its 'relief'. The word 'relief' in this geographic context refers to the difference between the lowest and highest elevations of a location. The Lebanese landscape is dominated by mountains and it is said that today's "*Lubnan*" name in Arabic originates from the ancient Phoenician name or Semitic root "LBN" which means 'white' or 'milk' in reference to the snowcapped white summits of the Mount Lebanon chain. Even the national symbol of Lebanon is the native cedar tree "*Cedrus libani*" which grows on some of the highest peaks in the mountain and which was selected as the emblem in the flag at independence (Figure 10) as it represents longevity and in reference to its several mentions in the bible.

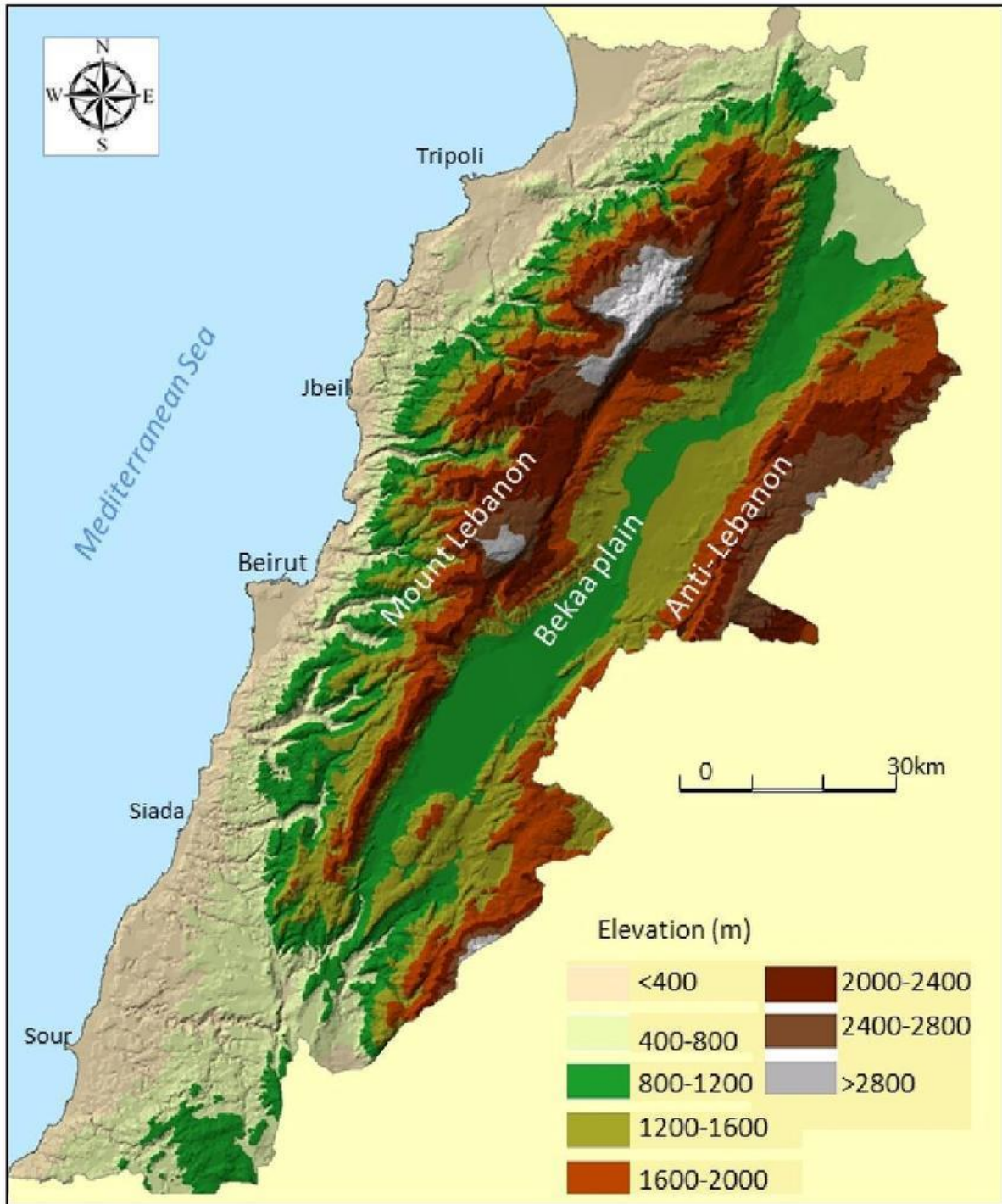


Figure 10: Flag of Lebanon. Source: Creative commons

In its description of the country's geography, the Lebanese Council for Development and Reconstruction (CDR) mentioned:

[translated from French] "The relief is an inescapable reality in Lebanon, interesting and constraining at the same time. The mountains of Lebanon have given it its climate, its water resources, its landscapes and a biodiversity of remarkable richness. The mountains have been decisive in the history of its settlement from the origins to modern times".

(CDR, 2004, p. 16)



Map 8: Major topographic units of Lebanon. Source: (Shaban, 2020).

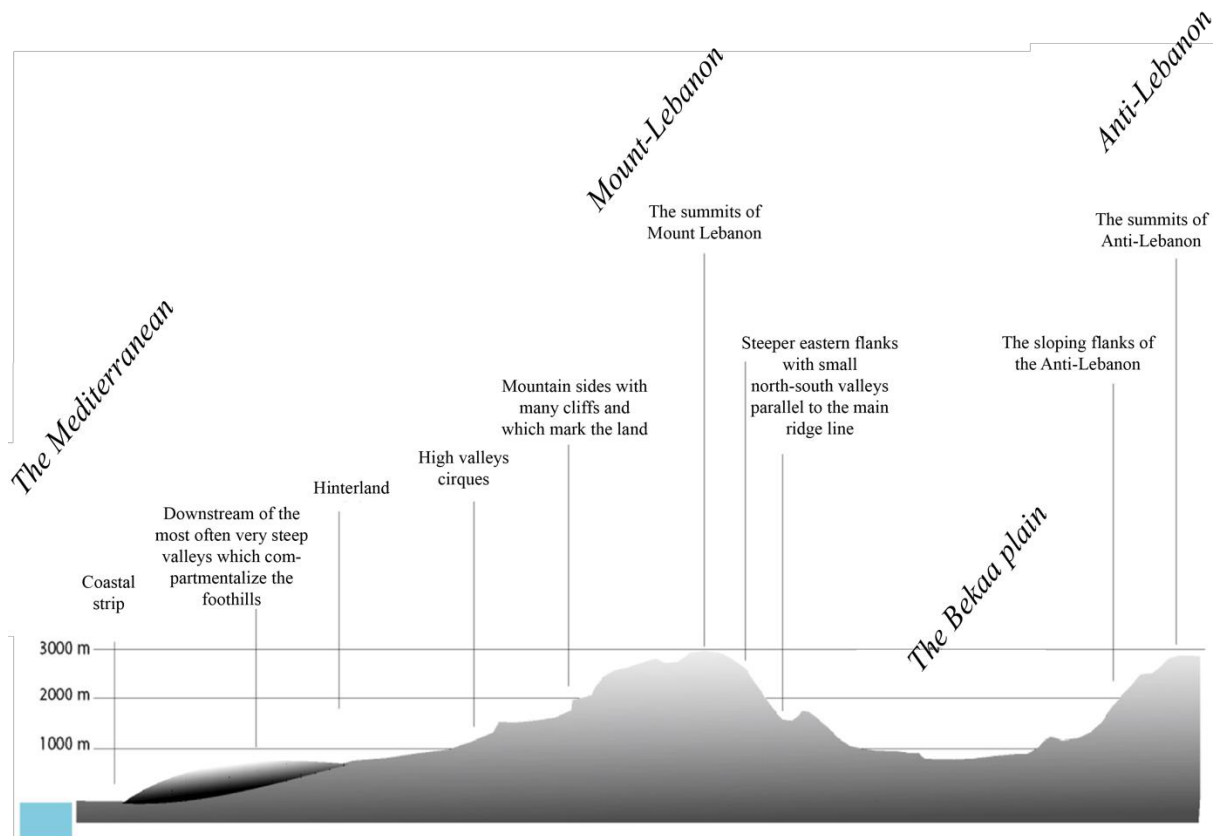


Figure 11: A schematic diagram representing a cross-section of the general geo-morphology of Lebanon from the coast of the Mediterranean on its west to the Anti-Lebanon mountain range to its east passing by the *Beqā'* valley as the inland plateau. Source: (CDR, 2004)

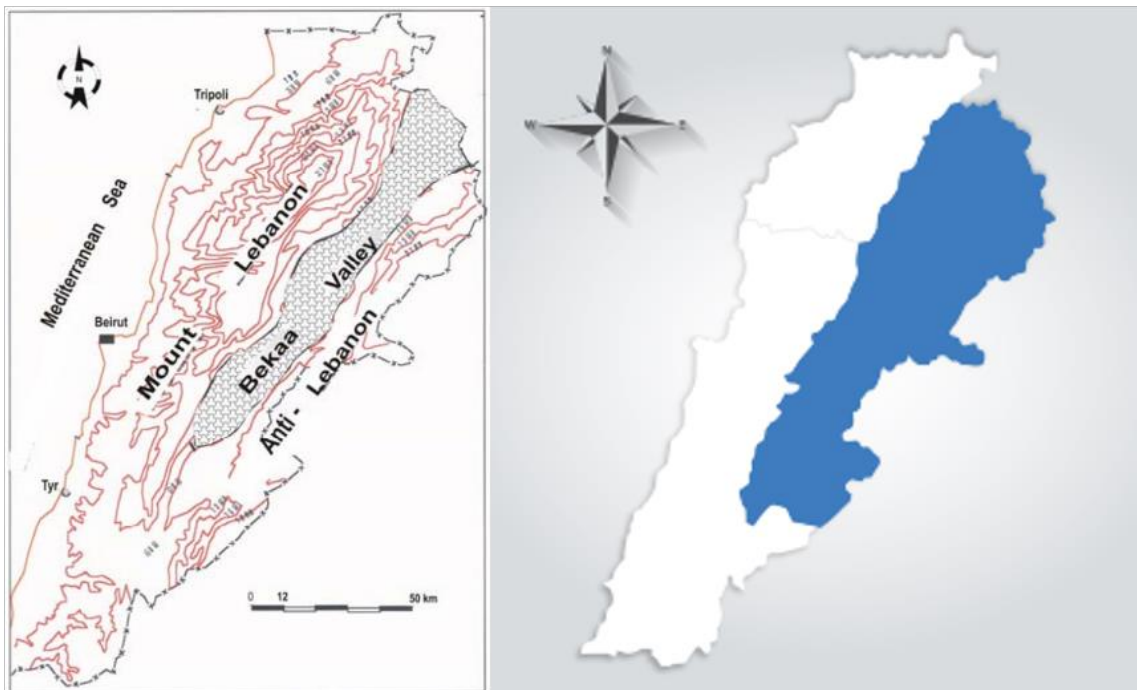


Figure 12: The *Beqā'* valley in its natural (left) and administrative (right) borders. Sources: (Lateef, 2007) and IDAL website

Lebanon's topography is complex and the reason behind that is the existence of mountain chains that extend longitudinally along the length of the country. They start facing the

Mediterranean sea, have numerous valleys and depressions while they gradually elevate to a maximum altitude of 3,088 m above sea level capturing the majority of wind, humidity and precipitation before steeping again down towards the inland plateau of the *Beqā'* valley. On the other side of the valley run the second mountain chain of the Anti-Lebanon also parallel to the length of the country. This complex geography of Lebanon is directly linked to the effect on climatic zones of the country (which could change rather quickly within short distances), on the creation of agricultural cultivation, forest species, compartmentalization of the land, imposition of physical constraints in construction and an overall 'grandiose' landscape (CDR, 2004). For the *Beqā'* valley, it consists the main agricultural zone in Lebanon and that could be reasoned from the several of its natural characteristics that differentiate the valley from the remainder of the country. These extend from its topography, soil type and fertility, precipitation, micro-climates, solar irradiation, water reserves, and others. The valley has a length of 120 km and an average width of around 16 km but is wider in its northern end (about 20 km) and becomes narrower towards its southern end (about 7 km) until it reaches Mount Hermon, the location at which the border between Lebanon with Syria and Palestine meets. The *Beqā'* valley as a natural basin has a surface area of around 900 km² (Lateef, 2006) whereas its administrative surface area which encompasses the governorates of *Beqā'* and Baalbeck-Hermel covers 38% of the country's surface area at around 4,000 km² (Bou-Antoun, 2014) (Figure 12). The average elevation of the valley is around 850m above sea levels and, despite describing it as a plateau compared to the two mountain chains that surround it, the *Beqā'* valley actually exhibits micro-relief (Lateef, 2006). A digital elevation model which provides a visualized representation of the topography of the *Beqā'* valley is found in Figure 13, and a topographic scale model of the Lebanese territory made from plaster cast is found in Figure 14.



Photo 12: Aerial photo of the *Beqā'* valley with Mount Lebanon visible of the far left and the Anti-Lebanon on the far right. Photo credit: Kameel Rayes²⁰

²⁰ <https://kameelrayes.com/>

Lebanon's location and topography of its terrain give it a moderate climate with hot and humid summers and wet and cold winters. The *Beqā'* valley however does not particularly have the same general climate. The *Beqā'* valley's summers are hotter and drier than that of the mountains and its winters are wet and cool. As seen in Map 9, Lebanon can in fact be classified with a variety of sub-climate types including a coastal climate, a mountainous and high mountainous climate. The majority of the *Beqā'* valley is categorized as a subcontinental climate but its northern section is semi-arid. The country's topography and quick differences in elevation plays an equally major role in precipitation. Maximal rainfall can exceed 1,000 mm per year which high rates are mostly found on the coast and the Mount Lebanon facing the Mediterranean and thus capturing the majority of wind, humidity and rainfall. Because of that, the inland of the *Beqā'* valley on the other hand receives less precipitation and especially at its northern end which records the lowest rates of rainfall at an average of 200 mm per year (Map 10) since it is shielded by the Mount Lebanon's highest peaks. Rainy months extend around the country from September to May with December and January being the highest, whereas summer months do not record any precipitation except in very rare occasions from the heat (Jomaa et al., 2019).

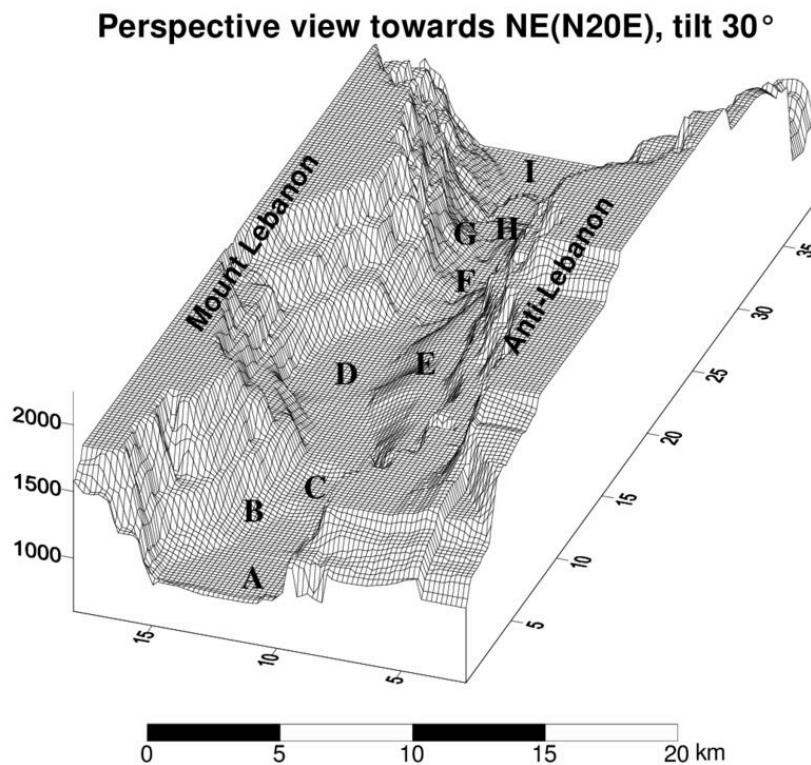
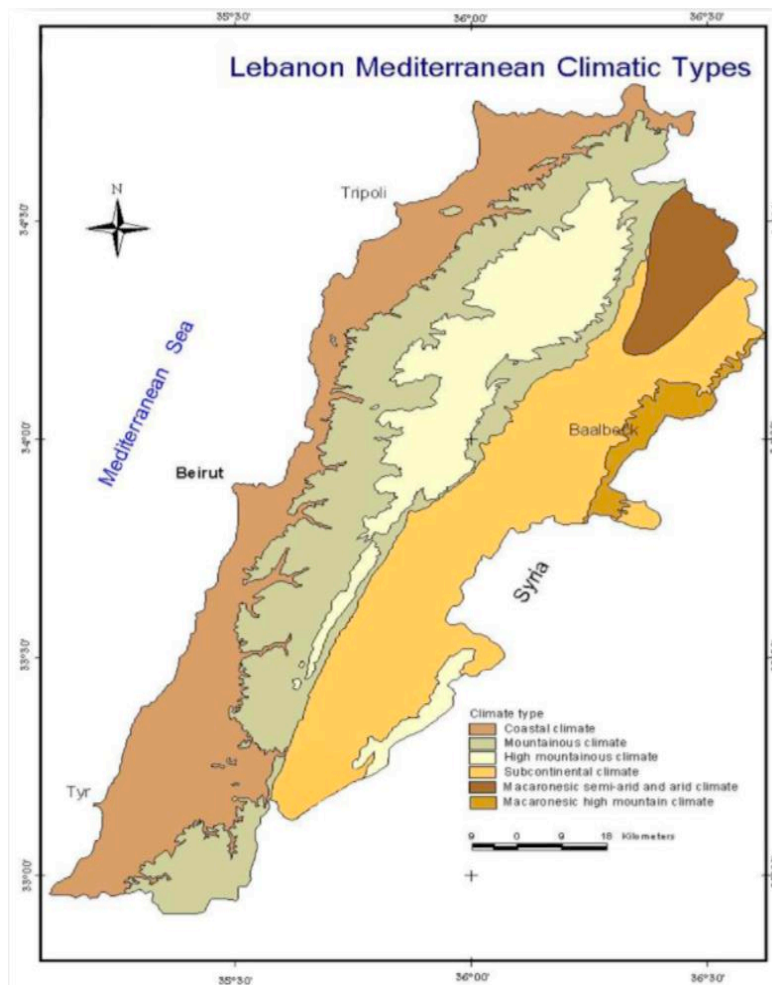


Figure 13: Digital Elevation Model of the *Beqā'* Valley based on 1:100000 scale topographic map. Source: (Lateef, 2006)²¹

²¹ This representation is published by (Lateef, 2006) in which he denotes the letters as: (A) is Bar Elias Plain, (B) is ancient (fossil) tilted alluvial fans, (C) is the terraced merging fan gravels of Tammine area, (D) stands for Iaat Plain, (E) is the piedmont train (bajada), (F) is terraced merging fan gravels of Kneisse-Laboue region, (G) stands for rock fans, (H) is undulatory terrain, and (I) denotes Al Hermel/Al Qaa sloping plain.

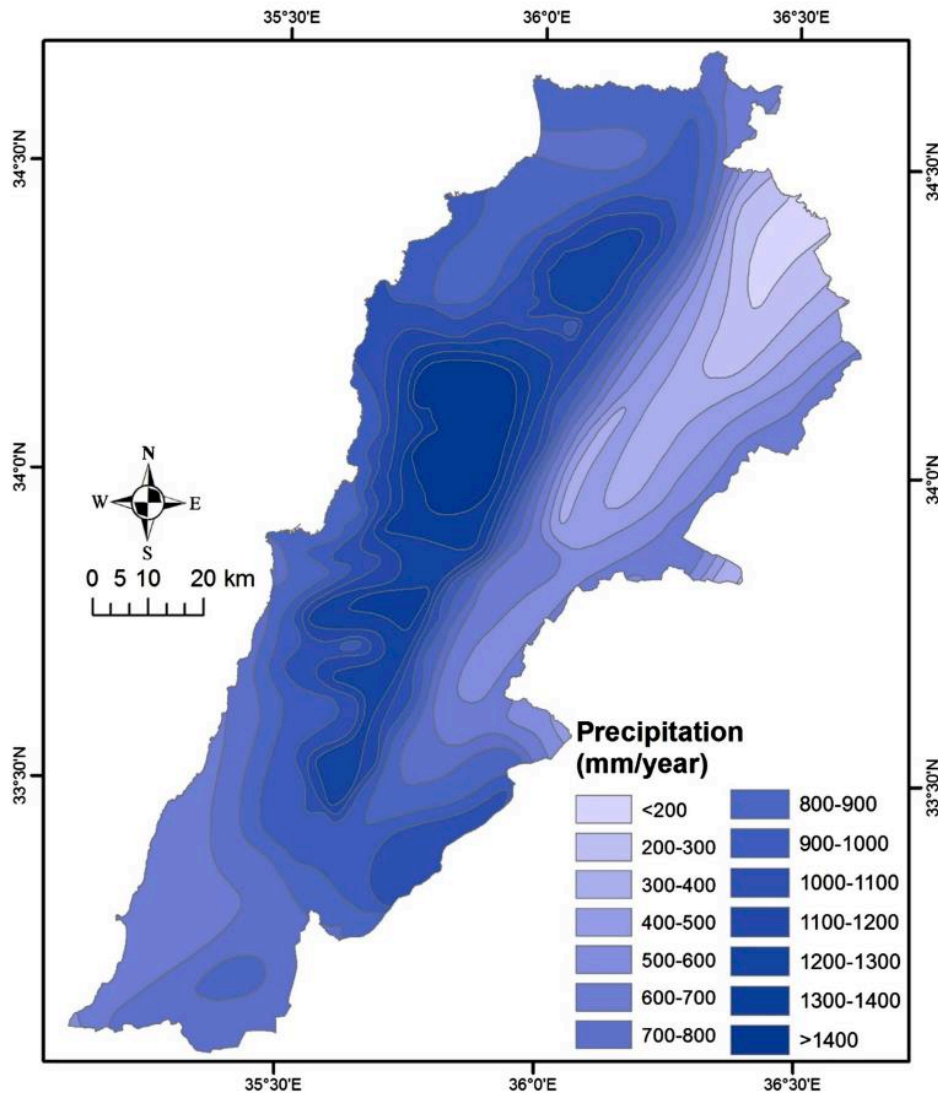


Figure 14: Topographic scale model of the Lebanese territory made from plaster cast. Photo credit: Ot3itsama Instagram page (@ot3itsama)



Map 9: Main climatic types of Lebanon classified according to the Soil Geographic Database of Euro-Mediterranean countries. Source: (Darwish, 2013)

The *Beqā'* valley in itself exhibits temperature, humidity and precipitation variations due its physical separation. The central and southern parts of the *Beqā'* valley have a partly better access to humidifying occidental wind coming from Greece due to natural districts at these two locations at the Mount Lebanon side, specifically at the towns of Marajoun and Dahr el Baidar. The northern part of the valley however does not. In fact, it receives hot and dry winds coming from the Arab Peninsula in summer and these elevate the temperatures (day/night) and reduce relative humidity (Karam, 2002). As for winter, the mountains of Mount Lebanon create a barrier that captures most of the precipitation coming in from the saturated humid clouds from the sea and leaves much less for the inland of the *Beqā'*. Rainfall becomes much less predictable and that makes the valley also more susceptible to drought. Minimal rainfall is usually recorded in the northern *Beqā'* at the Qaa' at about 50 mm / year and reach the central section of the valley at about 150 mm / year (Karam, 2002). The average mean temperature in the *Beqā'* valley varies from a minimum in January which can sometimes drop below zero in certain occasions to a maximum in July which can surpass even 35°C (Figure 15). This makes the *Beqā'* valley characterized by what are referred to as 'microclimates' as being modulated by the Mount Lebanon given the environmental heterogeneity (Lateef, 2007).



Map 10: Precipitation map of Lebanon. Source: (Jomaa et al., 2019)

Despite having these differences in the extent of annual precipitation, Lebanon generally remains relatively much richer in its water resources when compared to neighboring countries in the much drier Middle East. Lebanon has the fourth highest renewable water resources per capita after Turkey, Iraq, and Iran (Figure 16). Yet, as is the case with the majority of countries in the Middle East and North Africa, water scarcity is raising a serious alarm for the sustainability of water resources in the future. The Atlas of Lebanon voices this concern in its latest edition even if the country is still considered as 'privileged' in its freshwater resources since it surpasses the thresholds set according to the United Nations to classify the risks of water shortages (Verdeil, 2019). Forecasts are normally expected to increase in the demand of water especially in the highest consumer of water, which is the agricultural sector, especially in areas dominant with cultivation activities such as in the *Beqā'* valley. The supply of water today is 'barely sufficient' to meet the demand and is not being performed in a sustainable manner (.ibid).

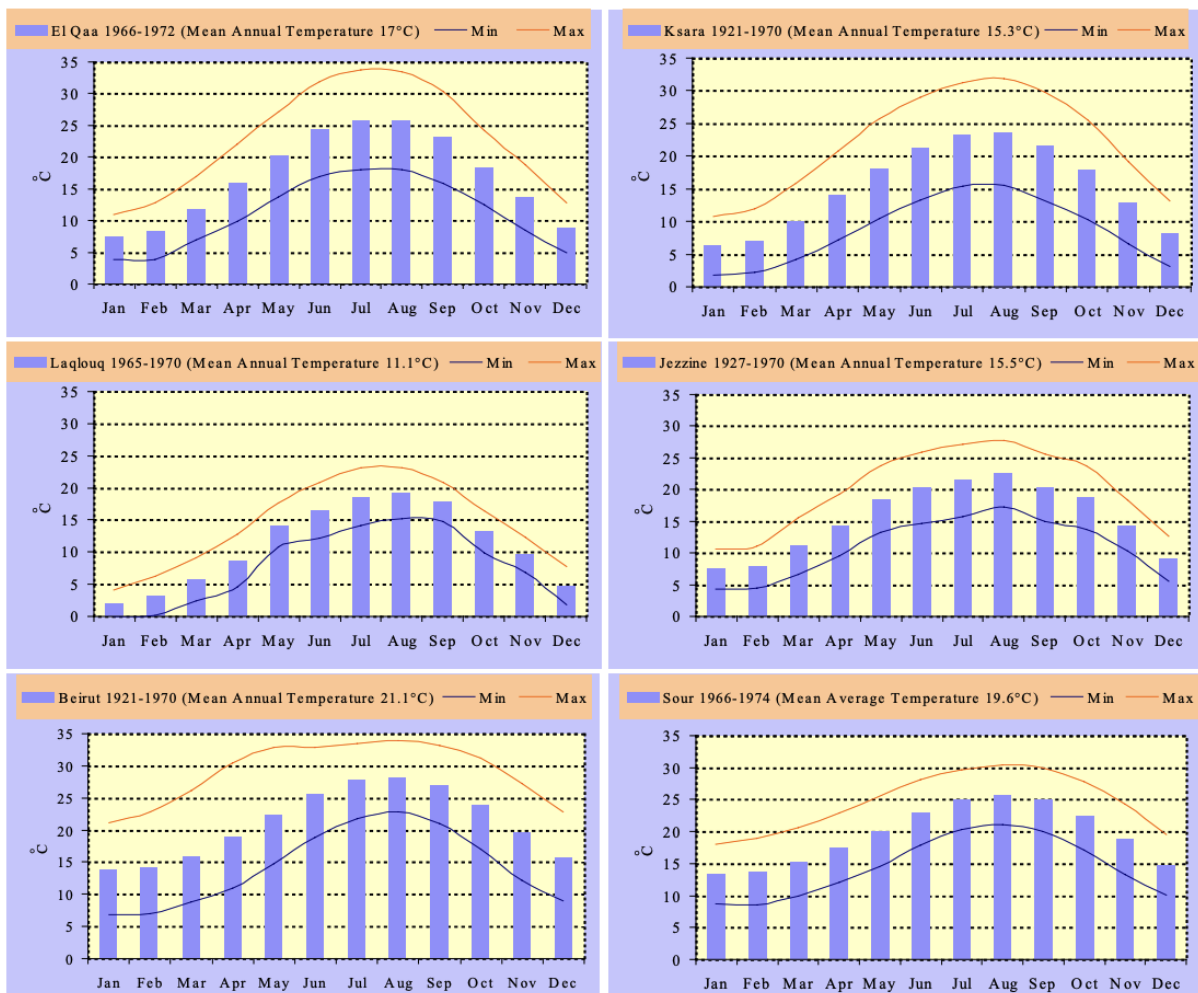


Figure 15: Monthly average air temperatures at different locations in Lebanon including El Qaa' (northern *Beqā'* valley – Baalbeck-Hermel), Ksara (central *Beqā'* valley – *Beqā'*), Laqlouq (Mount Lebanon), Jezzine (Mount Lebanon), Beirut (capital), Sour (South Lebanon). Source: (Karam, 2002)

Water in fact remains a strong characteristic in the country and the “*contrast between its green mountains and the aridity of the Syrian plains has indeed allowed it to affirm its specificity in the Near-East region*” (Verdeil, 2019, p. 90). The geological formation of Lebanon in fact created two major aquifer systems which mean the type of rock formation allows for the transmission of water, and there is the presence of aquicludes as well which if the rock formation that allows for the storage of water. These two formations are what form the groundwater reservoir in Lebanon with one aquifer system existing in the central section of the *Beqā'* valley. These are recharged principally by the snow cover of the Mount Lebanon which melt and percolate down through the fissures of the limestone formations (El-Fadel et al., 2000). As for its surface water, Lebanon has 40 water streams (14 to 17 are perennial rivers and the remaining are seasonal - Map 11) and which are fed by over 2,000 freshwater springs. Thirteen rivers take route from their source in Mount Lebanon and flow down towards the Mediterranean sea over a maximal distance of 60 km. The El-Kebir river constitutes the northern border between Lebanon and Syria. The Hasbani river flows south crossing the border until it reaches the Jordan river as one of its tributaries. As for the *Beqā'* valley, two rivers are included within it. These are the Litani river which flows from the central area of the *Beqā'* valley south passing through the Quraoun reservoir and crossing over the Mount Lebanon to finally discharge in the Mediterranean sea in South Lebanon's Qasimiyah north of Tyr (Sour). Finally, the Orontes river (Al Assi) is the only river that flows north of the country into Syria from the northern *Beqā'* valley reaching lake Homs (El-Fadel et al., 2000). These two rivers of the *Beqā'* valley add to the fertility of the area and makes it suitable for agricultural cultivation.

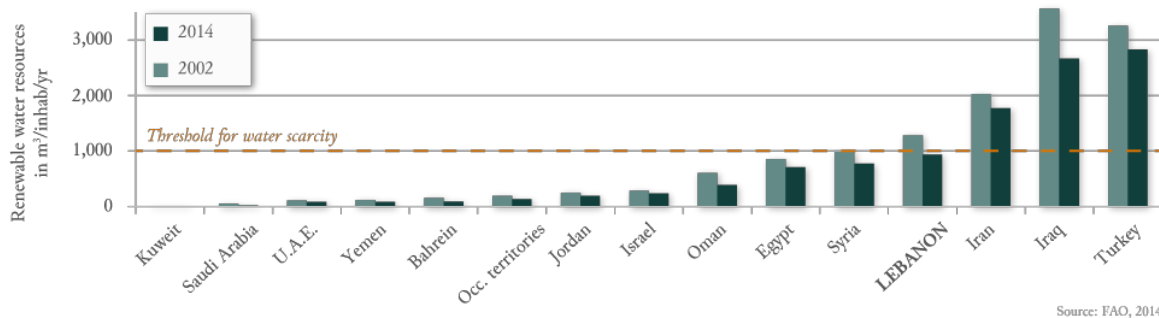
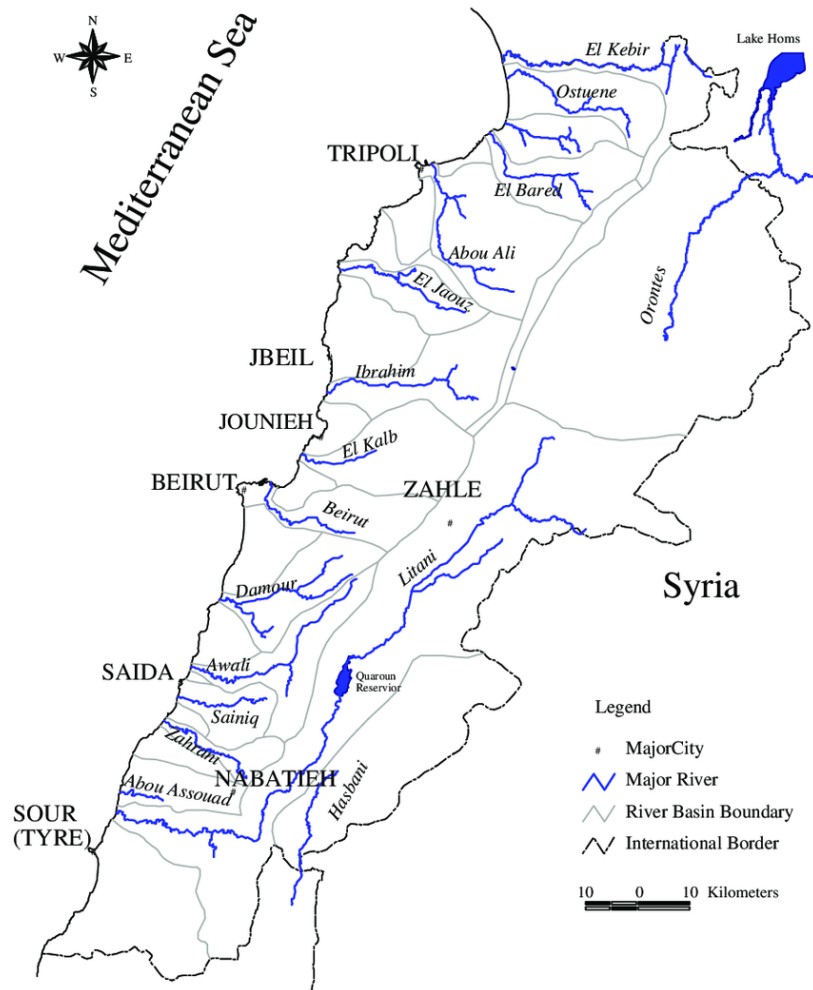


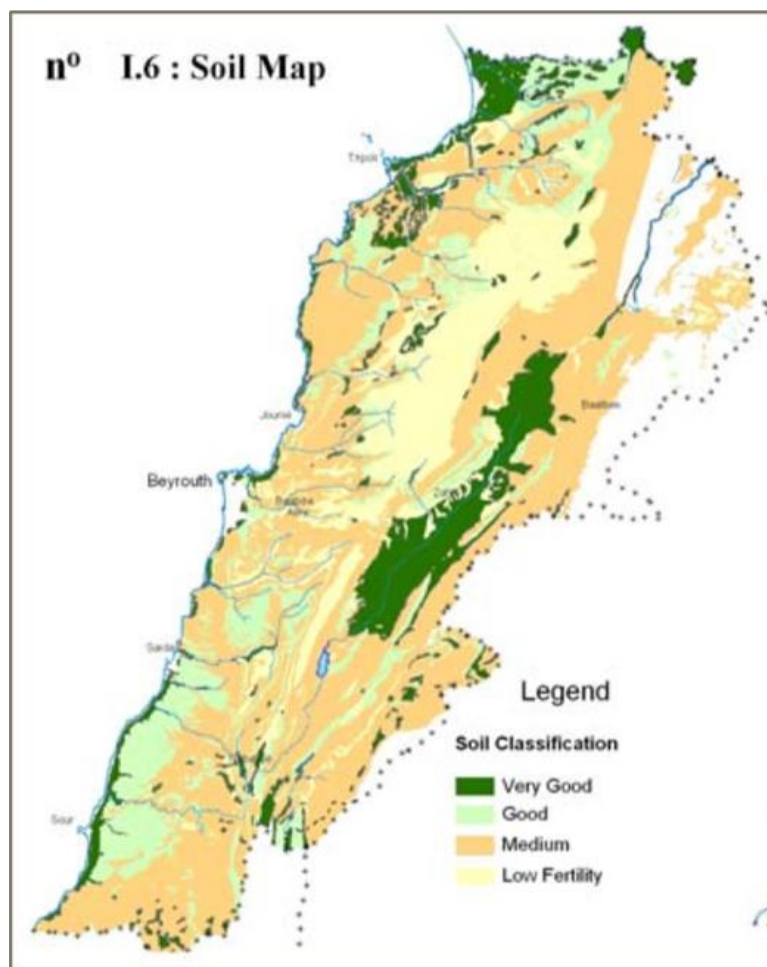
Figure 16: Renewable water resources per capita in Lebanon compared to other countries in the region (Verdeil, 2019)



Map 11: Major river basins of Lebanon. Source: (El-Fadel et al., 2000)

Perhaps one of the most distinct features of the *Beqā'* valley is the characteristics of its soil and land qualities. In fact, soil is another diverse and unique feature that characterizes the country whole. Given its geological and topographic nature, the difference sections of the country also create a combination of different soil types and physical features. This appreciable quality gives the country a high value in its share of agricultural land which nearly half the country could be cultivated with varying efficiency. The value of an agricultural plot is however determined by various characteristics such as the nature of the soil, its depth, its content of organic matter, its acidity and salinity, its capacity to retain water, its risks of landslides and erosion, slope degrees, and others. These are major qualities that ultimately determine the aptitude of the land to handle today's agricultural practices required for cultivation. In Lebanon, a few large areas which together constitute around one third of the country's surface area, have in fact a higher aptitude for such agricultural practices (Map 12). The most important of these include firstly the *Beqā'* valley (including the corridors of Rachaya and Hasbaya) as well as the plains in the north (Akkar, Koura), and in the south (Tyr, Sarafand, Sidon, Marjayoun, and others). The *Beqā'* valley in fact includes the fertile reddish color *terra rossa* with the central and south *Beqā'* being described as the most fertile sections of the valley. Its soil is further distinguished by being meters in depth compared to the otherwise mostly shallow soil of the country. Lebanon's soil diversity is majorly the result of the rock

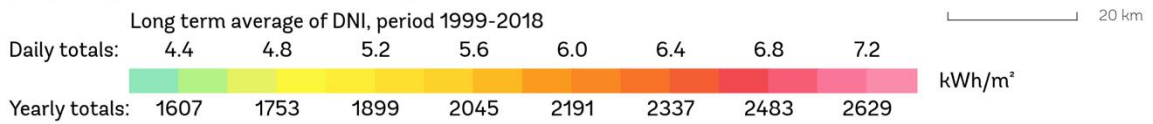
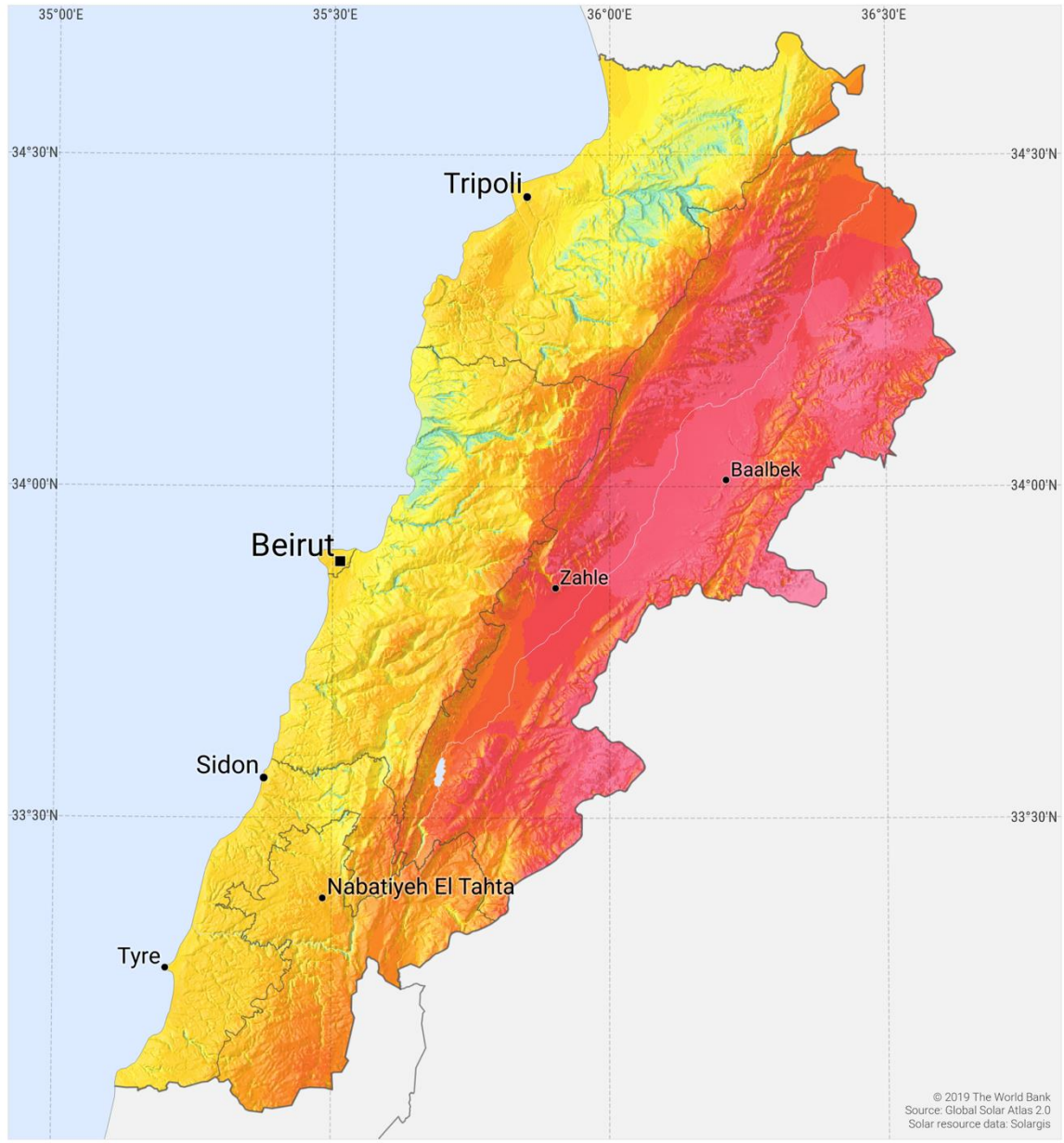
constituents which are mostly base-saturated calcareous soil depositing mainly from one of two ways; either from deposits transported by water (called alluvial soils) or by gravity (called colluvium soils) (MoE, 2001). Overall, the soil has been described as having a striking mosaic of soil types which “rarely can be found in comparable areas” (Darwish, 2013). However, issues of soil pollution have also been voiced and especially in areas as the *Beqā'* valley since due to the concentration of agricultural activities, the detection in the levels of soil and groundwater pollutants mainly nitrate content have been increasing from certain malpractices such as poor crop rotation and low use efficiency of fertilizer and water (.ibid). The soil characteristics of the *Beqā'* valley together when coupled with the other features and in addition to other unique qualities as its higher exposure to direct solar irradiation (Map 13), the differentiable characteristics of the territory begin to take form. Now, it becomes more understandable why the *Beqā'* valley consists not only a territory suitable for primary agricultural cultivation, making the valley a historic producer, but rather in exerting its own effect on the preservation of these foods into traditional *mūne* and transferring that effect on the raw material (example variety and quality of plant or animal produce), the environment (example average lower humidity, temperature, solar irradiation), and overall conditions (example more efficient solar drying techniques) that would add a natural differentiating factor on the end products, and especially when factoring the knowhow and skills of the producers themselves.



Map 12: Soil aptitude for agricultural cultivation in Lebanon. Source: (CDR, 2004)

SOLAR RESOURCE MAP

DIRECT NORMAL IRRADIATION
LEBANON



This map is published by the World Bank Group, funded by ESMAP, and prepared by Solargis. For more information and terms of use, please visit: <http://globalsolaratlas.info>.

Map 13: Direct normal solar irradiation map of Lebanon. Source: (World Bank, 2019)

2.1.3. History and relationship with traditional foods and drinks

The *Beqā'* valley is a space that is almost enclosed by high mountains, which make it a space that requires the crossing of physical barriers to arrive to from other regions in the country. Similar to the country, the valley witnessed a history that was dynamic and quickly changing. But what makes the *Beqā'* valley an excellent terrain for this study is its long and historical relationship with farming and production of food. Being the primary fertile plain amongst its surrounding, it was an attractive space for dwellers in maximizing proximity to production. The *Beqā'* valley was long known for its agriculture and was used for thousands of years as an area of production and supply of food for its surrounding. The valley's capital and main metropole city of *Zaḥle* in central *Beqā'* was even a pitstop and intersection at the famous Silk Road trade routes and was known to host merchants and travelers at its inns for rest before continuing their journey (UNESCO-Beirut, 2013). One of such popular inns was recently renovated with the horse stables and rooms can still be found today. Today, the city of *Zaḥle*'s vibrant life, history, and specifically its strong attachment to its culinary heritage makes one of the UNESCO's world Creative Cities Network designated ***City of Gastronomy***, the only one of Lebanon (.ibid). The city of *Zaḥle* to this day remains the largest inland city in the country with its strategic location and, in addition to its links to the traditional cuisine, has grown into a logistic center, an area of population concentration, and as the primary entrance and exist to the entire *Beqā'* valley making it a place of gathering.

The *Beqā'* valley was a significant producer in ancient times that it was even known as the 'breadbasket' of the Roman Empire. This was because the valley was a supplier of wheat in the days of the empire and especially with the premium variety called Salamouni (*Triticum aestivum* L. var. Salamouni also called locally *breiji*) which has been continuously cultivated for over 5,000 years (Zurayk & Rahman, 2008). This variety of wheat is still preferred to this day for the production of one of the most traditional and typical *mūne* foods, the *burgol* (section 1.2.3.2) and which is used in the *Kīshk* (section 1.2.3.3). Even in contemporary days, wheat remains one of the main cultivations and was estimated to comprise of 50% of cereal cultivations in Lebanon with the highest proportion of agricultural lands (42%) of the country being in the *Beqā'* valley (Karam et al., 2009). Besides wheat, the *Beqā'* is probably mostly known for its production of vines. It has been one of the oldest locations to produce vines and wines in the world which date back to days of the Phoenicians. Recently, new evidence was excavated in Lebanon of what is believed to be one of the oldest wine press from Phoenician times from 2,600 years ago (Metcalf, 2020) (Figure 17). This finding, that was published by National Geographic, was remarkable given the scarce information on winemaking dating from these days. Yet, the finding further cemented the very solid relationship that Lebanon in general and the *Beqā'* valley in specific have with the vine and wine production. The *Beqā'* valley was so important in its position with wine that the Romans chose the *Beqā'* to build the renowned Temple of Bacchus in tribute to the god of wine at the site of Baalbeck. The ruins of the Roman temple complex survive to this day and constitute one of the country's main touristic sites (Photo 13 and Map 14) and one of two UNESCO World Heritage Sites found in the *Beqā'*

valley out of a total of 5 sites for Lebanon²². Even the valley's main city of *Zahlé* is nicknamed to this day as “The city of *khamra* and poetry” (with *khamra* referring to wine and the traditional grape-and-anise-based '*arak* drink) (UNESCO-Beirut, 2013). The strong link with the vine is further represented by the statue of *Erato*, the Muse of love and poetry, and the well-known statue of Our Lady of *Zahlé* and *Beqā'* both located at the entrance of the city and both are personified holding a bunch of grapes (Photo 14).

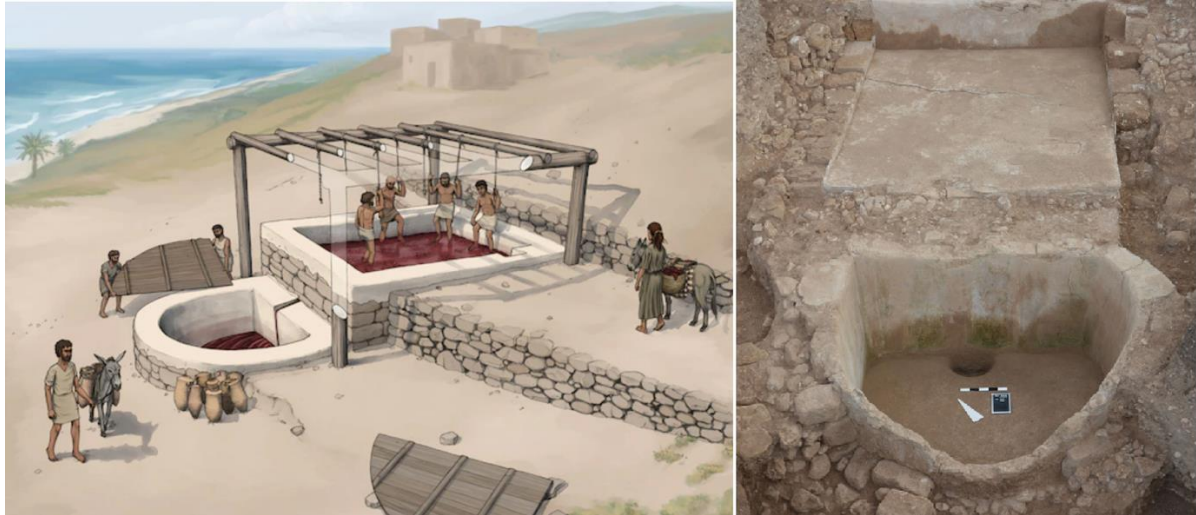


Figure 17: (Left) An illustrated reconstruction of Lebanon's Tell-el Burak Phoenician wine press and (right) picture of the Tell el-Burak wine press. Source: (Metcalfé, 2020) with illustration and photograph courtesy of the Tell el-Burak Archaeological Project; drawing by O.Bruderer.



Photo 13: Photographs of (left) the mosaic at the entrance of the Temple of Bacchus at Baalbeck temple complex depicting the god of wine, and (right) inscriptions and decorations of vines, wheat spiked and sequences of eggs referring to the fertility of the *Beqā'* valley's soil. Photo credit: (Karam, 2016) and (Tannous, 2020)

²² These include: 1) Anjar (designated in 1984 and found in the *Beqā'* valley's *Zahlé* caza), 2) Baalbeck (designated in 1984 and found in the *Beqā'*'s valley Baalbeck caza), 3) Byblos (designated in 1984 and found in the Byblos-Jbeil caza), 4) Ouadi Qadisha (The Holy Valley) And The Forest Of The Cedars Of God (Horsh Arz El-Rab) (designated in 1998 and located between the Zgharta and Bcharri cazas in North Lebanon) and 5) Tyre (designated in 1984 and found in the caza of Tyre in South Lebanon). More information available at <https://whc.unesco.org/en/statesparties/lb>

The city celebrates the Festival of the Vine to this day that takes place annually over one week every September. Winemaking was revived by Jesuit priests who started cultivating large plots of land and trade when settling in the town of Ksara in the 1850s thus establishing Chateau Ksara, one of Lebanon's most famous wineries to this day. After that, other wineries started getting established in the valley and in Mount Lebanon, most famous were the Domaine des Tourelle and in 1868 and Chateau Musar in 1930. Interestingly, it was the *Beqā'* valley's dry weather conditions that contributed to the increased sugar content of grapes and made for an attractive quality for wine production and for eating as table grapes. Today, the valley is estimated to host 75% of all the area dedicated for grapevine production in the country and 50% of wineries (Bou-Antoun, 2014). Lebanon has been a member of the International Organization of Vine and Wine (OIV)²³ since 1995, which is an intergovernmental organization made up of, as of January 2021, 48 international member states and 16 territories and organizations as observers with the European Union granted particular status. Shortly after in 1997, Lebanon established its own Union Vinicole du Liban (UVL)²⁴ based on the advice of the OIV. Lebanon's UVL recognizes the position of the *Beqā'* valley as a major *terroir* of vine and wine crediting its early ripening of grape to the valley's altitude, climate (specifically dry summers, cool nights and consistent precipitation), and natural water table that is fed by the incoming runoff from the melting snow of the Mount Lebanon and Anti-Lebanon slopes.

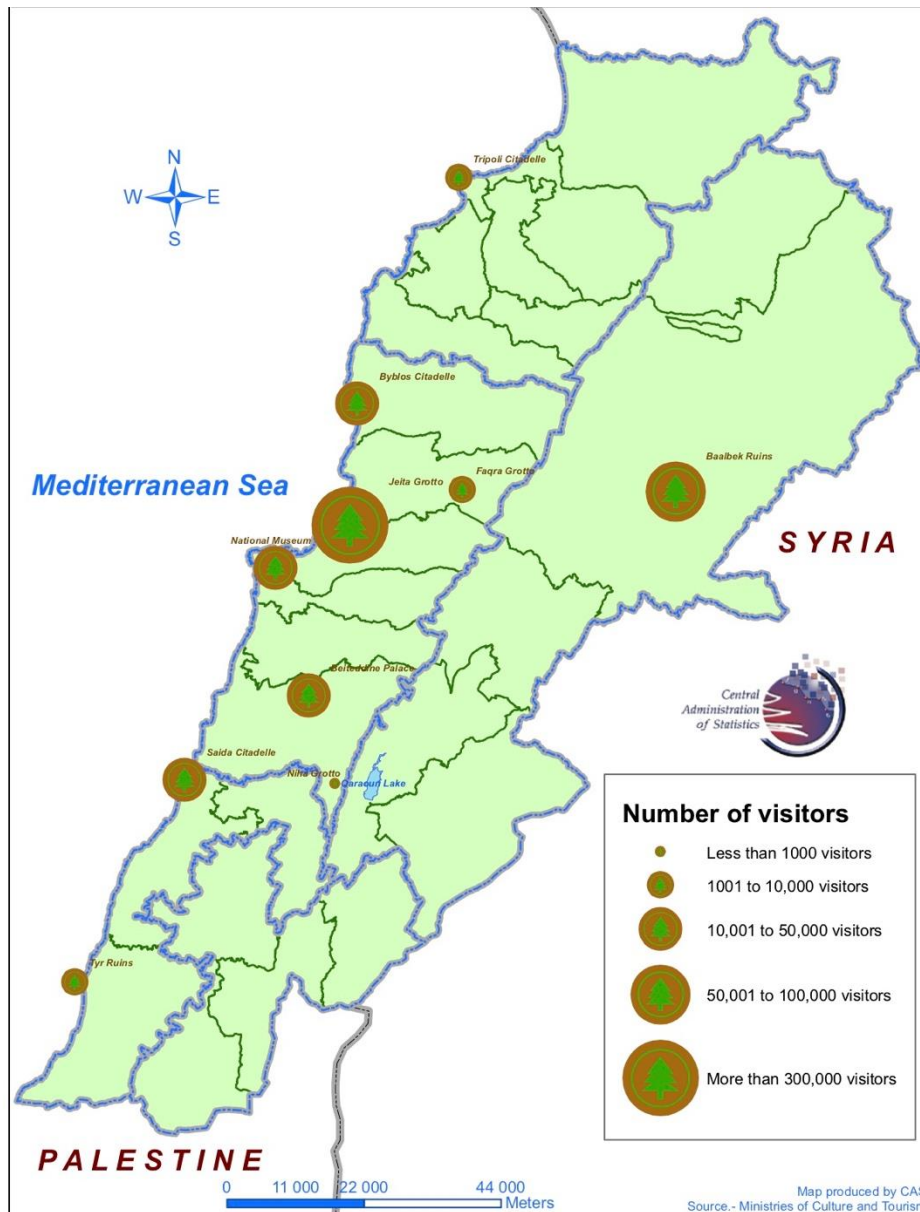


Photo 14: Pictures of (left) statue of Erato and (right) statue of Our Lady of *Zahle* and *Beqā'* both holding a bunch of grapes signifying the importance of the crop in the city of *Zahle* and the region. Photo credit: Lebanon Untravelled²⁵ and Twitter user @beautyoflebanon

²³ <https://www.oiv.int/en/the-international-organisation-of-vine-and-wine/member-states-and-observers>

²⁴ <https://www.lebanonwines.com/>

²⁵ <https://lebanonuntravelled.com/discover-Zahle-with-Zahle-tours/>



Map 14: Most visited tourist sites of Lebanon in 2008. Source: Central Administration of Statistics²⁶

The link of the *Beqā'* valley to its rich cultural and gastronomic history is therefore normally well recognized in the country. Being a main attraction in the valley, the city of Baalbeck and its surrounding region is in fact recognized as a heritage regional site by the CDR extending to the town of Hermel in northern *Beqā'* (CDR, 2004). Several other areas across the *Beqā'* valley have also been indicated for their touristic and cultural significance. These include areas as *Zahle*, Hermel, and Anjar. Besides touristic and cultural attachment, the CDR very clearly and directly links tourism and the agro-food sector (in relation to traditional foods) as the two sectors that are strongly linked to their territory. The primary capital that is said to link these sectors to their territory are the landscape, the versatile relief of the geography, the land, the heritage, and so on. In fact, the entire country is acknowledged to have 'undeniable comparative

²⁶ <http://www.cas.gov.lb/images/Maps/Tourism.pdf>

advantages' when it comes to four sectors: 1) tourism, 2) agro-food, 3) publishing, and 4) artisanal arts (CDR, 2004).

Not only that, but the Lebanese people are generally known to have a strong link to their land, heritage and areas of origin. This is no exception to the *Beqā'* valley and is what constitutes a strong link of the people with their village life. This relationship has been existent, rich, and ongoing since ancient times and it has most importantly played a key role in developing the of the national life across the country and with the movement of its people (Tannous, 1949). This is especially true to Lebanese farmers who have been deeply rooted in their lands for many generations, and who if they were obliged to emigrate, would always be hoping of returning to their land and rural communities. This national community life was the rural origins that have directly contributed to the rise and flourishing of urban concentrations, including withstanding crises, especially in the past half century and especially for areas as *Zahle*, Sidon, Tripoli, and the capital Beirut (.ibid). In fact, the CDR acknowledges that fact and describes that the performance of territories in general at the economic level is driven by the power of their cities and their development in linked to that as well (CDR, 2004). This is how *Zahle* firstly and other larger towns in the *Beqā'* valley as Baalbeck and Hermel could also be looked at as poles of development. What also characterizes the cities of the *Beqā'* valley and specifically *Zahle* is it being a city of economic and central hub, but which has preserved its link to the history and rural spirit.

“Residents of Zahle and to a certain extent the Beqā' residents have always been keen on safeguarding their traditions through handicrafts and the transmission of food heritage. They feel a certain pride in the preservation of this expertise”.

(UNESCO-Beirut, 2013, p. 11)

When it comes to food, the people of the city of *Zahle*, Lebanon's only designated UNESCO City of Gastronomy, and the people of the *Beqā'* valley generally have a strong link not only to their land but to the practices they apply on their land and food. To this day, city dwellers chose to acquire raw material for the preparation of their own traditional preserved *mūne* foods or the final preserved foods directly from the *Beqā'* valley. In fact, and when applied to the provision of preserved *mūne* foods, the Lebanese are known not to settle for any accessible products but would rather 'go to great lengths' to acquire the right ingredients and the *mūne* that they consider to be right (Cesbron, 2020). This loyalty to traditional products mirrors the strong connection to the origins, lands and practices and the desire to maintain them. People have long cultivated the valley, harvested its produce, consumed what was in season and preserved the excess yields. The CDR source directly links the areas of central and north *Beqā'* as *Zahle* and Ras Baalbeck to their gastronomy, and calls *Zahle* as the capital of the agri-food industry in Lebanon (CDR, 2004). Besides being very known for its abundant vine thus wine and '*arak*, *Zahle* is particularly known for being as the birthplace of the traditional *Mezze* experience (UNESCO-Beirut, 2013) (section 1.2.1). That the city has won its own nickname as *Mezze Zahlawiye* (translating to the Mezze of *Zahle*) because of its famous and elaborate array of the *Mezze* tradition which is usually coupled with the drinking of '*arak* (MoT, n.d.). In recognition of the importance of village life and traditional ways, the nearby town of Terbol in the *Zahle caza* has a museum called the Terbol Museum that specifically represents the

traditional architecture of homes during the ruling of the Ottoman Empire (Photo 10). The interest in that museum is that it is an old farmer house that reconstructs what was known at the time as the ‘*cereal hole*’ which was an opening found in a double partition wall used at the time to hide the harvest of grains. The city of *Zahle* being at a crossroads from the surrounding mountains made it a place of gathering and this has continued to this day and especially at historically and ongoing lively locations as the celebrated café and parlor stretch of the *Berdawni* riverbank. The *Beqā'* valley has therefore long been a predominantly agricultural region with cultivations and animal livestock. This made for an excellent source of a large variety of fresh raw produce that could be used for direct consumption or cooking when in season and which provided the raw material for the equally diverse *mūne*. The people of the *Beqā'* are still very known for their preservation of *mūne* foods with their most popular being the *qawarma* (lamb meat preserved in solidified fat), *kīshk* (fermented, dehydrated, and grind mix of *burḡol* and yogurt/labneh), *samne* (clarified butter), *dibs* (molasses of grape, carob, or pomegranate), *rib* (concentrates), dried fruits mainly figs, and of course distillation. Needless to say, the valley is well known for its other specialty foods as bread and pastry, sweets, and meats.



Photo 15: Photograph taken of the cafes at the Berdawni river in *Zahle Wadi*, meaning the valley in Arabic, circa 1920. Photo credit: Mary Evans picture library.



Photo 16: Aerial view of *Zahle* overlooking the *Beqā'* valley and the Anti-Lebanon mountain range. Photo credit: Ahmad Shinder through Live Love *Zahle* Instagram page (@LiveLoveZahle)

Box note 7: Understanding territory

The term territory is larger than the simple designation of a piece of land or a spatial border. The term in fact holds a much larger meaning and can be interpreted differently and mobilized differently to serve various questions and mechanisms. In a popular paper by Star Elden (2010), the notion of territory is recognized as being neglected in the domain of geography and that the building of its history, at least in the English-speaking scientific community, is yet to be done. In his article, Elden mentions how he sees territory as in one way closely related to land (in relation to property) and terrain (in relation to power) but is more than both, and that it should be approached separately. He focuses on how a territory should be considered with what makes it specific (its specificity) and links it to some sort of political and institutional power struggle (Elden, 2010). From the French scientific community, territory was also linked to three inter-related sub-systems by Alexandre Moine. In his 2006 article, Moine mentions how the understanding and definitions of a territory have been and are continuously

evolving, and that they can be thought of as 1) the geographical space (which is appropriated by having spatial organizations emerging between its compositions, as natural, social, and institutional), 2) the system of representation (filters, as ideological or societal, that are common and which influence decisions and choices of actors), and 3) the action applied by the actors on their geographical space, whether conscious or unconscious, being influenced by these filters and according to their position (Moine, 2006). On another hand, Bernard Pecqueur (2013) uses the term territory to distinguish its use from the word 'local' or 'localist' which refers to that what is specific to a locality. He approaches territory in use for the purpose of territorial development with two definitions; those of given territories and constructed territories. The given territory is defined as that which is a portion of space and usually refers to infra-national administrative divisions such as regions, cantons, and provinces. The analysis of the given territory is normally not required or sought when it comes to origins or the construction. The latter enters in the second definition, the constructed territory. The territory in this case is "*a process of construction by the actors. The territory is not postulated, but is observed a posteriori.*" (Pecqueur, 2013, p. 12). This constructed approach of territories was also priorly voiced by Frédéric Giraut (2008). He mentioned that the word "*territoire*" (in French) is a buzzword in contemporary use and is being used in both extensive and restrictive ways, but that the constructed nature of the concept remains very necessary. Pecqueur's analysis was also resonated by André Torre (2015) who described territories as either biophysical (an example of a watershed), or institutional (such as territories designated and formalized by their biodiversity), and as being 'existing and a social construct' as a result of actions from their actors. When it comes to the application of the notion of territory on the *Beqā'* valley, the term is being based on the assembly which includes the two definitions conveyed by Pecqueur (2013). On one hand, the "given" portion of the territory exists through the administrative borders (and even natural landscape) which exist to delimit the space. On another hand, the *Beqā'* valley can also be considered as a potentially constructed territory due to several factors. These include its naturally delimited geography, its geo-climatic conditions, its historical and socio-economic standing, its significance as an agricultural producer, and the relationship that exists between it and its relevant productive actors.

2.2. THE KEY POSITION OF THE AGRI-FOOD SECTOR

2.2.1. National competitive advantages

What stands at the basis of preservation of traditional *mūne* foods are the food produce and cultivations themselves. They constitute the raw material whether coming from plant or animal origins of what will end up being preserved, made into recipes, and manipulated into the final

product. The agricultural sector therefore stands at the foundation of the *mūne* heritage. When describing the status of the agricultural sector in a country as Lebanon, it is important to acknowledge the advantages that are present and potentially exploitable despite the many complex challenges. The geography of Lebanon itself with adequate arable lands plays a major advantage when compared with the resources of other neighboring countries. The moderate climate and regional microclimates along with fertile soils and rich water sources are key factors. In fact, Lebanon holds the highest proportion of agricultural land in the Middle East with latest estimates by the FAO reporting it at 64% in 2017 compared to an average of 33% in the MENA region (IDAL, 2020a). As for water availability, Lebanon also ranks one of the top countries with the highest rates of precipitation compared to neighboring countries despite growing concerns on its scarcity (Dal et al., 2021). The average precipitation in Lebanon reaches 661 mm a year compared to 593 mm in Turkey, 252 mm in Syria, 261 mm in Iraq, and 111 mm in Jordan. Because of the favorable conditions and diverse geography, the country is able to cultivate produce that grow in both cold and tropical climates including a diversity of over 60 types of crops extending over a relatively long growing season and over 10 livestock breeds and products (IDAL, 2020a). In fact, this is what has allowed the people of Lebanon to use this rich diversity of agricultural produce in their diet, consuming what was seasonally available and preserving the remainder for later use. Today, this agricultural diversity reduces dependency on specific crops and expands the scope of exploitable and added-value potential. The local growing conditions do also display certain advantages despite being currently unstable and witnessing sudden shifts in the availability of imported resources, inputs and skilled labor. Lebanon is also acknowledged for its strength in the processing of fruits and vegetables. Lebanon has higher yields in citrus fruits such as along with cereals which are higher than those of neighboring countries, but not in other fruits and vegetables, nuts, roots and tubers (Dal et al., 2021). The country is reported as part of the conditions that allow the country to produce early seasons of fruits and vegetables especially those of high value fresh and processed horticultural crops destined for both domestic consumption as well as export (World Bank, 2010). This positioning stands at an especially important stand today given that the country has been long recommended to enhance its productive sectors rather than the conventional rentier economy. In fact, the food processing agribusiness sector has witnessed a growth within the past 10 years as a result of the performance of the food industry instead of that of the primary agricultural sector (McKinsey & Company, 2018). The latter has instead been stagnant and displayed only marginal growth in the highest yield increase in cereals for example which recorded 10% compared to the global average of 14% in the same period (Dal et al., 2021). The sub-sectors of fruit and vegetable processing has been recognized as recommended opportunity to increase not only the agricultural competitiveness but also food security of the country. Finally, one of the largest advantages in which Lebanon is said to potentially benefit from is its proximity to the Gulf and European markets and especially where in the former, the reputation of certain Lebanese products such as apples is prominent. This point is highly complemented with the huge market potential found in international arena where the Lebanese diaspora (Figure 27) is located in significant numbers around the globe and are estimated at triple the number of national residents (Skulte-Ouaiss & Tabar, 2015) and counting after the 2019 economic collapse.

Box note 8: Highlights on the added value of processing and *mūne* food preservation

When thinking about *mūne* from an agricultural standpoint, it can be easily seen how proximity to the space of primary production would be useful for the provision of raw material. This is not the only reason why the *Beqā'* valley is important in this regards. In fact, certain *mūne* products would also be dependent on the characteristics of raw produce used in its preparation (Box note 6), which the *Beqā'* valley is capable of providing. Examples would be the reputable variety and dimensions of eggplant used in the preparation of *makdūs* (usually striated *Kafarsusi*), or the known apricots of northern *Beqā'* for jam, the famous roses (the *Rosa Damascena*) from Qsarnaba in central *Beqā'* used for *maward* (distilled rose water). Another important point to understand is that Lebanon is a small country of 10,452 km² which makes its agricultural productivity limited. Therefore, the country is much less competitive in terms of quantity. But, as seen above, Lebanon does hold certain competitive advantages in its agricultural production of fresh raw produce. In addition to that, the bigger potential would be in adding value to that fresh produce through processing and especially that which is traditional, holds an identity and is directly linked to the country's culinary heritage; the *mūne*. Added-value processing practices such as those of traditional *mūne* preservation can assert their value in several approaches. First, they capture and elevate the value of fresh produce which hold the quality of both raw material and the end product which both are a result of a cumulative knowhow and skills of their producers. It is not only the characteristics of the fresh produce that are in play here, but the most important advantage highlighted within the scope of this study would be the tangible and intangible value and characteristic of preserved *mūne* foods coming from the women skills and knowhow, tradition, heritage and story behind the products themselves. In addition, elements of food security are also considered as added value since preserved *mūne* foods are more stable with time compared with fresh agricultural produce. This would constitute an advantage in times of crisis such as which is being witnessed by Lebanon currently. Being preserved, *mūne* foods are shelf-stable and their shelf life is normally much longer than fresh produce. They can on average stay suitable for consumption anywhere between one or two years with their original objective being to serve household nutrition throughout the year. Such stability means that storage is rather easier and much longer than fresh produce since so refrigeration or special conditions are required. This serves well during times of food shortages thus contributing to food security objectives. Moreover, this also would facilitate in transportation and logistics for market supply and trade.

2.2.2. A brief overview on facts and figures – production and trade

Agriculture in Lebanon generally and in the *Beqā'* specifically is considered one of the pillar sectors. The *Beqā'* valley can be arguably looked at as the main agricultural production area in the country, covering almost 40% of the national surface area and constituting almost half of the entire cultivated areas. The planning of land use in the *Beqā'* as well as the agricultural regions of north Lebanon have been said to have an impact on the national interest of the country as they were described to have the 'best' agricultural lands in which irrigation networks were either existing or planned (Darwish et al., 2012). The *Beqā'* specifically holds the main surface dedicated for the production of cereals and pulses (57%), vegetables (57%), and fruit trees (36%)²⁷. The *Beqā'* valley also contains the majority of livestock production (goats, sheep and cattle) and dairy. The largest sizes were the goat herds and the least were cattle. 57% of the country's goats (total 434,700 heads) and 38.6% of cattle (total 77,400) were found in the *Beqā'* valley (Ghadban, 2013). The agricultural significance of the valley was even a main reason why it was joint to Mount Lebanon along with the northern Akkar and the South regions thus forming the Great Lebanon state in 1920 during the French mandate to ensure a source of production and food security (Hamadé, 2020). Although the agricultural sector has a low national contribution to GDP which was estimated at 4% in 2018 by the World Bank (World Bank, 2018) and averaging 6.8% between 1994 and 2007, that contribution increases up to 80% in rural areas in Lebanon as stated by Food and Agriculture Organization of the United Nations (FAO)'s website country brief²⁸. This is true especially in predominantly rural and agricultural regions such as the *Beqā'* valley, the North and South Lebanon which yet reinforces the sector's weight and demonstrates how the agricultural sector is stated as a primary source of income in such areas. The significance of the agricultural sector is further reinforced in its coupled rather than separate impact. The World Bank acknowledges the compounded importance when coupling agriculture with inputs of the food production sector. Together, with their indirect contributions, the agro-food sectors increase the contribution to Lebanon's national GDP from 4% to 25–30% and are thus able to support growth as they combine up to one-quarter to one-third of the economy. In fact, the local Investment Development Authority of Lebanon (IDAL) states that the sector employs a significant number of personnel accounting for 25% of the industrial sector workforce (IDAL, 2020b), and some sources even report these figures up to 40% (L. Chalak et al., 2011). Nationally, the country's economy has instead long been constructed around a free open-market and strong *laissez-faire* tradition with a reliance on services and tourism (commercial interests) due to the limited resources that the small surface area of 10,452 km² has to offer and a largely urbanized population (Ghadban, 2013). Moreover, even though the national contribution of the agriculture sector to the GDP is significantly less than the neighboring countries, the value added per square kilometer is higher and that reflects a more elevated intensity of production focusing on high value fruits and vegetables (World Bank, 2010) (Table 3). Yet, despite the valuable potential, today's reports mention that the sector is rather stagnant and has not witnessed any growth since 2004. Since then, the value of agricultural crops and forestry output

²⁷ According to IDAL's regional descriptions available at

https://investinlebanon.gov.lb/en/lebanon_at_a_glance/invest_in_regions/Beqa_governorate

²⁸ <https://www.fao.org/lebanon/fao-in-lebanon/lebanon-at-a-glance/en/>

remained constant between 2004 and 2016 at around US\$ 2 billion while that of livestock and fishery has grown by only US\$ 300 million in these 12 years (Hamade, 2019).

Table 3: A comparative table showing the percentage contribution to GDP, agricultural employment and agricultural added value between Lebanon and other countries in the Middle East and North Africa. Source: (World Bank, 2010).

Country	Agriculture value added (% of GDP)	Agricultural employment (% of total employment)	Agriculture value added (constant 2000 US\$)/agricultural land (sq.km)
Egypt	13.0	29.9	556,549
Jordan	3.1	3.6	26,019
Lebanon	6.1	12.0	278,163
Morocco	12.4	44.6	22,155
Syria	20.4	27.0	43,572
Tunisia	10.9	--	28,172

The geography of the country is one that is diverse and allows for the cultivation of a variety of crops. As shown in the topographic map in Map 8, it includes a flat coast, rugged mountains and the fertile plain of the *Beqā'* valley. It is this multitude nature of the land, its general moderate Mediterranean climate with present microclimates, soil diversity and having one of the highest rates of precipitation and water resources amongst its neighboring countries that allow a country such as Lebanon to diversify its agricultural production. In an appraisal document for a pollution prevention project of the Qaraoun Lake, the World Bank estimated that 2.3 million dunum (du) of land are cultivated in Lebanon, equating almost quarter of the total surface area of the country, from which 1.1 million du are irrigated cultivations (World Bank, 2016). The *Beqā'* valley normally had the highest percentages of irrigated plots at almost half of those in the country and has the highest prevalence of pressurized irrigation by drip or sprinkler (Dal et al., 2021). The valley, comprising of both the governorates of Baalbeck-Hermel and the *Beqā'* is also the top agricultural contributor in the country when it comes to cultivated land (Figure 18) as according to IDAL, these include the Baalbeck-Hermel (25%), the *Beqā'* (18%), and Akkar (15%) (IDAL, 2017a).

Nationally, the top 5 agricultural product manufactured by the country include 1) vegetables (potatoes, tomatoes, cucumbers, and gherkins at 1,340,443 tons produced in 2018), 2) fruits and nuts (oranges, apples, lemons and limes at 816,800 tons produced in 2018), 3) live animals and animal products (fresh cow milk, chicken, and cattle meat at 410,155 tons produced in 2018), 4) unmanufactured tobacco (8,694 tons produced in 2018), and 5) cereals (wheat, barley, and maize at 170,737 tons produced in 2018) (IDAL, 2020a). The top 10 agricultural products by production weight nationally are represented in Figure 19. In terms of trade, Lebanon mostly exports coffee, grapes, potatoes and bananas most of which (77.8%) gets exported to Arab and Gulf countries including Saudi Arabia, Qatar, Syria and Kuwait (IDAL, 2020a). Lebanon in fact is part of several trade agreements that help its economic integration. These are the Euro-Mediterranean Association agreement, the European Fair-trade Association-Lebanon, and the Greater Arab Free Trade agreement; noting that an observer status in the World Trade

Organization was granted for Lebanon in 1999 but has yet to develop into a full membership (Ghadban, 2013). Generally, the agricultural sector in Lebanon tends to be oriented towards export. This comes from the increased demand to fruits and vegetables in the 1950s which caused a rapid shift from traditional sharecropping production. This change however had negative implications especially on farmers in poorer regions as Akkar in North Lebanon and the Northern *Beqā'* who suddenly found themselves without any farms to cultivate and were obliged to seek employment in the city (Hamade, 2019). Despite the attempt at opening to international markets and demand, Lebanon in fact remains a country which is highly dependent on importation, even in making its agricultural sector operate. In fact, this dependency extends beyond agricultural and foodstuffs but the agricultural sector in itself imports the majority of raw material required for local production. Latest figures show a value of US\$ 232,861 thousand for export of agricultural products versus US\$ 796,839 thousand for imports, equating a negative US\$ 563,978 thousand (29%) trade balance (CCIB, 2020). The dynamics of trade exchange in agricultural products between 2007 and 2020 can be found in Figure 20. The top agricultural imports for Lebanon in 2020 registered wheat, corn, rice and soybeans with main imports supplied from countries as Ukraine, China, the United States and Brazil (CCIB, 2020).

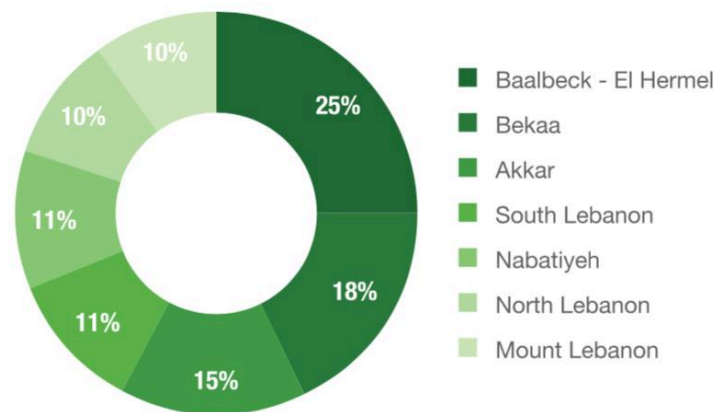


Figure 18: Cultivated land by governorate (*mohafaza*) % share in Lebanon as reported by (IDAL, 2017a) using latest data from FAO, 2010.

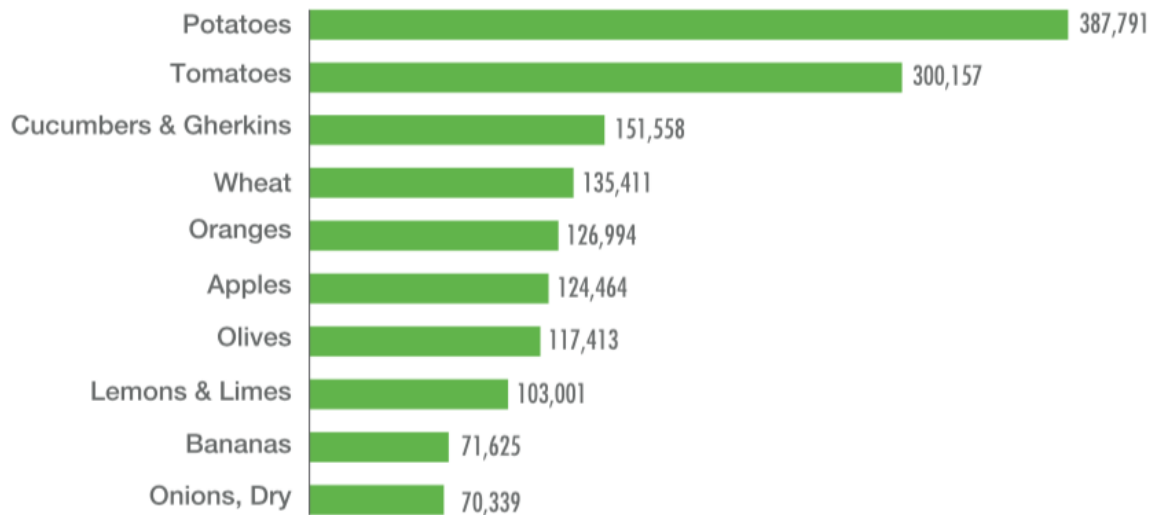


Figure 19: Top 10 agricultural products by production weights (tons) in Lebanon as reported by (IDAL, 2020a) using data from FAO Stat, 2020

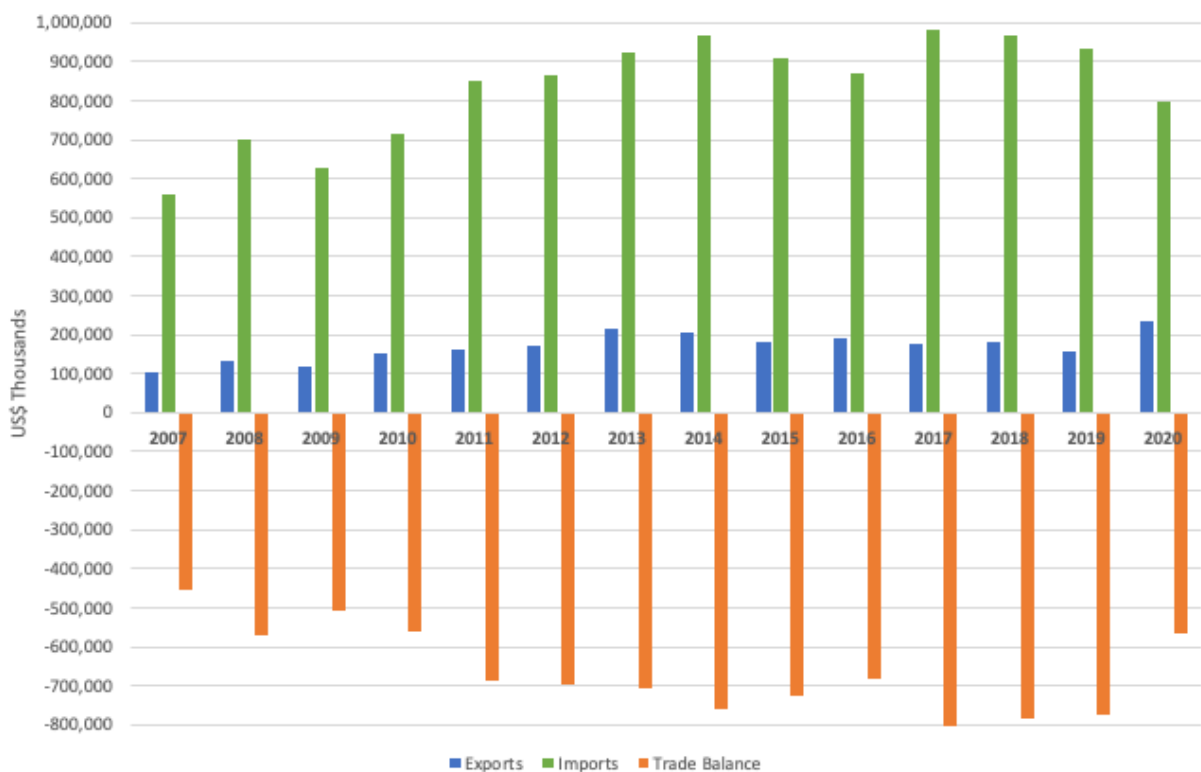


Figure 20: Development of trade exchange in agricultural products between 2007 and 2020 (thousand dollars). Source: (CCIB, 2020) using data from the Lebanese customs statistics

2.2.3. Land use, productivity and connectivity

Even though many compounding and evolving challenges exist in the economic fabric of the country, the agricultural sector, despite its own set of difficulties, has always been considered as an essential employer and livelihood sector in Lebanon, particularly for rural and poorer classes. The World Bank reported in 2010 reported that 40 homogeneous agricultural zones exist across the country with each having a distinct socio-economic and geo-political

characteristics (World Bank, 2010). With no surprise, the largest proportion of a Utilized Agricultural Area (UAA)²⁹ belonged to the *Beqā'* valley inclusive of its two administrative governorates; the Baalbeck-Hermel and the *Beqā'* (Figure 21). Together, the proportion of the UAA covered by the two governorates surpassed 45% of that of the country's total, knowing that 64.3% of Lebanon's surface area, equivalent to around 658,000 ha (132,000 ha arable land, 126,000 ha permanent crops, and 400,000 permanent meadows and pastures) was said to be dedicated to agricultural land (Dal et al., 2021). When describing the agricultural characteristics and production of the *Beqā'* valley, usually two regions are distinguished. The first is the Orontes valley in the northern section of the *Beqā'* valley, and the second is the central and south (usually called west) *Beqā'*. In a study of the country by Darwish *et al.* (2012), these regions were described in addition to the characteristics of the Anti-Lebanon. In summary, the description included:

- **The Orontes Valley** which has lower levels of precipitation (Map 10), is more prone to desertification, and includes large pastures with a UAA reaching 20,000 ha (53% irrigated) and a significant presence of livestock with 21,000 large units of mostly goats and cattle.
- **The central and south *Beqā'*** (usually referred to as West *Beqā'*) which is described as the most fertile region of the country and one which is significant in its share of national production (includes 25% of large livestock units, 25% of national UAA, and 30% of irrigated UAA). This region has higher precipitation than its northern counterpart and its share of UAA is at 64,000 ha (61% irrigated) and also has an important presence of livestock with 44,000 large units.
- **The Anti-Lebanon** which is a rugged mountainous chain bordering Syria which has low levels of precipitation and which can also be divided in two sections. These are 1) the Anti-Lebanon which has a UAA of 7,000 ha (13% irrigated) with 12,000 large livestock units, and 2) The southern Hermon which is located at the bottom edge of the valley and is the location where the country's international borders meet with Syria and Palestine. This region has a UAA of 13,000 ha (16% irrigated) with 20,000 large livestock units.

These above characteristics further solidify the importance of the entire valley in its agricultural contribution but also bring forward the key position of livestock and especially small ruminants dairy sector which majority of production originates from the valley (57% of goats and 38.6% of cattle are found in the valley). This is important to consider for *mūne* foods since fundamental items such as *kīshk*, yogurt and *labneh* for example are dairy based. It therefore comes to no surprise that the *Beqā'* valley in both of its governorates includes the most dairy processing centers, almost half of those found in the entire country (Table 4). Besides its important dairy husbandry and processing sector, the *Beqā'* valley has been long infamous for its cultivation of illicit drugs mainly cannabis *hashish*. In fact, the cultivation is significant expected to occupy between 15 to 22% of arable land nationwide (over half of that

²⁹ According to EuroStat, Utilized agricultural area, abbreviated as UAA, is defined as “the total area taken up by arable land, permanent grassland, permanent crops and kitchen gardens used by the holding, regardless of the type of tenure or of whether it is used as a part of common land”. [https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Glossary:Utilised_agricultural_area_\(UAA\)](https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Glossary:Utilised_agricultural_area_(UAA))

of the *Beqā'*) over 20,000 to 30,000 ha and is also a significant user of water but a significant provider of income generation and supporter of livelihoods for poor farmers (Dal et al., 2021). Its cultivation has even been a sign of resistance in the face of socio-economic and political hardship in the marginalized and remote area of the *Beqā'* during and after the civil war. Their prohibition in fact seemed ineffective throughout the years with their trade having export markets beyond the Middle East reaching the West and Central Europe and Africa (Afsahi & Darwich, 2016).

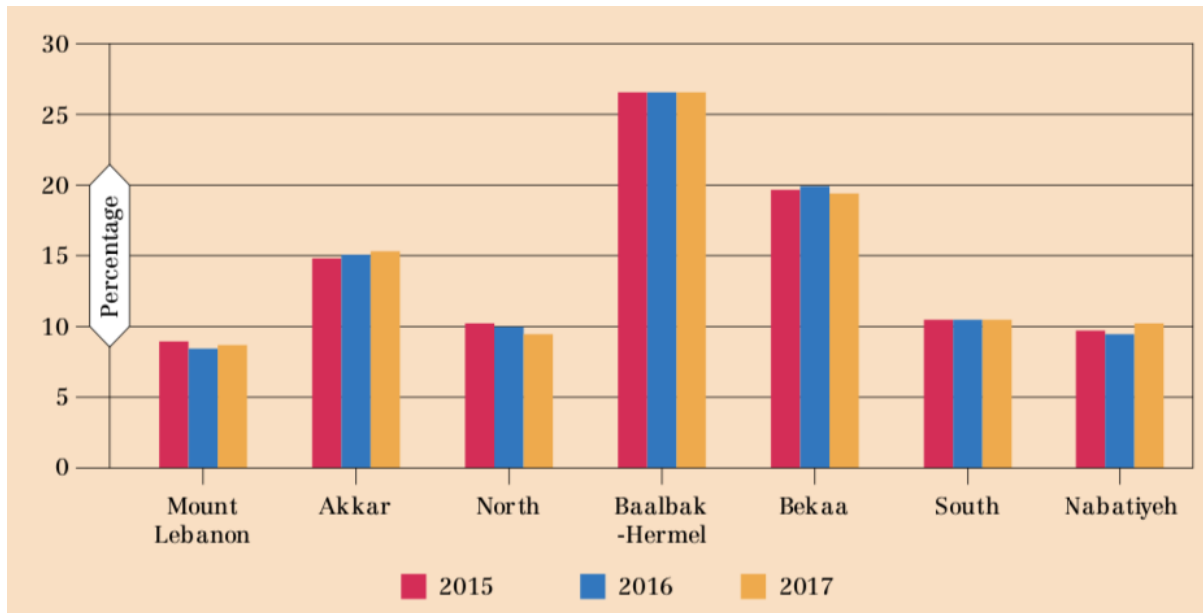


Figure 21: Distribution of Utilized Agricultural Area (UAA) in Lebanon per governorate except Beirut in 2015, 2016 and 2017. Source: (Dal et al., 2021)

Table 4: Distribution of dairy processing units in Lebanon. Source: (IFAD, 2017)

Governorate	Nb. of dairy processing units
Mount Lebanon	75
<i>Beqā'</i>	103
Baalbeck-Hermel	34
Akkar	9
North Lebanon	26
South Lebanon	19
NabatyeH	10
Total	276

From the last agricultural census that was performed by the Lebanese Ministry of Agriculture in 2010, Lebanon was estimated to be 55% covered in permanent crops out of which 42% is covered by mostly with non-irrigated olive trees. Almost half of agricultural lands were estimated to be irrigated with cereals and vegetables-legumes consisting each of 20% coverage, leaving 5% covered by industrial crops and around 1.7% for intensive greenhouse cultivations which increases to 3.3% in North Lebanon Akkar region (Hamade, 2019). Based on that data of the last agricultural census that was conducted back in 2010, Table

5 represents the distribution of agricultural land use in Lebanon per governorate except Beirut. These figures in turn show how the *Beqā'* valley governorates hold the highest proportion of seasonal crops (specifically cereals at 55.5% and vegetables 52.2%) as well as the highest proportion of agricultural lands in the country at 45.8%. The land distribution is presented in more details specifically for the *Beqā'* valley in Table 6 and Map 15 represents the distribution of the main cultivations around the country map.

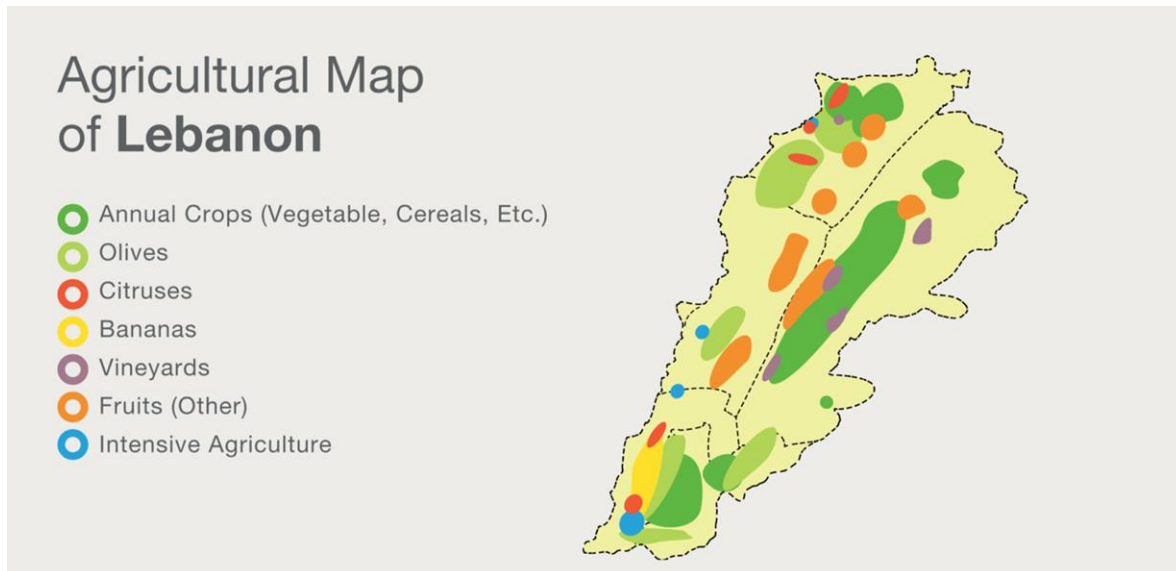
Table 5: Percentage distribution of agricultural land use and average farm size per governorate (excluding Beirut). Source: (Hamade, 2019) using data from the MoA agricultural census of 2010.

	Mount Lebanon	North Lebanon	Akkar	Nabatieh	South Lebanon	<i>Beqā'</i>	Baalbeck-Hermel	Lebanon total
Permanent crops	86.7%	90.9%	59.6%	58.9%	78.9%	28.8%	43.4%	55.1%
Permanent crops excluding olives	59.4%	38.4%	24.2%	13.9%	48.2%	17.1%	35.6%	31.6%
Olives	27.3%	52.4%	35.4%	45.0%	30.7%	3.3%	7.8%	23.5%
Seasonal crops	10.5%	7.1%	37.2%	40.0%	18.7%	71.0%	56.2%	43.2%
Industrial crops and forage	0.2%	0.9%	3.6%	12.0%	5.1%	2.1%	11.5%	5.0%
Cereals	0.4%	3.6%	15.9%	16.5%	7.4%	30.8%	24.7%	19.7%
Vegetables and field legumes	10.0%	2.6%	17.7%	11.4%	6.1%	32.2%	20.0%	18.5%
Greenhouses	2.8%	2.0%	3.3%	1.2%	2.5%	0.2%	0.4%	1.7%
Total	100%	100%	100%	100%	100%	100%	100%	100%
% of total agricultural land	17.1%	10.0%	17.4%	10.4%	10.1%	18.5%	27.3%	100%
Average farm size	0.5ha	0.9ha	1.3ha	1.0ha	1.13ha	3.9ha	2.1ha	1.5ha

Table 6: Cropping patterns in the *Beqā'* Valley. Source: (Aw-Hassan, et al., 2018)

Land use	West <i>Beqā'</i>		Central <i>Beqā'</i>		Baalbeck - Hermel		Total	
	Area (ha)	%	Area (ha)	%	Area (ha)	%	Area (ha)	%
Cereals	8,073.7	45.7	5,885.2	27.8	13,191.8	24.7	27,150.7	29.4
Legumes	627.7	3.6	769.8	3.6	3,523.1	6.6	4,920.6	5.3
Vegetables	1,579.6	8.9	3,964.7	18.7	6,154.9	11.5	11,699.2	12.7
Industrial crops	518.7	2.9	432.1	2.0	3,719.3	7.0	4,670.1	5.1
Potatoes	1,791.3	10.1	3,723.6	17.6	2,033.0	3.8	7,547.9	8.2
Bulbs and tubers	783.1	4.4	1,454.8	6.9	1,596.3	3.0	3,834.2	4.2

Wine grapes	1,003.5	5.7	250.6	1.2	712.0	1.3	1,966.1	2.1
Table grapes	263.1	1.5	1,443.4	6.8	2,777.7	5.2	4,484.2	4.9
Olive	1,394.1	7.9	96.4	0.5	4,141.5	7.8	5,632.0	6.1
Fruits	1,638.1	9.3	3,158.2	14.9	15,493.3	29.0	20,289.6	22.0
Total	17,672.9	100	21,178.8	100	53,342.9	100	92,194.6	100



Map 15: Distribution of the main agricultural cultivations on the Lebanon map. Source: (IDAL, 2017a) using data from the FAO 2010

When it comes to the major agricultural production regions in the country such as in the *Beqā'* valley and North Lebanon, they mainly belong to farmers who work in a larger scale than others in the country, some even at a large and commercial scale. Such reach a proportion of 67% of the overall total agricultural land of the country, whereas those of the mountainous areas of Mount Lebanon and the South consist of smaller farmers (UNESCO-Beirut, 2013). In his article of the status of the agricultural sector in Lebanon, Hamade (2019) highlights this heterogeneity (or fragmentation) in the distribution of land tenure. He explains how in Lebanon, 60.6% of the total agricultural land is owned by only 10% of landowners from which the top 1% alone own 26.5% of that surface area and that the percentage increases even further in areas of intensive agriculture such as in *Zahle* and West *Beqā'* (69.1%). The author adds how such large-scale private holdings, which include those linked to high-profile politically affiliated families, focus their production on export-oriented sub-tropical produce and intensive field productions such as citrus, avocado, potatoes and bulbs while their direct owners are absent from the direct field work. Yet, the heterogeneity is also reflected on the modes of production. In the northern *Beqā'* valley in the Baalbeck-Hermel, agricultural activity is a major source of livelihood and farms are mostly traditional in their practices and are mostly small to medium in their sizes. 22.9% of farming land in this northern section of the *Beqā'* valley have plots larger than 5 ha and 64.8% of these lands are cultivated by their owners. On another hand, the central and south (referred to as west) *Beqā'*, agricultural practices are more intensive and farm sizes are larger with more capital investment. 69.3% of farming land in this section of the *Beqā'* valley have plots larger than 5 ha whereas 33% of the land constituting 67.2% of farms are cultivated directly by their owners and are mostly small scale. These

distributions in plot sizes by region and types of land tenure can be found in Table 7 and Table 8.

Table 7: Distribution of plot sized by region in Lebanon by percentage (%). Source: Hamade (2019)

	%	0.1 ha ≤ area ≤ 0.2 ha	0.2 ha ≤ area ≤ 0.5 ha	0.5 ha ≤ area ≤ 1 ha	1 ha ≤ area ≤ 2 ha	2 ha ≤ area ≤ 5 ha	area > 5 ha	Total %
West <i>Beqā'</i>	Share of land	2.7	5.1	6.7	7.8	13.8	63.9	100%
	Share of plots	34.8	13.5	15.4	9.1	7.4	7.8	100%
Central <i>Beqā'</i>	Share of land	1.1	4.7	9.1	11.0	21.8	52.3	100%
	Share of plots	15.2	25.3	23.5	15.0	13.6	7.5	100%
Baalbeck – Hermel	Share of land	4.0	11.5	16.4	18.6	26.7	22.9	100%
	Share of plots	28.0	30.3	20.5	12.1	6.8	2.4	100%
Akkar	Share of land	9.1	18.3	21.7	19.3	17.2	14.5	100%
	Share of plots	40.8	30.4	16.8	7.9	3.4	0.8	100%

Table 8: Distribution of land tenure of agricultural land by region in Lebanon by percentage (%). Source: Hamade (2019)

	%	West <i>Beqā'</i>	Central <i>Beqā'</i>	Baalbeck- Hermel	Akkar
Farmed by landowner	Share of land	33.0	57.5	64.8	73.1
	Share of farms	67.2	79.1	74	83.7
Leased out	Share of land	50.3	36.6	14.7	21.5
	Share of farms	11.0	16.5	6.4	8.5
Share cropping	Share of land	11.1	5.4	3.3	0.9
	Share of farms	3.5	3.1	1.5	0.6
Other	Share of land	5.7	0.4	17.1	4.5
	Share of farms	18.2	1.4	18.1	7.3

As previously noted, Lebanon produces a diverse agricultural output at a national level which constitutes a positive attribute in the lack of dependency on a certain type of cultivation. The main agricultural output is in the form of crop production which comprises 60% (mainly fruits and vegetables including citrus, apples, grapes, bananas, potatoes and tomatoes) while the remaining is in livestock production (Dal et al., 2021). According to the same source, data from FAO Stat in 2020 reveal that nine types of the local produce is usually destined to processing. The size amount of these locally cultivated and locally processed agricultural produced by weight between 2014 and 2017 is represented in Table 9. The table reveals agricultural produce that could be used in traditional preservation techniques but also those that do not, such as soybeans. These in fact have been on an increased cultivation trend most probably to be used to supply the husbandry feeding of the most common livestock of goats, sheep, and cattle. Yet, no data are available on the regional supply of such produce destined for processing and certainly no data relating to these outputs for *mūne* preservation. In fact, the size of production compared to those preserved for *mūne* (specifically by cooperatives) are not acknowledged nor registered and especially since they are still small very small in size as the results will demonstrate. Generally in Lebanon, the top four food processing activities around the country include dairy products and confectionary (each at 18%), bakery (at 16%) and the production of processed foods (as canned, frozen and dried foods at 10%) as shown in Figure 22. And as previously noted in Table 2 in section 1.3.1, the *Beqā'* governorate ranks second top in the number of food and beverage industries (257) after Mount Lebanon (602) but the former has the highest proportion with respect to other industries (40.6%).

Table 9: Common processed agricultural products by 1,000 tons. Source: (Dal et al., 2021) using FAOSTAT data

Product	2014	2015	2016	2017	Total
Apples and apple products	14	14	13	10	51
Barley and barley products	11	11	7	7	36
Grape and grape products excluding wine	22	22	22	22	88
Groundnuts (shelled)	16	15	11	12	54
Lemons, limes and products	17	17	17	17	68
Olives (including preserved)	90	108	119	117	434
Onions	15	15	15	15	60
Oranges, mandarins	28	30	28	28	114
Soybeans	39	122	158	241	560

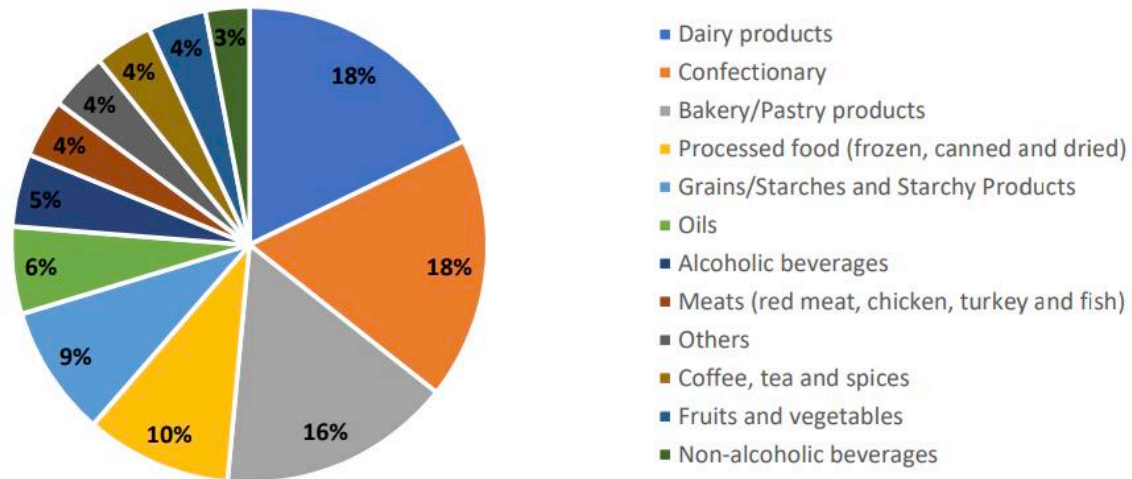
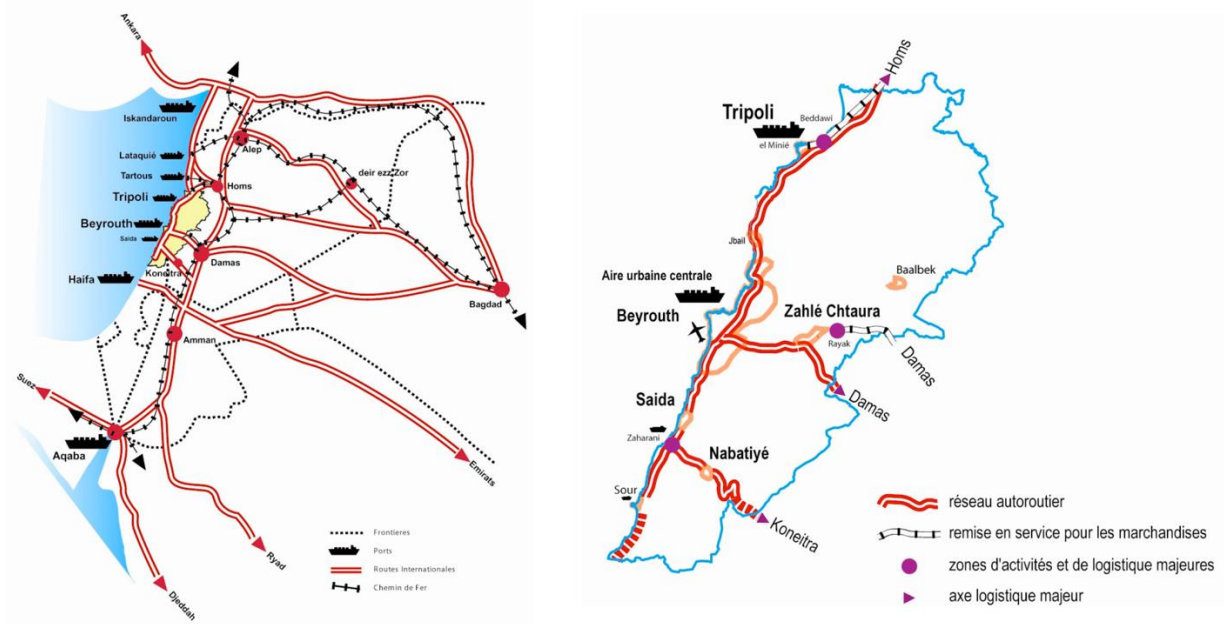


Figure 22: Distribution of agri-food enterprises in Lebanon by type of production. Source: (CRI, 2019)

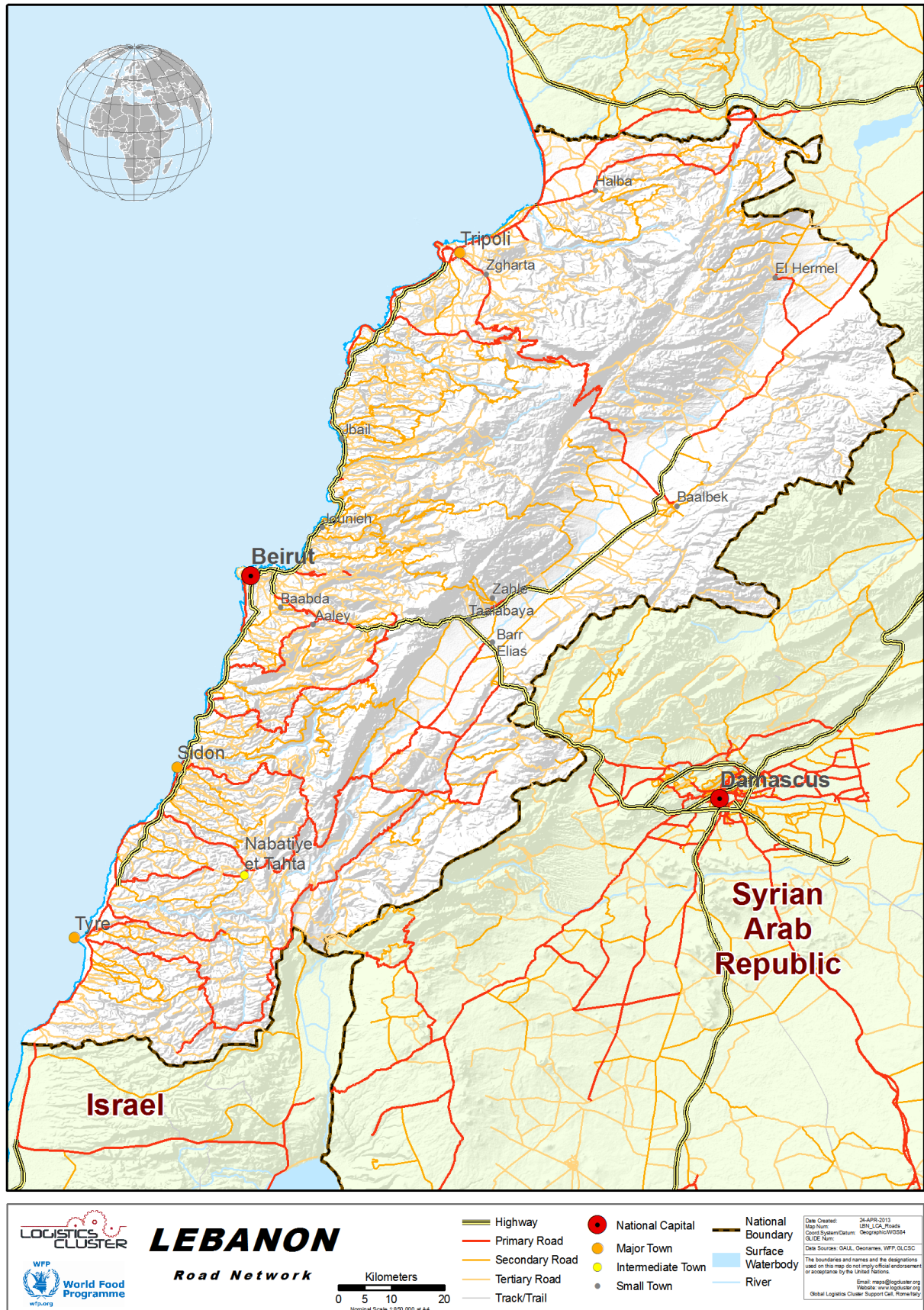
Besides the significance of the agricultural activities along with touristic and cultural attachment, the CDR additionally identified various roles and agglomeration of specific vocations that contribute to the economic life and possibly development of the major poles within the *Beqā'*, specifically for Baalbeck and *Zaḥle*. For Baalbeck, the city is listed as inclusive of services, commerce, hosting infrastructure and festivals, support for cultural tourism, and support for agricultural development. For the more central city of *Zaḥle*, these roles were listed as administrative, services, congress and headquarters for public affairs, commerce, logistics, having a carrefour main plaza, hosting infrastructure and festivals, and support for agricultural development (CDR, 2004). In fact, the city of *Zaḥle* together with the nearby Chtaura have the organizational assets that help in their function as a logistics and land-based trade route. This central region of the *Beqā'* valley has an industrial zone and facilities, warehousing, post-harvest and packaging centers and transit routes. The first dry port in the country was also established in the *Beqā'* valley by the French container and shipping company CMA CGM to offer warehousing, storage and handling to and from the region (IDAL, 2020a). These facilities that are concentrated mostly in central *Beqā'* connect firstly to within the valley itself through a main highway and road that transverses the valley north through Rayak and Baalbeck North until the crossing at Hermel, and south towards the west *Beqā'* region. It also connects directly to the capital and main concentration and market region of Beirut to the west of *Zaḥle* and to the Syrian territory, which the entire valley borders to the east over 365 km (Arbid, 2017). Finally, the valley becomes connected to other neighboring Levant countries. These connections and specifically for the movement of merchandize is visualized in Map 16 and the road network on Lebanon is found in Map 18. However, an issue of illegal border crossing is still a serious challenge to control, and which today has been causing a bleeding of products traded for black market rates including the much-needed subsidized food and fuel, depicted in Map 17.



Map 16: The connectivity of land-based trade routes in Lebanon (left) to neighboring Levant countries and (right) with border crossings to Syria through the *Beqā'* valley (in French). Source: (CDR, 2004)



Map 17: A representation of official and illegal border crossing points on the Lebanese (*Beqā'* valley)-Syrian border. Source: (Arbid, 2017)



Map 18: Lebanon road network map. Source: (WFP, 2013)

2.2.4. Value chain, policy and stakeholder framework

Starting by a description of the usual value chain mechanism, agricultural and food processing activities normally follow a typical organization and route that takes the product from the consumer to reach the market. This organization usually includes three separate types of stakeholders: the actors, the supporters, and the influencers. The involvement and roles of each stakeholder certainly change from one value chain to another and per type of producer (depending on product, location, farmer, or cooperative, etc.) but could be generalized in one typical model. This was performed for example by the FAO (Dal et al., 2021) as shown in Figure 23 and by ICARDA (Aw-Hassan, et al., 2018) as shown in Figure 24. These roles could therefore be summarized as:

- **The actors (or operators):** are the key private units who normally produce and add value to the output products along the different steps along the value chains. They are therefore directly involved in the cultivation, transformation and/or manipulation of the products from seed until it reaches its final market destination. Examples of these actors would be the farmers and primary producers, nurseries, input suppliers, cooperatives, packaging facilities, wholesale markets, traders, distributors, food processing facilities, local market agents and exporters.
- **The supporters:** provide the support for the value chain actors whether in commercial, technical, or financial means. Such support could be in the form of service providers, organizations of business support, educational or research institutions, international donors or local NGOs, trade associations, chambers of commerce, and so on.
- **The influencers:** belong to the institutional context at the local or national level who are involved with regulating the sector and its strategies and policies. The influencers include for example government departments, ministries and other relevant public agencies.

The roles of the three above stakeholders (actors, supporters, and influencers) can be further elaborated and this summary is based on that provided by (Aw-Hassan, et al., 2018).

- **Public influencers and supporters:**

The Lebanese **Ministry of Agriculture** (MoA) consists the main regulatory and institutional body of the Lebanese government that oversees and regulates the agricultural sector and including food processing products. In short, the MoA through its General Directorate of Agriculture regulates the sector's production, processing and market including its trade in terms of export and import. It also controls and monitors the implementation of any legislations or regulations issued. The MoA is also normally mandated to support the development of the sector by providing relevant effective extension services (on production, harvest and post-harvest, storage and packaging, processing, etc.), by planning, coordinating and implementing projects directly or indirectly, and finally by researching and documenting the sector. Three institutions are affiliated to the MoA directly and these are the Green Plan Authority, the Lebanese Agricultural Research Institute (LARI), and the Directorate General of Cooperatives (DGoC). The **Green Plan** operates autonomously under the tutelage of the MoA and that is in rural development activities as it has its own executive body responsible for rural infrastructure such as irrigation and water collection, roads, agricultural land reclamation and so on. The **LARI** is a research and extension entity that has a separate

independent budget and works to ‘provide answers and solutions’ for farmers. It conducts laboratory testing and analysis at different levels including soil, water, the environment, and food products including food safety microbiological and chemical tests prior to market dispatch and export. The **DGoC** is responsible of regulating, monitoring and controlling the entire cooperative system and not only those agricultural, meaning also those working in food processing, artisans, housing, marketing, and so on. It is responsible for the control of legal and financial aspects of the sector, providing leadership and technical extension for cooperatives, and also for the researching of economic status of cooperatives and providing statistical figures on the sector.

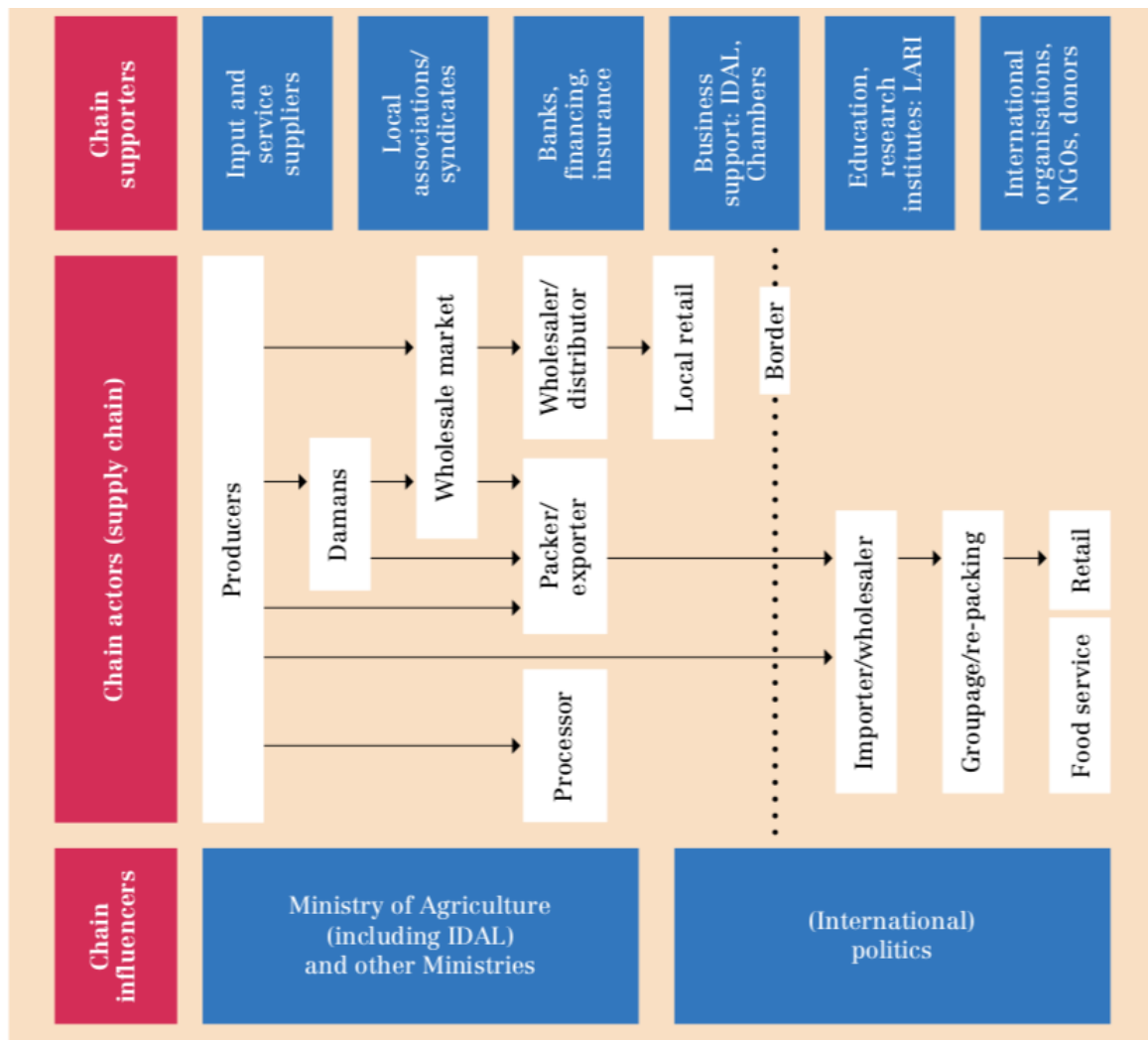


Figure 23: Generalized basic model of the Lebanese agricultural production and market value chain by the FAO and adapted from the UDAID LIVCD project³⁰. Source: (Dal et al., 2021)

³⁰ Eight wholesale markets exist in Lebanon which are mostly utilized by farmers for their end product supply to the market. The largest wholesale market is found in the capital Beirut which grabs the highest prices and additionally clears imported produce (Seyfert et al., 2014).

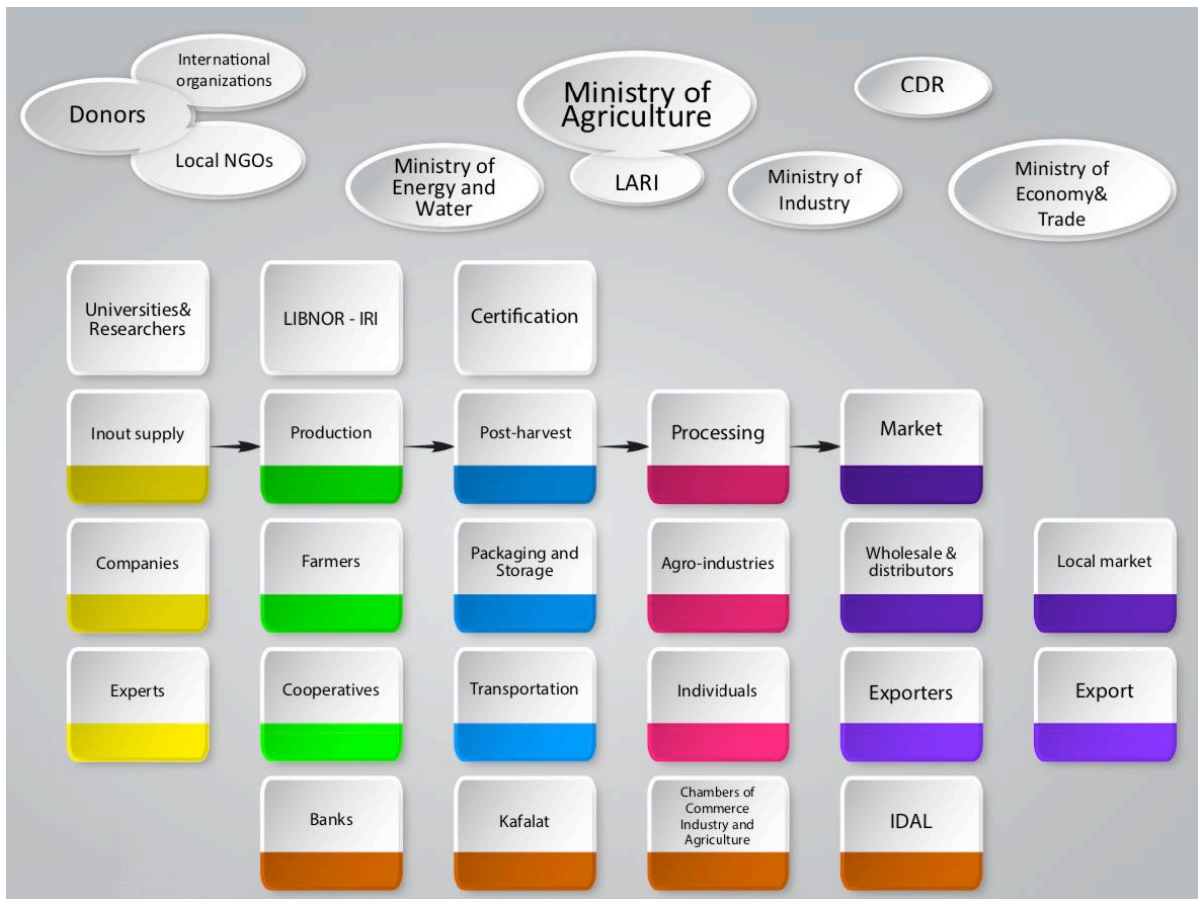


Figure 24: Generalized basic model of the Lebanese agricultural production and market value chain by the ICARDA. Source: (Aw-Hassan, et al., 2018)

Certain activities in the sector are also performed with common jurisdiction between the MoA with other ministries. The food safety issues for example are conducted also with the Ministry of Public Health (**MoPH**) and the Ministry of Economy and Trade (**MoET**). The national subsidy program for wheat and sugar beet however falls under the jurisdiction of the MoET (along with other trade policies, statistics, tariffs, and regulations) whereas the Régie Libanaise des Tabacs et Tombacs (the tobacco monopoly) is under the tutelage of the Ministry of Finance (**MoF**). Other governmental institutions could also be involved in the agricultural sector but not under the MoA. The Litani River Authority (**LRA**) for example is affiliated to the Ministry of Energy and Water (**MoEW**) and is responsible of large-scale irrigation projects and the management of water recourses. The Council for Development and Reconstruction (**CDR**) was created by a mandate by the Prime Minister in 1977 to help rebuild the infrastructure after the 1975 war by fundraising, coordinating and managing projects with donors, and itself distributing funds to ministries. When it comes to the agri-food sector, it has since 1990 been involved in projects such as developing agricultural roads, implementing irrigation canals and lakes, and funding dairy processing cooperatives. Another relevant support entity and specifically for the food processing sector is the Lebanese Standards Institution (**IDAL**) which is attached to the Ministry of Industry (MOI) and is responsible of developing and promoting standards for food and non-food items in the country.

When it comes to this study, an interesting initiative was launched by the Ministry of Foreign Affairs and Emigrants (MoFAE) under the Lebanese Diaspora Energy (LDE), called

the **Lebanese Gastrodiplomacy**. According to the Home Magazine³¹, a magazine targeting the Lebanese diaspora, the strategy of this initiative is to promote the Lebanese cuisine and help preserve its identity by certifying Lebanese restaurants abroad serving the authentic cuisine. The MoFAE under the initiative is said to have assembled an inter-agency committee with representatives from several ministries (including Tourism, Culture, Industry, Agriculture, Economy and Trade), along with the Syndicate of Restaurants Owners, the Association of Lebanese Industrialists and the Syndicate of Lebanese Food Industries.

▪ **Supporters:**

Many different types of supporters of the agri-food value chains are engaged in Lebanon in varying extent and forms. First and foremost, the non-governmental and civil society organizations³² (NGOs) (noting that 93% of CSOs in Lebanon are registered as NGOs (BRD, 2015) and will thus be referred to as herein) whether local and international along with international donors and civil society have long played a key role in the shaping of the sector. Some of the latest records in Lebanon by the Ministry of Social Affairs in 2014 number the officially registered NGOs at 8,311 (BRD, 2015) and their number is expected to be much higher today following the onset of the 2019 crisis and especially with the establishing of new ground groups after the disastrous Beirut Port explosion of August 4, 2020. The existence of NGOs in the country is said to be one of the most diverse and active in the region, with them being as diverse as the societies of Lebanon and engaging in activities to serve the meeting of needs where the government is not able (AbiYaghi et al., 2019). Studies speak of their existence since the days of the Ottoman Empire and that their large number is in fact partly due to the liberal nature of the law on associations which does not provide any governance directives for the non-governmental sector but rather only specifies the required documentation with a brief about the governing board (Haddad & Zalzal, 2018). They engage in anything that extends from humanitarian and urgent response, to human rights, environmental, health, social issues and others. In response to the Syrian crisis, around 190 organizations were reported by the UNOCHA to have worked in the *Beqā'* valley alone in 2014 (UN.OCHA, 2014)³³. In the agricultural and food sectors, NGOs usually engage in projects especially in rural and marginalized regions with dominant agricultural and food processing activities such as the *Beqā'* valley, the north and south Lebanon. Projects are usually designed towards rural development, creation of income generating activities to enhance livelihoods, provisioning, and optimizing production processes including agricultural practices, quality, and compliance with standards to improve marketing and export potential. Some of the known NGOs working

³¹ <https://mylebanonmyhome.com/wp-content/uploads/2018/09/HOME-Magazine-Gastrodiplomacy-An-Initiative-of-the-Ministry-of-Foreign-Affairs-and-Emigrants.pdf>

³² A definition for Civil Society Organizations was provided in a recent report by Beyond Reform and Development (BRD) titled “Mapping Civil Society Organizations in Lebanon” under the framework of the Civil Society Facility south Program implemented by Transtec and supported by the European Union. In that report, Civil Society Organizations are defined as “those organizations working to promote intra-sectarian cooperation, civic participation, and inclusion in the governance and political order of Lebanon. This definition includes only a subset of a broader civil society sphere that incorporates partisan organizations, faith-based organizations, unions and others (BRD, 2015, p. 8).

³³ Distribution per caza (total number of organizations): Baalbeck-Hermel: 45, Hermel: 19, Rachaya: 24, West *Beqā'*: 37, and *Zahlé*: 57.

in such activities for the development of the agriculture and food production sectors in Lebanon include but are not limited to: the Young Men’s Christian Association (YMCA), René Moawad Foundation (RMF), Safadi Foundation, ArcenCiel (AEC), Institute for University Cooperation Onlus (ICU), Expertise France, WorldVision, MercyCorps, Save the Children, and others. Their work is usually conducted through funds, cooperation and sometimes implementation received from international donors including but not limited to: the United States Agency for International Development (USAID), United Nations Development Programme (UNDP), United Nations Industrial Development Organization (UNIDO), International Labour Organization (ILO), World Food Programme (WFP), Food and Agricultural Organization (FAO), Italian Agency for Development Cooperation (AICS), European Commission (EC), International Fund for Agricultural Development (IFAD), World Bank (WB), and others. It is difficult to estimate the overall size of assistance received by Lebanon from the international community but to give an idea of its immense size, the USAID alone has provided funds exceeding \$1.3 billion since 2006 (most recently being \$20 million between 2019 and 2020)³⁴. The Lebanon Host Communities Support Programme (LHSP) program by the UNDP in response to the Syrian crisis was budgeted at \$2.48 billion over 5 years from which 35% aimed for investments in the national economies and institutions including agricultural in nature. Finally, the international community loan and grants pledges over the years for Lebanon’s reconstruction were held under the Paris I (2001) (500 million euros), Paris II (2002) (4.2 billion euros), Stockholm conference (2006) (980 million dollars)³⁵, Paris III (2007) (11 billion euros)³⁶ and, the most recent Cedre (2018) (unfulfilled 1.5 billion euros)³⁷ conferences which also raised tens of billions of dollars in total.

Other than the significant NGO sector in Lebanon, other supporters include **financing and subsidies** since financing opportunities as bank loans from the private sector to the agricultural sector are limited. The **Kafalat** program for example is a capital firm of public interest established by the Lebanese government which serves as a financing instrument to provide subsidized loans through commercial private banks specifically for farmers and small to medium enterprises (SMEs). The program loans prior to the recent crisis were set at a maximum amount of L.L 300 million with 5 to 7% subsidized interest rate that covered a maturity period of 7 years with a grace period of 1 year (Ghadban, 2013). In a 2020 report by the UNDP, 31 women-led cooperatives were reported to have taken a Kafalat loan from which 85% were food-processing cooperatives (UNDP, 2020). The Economic and Social Fund for Development (**ESFD**) is another example. It was originally funded by the European Commission with the objective of undertaking the many socio-economic challenges of the country including financing, knowing that the ESFD is autonomous in its financing and works under the CDR (EDS-ARE, 2021). Other micro-credit services available for farmers, cooperatives and small producers in Lebanon include for example **Al Majmoua, Vitas, Emkan, and ADR** (Association for the Development of Rural Capacities). A novel microfinancing civil company

³⁴ <https://www.usaid.gov/lebanon/our-work>

³⁵ <https://reliefweb.int/report/lebanon/international-conference-lebanons-reconstruction-international-communitys-economic>

³⁶ <https://www.reuters.com/article/us-lebanon-economy-france-idUSKCN1HD0UU>

³⁷ https://ec.europa.eu/commission/presscorner/detail/en/IP_18_2864

called **Shreek** was established as a result of the 2019 crisis and which attempts to operate under democratic and cooperative principles by supporting its members in their socio-economic conditions through their provision with alternative means for savings and credit³⁸. Finally, it should be noted that other forms of financing and micro-credit provisions could originate from development projects funded by international donors and implemented by (i)NGOs such as those by the World Bank and European Union (Ghadban, 2013). Other supporting agencies include also the Investment Development Authority of Lebanon (**IDAL**) which is another agency that promotes investment and supports export. It was created by the government in 1994 and aims to encourage investment around the country and in its different sectors including agriculture, agri-food industry and tourism. IDAL and the Lebanese government initiated the Export Plus program in 2001 which specifically aimed to support the export of agricultural and agri-food products by providing subsidies. IDAL also provides information, legal and audit support to businesses that are setting up through its Business Support Unit (BSU)³⁹ as well as exposure through participation in international exhibitions to agri-food producers and exporters through its Agro-Map export (IDAL, 2020). Finally, the Federation of Chambers of Commerce, Industry and Agriculture in Lebanon (**FCCIAL**) is also another major supporter of the sector. The FCCIAL was initiated in 1997 as a hub for four regional chambers that cover the entire territory of the country and which were created under the special governmental decree No. 36 of 1967. These four chambers include 1) the CCIABML for Beirut and Mount Lebanon, 2) the CCIAZ for *Zahlé* and the *Beqā'* valley, 3) the CCIAS for Sidon and South Lebanon, and 4) the CCIAT for Tripoli and North Lebanon. The main services that are provided by the chambers include support to the development of export and market exposure, provision of capacity building, provision of support and access to information (as market requirements and consumer needs), technical and extension services, and laboratory testing services (with the exception of the CCIABML). In relation to the *Beqā'* valley's **CCIAZ**, it has an interesting position of being a not-for-profit public organization. This means that the CCIAZ is eligible, and an actual active stakeholder, in partnering and implementing various forms of development projects with priority on agri-food production including dairy, quality control and marketing.

2.3. DISPROPORTIONATE DEVELOPMENT AND TERRITORIAL DISPARITIES

2.3.1. Distribution of the population, urban concentration and emigration

As mentioned in section 2.1.1, Lebanon has long faced sensitivities raised by the religious-based structure of the central government given the extremely diverse composition of its population. Coupled with these core sensitivities, Lebanon to this day has no accurate numbers on the size nor the spatial distribution of the general population. The last census of the population was conducted back in 1943 at the time of the independence (Tabar, 2010). There is in fact only estimates of the population and the most recent of which was carried out by the Central Administration of Statistics (CAS) and the ILO. These reported the estimate size of the population in 2019 at 4.842 million (CAS, 2019) excluding individual in non-residential units

³⁸ <https://shreek.org/about/>

³⁹ https://investinlebanon.gov.lb/en/business_support_unit/about_the_unit

as refugee camps and informal settlements. The *Beqā'* valley (meaning the data estimates for the residents in its 5 *cazas*) was estimated at around 11% of the population (around 550,000 individuals) as shown in Figure 25 for the territory which size covers a little less than 40% of the country. To this day, there is no registry for the spatial distribution of the population and the general mechanism usually relies on voters lists and civil registries that are kept at the original locality of birth and not at the place of residency. This obliges the Lebanese people, whether they reside locally, regionally, or even internationally, to refer back to their place of birth for administrative processes or acquisition of documentation locally or even to participate in the political life through elections. As seen in Map 19, there is large spatial disparities in the number of voters and people who have resided in the same area for over 20 years as published in the most recent issue of the Atlas of Lebanon. Certain areas such some in the upper *Beqā'* valley, North Lebanon, and Hasbaya have witnessed a bleeding of the population normally to more urbanized zones and especially in and around the capital of Beirut. On another hand, other regions have become areas that have been hosting a progressively increasing size of residents such as areas of the coast around the capital (belonging to the governorate of Mount Lebanon) and the larger (and growing) cities as *Zahle*, Baalbeck, and Hermel in the *Beqā'* valley specifically.

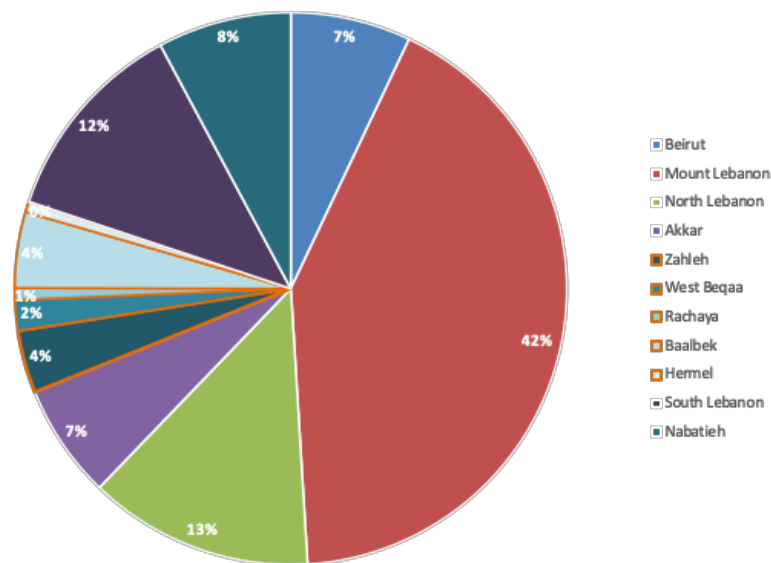
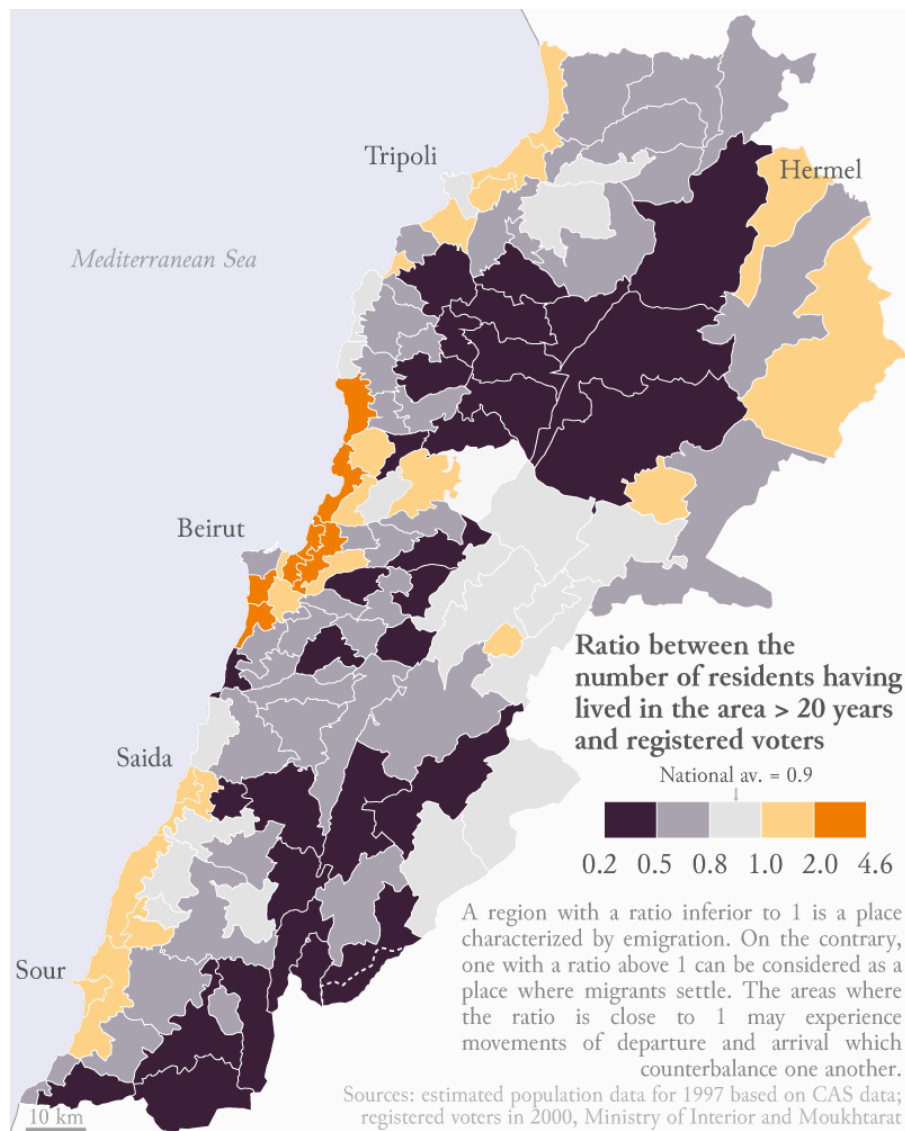
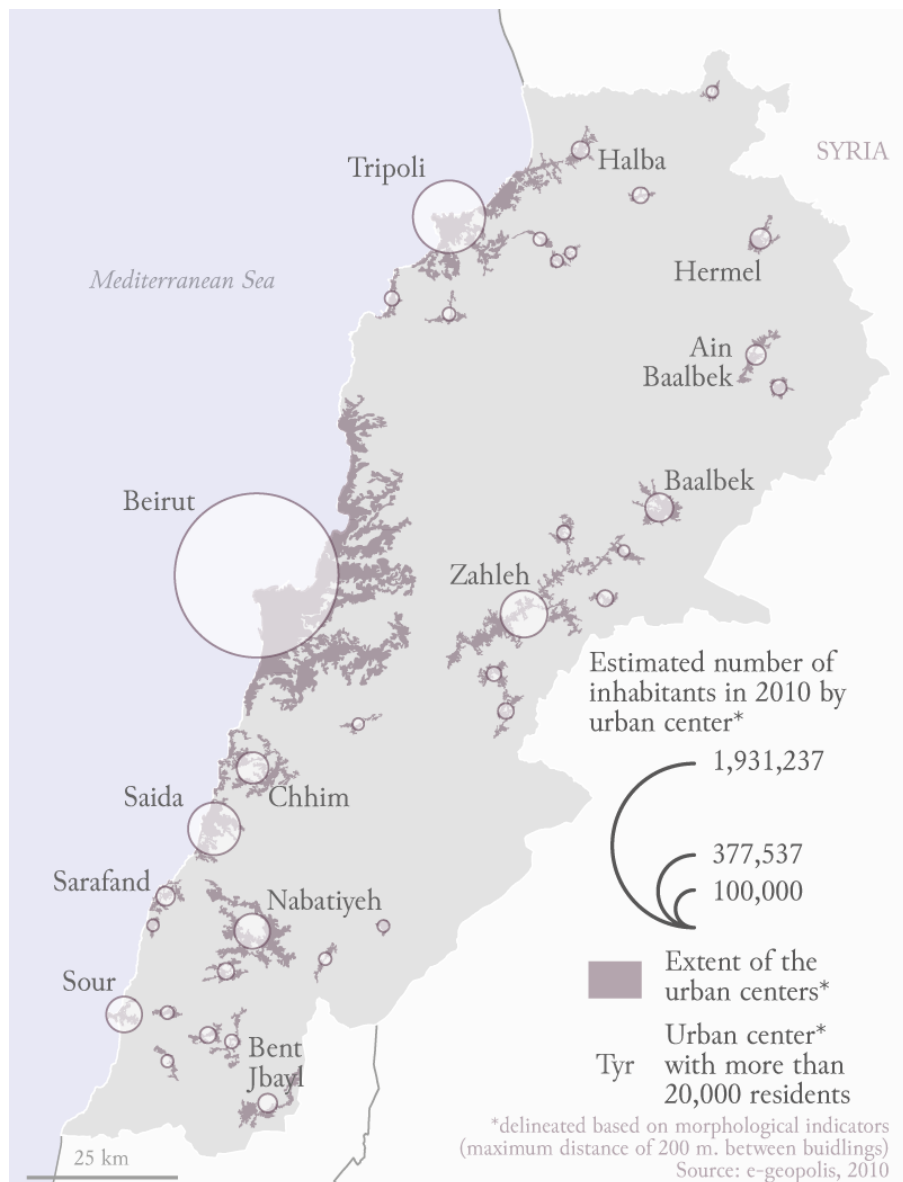


Figure 25: Most recent estimate on the distribution of the population in 2018-2019 in Lebanon (per governorate) showing the *Beqā'* valley (in orange border per *caza*) at around 11%. Source: Produced using data from (CAS, 2019)



Map 19: Spatial distribution of the portion of resident population versus registered voters. Source: (Verdeil, 2019)

The significant movement of the population and their dynamics throughout the years therefore created pockets of high concentration. The estimated number of inhabitants in urban centers around Lebanon in 2010 were represented in the Atlas of Lebanon as shown in Map 20. When it comes to the *Beqā'* valley, we can see in fact that certain zones of concentration exist, the biggest of which in the entire valley is in the city of *Zaḥle* in the central *Beqā'* and it is in fact the capital, urban and administrative center of the *Beqā'* governorate. Besides that, *Zaḥle* is the largest inland city in Lebanon since the other larger cities are all located on the coast. It is also through the *caza* of *Zaḥle* where the major border crossing to the neighboring Syria is found. The northern section of the *Beqā'* valley also has important zones of concentration of population. These are in areas as in the city of Baalbeck and Hermel. These are after all the main cities in which the administrative names are structured around, both at the governorate and *caza*.



Map 20: Estimated number of inhabitants in urban centers around Lebanon in 2010. Source: (Verdeil, 2019)

At this point, it is worth mentioning that there is no official definition of zones of concentration in Lebanon whether it be at the level of what is considered an urban, peri-urban or rural zone, or what constitutes a city, town or village. This is true at both legal and administrative levels. This certainly causes confusion and especially when it comes to official and academic communication such as with this study. This fact is also raised by the rare literature on such topics in Lebanon. Bahn and Abebe mention how Lebanon does not provide any clear definition of urban, semi-urban or rural spaces but they rather refer to other research to utilize in reference to their own and which bases on indicators as land-use, population density, and type of economic activities and their engagement with agriculture (Bahn & Abebe, 2020). The same authors in another article refer to how the world bank classifies the distribution of the population in Lebanon to three main areas labeled as 1) large metropolitan cities such as Beirut, 2) small and intermediary cities, and 3) rural areas (Bahn & Abebe, 2017). When reviewing the information on the Central Administration of Statistics (CAS), two maps were

found produced by the Council for Development and Reconstruction, CAS, and National Center for Remote Sensing which provide a visualization on the concentration of population in the form of urbanization. More importantly, they give an idea on what the public administrations could be looking in terms of terminology. Despite entering in no official, legal, or administrative definition, these two maps (Map 21 and Map 22) demonstrate the extent of urbanization of Lebanon with the first differentiating between three zones as city, town, and rural area whereas the second enters in more details in the differentiation between city, dense town, semi-dense town, peri-urban, village, dispersed rural area, and mostly uninhabited area. However, the maps do not provide any additional information as to the year to which they belong or the source of the data. Yet, the maps are interesting in depicting in more details the areas of high population concentration in the *Beqā'* valley. *Zaḥle* for example can be seen as a clear major hub right at the entrance of the *Beqā'* valley and is the only inland city in the country. Other but less sizeable areas can also be seen especially in the northern section of the valley which also indicate not only population but in fact potential markets and economic activities. Additional information in relation to the *Beqā'* valley was also provided by CDR noting that the *Beqā'* valley compared to other regional around the country has a lower urbanization rate at about 34% of its population residing in the two largest agglomerations, *Zaḥle* and Baalbeck (CDR, 2004). The report mentioned that even though there are these two large agglomerations which are also expected to grow in their concentration of population in the future, the majority of dwellers normally still reside in surrounding relay cities. Eleven were specifically listed including (from north to south *Beqā'* by order): 1) Hermel, 2) Labouweh, 3) Deir El Ahmar, 4) Chmestar, 5) Brital, 6) Rayak, 7) Majdel Anjar, 8) Joub-Jannine, 9) Saghbine, 10) Mashghara, and 11) Rachaya.

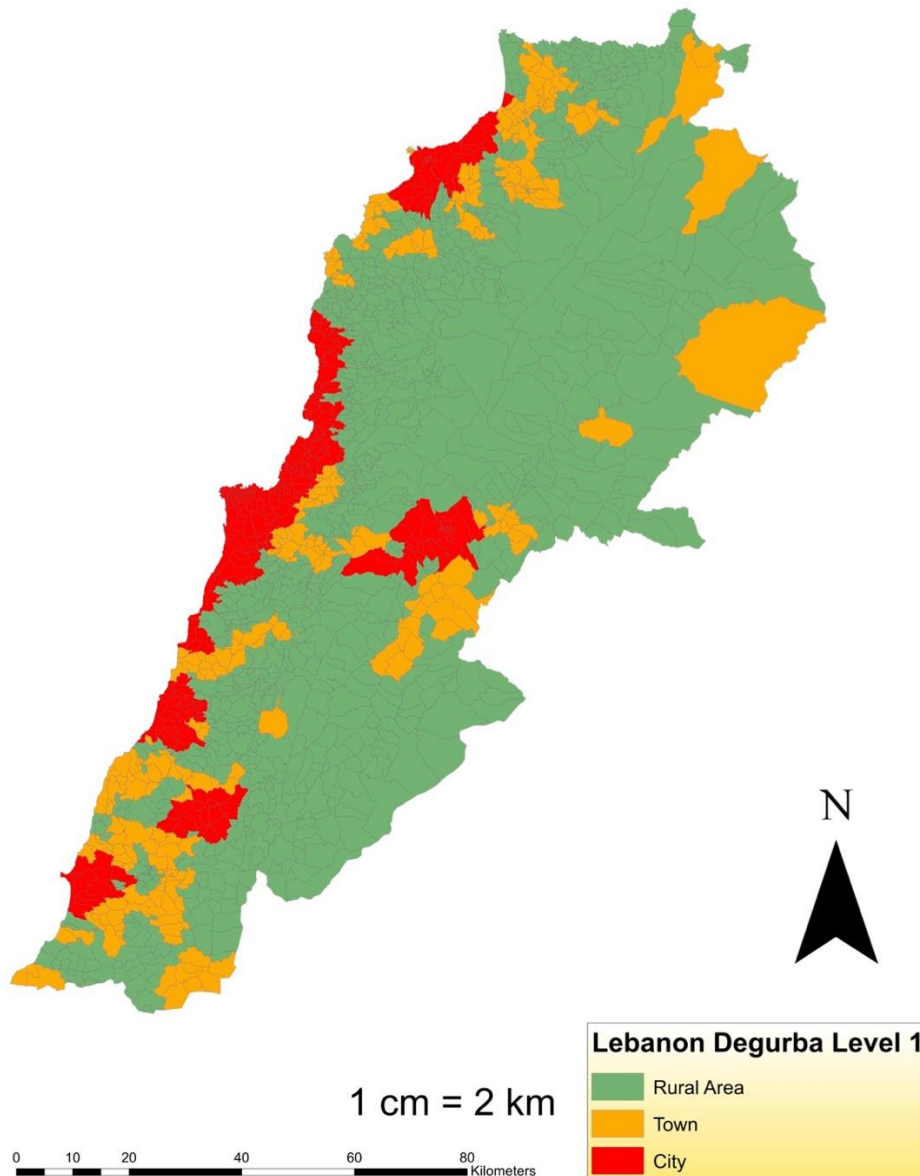
Box note 9: What is a rural space in Lebanon?

We now see that there is no official, legal or standardized definition for what is a rural or urban space in Lebanon, or for what constitutes a city, town or village. No quantifiable or non-quantifiable factors are identified and applied in the understanding of such spatial elements, which normally cause confusion in understanding, communicating, and even managing territories. Yet, a rare glimpse can be found in a report published by the Ministry of Tourism for the 2014 Lebanon Rural Tourism Strategy. In that report, and despite not being a formal definition, the word 'rural' is understood as its link to rural space in the meaning of 'countryside' and areas engaged in agricultural production (MoT, 2014). The report however provides a very important and interesting description of Lebanon's rural areas. It says "*The rural aspect in Lebanon is actually atypical if factors that normally define typologies of rural areas are considered [...]. Many rural areas in Lebanon have become semi-urban in appearance but still retain aspects of rural areas in the background and regional specificities need to be taken into consideration when considering areas as "rural" [...]*" (MoT, 2014, p. 10). This statement shows that even in its identification, rural life in Lebanon can't only necessarily be restricted to an understanding of factors as population density, socio-economic status, land

use, dominance of agricultural activities, etc. Instead, it should also be thought of in terms of its specificities and what makes a rural space in fact an ‘experience’, a character also stressed by the Ministry of Tourism (MoT, 2014). In that understanding, the environment and especially the culture and traditional cuisine are placed at the core.

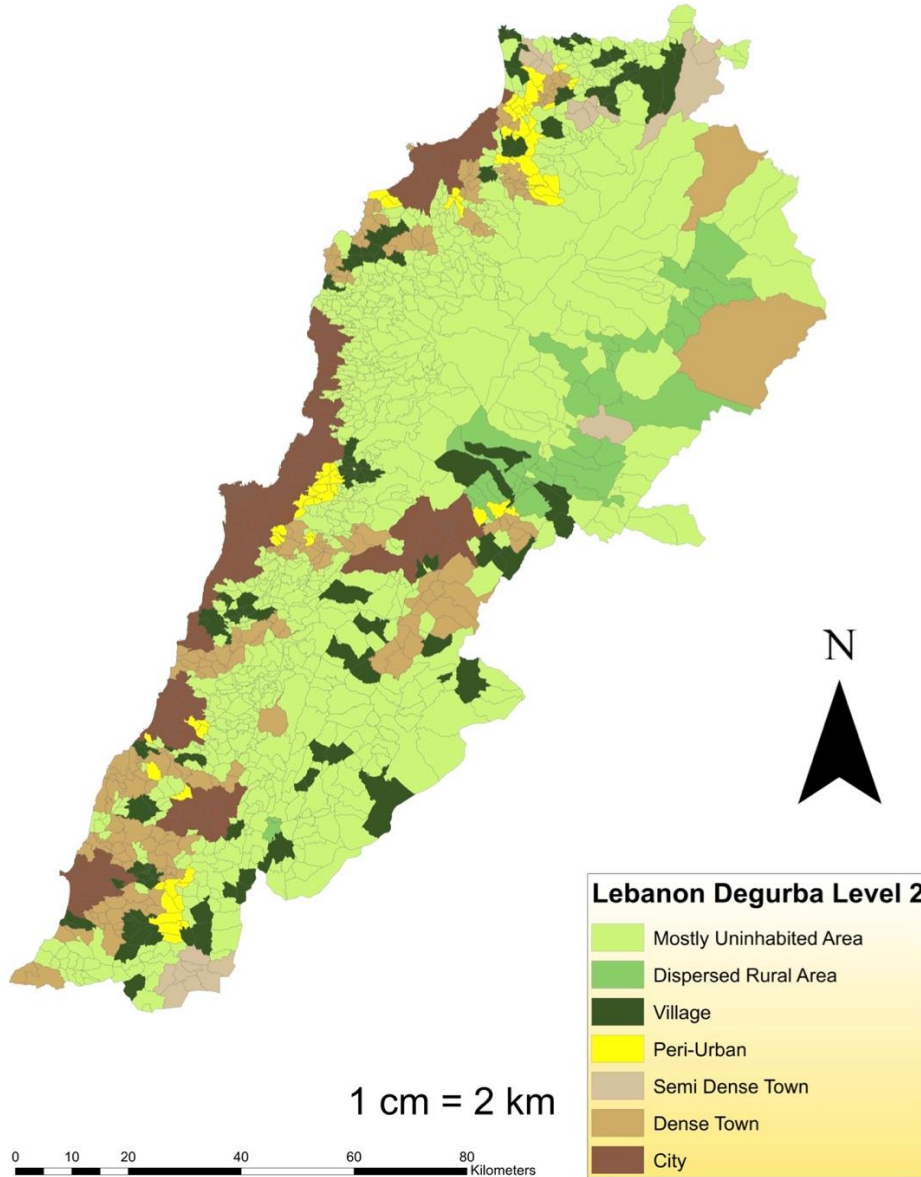


Degree of Urbanization in Lebanon



Map 21: Degree of urbanization in Lebanon described at level 1 with three distinctions between 1) city, 2) town, and 3) rural area. Source: Central Administration of Statistics portal

  
Degree of Urbanization in Lebanon



Map 22: Degree of urbanization in Lebanon described at level 2 with seven distinctions between 1) city, 2) dense town, and 3) semi-dense town, 4) peri-urban, 5) village, 6) dispersed rural area, and 7) mostly uninhabited area. Source: Central Administration of Statistics portal

When it comes to describing spatial disparities in the distribution of the population across Lebanon, it is important to also mention the internal migration of people from the rural to urban spaces. This has long been happening in the contemporary history of the country. People from rural areas, due to many reasons such as poverty, seeking of education, economic uncertainties, war, etc., have been relocating to urban zones such as the city of Beirut or its surroundings for many years. Bahn and Abebe (2017) trace the changing dynamics in the number of rural versus urban population in Lebanon between 1960 and 2015 using data from the World Bank (Figure

26). The diagram in fact demonstrate the serious decrease in the number of rural dwellers and which have been under the acknowledgement and attention of the state's government and development agencies. More recent data for 2019 was also mentioned with regards to the declining proportion of the rural population in Lebanon when compared to other countries in the Middle East and North Africa (Table 10) (Bahn et al., 2021). This rural bleeding has been positioned at the heart of several campaigns and interventions in attempts to 'root' the urban population in its locality with the creation of benefit at their local space instead of seeking better opportunities elsewhere. In fact, such objectives have been announced repetitively when discussing the agricultural and cooperative sector in Lebanon and especially women food processing cooperatives (Osta, 2020).

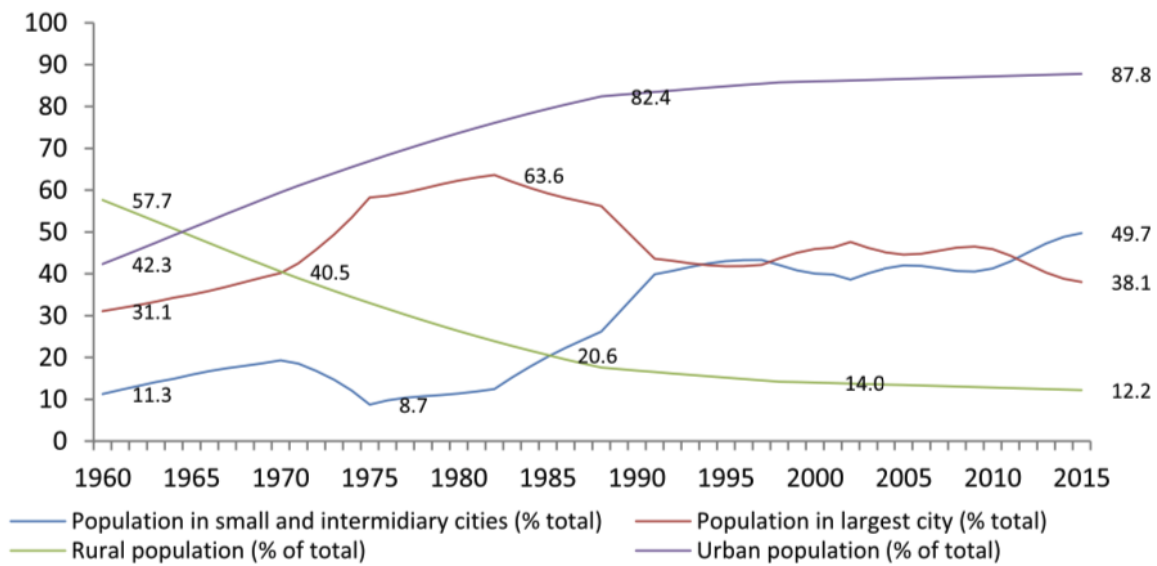


Figure 26: Changes in the proportion of rural versus urban population in Lebanon between 1960 and 2015. Source: (Bahn & Abebe, 2017) using data from the World Bank

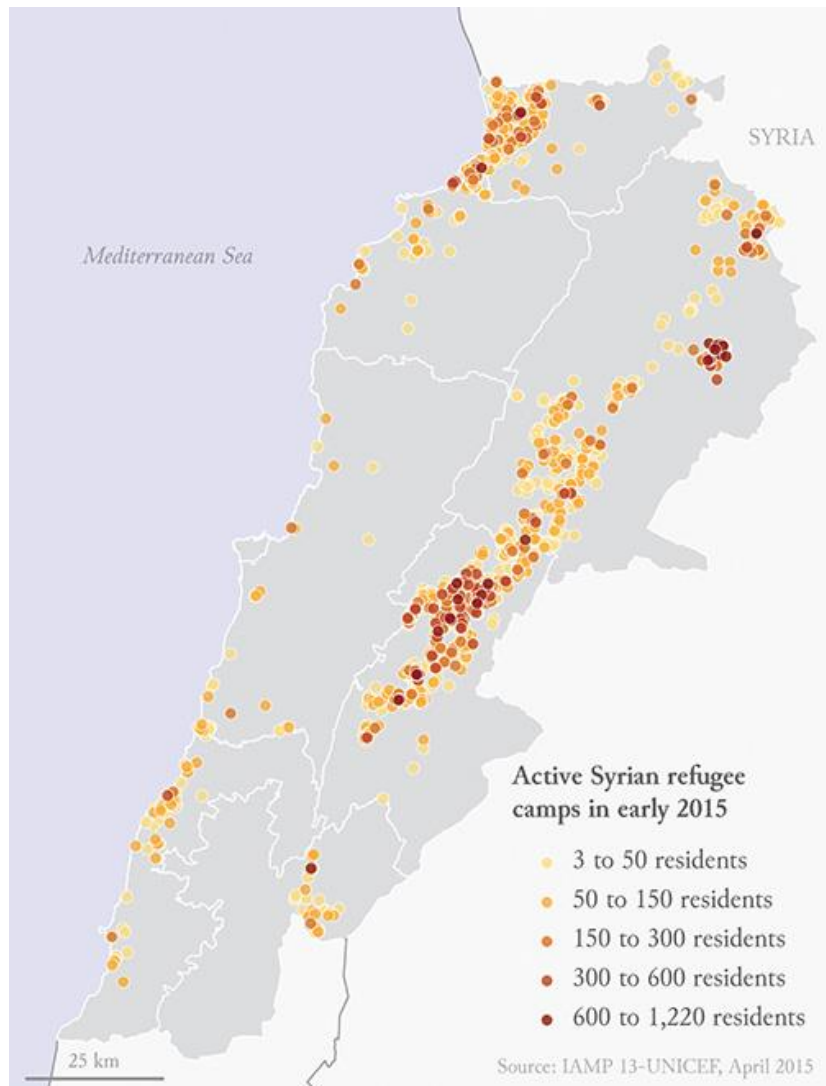
Table 10: Proportion of rural populations and growth rates by country between 1960–2019. Source: (Bahn et al., 2021)

Country	Total rural population (2019)	Rural population as percent of total population (2019)	Annual growth rate of rural population (average, 1960–2019)
Algeria	11,542,954	26.8	0.7
Bahrain	174,063	10.6	3.1
Egypt	57,492,249	57.3	2.1
Iran	20,404,283	24.6	0.6
Iraq	11,526,415	29.3	1.8
Jordan	888,646	8.8	1.1
Kuwait	0	0.0	-8.8
Lebanon	770,719	11.2	-0.5

Libya	1,328,855	19.6	0.4
Mauritania	2,058,875	45.5	1.6
Morocco	13,496,743	37.0	0.7
Oman	724,209	14.6	0.8
Palestine	1,103,858	23.6	1.9
Qatar	22,996	0.8	2.0
Saudi Arabia	5,460,690	15.9	1.1
Sudan	27,856,005	65.1	2.4
Syria	7,712,116	45.2	1.7
Tunisia	3,595,658	30.7	0.5
Turkey	20,331,797	24.4	0.1
United Arab Emirates	1,290,785	13.2	6.7
Yemen	18,292,399	62.7	2.3

Additionally, the general population in Lebanon includes a significant number of foreigner communities who also resides on the Lebanese territory. These are mostly constituted of Palestinian refugees from the older years and the most recent surge in the number of Syrian refugees following the onset of the 2011 war in Syria. These numbers were estimated in 2011 at 270,000 for the Palestinian residents, 200,000 Syrian residents (prior to the 2011 war), 160,000 foreign domestic workers, and 90,000 other foreigners (Verdeil, 2019). After 2011, the influx of Syrian refugees peaked and surpassed 1 million in 2016 according to the United Nations Higher Commission for Refugees (UNHCR)⁴⁰ compared to Lebanon's population of slightly less than 5 million. This accounted a high proportion of 1 Syrian refugee per 5 Lebanese individuals on average and when accounting only formally registered refugees since it was very difficult to monitor the number of refugees crossing the border informally. The *Beqā'* valley hosted the highest number of refugees (37.6%) as bordering to Syria followed by North Lebanon (26.5%) and Beirut (24.5%). Also, when considering the immense number of refugees in the *Beqā'* valley specifically when compared to the number of local residents, the proportion of refugees in fact surpasses that of local residents. The issue of Syrian refugees raised serious pressure in Lebanon on many levels. These most normally included the space, imports, electrical power, food, natural resources, waste, and others. Most unfortunately were the social sensitivities and episodes of dispute that happened occasionally between the Lebanese and the Syrians in places with a high concentration of refugee camps such as around many areas in the *Beqā'* valley.

⁴⁰ Interactive platform available at: <https://data2.unhcr.org/en/situations/syria/location/71>



Map 23: Areas of settlements of Syrian refugee camps in Lebanon in 2015. Source: (Verdeil, 2019)

On one hand there is therefore the issue of serious spatial disparities in the population in Lebanon characterized by a estimates of the population rather than accurate census, strong and long history of internal migration from rural to urban dwellings and relatively recent increase in the presence of refugees. These are internal imbalances alone. But, Lebanon in fact has an additional long and complicated history with international emigration, and today, an immense diaspora resides in almost every country around the world and whose size is multiple the number of the local population. These are referred to as the ‘waves’ of migration that occurred in different eras of the Lebanon’s history. Emigration is so common that it is even said to have touched every family in Lebanon since the nineteenth century.

Box note 10: The ‘waves’ of Lebanon’s migration

by (Tabar, 2010)

Paul Tabar described four waves of emigration prior to 1990. The first took place between 1840 and 1860 and was linked the two main reasons. The first

was when one specific form of a centralized feudal system disintegrated in Mount Lebanon (called the *Muqata'aji* system) and the second was having an increased economic influence on the area by the foreign expanding markets of France and Britain. These conditions, in addition to the episodes of conflict both nationally and internationally, pushed people to seek better opportunities abroad. Also, some people belonging to the Maronite Christian communities were sent around these times by the Maronite Catholic Church to Rome to study and return as clergy. The second wave took place around 1860 onwards being caused majorly by the emancipation of the peasants and exacerbated by the growth of the population and the increase in the level of education at that time (contribute by the clergymen who returned with the knowledge from Rome). That wave of migration abroad was so substantial that one third of Mount Lebanon's population left by the end of the first World War, most being Christians towards North and South America. Prior to World War I, a third of migrants were estimated to have returned to Lebanon and from whom the middle class was constructed in addition to the remittance sent back from expats abroad. These dynamics helped in developing the tertiary sector (tourism, trade, etc.) as the needed capital (economic and cultural) spread and is said to have formed the 'driving force' of the idea behind the modern Lebanon around the 1920s. The third wave of migration was after World War II in 1945, became more prominent by the 1960s (increasing further in 1967 with the Arab-Israeli war) and extended to 1975. This wave was driven further by the increased demand for labor in the Gulf countries given the boom of the oil industry while nationally Lebanon was facing political instability and the 1967 war time. From 1945 to 1960, the average annual number of emigrants was 3,000 and that number increased to 10,000 from 1970 to 1975. The fourth wave was notably caused by the Lebanese civil war of 1975-1990. Around 40% of the population at the time, equivalent to 990,000 people, emigrated from the country during that period with many going to countries as Australia and Canada. In addition to international migration, thousands of families were also internally displaced because of the fighting over those 15 years which also had repercussions on the economy, unemployment and poverty rates. Finally, this ongoing period after the 2019 economic meltdown (described in section 2.3.3) is being described as yet another new wave. An article by Miguel Mendelek in 2022 describes that reality as "*the severe economic meltdown, which began to unfold few years earlier, followed by a prolonged political stalemate, staged the one of the largest mass exoduses of the "nouveaux poor" Lebanese*" (Mendelek, 2022). It states that in fact, emigration has exploded between 2018 and 2021 surpassing 195,000 individuals, 40% of which left the country in 2021 alone. The trend unfortunately is still ongoing and unfolding to this day.

The size of the Lebanese diaspora is estimated to be around three times the size of the Lebanese population in the country (Skulte-Ouais & Tabar, 2015). It is not known accurately,

and this is a difficult data to acquire since several generations from Lebanese origins have been born abroad and do not necessarily hold the citizenship or even identify with the Lebanese nationality, although some do seek it. An estimate of the number of international immigrants can be found in Figure 27. The interest in the diaspora, besides its immense size, is the actual relationship it holds with the mother country. When leaving the country, emigrants do not cut ties with Lebanon. On the contrary, the engagement of the international diaspora is significant and especially at the economic level. In fact, it constitutes the highest portion of hard currency entering the country in the form of remittance sent from expats abroad to their families in Lebanon. These remittances constitute a massive 25% of local deposits in the country (McKinsey & Company, 2018). Not only is its economic strength recognized, but the diaspora is also described to have a cultural and political power as well. The “*Lebanese Diaspora has long retained and/or rebuilt ties to the homeland, using hard earned economic and social capital to try to ‘build’ the Lebanon*” (Skulte-Ouais & Tabar, 2015, p. 2). The diaspora has helped spread the Lebanese culture to different corners of the world and especially when it comes to the traditional Lebanese foods and cuisine (as described in section 1.2.1). Emigrants have also played an important force in the Lebanese political life and especially in the most recent 2022 parliamentary elections⁴¹. The diaspora remains a force to be reckoned with, but which is still regarded as the engine that supplies the country with hard currency, whereas its hunger for traditional food consumption remains an unchartered advantage to this day.

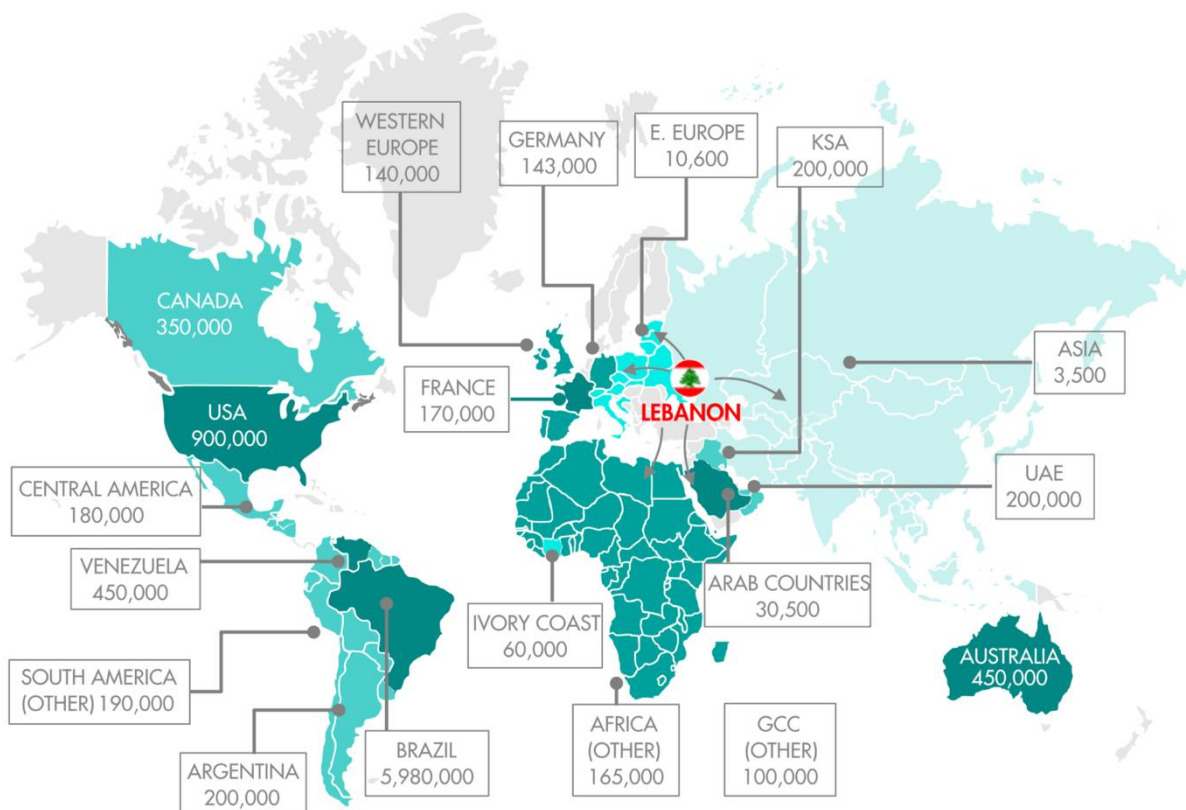


Figure 27: Mapping of the global Lebanese Diaspora in 2017. Source: (IDAL, 2020b) using data from (McKinsey & Company, 2018).

⁴¹ <https://www.france24.com/en/middle-east/20220509-overseas-lebanese-vote-in-key-poll-with-high-stakes-for-crises-hit-country>

2.3.2. Disparities in the main agricultural and food production sectors

In the context of Lebanon nationally and at the *Beqā'* valley locally, and despite the potential, several challenges still hinder the optimal and efficient economic potential of the agriculture and food production sector, which makes it today still fragmented, not properly controlled and with a lot of informality of operations. Several reasons could be associated for the lag of this valuable sector to which the livelihoods of a significant portion of the population depend. These vary from political, structural and institutional, to financial, environmental and technical.

At the **political, structural and institutional level**, the challenge starts at the structure of the national economy and the positioning of the sector in the central government's outlook, strategy and action in creating an enabling environment. The Lebanese economy has long been a rentier economy which encourages and prioritizes tourism and services at the expense of productive sector. This has rendered the general economy sensitive to shocks, vulnerable and volatile (FAO, EU and CIRAD, 2022); unfortunate factual characteristics which have sadly manifested in the 2019 economic crisis. The structure of the economy is yet worsened by the mal-positioning of the agri-food sectors in the government's priorities and inaction although national strategies have been put in place, the recent of which is the National Agricultural Strategy of 2020-2025 in which cooperatives and traditional food products are explicitly mentioned⁴². But a holistic and long-term plan that translates into action and not only policy, and especially including a rural development component, has yet to take shape. Added to that is the low portion of the annual budget which does not exceed 1% of the national budget being dedicated by the government to the MoA. And as seen in section 2.2.4, there is an extent of overlapping responsibilities between different ministries and governmental entities which, since inter-ministerial coordination is weak, leads to more complications in the implementation and control within the sector. This leaves farmers and other small producers within the agri-food supply chain marginalized and vulnerable to exploitation by middlemen such as traders and wholesalers given the weak institutional framework, state capacity in national regulation of the sector. This equally leaves farmers and small producers prone to extremely high competition especially when it comes to large-scale commercial producers and when faced

⁴² In the National Agricultural Strategy of 2020-2025 under Pillar 3 (Enhancing efficiency and competitiveness of agrifood value chains), 5 programs are mentioned. Programme 3.3 (Provide enabling conditions to promote agricultural and food industries and enhance utilization of locally produced primary products) is said to include specific interventions that target the development of traditional and artisanal food products, olive oil, dairy and cheese and Lebanese wine under an overall image of a healthy Mediterranean diet. Programme 3.4 (Support agricultural exports and access to new markets) mentions the importance of developing export infrastructure and information asymmetries for value-added crops and value chains such as traditional products and specifically lists products in that category including thyme (*za'atar*) and other aromatic plants, and honey. Finally, Programme 3.5 (Promote and organize cooperative work and farmers' associations and groups at the level of the value chains (targeting smallholders producers)) assumes that the stimulating of cooperative work would increase the participation of farmers in the supply chain. No specific actions to achieve that were mentioned except the linking of that programme with Pillar 5 (Strengthening the enabling institutional environment) "*to ensure enhancing the enabling legal framework (e.g., by simplified procedures, revision of business, legal and financial measures for cooperatives and strengthening of contract farming, improving access to information, and developing mechanisms to facilitate access to agricultural inputs by farmers' associations/ cooperatives and agricultural unions)*" (MoA, 2020, p. 32).

with imported products. The situation is compounded by the weak agriculture sector and its inability to properly organize and attract farmers which affects the potential for collective bargaining power and other advantages such as reduced production costs and improved marketing and market access. In fact, marketing remains probably one of the most difficult challenges for farmers. Many farmers rely on dispatching their products to wholesale markets which themselves have a whole set of problems in their operations, regulation and efficacy. They usually lack proper transparency and sharing of clear information with farmers especially when it comes to the size of the sale, the size of damaged and wasted produce (with significant damage being due to mishandling), and grounds for the pricing mechanism (Dal et al., 2021). If a farmer is interested in sorting the produce to grade levels and increase the range of price returns, that would be the responsibility of the farmers themselves who do not have the resources to do so. Accordingly, farmers are left to deal with an arbitrary pricing schedule set by wholesalers who often end up paying farmers less than the actual value of sales made and their profit margins reduced. At the national level, Lebanon has faced multiple crises. The most recent of these that have had the most impact are the Syrian crisis which started in 2011 and the most serious and recent economic crisis of 2019. The 2019 crisis and its continuously unraveling context is elaborated in the next section 2.3.3. As for the Syrian crisis, it is considered as a crisis which has greatly pressured Lebanon's resources and threatened its food security with the influx of around 1.5 million refugees and increasing demands for food, water and waste management, despite having indications that the influx of refugees have in fact increased the output of agriculture with satellite images showing the expansion of agricultural land in northern *Beqā'* and Akkar (Hamade, 2019). Finally, all these conditions have made agri-food not an attractive sector to investors and especially not to the youth. This is the case around the country but stands especially true in the *Beqā'* valley. This is due to several reasons but mainly being due to the relatively low returns that are generated by farming when compared to other economic activities in the country. Also, by having a good access to education in the many educational institutions in the *Beqā'* valley and especially its central city of *Zahlé*, this opens the opportunity for the youth to seek other opportunities that are considered better, whether in the urban environment in Lebanon or beyond in other countries (FAO and IWMI, 2020). With the farming population aging (average age of farmers in Lebanon being 52 and over three quarters are over 40 years old) (ILO, 2018), this raises serious challenges of sustainability of the sectors.

At the **socio-economic and financial level**, it is important to understand that the socio-economic conditions of farmers are usually one which provide low returns and benefits. Farmers in Lebanon do not have any formal definition or assigned classification by the central government. This makes their mapping extremely difficult along with understanding which individuals in Lebanon are eligible to be identified as farmers, since many people who are involved in agriculture could in fact be employed or even outsource tasks for their cultivations. In fact, almost one quarter of the Lebanese population is employed by the agri-food sectors either in a full-time or part-time basis from which 13% work on a part-time or seasonal basis including the mostly family labor who are usually unpaid (MoA, 2020). The last agricultural census was performed by the Lebanese government back in 2010 and no clear information with that regards was given. These conditions thus leave farmers even further marginalized and without any access to social services as health, sanitation and education. In fact, farmers in

Lebanon have a much lower rates of literary than the general population whereby 16% are illiterate and 61% only have primary-level education (Dal et al., 2021). This could be one of the major reasons behind the fragmentation of lands and disparities in the size of farm holdings which is a common phenomenon in Lebanon. However, an evident discrepancy exists in the distribution of land use and size when it comes to local and national production and land tenure is recognized to cause problems and being associated with degradation of agricultural land. As noted previously, mountainous regions in Mount Lebanon tend to have much smaller scale farming plots reaching only 0.66 ha but those in the *Beqā'* valley have larger size of plots reaching 2.9 ha (Dal et al., 2021). Even within the *Beqā'* valley itself, this disproportion in land tenure exists since significant areas of agricultural land (60.6%) is owned by the top 10% of landowners, and 26.5% of those are owned by the elite top 1%. This inequality is even more potent in areas of intensive agriculture such as in *Zahle* and West *Beqā'*. Besides imbalances in the access to land, farmers also face serious difficulty in accessing sustainable financing and many remain dependent on doing so from private input supplying companies which provide advances at the beginning of every farming season. With only 4.5% of farmers being members in agricultural cooperatives (ILO, 2018), this greatly reduces the chances for efficient collective work and the access to shared benefits such as use of machinery, inputs, technical support, and marketing. This very context of land fragmentation and strong informality of the sector is considered one of the main barriers why a more sustainable cooperative sector has not yet been able to develop (Scolding & Nour, 2020). Added to that are the unbalanced post-war development strategies after 1991 which did not provide equal efforts around the Lebanese territory. These were instead rather concentrated on the reconstruction and development in and around the capital city and coastal regions but left the hinterland many regions on the extremities greatly neglected, underdeveloped and much weaker in their basic infrastructure (Makhoul & Harrison, 2002). To this day, we find major lacking when it comes to adequate infrastructure in rural Lebanon and especially those of the *Beqā'* valley, not only those needed in the handling activities of the agricultural sector but also in those needed for everyday life of a working society in terms of public service utilities as electricity, water supply, transportation, and waste and wastewater management. The wartime and lack of proper extended support afterwards also lead to major changes in the demographic distribution and many people decided to relocate to more urban environments to seek better opportunities (Fawaz & Peillen, 2002). These demographic changes and strong migration patterns from rural to urban environments and the immense waves of international emigration only added pressure and contributed to the further decline of the agriculture sector we find today. Surely enough, and with the understanding of the above factors, it comes to no surprise that the agriculture sector and poverty and linked quite strongly in Lebanon and especially in the *Beqā'* valley. Poverty rates are highest in the agricultural sector and more than 20% of households engaged in the sector are identified as very poor (World Bank, 2010). Even prior to the 2019 crisis which pushed over half of the country's population below the poverty line (UN.ESCWA, 2021), the distribution of poverty in Lebanon was not homogeneous and areas in the *Beqā'* valley, mainly its northern section of Baalbeck and Hermel registered the highest percentages. These were reported at between 20 to 25% in 2002 (CDR, 2004) and increased to 38% in 2016 (UNDP, 2016); the highest rates in the country.

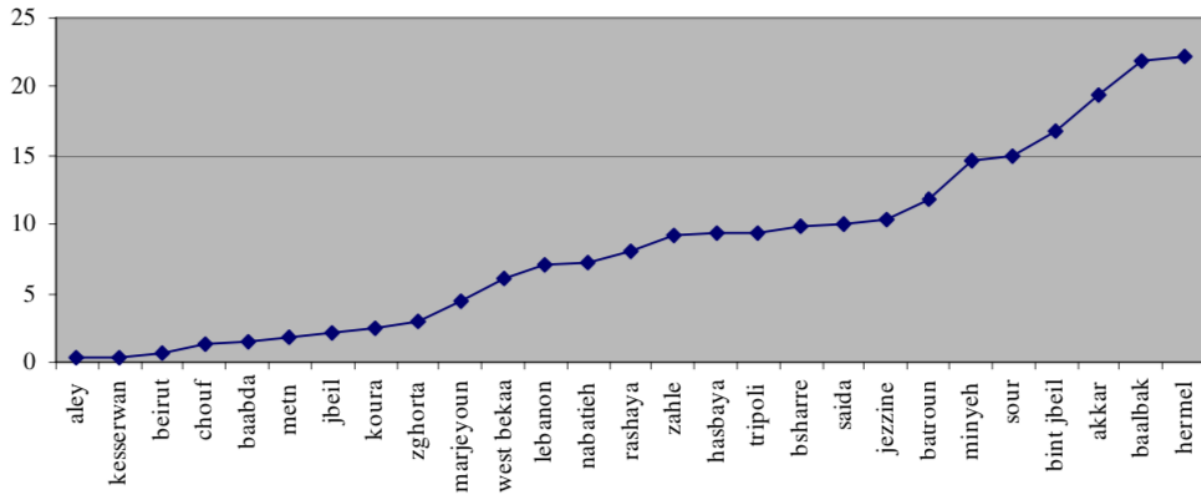


Figure 28: Percentage of households living below the absolute poverty line by Caza in 2002. Source: (CDR, 2004)

The **environmental level** adds challenge to the agriculture and food sectors as these conditions are at the basis of the activity which delicate balance dictate the types of crops and have immense effects on yields and quality. When it comes to the major agricultural production regions in the country such as in the *Beqā'* valley and North Lebanon, land tenure rights in general becomes a sensitive topic to cover. In fact, that issue of land ownership is considered as one of the most challenging factors in the management and planning of territories in the country. This is mainly due to unclarities in land property rights which create ill-usage of private properties due to the absence of any restrictions, and which tend towards real estate rather than agricultural investment. This normally raises other complications and negative effects on the environment, natural resources, and communities. In Lebanon, there is a reported degradation in natural resources and soil fertility along with the known desertification of northern *Beqā'* valley's arid space. When it comes to the land itself, the proportion of land used for agricultural cultivation has in fact been decreasing over the years. It registered 18% of the country's surface area in 1990, decreased to 13% by 1999, and then down to 11% by 2011 (Haddad et al., 2014). This has also been asserted by the FAO reporting that 308 km² of land has been lost to urban settlements in Lebanon between the years 2000 and 2012 (Darwish et al., 2012). The urban zoning and capability of the state to implement ecological measures have been questioned because pf that 308 km² urban expansion, an massive 63% (equivalent to an area of 194 km²) were agricultural lands that 'have been converted to concrete' whereas only 3.7% (11 km²) was the size of the expansion onto unproductive which is supposed to host such urbanization (.ibid). The same forms of mismanagement of natural resources also falls onto the water resources which, in a country that is much richer in water than its neighbors, the supply remains insufficient, unequal and irregular mainly due to poor management (Verdeil, 2018). This problem raises serious issues when it comes to the largest consumer of water in the country, the agricultural sector. Not to forget that projects relating to water collection in Lebanon have also been debated for their costs and efficiency along those of the supply of electrical energy in general and their dependency of fossil fuel which not only heightens levels of pollution but is actually still being rationed to this day (.ibid). Pollution sourced from agricultural practices has also been voiced as one major problem in Lebanon generally but issued relating to the

accumulation of nitrates and heavy metals (in fall and their leaching in spring raising contamination to the groundwater) have been particularly alarming in the central *Beqā'* valley (Darwish, 2013). Finally, the effects of climate change cannot be excluded. Ultimately, agriculture and agri-food value chains are a highly resource-and-climate-sensitive sector. A study by Al Dirani *et al.*, (2021) reported that small family farms in the *Beqā'* governorate consider that climate change has already begun and that its impacts are perceived by what they consider is an increase in temperatures and reduction in precipitation in the past 20 years. The study in fact did provide evidence on the slight yet dangerous increase of mean annual temperatures since the 1980s but no specific evidence could be provided for the decrease in levels of precipitation (Figure 29). Predictions performed by a model called PRECIS (a climate modelling system) conducted by the Intergovernmental Panel on Climate Change (IPCC) on another hand showed more gloomy results (Haddad *et al.*, 2014). The model predicted that by 2040, temperatures will increase by around 1°C and 2°C on Lebanon's coast and mainland; respectively, and that by 2090, these temperatures will further increase by 3.5°C and 5°C. Similarly, levels of rainfall are also projected to decrease. By 2040, this decrease is estimated at 10 to 20% and by the year 2090, it is expected to reach 25 to 45%. These predictions mean that considerably longer periods of drought are to be expected (becoming 9 days by 2040 and 18 days by 2090) as a result of the much lower levels of precipitation combined with the significantly higher temperatures (.ibid). Therefore, the trends of malpractice, lacking in the control of human inflections and absence of protection measures have, coupled with natural caused, are greatly degrading the available natural resources of the country and if not mitigated will have serious future implications on the viability and sustainability of the sectors and in turn on the livelihoods of their stakeholders.

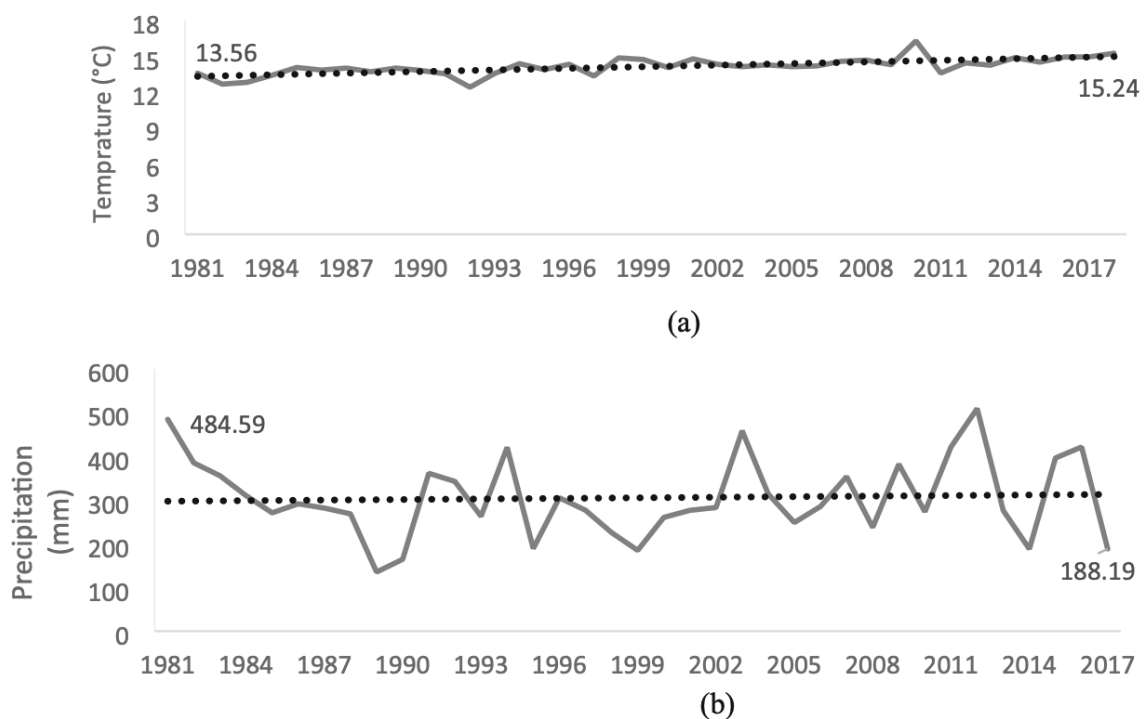


Figure 29: Average annual (a) temperatures (°C) (at 2 m) and (b) precipitation (mm) of the *Beqā'* Valley between 1981 and 2017. Source: (Al Dirani *et al.*, 2021) using data from NASA POWER (<https://power.larc.nasa.gov/>)

Finally, one should mention that **technical factors** raise a main challenge in the agricultural sector in Lebanon. In fact, farming is still being exercised using quite conventional practices. Given the various factors listed above, farmers in Lebanon do not have adequate access to extension services and this further marginalizes them in accessing information which, technically, still affects their feasibility, sustainability, and impact on the natural resources and the environment. The majority of farmers in the country and especially in less intensive farming regions such as northern *Beqā'*, conventional practices are still predominant. This means that farmers do not invest or incorporate any technological, ecological, or advanced tools in cultivation, irrigation, harvesting, sorting, storage, and so on. They mostly rely on simple equipment such as small tractors, fittings, and water pumps, which in turn limits their ability to reach an economy of scale and render their farming less profitable (FAO, EU and CIRAD, 2022). This challenge is not being eased by the absence of adequate infrastructure or post-harvest facilities that could provide the farmers with such needed services at an affordable price; knowing that cooperatives could potentially fill that void if they properly respond and organize. Farmers still tend to overuse pesticides and this has been reported quite intensely for the *Beqā'* valley farmers and especially within certain cultivations such as tomatoes (Aw-Hassan, et al., 2018). Farmers are also known to overuse fertilizers because they are usually encouraged to do so by input suppliers (.ibid). Irrigation is also still significantly being applied using conventional and wasteful methods such as furrow irrigation although drip and sprinkler irrigation systems do exist. These trends in dominant practice result in very high production costs which further negatively impact the feasibility of farming in the country. These are only accounted for in the actual production which should be added to other costs related to energy, transportation, and labor. In addition, it is not only the cost implications which are serious in that matter, but the malpractices certainly have detrimental effects on the environment and could even have implications on public health in case of chemical or microbiological contamination that could arise from these practices, that is without mentioning the quality implications on the products themselves. These issues also have serious economic implications given their lack of traceability and low conformity to international standards that are today required per country basis to export and access new markets. It is also worth mentioning that all these challenges and disparities extend across the value chain meaning not only in the primary production of raw agricultural produce but also in the food processing businesses as well and further until products reach the market. The above dissected challenges are compiled together in Figure 30.

Finally, the issue of **gender inclusivity** and the impact of these disparities on the role of women in the productive sector in Lebanon and the *Beqā'* valley stands importance given the nature of this study. In 2022, Lebanon ranked 199 out of 153 in the Global Gender Gap index (World Economic Forum, 2022). In Lebanon, women generally have a low level of participation in the labor market. Only 4% of top management roles are held by women in Lebanon compared to 5% in the MENA region and 19% worldwide (UNDP, 2020). When it comes to the agri-food sector and especially the cultivation of fresh agricultural produce, women are shown to have a strong presence in labor-intensive and on-field activities relating to cultivation, harvesting and packaging but not when it comes to marketing which require more soft skills and communication. Figures mention that 35% of the agricultural labor force is in fact held by women but that their participation is highly informal as they take on family-

related agricultural tasks (.ibid). In addition, migrants workers, both men and women and officially but mostly unofficially, are highly integrated in the agricultural labor force. Their numbers have been estimated to be between 200,000 and 1,000,000 (Habib & Fathallah, 2012). Knowing that since the 1970s, the low participation of women in the labor market has been noted. The estimated number of women living in rural regions of the country at the time was almost 417,000 but only 45,000 of the total women labor force in the country (equating to 38%) was rural, thus modestly contributing to the rural economy specifically and that of the national economy generally (Andreou, 1980). One of the key causes behind the modest participation of women in the economy are the social norms and conventional gender roles and expectation which the society in Lebanon is used to. In the Lebanese society, the dominant trend is still the reliance of families on men to provide and especially at the financial level. This creates a root limitation due to the uneven power relations in the family structure and raises the position of men when it comes to decision-making and financial control while creating social restrictions for women (UNDP, 2020). But, as mentioned in section 1.2.5, the preservation of *mūne* foods actually raises the position of women within the family structure and empowers women to participate at the household level. These were in taking decisions on certain finances that are related to that activity and also allowed women to directly engage and cooperate with her spouse (along with the community at large) in cultivation and harvesting tasks in addition to the bulk tasks required for the preparation and preservation of food. Today, these dynamics are translated into incorporating women in more extensive economic participation which has been made possible by certain formal business models as cooperatives, which is a main pillar of this study as seen in Part 2.

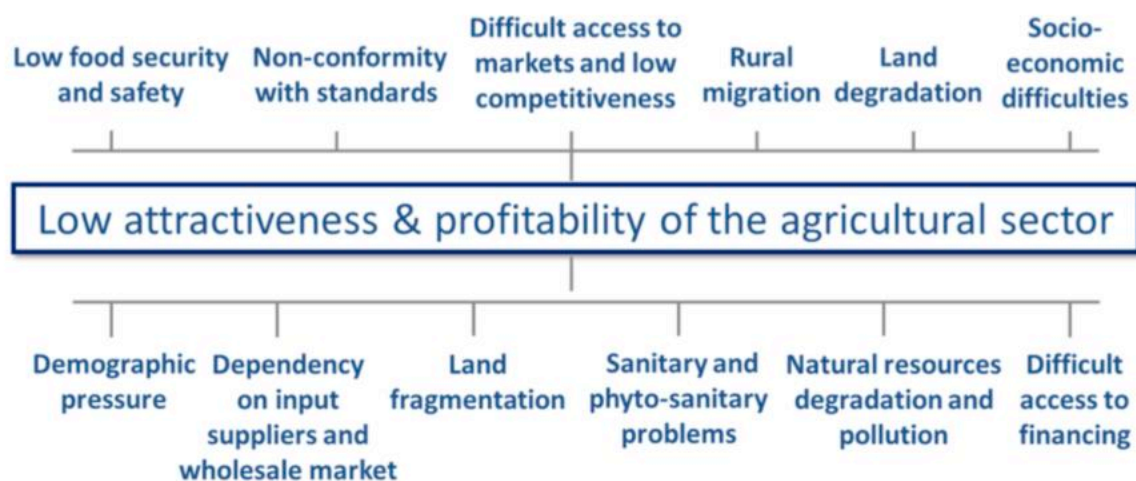


Figure 30: Compiled representation of the challenges of the agricultural sector in Lebanon. Source: (Aw-Hassan, et al., 2018)

2.3.3. The old and the new Lebanese contexts - The post-2019 economic crisis

When describing Lebanon and the study's territory (the *Beqā'* valley inclusive of two administrative units - governorates - the Baalbeck-Hermel and the *Beqā'*), it is important to build an understanding of the most important event that has taken place in the country's modern history and which implications are still unfolding to this day; the 2019 economic crisis. Other than the inherent institutional and economic challenges the country has been witnessing, the

2019 economic collapse has truly changed the entire dynamic and trajectory of development. Understanding that crisis is therefore essential in framing the pre-and-post-crisis conditions and the possible approaches in mitigation.

Lebanon is a small Mediterranean country whose need for development stretches over various aspects as economic, institutional and social. In order to understand the recent developments in the country, it would first be important to provide a backstory and brief historical introduction. Benchmarking at its post-war reconstruction era following the 16-year civil war (1975-1991) and 30-day 2006 war, Lebanon's modern history is highlighted by internal dispute, external conflicts, and several waves of refugee influx including Palestinian and the more recent Syrian refugees (Le Borgne & Jacobs, 2016). Lebanon has been underpinned with a history of politico-sectarian divisions and dispute. Although originally created to stabilize post-war governance system, this sectarian (religious)-based consociationalism power sharing is considered by some as a failed approach and even the basis for the country's instability (Makdisi & Marktanner, 2009). Over the years, Lebanon resorted to the international community to acquire aid and support in return for promised reforms (mainly infrastructure development, rehabilitation, economy and sectoral), which were held under the Paris I (2001), Paris II (2002), Paris III (2007) and, the most recent Cedre (2018) conferences. Despite these efforts, the lack of political commitment and suspected misconduct on Lebanon's end were the subject of consistent critique (Mehanna & Haykal, 2016). An analysis of the government spending between 1994 and 2004 when it comes to poverty, education, and public-health has shown "*that the distribution of public funds has been at best blind to socioeconomic priorities and at worst a cause of greater disparities in education and health development indicators across various Lebanese regions*" (Salti & Chaaban, 2010, p. 652). Major basic infrastructural needs are still underdeveloped and mainly include the inconsistent and rationed supply of electricity and drinking water, waste and sewage (mis)management amongst others (Verdeil, 2018). Several indicators also place Lebanon at the lower end of global competitiveness. The World Economic Forum's Global Competitiveness Index has ranked Lebanon at 113 out of 144 worldwide in 2014 and lists main setbacks in adequate supply of infrastructure, high bureaucracy, corruption and government instability (Schwab & Sala-i-Martin, 2014). Although that ranked improved in 2018 to 88 in 2019 (Schwab, 2019), it is assumed that the situation greatly deteriorated following the economic crisis by end 2019-early 2020 even if no official rank has yet been announced specifically for Lebanon. The country's Gross Domestic Product (GDP) per capita was recorded at US\$17,390 in 2016 in purchasing power parity making it a middle-income in the Middle East at the time (Le Borgne & Jacobs, 2016). However, even before the 2019 economic crisis, Lebanon was still troubled by a significant level of poverty and income inequality. The Gini coefficient for example placed Lebanon at a rank of 129 of 141 in 2017 in terms of income inequality (Bahn & Abebe, 2017). And according to the "Rapid Poverty Assessment in Lebanon" report by the United Nations Development Programme (UNDP) for 2016, 30% of Lebanese population, equivalent to 1.5 million individuals, living under \$4.00/person/day and about 300,000 individuals considered extremely poor living under \$2.50/person/day (UNDP, 2016). Additionally, the distribution of poverty across the Lebanese territory include the highest observed percentages at the *Beqā'* valley, North Lebanon and South Lebanon with 38%, 36% and 32% respectively. The influx of refugees following the Syrian crisis in 2011 has arguably

greatly exacerbated that stress. The number of Syrian refugees surpassed 1 million at its peak in 2016 compared to a population of slightly over 6 million but slightly decreased to almost 900,000 by 2020 according to the United Nations Higher Commission for Refugees (UNHCR)⁴³. Highest concentrations of refugees were recorded in that duration in the *Beqā'* valley (37.6%), followed by North Lebanon (26.5%) and Beirut (24.5%) with the lowest percentages listed in South Lebanon (11.4%).

Economically, Lebanon has a free market economy that prioritizes service-oriented business such as banking and tourism for its income (McKinsey & Company, 2018). The state government officially declares to limit its ownership to infrastructure and utilities without intervening in private investments (MoF, 2014). Yet, the economy is heavily burdened by the 3rd worldwide highest Debt to GDP ratio at around 153% (Youssef, 2020). Perhaps the most serious disadvantage lays in the fabric of the Lebanese economy which marginalizes the agricultural sector at only 4% of the GDP (World Bank, 2018). This is matched by an extreme dependency on importation reported at up to 80% of only food needs (UN.ESCWA, 2016). The above unfortunate concoction peaked in October 2019 when national uprisings crippled Lebanon after the introduction of a new communication tax. These were soon followed by a strong devaluation of the local currency in informal and black-markets due to shortage in hard currency (Youssef, 2020). This devaluation trend was the first to hit the country in 20 years since the peg of the national Lebanese Pound (LBP) currency against the United States Dollar in 1997 at a rate of 1,515 LBP/\$⁴⁴. Yet, this period has witnessed exchange rates that surpassed 3,000 LBP/\$ for the first time in Lebanon's history. With a situation that is still highly volatile to this day and is sometimes experiencing daily or even hourly change, certain black market exchanges were recorded at rates up to 30,000 LBP/\$ signifying a loss of over 90% of the currency's pre-crisis value. Although the official rate is still reported at the pegged rate, the Central Bank of Lebanon has offered money transfer companies varying exchange rates in attempts to set an upper market limit to control further plummet, but it has later set up an official platform for announcing rates called Sayrafa. This platform initially served for money exchangers but was later made accessible to banks and by 2022 was announced for rates to custom transactions⁴⁵. The grim situation unveiling after the defaulted payment of Eurobonds is therefore dictated by a loss of over 90% of the LBP value at best. The significant debt-to-GDP ratio was further plummeted with the GDP decreasing by a massive 58.1% between 2019 and 2021 reaching \$21.8 billion as reported by the World Bank⁴⁶. The situation was yet compounded by the COVID-19 pandemic and general mobilization in Lebanon which extended from throughout 2020⁴⁷. These conditions created multilayered complications at the economic, social and health fronts only to climax with a massive explosion at Beirut's port on August 4

⁴³ Interactive platform available at: <https://data2.unhcr.org/en/situations/syria/location/71>

⁴⁴ <https://www.reuters.com/article/lebanon-crisis-currency/crisis-hit-lebanese-pound-weakens-to-3000-to-the-dollar-for-first-time-%20idUSL5N2C24FG>

⁴⁵ [https://www.reuters.com/markets/rates-bonds/lebanese-cabinet-apply-cenbank-sayrafa-exchange-rate-customs-transactions-2022-2022-02-03/#:~:text=BEIRUT%2C%20Feb%203%20\(Reuters\),21%2C100%20Lebanese%20pounds%20per%20dollar.](https://www.reuters.com/markets/rates-bonds/lebanese-cabinet-apply-cenbank-sayrafa-exchange-rate-customs-transactions-2022-2022-02-03/#:~:text=BEIRUT%2C%20Feb%203%20(Reuters),21%2C100%20Lebanese%20pounds%20per%20dollar.)

⁴⁶ <https://www.reuters.com/world/middle-east/lebanese-govt-revenues-fell-by-nearly-half-2021-world-bank-says-2022-01-25/>

⁴⁷ <https://www.ministryinfo.gov.lb/en/51354>

2020, destroying vast parts of the city and displacing hundreds of thousands. Some of the detrimental effects of the overall situation is estimated to have increased the multifaceted poverty levels from 30 to 80% of citizens according to the UN.ESCWA, out of which extreme poverty is approaching 50% of households (UN.ESCWA, 2021). Unemployment has also been unofficially estimated by the Food and Agricultural Organization of the United Nations (FAO) to have touched 40% of the workforce in 2020⁴⁸. The financial hit comes within one of the highest dollarized economies in the world. The first and most recent Lebanese stress index published in March 2019 relates to vulnerabilities in three major market segments: the banking sector, the equities market, and the foreign exchange and debt markets (Ishrakieh et al., 2019). The World Bank also reported a drop of almost 21.5% in the overall GDP by 2020 and a 154.8% annual inflation rate in 2021⁴⁹. This financial situation crippled most if not all the local economy and was depicted as possibly one of the worst top three economic collapse witnessed in the world since the mid-nineteenth century⁵⁰. Being an import-dependent country with great restrictions in foreign currencies required for trade and purchases, many Lebanese producers and consumers alike are finding it progressively harder to access increasingly expensive resources and goods. Most recent updates by the World Food Programme (WFP)⁵¹ published estimates of price inflation in food commodities around the Lebanese market. Highlights summarize a significant increase in the monthly average food basket (known as SMEB⁵²) by 12% in only one month between January and February 2021, and three times (194%) compared to the pre-crisis prices in October 2019. The report recorded immense increase in basic food staples since the pre-crisis prices such as *burgol* (327%), chickpeas (179%), eggs (335%), lentils (255%), rice (280%), and sugar (442%). The price shocks of the currency devaluation on consumer price index and food prices were similarly monitored by the Central Administration of Statistics (CAS) as shown in.

To monitor the rate of inflation in more relatable terms, a “Fatouch Index” was adopted by the Ministry of Economy and Trade that represents an estimation of the cost required to prepare a common salad in Lebanon called Fatouch. Ingredients and weights are: tomato (50g), cucumber (50g), onion (15g), garlic (10g), lemon juice (50g), lettuce (50), parsley (30g), mint (10g), purslane (20g), radish (20g), olive oil (15g), sumac (5g), salt (5g), fried pita bread (30g). Since 2011, the yearly change in the Fatouch index was recorded at a peak rate of 264% in 2021 (Figure 32). A report by UN. ESCWA (2016) mentions that Lebanese households spend an average of 20% to 35% of their income on food. This fact, coupled with low national production and high dependency on importation, makes residents in Lebanon highly susceptible to changes in purchasing power and thus food access. In fact, Lebanon’s small

⁴⁸ https://reliefweb.int/sites/reliefweb.int/files/resources/LBN_11.pdf

⁴⁹ Interactive chart available at: <https://data.worldbank.org/country/lebanon?view=chart>

⁵⁰ <https://www.worldbank.org/en/news/press-release/2021/05/01/lebanon-sinking-into-one-of-the-most-severe-global-crises-episodes>

⁵¹ [https://api.godocs.wfp.org/api/documents/WFP-0000126905/download/#:~:text=Preliminary%20data%20shows%20an%20average,week%20of%2022%20March%202021.&text=The%20Consumer%20Price%20Index%20\(CPI,an%20inflation%20of%20536%20percent.](https://api.godocs.wfp.org/api/documents/WFP-0000126905/download/#:~:text=Preliminary%20data%20shows%20an%20average,week%20of%2022%20March%202021.&text=The%20Consumer%20Price%20Index%20(CPI,an%20inflation%20of%20536%20percent.)

⁵² Survival Minimum Expenditure Basket (SMEB) which includes: is based on a monthly ration per person of 6 kg of rice, 3.9 kg of bulgur, 1.5 kg of pasta, 1.5 kg of white beans, 1.5 kg of sugar, 0.9 liters of sunflower oil, 0.3 kg of salt and 1.2 kg of canned meat.

surface area of 10,452 km² is home to estimated 37% of land that could be cultivated and are arable according UN. ESCWA (2016). The same source also estimates that 231,000 hectares exist as utilized agricultural areas with only half as irrigated. This therefore leaves slightly over 40% as unutilized arable land. Although close figures were reported by IDAL (2020a) using data obtained from the FAO, other contradicting data were stated in the 2018 MEDREST working papers (Chaaban et al., 2018) using data from World Bank. This latter report mentioned a decrease in Lebanon's arable lands from 18% to 12% between 1998 and 2015. On another hand, the risk of urban expansion has already caused a loss of 308 km² of land resources (almost 3% of the country's surface area) between 2000 and 2010 out of which of 63% were agricultural lands (Darwish et al., 2012). This is why it would be difficult to precisely estimate the potential of Lebanon in increasing its local production following a strategic and controlled distribution of cultivations into balanced national nutritional needs. The agricultural sector itself has long faced many grave weaknesses, instabilities and malpractices. This fact is supported by UN.ESCWA's (2016) report on food and nutrition security in Lebanon where an extract of self-sufficiency and import dependency of food is reported using data extracted from FAO. Noting on Lebanon's institutional fragmentation and need for structural reforms, the report states a serious strain of the agriculture sector. Self-sufficiency is only attained in fruits and vegetable whereas the country is highly dependent on imports, specifically cereals. Yet, the report acknowledges the growing agro-food industry and its potential in enhancing growth and employment. Overall, the response of the Lebanese state was and is still considered weak in face of the gravity of the situation. Many alarming statements have been shared by experts in the different sectors, yet the state is considered to have not developed a "timely, robust, or coordinated assistance plan" coupled with a sharp decline in human rights⁵³. The common thought remains that the unprecedented crisis and its multiplicity of implications with the government inaction continues to adversely affect the general population especially low-income families, migrants, and marginalized groups.

The dire situation has considerably increased food insecurity in country and especially since the multitude of the crisis was exacerbated on the social and economic level by other complications. These most importantly were added by the COVID-19 pandemic, its episodes of general mobilization and lockdowns, and most recently by the Ukraine-Russia war thus global fluctuation of fuel and wheat prices. With impacted local production and high dependency on import along with low reserves, the concerns of food insecurity have become deeply concerning and shall continue to be so as the situation continues to unravel nationally to this day. The limited governmental action has so far not reaped in any mitigation. Contrarily, the subsidies of the Lebanese government were said to have been regressive in nature which have enticed cross-border smuggling, pushing up of black-market rates, and encouraged traders and importers to sell the precious subsidized foods abroad for profit (Zaki et al., 2022). This behavior in response to the (in)actions of the state have only worsened the already very fragile situation and has put about half of households in the country in direct food shortage as the UN.ESCWA has already alerted in early 2020 (.ibid). The same concerns were also voiced by a study in 2021 that found the prevalence of food insecurity to increase from a former pre-crisis trend average of 27% up to almost 40% post-crisis with projections being higher for females

⁵³ <https://www.hrw.org/news/2021/01/13/lebanon-sharp-decline-human-rights>

and older adults compared to men and youth accordingly (Kharroubi et al., 2021). The seriousness of the situation is progressively being drawn with the more publishing of ongoing studies. Another study in 2021 in fact announced very concerning rates of food insecurity amongst college students at 39% but more seriously at the significant proportion showing symptoms of severe depression (22.6%) and anxiety (34.4) (Itani et al., 2022). Today and for the first time in its modern history, Lebanon stands at arguably its most uncertain time and outlook. Today more than ever, the country requires urgent short-term mitigation and policy strategies and certainly longer-term reform. Within that, the productive sectors of the country and especially those with an array of beneficial elements that could enhance food security, household nutrition, creation of employment, improvement of local rural production, and have a cultural added value which also can be made mobile, such as the *mūne*, could therefore be the suitable starting point and contributor.



Figure 31: Consumer price index and food prices between September 2019 and March 2022 as reported by Bloomberg using data from Lebanon CAS (Idayu Ismail & Gokoluk, 2022)

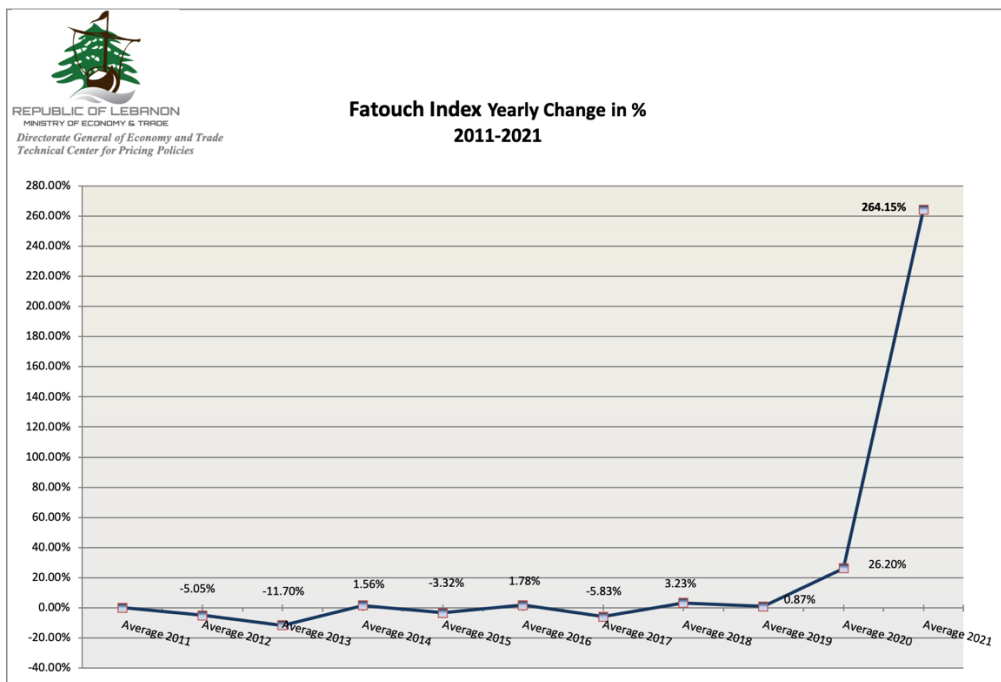


Figure 32: Yearly changes in the Fatouch Index between 2011 and 2021 as issued by the Lebanese Ministry of Economy and Trade. Source: (MoET, 2021)

Box note 11: Back to the roots during crisis

Since the onset of the triple crisis in Lebanon at the economic, social and political levels, the lives of many people if not the majority of the population has changed. As explained above, the dire situation is still unfolding to this day with the exchange rate changing regularly and sometimes suddenly from one day to another. Prices of food and basic commodities have multiplied, and the governmental subsidies have been lifted on many essential products. These conditions have made life very expensive to maintain and especially for people living in urban cities and whose work remuneration in LBP have rendered valueless and not enough to cover basic life expenses such as rent, medicine or fuel and especially food. Coupled with the complication risen from the numerous and extended episodes of general mobilization and lockdowns caused by the COVID-19 pandemic in addition to the culmination of the instability on August 4, 2020 with the explosion of the Beirut Port, many people decided to move back to their rural hometowns⁵⁴. There was even a general call by certain activists and even political parties⁵⁵ to engage personally in the securing of food by cultivating on small scale and in urban gardens (or on balconies). One such campaign was conducted by the renowned Lebanese director and actress, Nadine Labaki, where she reproduced one of her popular songs with adapted lyrics for that cause⁵⁶. By moving back to the village, many people found the chance to re-engage in the production of food at a personal level, cultivating lands, and their preservation in *mūne*. By doing so, women and even the youth (who many grew unemployed) found it as an opportunity with multiple benefit as; reducing the risk of food insecurity, reducing the household cost of food, and a possible income generating opportunity when directed to the market and sold.

2.4. CONCLUSION OF CHAPTER TWO

This chapter explores the context of the main agricultural region in Lebanon, the *Beqā'* valley, as the territory of focus for this study. We first see that the *Beqā'* valley is a backbone to the agricultural production of Lebanon in many produce but especially in its proportion of land cultivated in cereals and pulses, vegetables, field crops, and fruit trees. It also is the main area for livestock and especially small ruminants, as goats and sheep, and cattle. It additionally contains the highest proportion of food and beverage industries in the country and mainly those of the dairy industry. Since ancient times, the *Beqā'* valley was also known to have a solid and deep relationship with the production of food. It was nicknamed the 'breadbasket' of the

⁵⁴ <https://www.reuters.com/world/middle-east/back-land-lebanese-family-turns-farming-survive-crises-2022-06-12/>

⁵⁵ <https://www.nytimes.com/2020/09/05/world/middleeast/lebanon-economic-crisis-farming.html>

⁵⁶ The music video (in Arabic) for that campaign can be found on <https://www.facebook.com/watch/?v=575127209781266&ref=sharing>

Roman Empire for its supply of wheat and to this day maintains many archeological and contemporary monuments that indicate its rooted and thriving relationship with vine and wine such as the renowned Temple of Bacchus in tribute to the god of wine at Baalbeck. Other than its primary agricultural position, presence of cultural spaces with a long history with food, the *Beqā'* valley is also well positioned when it comes to its connectivity. Its central pole city of *Zahle* (capital of the *Beqā'* governorate) is the only and largest inland city in the country which is listed for its functions at various levels such as administrative, logistics, commerce, services, congress and headquarters for public affairs, and hosting infrastructure and festivals. Baalbeck (capital of the Baalbeck-Hermel governorate) in the northern section of the *Beqā'* valley also has similar but less potent functions. The central region of the *Beqā'* valley has an industrial zone and facilities, warehousing, post-harvest and packaging centers and transit routes. It is also well connected to other areas in the country and especially through the highway directly to the capital of Beirut from the west and to a network of road trade and transportation routes to the east through Syria. Despite the many challenges that affect the *Beqā'* valley and especially those emerging from national limitations (such as in the unbalanced distribution of the population, detrimental risks of urbanization, inexistence of proper territorial classifications, growing internal and international migration, growing poverty and the many complication of the post-2019 economic downfall), the *Beqā'* valley was found to be the logical first choice for this study. This is due to the different characteristics that construct the *Beqā'* valley as a suitable territory including its natural landscape, existence of micro-climates, its temperature, precipitation, soil, water, humidity and solar irradiation factors that are different than the remainder of the country. In addition, other factors come to play including its general local at the border, its connectivity to transportation and trade routes, and its vulnerable socio-economic context.

CHAPTER THREE. *MŪNE* – A MULTI-DIMENSIONAL MULTI-SOCIO-SPATIAL SYSTEM IN LEBANON

Today, Lebanese citizens strongly correlate *mūne* items with tradition, heritage and village life. This is evident in certain day-to-day semantics portrayed by the common use of words such as “*Baladi*” which is interchangeable with the word “traditional” (Challita, 2010) and which means “local” and literally translates to “country” (Zurayk & Rahman, 2008); refer to the quote by (Pugliese et al., 2013, p. 3) section 1.3.2. The idea of *mūne* is therefore directly linked to the simple village life (Abu Ghyda, 2007), thus demonstrating a strong statement for *mūne* as a carrier of the local culture. The characteristics of *mūne* also stem from not only its authentic reputation but from the quality emerging from its geographic origin and *terroir* as well (refer to section 3.1.1.1 for the notion of *terroir*). Multiple factors come into play with the construction of these characteristics, or quality, which some are based on the geo-climatic conditions of the production environment, but most importantly those that are based on the knowhow and skills that have been inherited, refined, and mobilized by the women who are in direct contact with the food throughout the entire harvesting to preservation process.

It is however clear that household production of such foods has greatly declined with time for several reasons including changing lifestyles, migration and employment seeking. In fact, a study by Bahn & Abebe (2017) explains how Lebanon witnessed significant changes in the proportion of urban to rural populations despite not having any administrative or legal definitions for urban, semi-urban or rural spaces. However, by following their reference of a conceptualization by (Lerner et al., 2013; Thapa & Murayama, 2008), the study showed how the share of population residing in smaller and intermediary cities more than quadrupled between 1980 and 2016 while rural population decreased relatively. On another hand, a study by Tueni, Mounayar and Birlouez-Aragon (2015) showed that Lebanese citizens retain high importance for traditional foods, consuming on average two traditional dishes per day. Since *mūne* products are well integrated in the Lebanese cuisine, it could be therefore assumed that rural and urban populations alike have a high affinity towards traditional foods and products. *Mūne* is also making a strong comeback which has reemerged after the onset of the economic meltdown and driven by fear of food instability, inaccessibility and price hikes. That has pushed people to renew their relationship with their land, to cultivate and preserve. Global and national consumers in general are also shifting away from industrial foods and leaning towards local environmentally friendly foods characterized by short supply chains (local), organic, use low input practices and are more multifunctional (Ponte, 2016). For Lebanon, a study on consumer behavior also identified the influence of local social norms, specifically religion, on shopping trends of different coexisting religious groups (Cleveland et al., 2013).

It would be important and pivotal to frame *mūne* and describe its position. The public is drawn to *mūne* naturally in their everyday lives and the practices of *mūne* reflect a strong correlation to a cultural heritage. Yet it remains a highly unregulated, undifferentiated and even considered an unrecognized asset. Given that the country is facing probably one of its worse economic crises in its modern history, a framing of that sector could entail a contribution to the

much-needed productive aspect of the national economy. What is meant by that is having a locally produced product well defined, well valorized and well differentiated for the end consumer to recognize and purchase based on its cultural value. In order to assess the standing of the *mūne* as a cultural resource, some conceptual frameworks would help to better understand its position. The below sections will attempt to provide such an approach by framing *mūne* within certain theoretical concepts such as ‘resources’, ‘culture foods’, ‘heritagization’, and ‘geographic indications’. Concepts such as these have been already used successfully not only to protect valuable culture foods in many countries over the world, but that protection was raised into legislation, creation of official regulatory bodies, their integration into strategic plans and the delimitation of production zones based on the characterizable specificity of products; all of which are important factors that contributed to the economic return to the local geographic spaces of origin. Today, one may consider that *mūne* can be argued to be recognized as a potential resource since it is being capitalized for market dispatch by certain players. A relatively large number of private businesses and industries in Lebanon are currently benefiting from such products commercially, despite no available data, lack of legal definition, planning or valorization system for the culture. This fact is however suspected to affect end consumer perception, and consequently sustainable consumption, due to an inability in clearly identifying origin and quality (Zurayk & Abu Ghyda, 2009). This could be a main reason why *mūne* foods are seen to urgently need clear differentiation from other similar but industrial products, by means of a seal or certificate for example. In a study by Lina Abou-Habib et al., (2013b), the authors described that small-scale women companies used markers as “homemade *mūne*” to distinguish their products from those similar but mass-produced. This was adopted since the latter versions that did not follow traditional practices or have used additives. The study however recommended placing more focus on gender differentiation by advertising the support to women producers rather than the product themselves, considering that products with similar features are available in the market. Despite any efforts made, the reality remains that decision makers and regulators in Lebanon today must actively invest more effort to arrive at a framework where *mūne* is a recognized, well-framed, legitimized, and protected culture, and this dissertation study would hopefully be a step in that direction that would encourage action towards that objective.

3.1. APPLIED THEORETICAL ELEMENTS

3.1.1. Food as a carrier of culture and a means of heritagization

3.1.1.1. Food and culture, *terroir* and territory

When thinking about food, one does not only consider the nutritional and biological needs that are being met from ingestion. A variety of different perceptions arise with different people according to their objective and personal preference. Several ontological concepts of food are possible, and these could include variable categories such as the physical aspect, the artifact factor of recipes, the events at which they are prepared, the conditions when they are consumed, the processes that enter in their preparation, and their organoleptic perceptions (Borghini et al., 2021). So, food comprises of an additional qualitative approach that is inclusive of culture,

social and aesthetics; hence giving food multiple roles. According to Massimo Montanari in their book suitably titled “Food is Culture”, the introduction highlights how: “food becomes culture *when it is prepared* [...] *when it is eaten* because man, while able to eat anything, or precisely for this reason, does not in fact eat everything but rather *chooses* his own food, according to criteria linked either to the economic and nutritional dimensions of the gesture or to the symbolic values with which food itself is invested” (Montanari, 2006, p. xi). Normally, the varying geographic, climatic and environmental context where humans settled sculpted the preservation methods originally used by man. Humans innovated in ways that would best utilize the surrounding conditions and resources where they were located. People came in direct touch in dealing with their food and weaved these practices in their day-to-day lives. The practices involved were not static but rather a dynamic and evolving relationship that highly depended on the human factor. In the case where *mūne* is involved, the preservation of food is not a purely technical attitude in which ingredients and recipes are standardized and strictly applied. Techniques have been created by humans and thereby greatly integrate social and collective behaviors that still tie groups and communities together today. Food can therefore be thought of as a vehicle of culture that represents the skills, knowledge, and refinement of recipes over hundreds and probably thousands of years that enter into the transformation of ingredients into the final food product. This representation normally takes shape also differently in the various local and regional scales, becoming a form of territorial identity. This philosophical perspective was addressed by Andrea Borghini and Nicola Piras (2020) in their interpretation on what is food. The authors explain that the identity of food is owed partly to their biological or chemical aspect while another part of their identity is associated to the cultural and social component. They support their theories by citing Kaplan (2019) in having food’s identity depending on “how we conceptualize it”, and that every food has a “*natural entity*” side and a “*theoretical background*” side to it. In its natural side, food is seen in terms of its constituents and ‘real properties’ such as its mass, volume, chemistry, individual ingredients, and physical or chemical processes (fermentation for example) that exist and occur naturally regardless of how we interpret it. On the other hand, the theoretical background of becomes inclusive of what the food itself represents. It is understood of how an eater thinks of what properties makes this ‘natural entity’ into a food; thus, this is where the social and cultural components come into play. In fact, Borghini and Piras (2020) mention that this ‘*background*’ aspect can also emerge from a component of *collective training* within a community that contributes to the interpretation of the food based on what is referred to as *prejudices*. This point stands particularly fitting when related to the preserved *mūne* foods when considering how communities, over hundreds of years, have established their own forms of food preservation (particular techniques and refined recipes) and preparation which they have passed down over generations and which still survive to this day. These small geographic variations is what adds to the uniqueness of the *mūne* in the sense that the same type of preserved food can have small variations in their recipes, the way they are prepared, when they are consumed, or even in how they are called, depending on the town or region across the country. In fact, 8 essential elements of food have been acknowledged to create an experience in which supports the ‘branding’ of distinct spaces and therefore the creation of what is known as ‘foodscapes’. These dimensions are, as cited by Florek and Gazda (2021): 1) products (as food and beverage), 2) practices (as eating), 3) the gastronomy, i.e. the art and customs of preparation, 4) the sensory

properties (as smell and taste), 5) the origin (organic or locally produced), 6) the ways of cooking, 7) the style of serving (fast, slow, or street food) and 8) the context in which the food is served and consumed (place, occasion, etc.). Ultimately, in part or together, these dimensions lead up to the creation of a place brand or marketing tool in which food is a vehicle that distinguishes spaces into said foodscapes. This concept of foodscapes is understood as those “*which unite local culture, creativity and food is becoming, therefore, relevant in highlighting the important linkages between novelty, authenticity and locality in food experiences*” (Florek & Gazda, 2021, p. 12). The very *taste* of food is a cultural construct. While food cannot be objectively determined as good or bad, it is ultimately the brain which translates the taste signal and it is the societal norms that judge whether a food is good or not (Montanari, 2006). What is considered as good-tasting food in one society could be perceived as the inverse in another and therefore are characteristics of synthesis rather than analytical. These do not only vary from one society or community another but also temporally with changing eras such as for example what was considered as tasty food in the renaissance, medieval or ancient Roman times. This is how ‘taste is a product of society’ (Montanari, 2006, p. 71) which not only relates to the habits of preparation of consumption but could be in certain conditions become a reflection of a large picture that could encompass wealth, luxury and social class. Another important reflection at this stage would be the direct correlation between the culture of food and its geography. This is where the notion of *terroir* comes to play.

Box note 12: Notion of *terroir*

The concept of *terroir* is debatable, continuously evolving and entails several elements such as link to origin, typicality, history, authenticity and legality (Spielmann & Charters, 2013). It could be defined relatively differently in accordance to varying disciplines. Historically in Middle Age France, the term was used in the field of viticulture in reference to an assigned aptitude of soils (Audet, 2014). The term in its currently accepted form is rooted in the 1919 law of the *Appellation d'Origine Contrôlée* (AOC) and was later officially adopted in 1935 (.ibid). In the book “*La mode du terroir et les produits alimentaires*” by Claire Delfosse, *terroir* is positioned as a hybrid object of regional development through food products that could even extend to global scales by building on typicity within the political, economic, and legal context (Delfosse, 2011). *Terroir* therefore reemerges as a tool which can play a role in the organization of territories and the building of identities. In fact, another article by the same author emphasized the impact in which geography plays in the denomination of origins and whereby even the name of countries or localities can in fact serve that purpose especially with food products (Delfosse, 1997). Here, I will follow the explanation by Dedeire (1997) who examined the term *terroir* in three main polysemic dimensions; the **natural**, **social**, and **heritage**. In the **natural** dimension, the notion of *terroir* is understood as the pedologic and agronomic characteristics relative to a natural region (such as soil quality, microclimatic conditions, agricultural practices, etc.), and the capacity of the specific transformation of this physical

geography by man; therefore, assimilating a relationship between the natural environment and humans. The **social** dimension is considered as a construct resulting from the human actions on a specific *terroir* in the sense of the landscape, its ecology and agricultural systems are organized in a way that constructs an identity of belonging. This dimension reflects on an extent of familiarity that joins certain people from belonging to a certain *terroir*, therefore indirectly linked to the natural and cultural dimensions, through a number of social and economic behaviors. Finally, the third **cultural** dimension adds to the characterizable physical environment that is constructed with an appropriated identity and jurisdiction. The cultural dimension emerges from a historical deposition and revelation of a symbolic space designated as a product of its sphere of memories and past directives. These are inclusive of the landscape characteristics, its physical structures, social elements and cultural features that altogether add up to a meaningful collective representation of the practices, functions and objects of a specific space.

From that understanding, we see how the link between end-product (either dishes or a collection of dishes into a cuisine, or in this case the preserved *mûne* foods) and *terroir* is direct; i.e. supplied directly from the land. This in turn reflects directly to the preservation of *mûne* foods in which, in older times and today's conditions as we will see later on, are still supplied from local farmers in rural communities. According to Rouvellac *et al.*, it is also important to mention that for French geographers, [translated from French] “*the terroir is above all a portion of territory, a taxon, homogeneous from all points of view, natural and socio-economic. The concept is taken in all its complexity between nature and culture, without minimizing one or the other dimension*” (Rouvellac *et al.*, 2011, p. 339). Hence, a *terroir* becomes the basis of action for the development of territories. This becomes possible by being the social construct of a *terroir* in which the specificity (or typicity) of products is highlighted with the contribution of their material and immaterial value. Through a *terroir*, the entry of a product and the communication of the human activity of a specific local space over time is favored (Prévost *et al.*, 2014). In fact, the latter source explicitly enters into the challenges of understanding and differentiating between the French notions of ‘*terroir*’ and ‘*territoire*’ i.e. territory and noting the confusion made in the English-speaking world. The main difference between these two notions as noted by the author is that a territory is able to exist regardless of the existence or absence of products or a community, whereas the *terroir* can be thought of as the territory of one or several products (as goods or services) (Prévost *et al.*, 2014). Following these lines, it becomes more evident how the construction of a form of territorial differentiation in food serves as determinants that would build a form of “eating geographically” with that encompassing not only the food itself but the entire gastronomic experience known for a given territory. This attention to the local scale of culinary cultures and the ‘re-discovery of roots’ has been boosted by three main reasons as noted by Montanari (2006). These are: First, as a response to the phenomenon of food globalization, standardization of systems and industrialized certification processes. Second, the transformation of taste preference witnessed a change from the pre-modern times when artificial flavors and ingredients were favored. However, by the eighteenth-century France and Europe, a change from that perspective was

met into a change whereby a culture of the *natural* emerged. Third and finally, the phenomena of using the food low as a form of social differentiation that reflects wealth and class has weakened with food becoming a common commodity and with societies having shifted from those of hunger to those of abundance. With that emerged the value of ‘regional’ and ‘geographic’ foods. It is therefore pivotal to couple and emerge the importance of the surrounding environment and landscape upon which the nature of food heritage is also strongly influenced. The geography of food can thus be looked at as an essential element both directly in the material (physical nature) and indirectly in its immaterial form (social organization, habits, customs). The space in which food systems take place therefore have the ability of not only creating and influencing the end-product itself, but to create an organization and social components upon which the habits and customs of societies are built. The geography of food has not been actually a central topic in the field of geography, but it has been growingly recognized especially within the changes being witnessed today at the level of transformation of foodways. This is why the complexifying food system should become inclusive of new actors along with global reflections and geographical considerations that are ultimately interwoven within the system. Today, the geography of food should become a basis upon which the upstream production and downstream systems related to cuisines and consumption exist (Fumey, 2007). This is how food systems surface the ideas in which food bring a relationship between humans, biology, and the ‘nature’ around them (ibid).

3.1.1.2. What are traditional foods and heritagization

The association of food as a determinant for sustainable place development has been addressed in papers as those reviewed by Rinaldi (2017). Distinct literature on food preservation in the social sciences and their traditionality is however not widely common; an observation remarked by Click and Ridberg (2010). Yet, they could be positioned in parallel with similar efforts invested in the heritagization process, also known as patrimonialization, of traditional foods around the world and especially in Europe. Prior to that, it is essential to enter into the cornerstone of the notion itself; what constitutes a traditional product. In the first chapter of the book called “Eating traditional food. Politics, identity and practices”, Sebastia (2017) started by labeling traditional food as a term that resists definition. She questioned what people think when considering what is traditional or not, what criteria do they employ to qualify a food as traditional, and what context does it entail whether social, religious, political, and so on. Such a question should be regarded as priority since it underlies common discourse whether it is used in the common public life, local tourism effort, or political economies; yet hardly do concise and clear official definitions exist even in the international arena. Describing a food product as traditional usually associates directly with heritage, the past healthy lifestyle, the transmitted shared know-how of specific groups or communities, and which ultimately serves as a form of “mark of approval” (Sebastia, 2017). In one of her observations, the author noticed how a group of students linked traditionality of food to their direct social life rather than the long-term use or cultural significance. Students understood traditional foods as those associated with family recipes used by their grandmothers or mothers that are hand-made and include certain unconventional ingredients or served on certain special occasions. In comparison, panel discussions on that topic were linked to more conventional perspectives relating to long-term

use both explicitly (historical texts and evidence) and implicitly (association with indigenous groups and communities). Following the same lines, Guerrero *et al.*, (2009) detected four dimensions emerging from consumer-based understanding of traditional food products in 6 European countries (Belgium, France, Italy, Norway, Poland and Spain). These are *habits and natural* (frequent and common consumption), *origin and locality* (linked to local spaces and cannot be exported), *processing and elaboration* (transfer of artisanal know-how across generations with respect to not only ingredients but traditional processing methods and techniques, also linked to being natural and minimally processed foods), and *sensory properties* (distinct taste). These four dimensions of consumer understanding of what constitutes traditional foods is not presumed to be far from the conceptions in Lebanon as well. Lebanese people have also been noted to retain a link with what is correlated to the above understanding of traditional food. This is specifically in terms of frequent consumption, some with a modernized version (Hwalla & Khoury, 2008; Nasreddine *et al.*, 2006), as well as their preference for sensory properties, links to natural and simple ways of life with minimal processing and even packaging; while focusing on the retaining of artisanal techniques, knowhow, recipes and ingredients of the older generations and with clear indications of typicality of certain regional specialties (Kanafani-Zahar, 1994; Massaad, 2017; Pugliese *et al.*, 2013; Zurayk & Rahman, 2008). A compiling of some common and relevant definitions of ‘traditional foods’ in this case would be as follows:

“A product frequently consumed or associated with specific celebrations and/or seasons, normally transmitted from one generation to another, made accurately in a specific way according to the gastronomic heritage, with little or no processing/manipulation, distinguished and known because of its sensory properties and associated with a certain local area, region or country”.

(Guerrero et al., 2009, p. 348)

“Traditional food is a food with a specific feature or features, which distinguish it clearly from other similar products of the same category in terms of the use of ‘traditional ingredients’ (raw materials of primary products) or ‘traditional composition’ or ‘traditional type of production and/or processing method’”

(Weichselbaum et al., 2009, p. 4)

...and further definitions, including the European Council’s 2006 official definition, that focus on defined local spaces for traditional foods and the transmission within a community over time:

“‘Traditional’ means proven usage on the Community market for a time period showing transmission between generations; this time period should be the one generally ascribed to one human generation, at least 25 years”

(Council Regulation (EC) No 509/2006 of 20 March 2006 on Agricultural Products and Foodstuffs as Traditional Specialities Guaranteed, 2006, p. article 2, section 1, subsection b)

“According to Bertozzi (1998), a traditional product is a “representation” of a group, it belongs in a defined space, and it is part of a culture that implies the cooperation of the individuals operating in that territory. From this clearly sociological definition it can be derived that in order to be traditional, a product must be linked to a territory and it must also be part of a set of traditions, which will necessarily ensure its continuity over time.”

(Jordana, 2000, p. 147)

Tradition is therefore a form of reproducing the past in the present which, although has been difficult to clearly draw within boundaries between traditional and modern, has been used to justify and construct long-term protection systems (Sebastia, 2017). In line with that form of understanding, the elaboration of culture, knowing that there is no set common definition for the notion itself, becomes that is “referred to as the relationship between the man-made world (including humans) and the world we are living in” (Bujdosó et al., 2015, p. 307). According to the Lebanese-Canadian scholar Kamal Dib, culture in its larger meaning [translated from Arabic] “also includes language, customs, traditions, heritage and historical developments that unite a people or group to a piece of land” (K. Dib, 2016, p. 15). This geographic link of humans to their land, environment and overall landscape is therefore pivotal in deciding what constitutes a culture, including traditional foods. These lines ultimately became the basis upon which intellectual property rights were built but which have been equally considered by some to witness the commodification, profit generation and even social prestige (Sebastia, 2017). Despite having a debatable discourse on the political implications of such systems, which will be further discussed in the coming sections including intrinsic and intangible characteristics, the role of food as a carrier of culture and food in general has been widely acknowledged. Culture foods have been noted to play multiple roles including identity-building and tourism economies especially at the local spaces. Organization as the OECD (Organization for Economic-Co-operation and Development) mentions that food-based services represent more than 30% of tourist spending in general (OECD, 2012). Gastronomy and food culture increase a place’s attractiveness and competitiveness and in turn the sustainable development of places (Rinaldi, 2017). Using traditional foods as a resource for a community is possible especially when well defining the typicity which, on one hand is highly dependent on the process of production, but which on another hand also includes a component of relations that join the different actors in a territorial system thus including a collective dimension (Florek & Gazda, 2021). Yet, warnings have been raised that despite having the process of heritage-building a political and top-down practice, attention should always be invested in the proper understanding of the value and how it should be ‘worked out’ by social actors in their day-to-day interactions on the ground (Jones, 2017).

3.1.1.3. Immaterial and material nature of heritage protection

The protection of heritage can introduce aspects that frame the immaterial intellectual or practices (also known as the intangible) or the physical material side of products and places. For food, it has been specifically noted to have the atypical ability to encompass both of these intangible and material components (Florek & Gazda, 2021) since it merges both the product

component and the social, environmental and landscape aspect to its preparation, consumption, and social habits around it. In the intangible side, systems such as the “Intangible Cultural Heritage” (ICH) of the UNESCO becomes relevant. The UNESCO’s Convention for the Safeguarding of the Intangible Cultural Heritage was adopted on 17 October 2003 after being ratified by UNSECO’s member states (178 states as of 2018), including Lebanon as a signatory in 2007. As part of its Article 2 on the relevant definitions that enter in the treaty, UNESCO defines the Intangible cultural heritage, its domains and safeguarding as (UNESCO, 2020, p. 5):

- 1) *The “intangible cultural heritage” means the practices, representations, expressions, knowledge, skills – as well as the instruments, objects, artefacts and cultural spaces associated therewith – that communities, groups and, in some cases, individuals recognize as part of their cultural heritage. This intangible cultural heritage, transmitted from generation to generation, is constantly recreated by communities and groups in response to their environment, their interaction with nature and their history, and provides them with a sense of identity and continuity, thus promoting respect for cultural diversity and human creativity. [...]*
- 2) *The “intangible cultural heritage”, as defined in paragraph 1 above, is manifested inter alia in the following domains:*
 - (a) *oral traditions and expressions, including language as a vehicle of the intangible cultural heritage;*
 - (b) *performing arts;*
 - (c) *social practices, rituals and festive events;*
 - (d) *knowledge and practices concerning nature and the universe;*
 - (e) *traditional craftsmanship.*
- 3) *“Safeguarding” means measures aimed at ensuring the viability of the intangible cultural heritage, including the identification, documentation, research, preservation, protection, promotion, enhancement, transmission, particularly through formal and non-formal education, as well as the revitalization of the various aspects of such heritage.*

Due to a growing activity in research and submissions since its adoption, the ICH website has officially integrated an interactive database which lists and groups their registry in addition to linking them with the United Nation’s 2030 Sustainable Development Goals (SDGs). It also integrates a bibliography of research and academic works around that topic although clearly noting that it is yet difficult today to compile all the works on that matter originating from different countries and languages. Yet, one of the initial objectives of the project under which the ICH was developed aims to “*foster better communication among researchers working in the field of intangible cultural heritage. It may enhance dissemination of ICH-related research within the academic community and direct future research activities on areas of particular need*”⁵⁷. Generally, ICH-protected practices are based in specific geographic origins as a means to protect against migration and globalization. It is also said that the complex approach integrates conservation rather than preservation which in turn accesses a form of development and creativity. In one of their documents, the UNESCO actually recognizes the importance of

⁵⁷ <https://ich.unesco.org/en/project-objectives-and-coordination-01071>

practicing these forms of heritage in their communities and their transmission from one generation to another (UNESCO, n.d.-b). The same document characterizes cultural heritage as inclusive, representative, and community-based. Interestingly, food enters in a variety of different categories in the registry, what is referred to as “concepts”. For example, ICH related to food can be selected from one of the concepts that encompass food preparation, food customs, food production, food processing, food security, food resources, food consumption, and others. One type of a navigation of the ICH is constructed in the form of a visualization called Sustainable Development in which the ICH are regrouped in terms of their concepts and their link to SDGs can be found in Figure 33 and Figure 34 (focus on food preparation). Some of the food-related products and safeguarding practices recognized as ICHs include traditional foods and foodways of Kenya (based on traditional vegetables and 850 indigenous plants), transhumance of livestock in the Mediterranean and the Alps, a culinary tradition in Malawi called *Nsima*, beer culture in Belgium, a traditional meal in Azerbaijan called *Dolma*, and many others. Even the Mediterranean diet has been recognized as an ICH in 2013 and especially in countries as Cyprus, Croatia, Spain, Greece, Italy, Morocco, and Portugal according to the nomination page⁵⁸. As for Lebanon, the only recognized ICH is the *Zajal* which became a representative safeguarding element in 2014 and is a form of recited or sung poetry. According to the nomination file, a written description depicted the characteristics of *Zajal* and which included headlines as the concerned communities, the geographical range location, its categorization in one of the identified domains, the roles and responsibilities of the practitioners and bearers, the transmission, social and cultural functions, compatibility with international human rights, ensuring of visibility and awareness, benefit to communities (dialogue, diversity, etc.), safeguarding efforts and proposed measures, etc.

In terms of their link to the SDGs, the UNESCO has mentioned the advantages of cultural heritage in contributing to the three fundamental dimensions of the SDGs; economic, social and environmental. Food-related heritage have also been specifically recognized such as traditional foodways, local farming practices, pastoral systems, food-gathering and food preservation systems. In another informative report, this link has been highlighted in how food can contribute to inclusive and sustainable development of communities via enhancing food security, well-being, equitable access to resources, social cohesion, income generation, gender equality, environmental sustainability, biodiversity protection, resilience and overall sustaining of livelihoods (UNESCO, n.d.-a). The immaterial component of heritage, which has in fact not been concretely recognized until the last decades of the 20th century, has now become familiar with the significance of the ensemble and totality of elements that constitute a ‘*distinctive idiosyncrasy*’ (Lenzerini, 2011). It is at the heart of that which exist intrinsic identity and distinctiveness of immaterial elements of one human group compared to others. This approach by UNESCO has been also described as involving a distancing from the ‘object’ and approaching to what is considered as ‘processes’ in the sense that culture incorporates a dynamic nature of the tangible and the intangible (Bortolotto, 2007). In turn, this opens the door to not only the preservation of the past, but as to what can be valorized, capitalized and appropriated by communities as their own collective and active symbolic living space. This moves in parallel with the process of heritagization upon which the basis of the ICH has been

⁵⁸ <https://ich.unesco.org/en/RL/mediterranean-diet-00884>

expected to achieve its impact and collective development on communities. At this point, it is important to reassert the cultural approach with what Fischler (1993) denotes as the ‘*social construction of food*’ and the relationship of the human (*Homo sapien*) with his food. In his description, Fischler dissects cuisines into their three basic functions which adhere to the characteristics of (1) providing a set of rules onto which an eater’s mind would be conforming to the order and morality of food that are together strongly associated and deeply rooted in the evolution of ancient and archaic societies; (2) provide a form of defining identity fixated in the control of ‘incorporation’ in the meaning that taking the food’s characteristic into the body, thus the saying “You are what you eat”; and (3) resolve ‘the omnivore’s paradox’ of obtaining adequate nutrition without the anxiety of venturing into unfamiliar foods. Fischler (1993) adds that the set of rules associated with a cuisine (such as preparation, manners, occasions, appropriateness, time, etc.) actually reinforce the collective social organization and behaviors around food upon which societies would feel comfortable adhering to in their everyday life. This is why it is considered as extremely difficult, and even potentially dangerous, to change a society’s food consumption habits. This is how additional background elements could be thought of as active structural elements in the immateriality of food, cuisines and their associated practices, customs and habits.

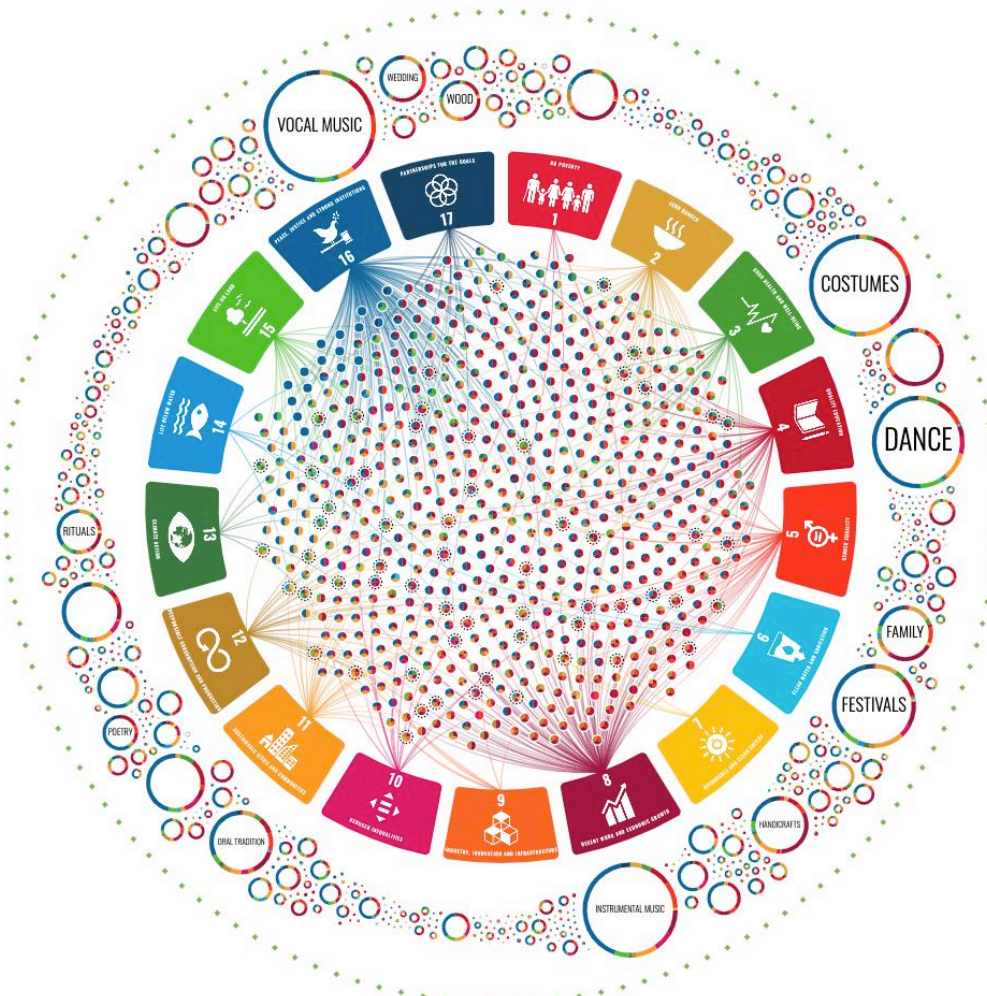


Figure 33: UNESCO’s interactive ICH Sustainable Development navigation visualization with the components being, from outermost to innermost levels: countries, concepts, sustainable development goals, and individual ICHs. Available at: <https://ich.unesco.org/dive/sdg/>

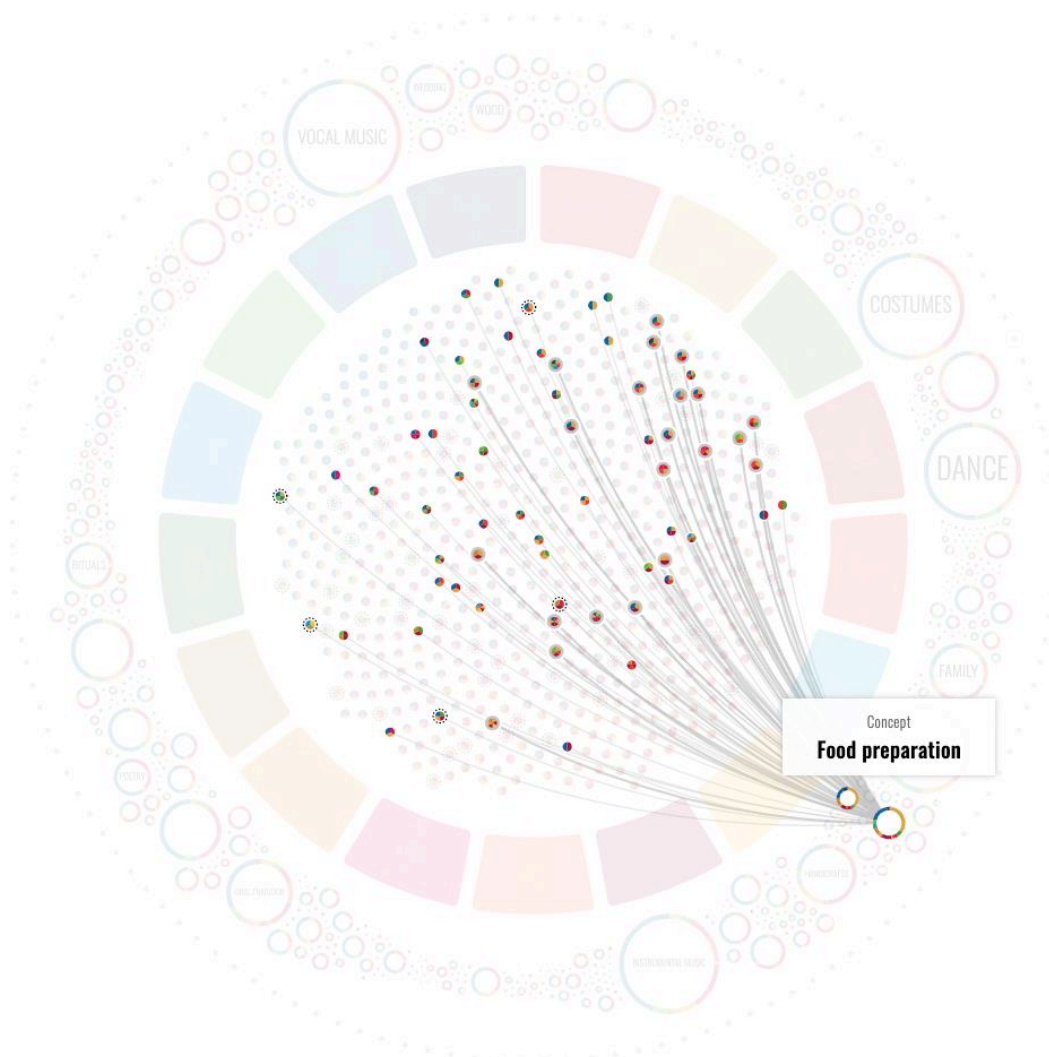


Figure 34: UNESCO’s interactive ICH Sustainable Development navigation visualization with focus on the concept of Food Preparation. Available at: <https://ich.unesco.org/dive/sdg/>

3.1.1.4. Overview of quality labels and geographic indications

As previously mentioned, food has the ability to create a relationship between humans, biology, and the ‘nature’ around them (Fumey, 2007). This in turn refers back, according to Bérard and Marchenay in their book (2016) to the complex framework that enters in food structuring of societies and the notion of *terroir*. They also mention how the appreciation of products included in that inventory requires the understanding of their production, processing, accommodation and consumption. These enter in products such as for example the 200 local products in the Rhône-Alpes region in French along with investigations performed for products such as in Trás-os-Montes in Portugal, Catalonia in Spain, and Emilia-Romagna, Liguria and Piedmont in Italy. These encompass a wide variety of historically abundant and commonly consumed foods as dairy, charcuterie, fermented drinks, oils and flours. According to the authors, the organization around these products comes in the form of space, time and knowhow. In its tangible (material) component, protection mechanisms have been thought of for such products, mainly in the system of geographic indications. In fact, one of the reasons behind the re-emergence of interest in local production of origin was as a response towards the growing health concerns and quality demands of consumers (Gracia & Albisu, 2001). This came at a

time when the link between food and space became less clear as a consequence to food globalization and global trade routes.

The historical trajectory of protection of geographic indication witnessed a long evolution in international treaties, agreements and even debates the past century (Geuze, 2009). Initially, geographic indications were recognized and protected under national laws that were developed per state therefore having different names for the signs in accordance to each country's legislation. However, they later became protected at the international scale between states since national protection alone was not enough. Provisions were introduced in the 1883 Paris Convention for the Protection of Industrial Property which identified geographic indications as intellectual property but left the concept not well define. This was followed by the 1891 Madrid Agreement for the Repression of False or Deceptive Indications of Source of Goods. It was the first multilateral agreement to surpass deceptive or false geographic indication, but it was described as lacking in the addition of more protection (O'Connor, 2008). After that came modifications on these provisions to the Lisbon Agreement for the Protection of appellations of origin in 1958 which was the first to provide a definition and extended protection of 'appellation of origin', defining it in Article 2 as:

"[...] the geographical denomination of a country, region, or locality, which serves to designate a product originating therein, the quality or characteristics of which are due exclusively or essentially to the geographical environment, including natural and human factors".

Official WIPO register, Article 22⁵⁹

More international discussions continued after that throughout the years until one of the essential international treaties arrived and addressed geographic indications in the World Trade Organization's WTO Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS). The TRIPS defines geographic indications as part of Article 22 as:

"[...] indications which identify a good as originating in the territory of a Member, or a region or locality in that territory, where a given quality, reputation or other characteristic of the good is essentially attributable to its geographical origin".

WTO, TRIPS, Article 22

Other than the TRIPS and the ongoing works undertaken through its framework, the WIPO (World Intellectual Property Organization) and its member states participate in biennial and public international colloquia and produce documents on relevant topics relating to geographic indications. Other plurilateral and regional agreements also exist for the protection of geographic indications, such as the African Intellectual Property Organization (OAPI) Agreement and the Banjul Protocol on Marks the African Regional Intellectual Property, or the bilateral agreements by the European Commission with Australia, Canada, Mexico, Chile, South Africa, and the United States (O'Connor, 2008).

In an article that specifically discusses the international judiciary aspect of geographic indications, the author, Geuze M. (2009) explains that there are generally three different

⁵⁹ https://www.wipo.int/lisbon/en/legal_texts/lisbon_agreement.html

categories of protective indications as collective signs (unlike trademarks which are for individual use); as briefed below:

1) Indications of sources

The use of this term appears in the 1883 Paris Convention and in the 1891 Madrid Agreement for the Repression of False or Deceptive Indications of Source of Goods. Due to the lack of any direct definition of the term in these conventions but rather having an indirect elaboration of the expression, then the author infers that a referral of a country (or a space within a country), or place of origin should be specified. However, two characteristics should be noted within this indication. First, that no type other than the geographic space can be referred, meaning that no specific manufacturers are eligible, and second, this type of indication does not require the product to have any identifiable specificities, special qualities or characteristics derived from its geographic origin. An example of an indication of sources would be the mentioning of the country in the expression “made in [...]”.

2) Appellations of origin (Lisbon, Art. 2)

The 1958 Lisbon Agreement and its establishment of an international system is what defined and designates the protection of appellations of origin. In accordance with its definition of appellations of origin, the agreement thus indicates the designation of qualities and characteristics of products that are essentially or exclusively to the geographic space (demarcated) of the product, including natural and human factors, along with the name of the country (or space) from which the product is reputable and originates. Unlike geographical indication, reputation in the case of an appellation of origin (which can be thought of as a special and stricter form of geographical indication) is not solely enough to constitute as a link between a product and its place. Instead, clear quality factors of the product that are determined from its place by natural or human factors should be found. Examples of appellations of origins include “Noix de Grenoble” for walnuts, “Bordeaux” for wine, “Tequila” for spirits and “Jaffa” for oranges.

3) Geographic indications (TRIPS, Art. 22.1)

The geographic indications enters in the TRIPS Agreement which definition resembles, to some extent, that of the appellation of origin in the Lisbon Agreement but is thought of as less strict. It identifies a product with a reputation or specific quality that is essentially attributable to its geographic origin but are not strictly restricted to having specific qualities or characteristics attributable directly to their geographic environment as natural or human factors. Geographic indications interestingly also recognize, in addition to names, other signs such as symbols or emblematic images such as for example the Eiffel Tower for Paris or the Matterhorn Alps mountain in Switzerland.

In the European Union, the response we see today to geographic indications took shape in 1996 by the adoption of the EU Designation of Origin-EUDO regulation which protected food products from a specific geographic origin under the Protected Denomination of Origin (PDO), Protected Geographical Indication (PGI) (Gracia & Albisu, 2001) and the Traditional Specialty Guaranteed (TSG) in 2006 (Figure 35). Three main conditions designate the compliance of a geographic indication. These are: 1) being mostly in the form of a good, although some examples of services have been noted in countries as Azerbaijan, Bahrain and Croatia), 2) these good must be originating from a defined geographic area, and 3) these goods must have characterizable properties and qualities (or reputation) that are able to be tied to their defined

geographic origin (O'Connor, 2008). In a review paper by Dias and Mendes (2018), the authors provide a bibliometric analysis around these three types of quality labels. They explain how these were based on the national systems that existed originally in France (AOC - *Appellation d'Origine Contrôlée*) which links a terroir product to its specific geographic origin and local traditions, and Italy (DOC - *Denominazione d'Origine Controllata*). They clarify the difference between the three labels and mention that the PDO consists of having three stages (production, processing, and preparation) of agricultural products or foodstuffs being from a specific geographic area, the PGI having at least one of these three stages linked to a distinguished area, while the TSG covers those that are produced following traditional methods or using traditional raw material or composition without any restriction to geographic delimitations. An analysis of the EU register for geographical indications and traditional specialty guaranteed, the number of total registrations reaches a total of 1,661 from which 1,583 (over 95%) enter in the PDO and PGI entries whereas the TSG register only 78 products. Top ranking countries in the PDO and PGI systems, knowing that non-European registries are also available, include Italy, France and Spain with 314, 256 and 198 registered products as of 2022, respectively, compared with 291, 240 and 194 in 2017 respectively per country (Figure 36). Although initially used extensively in wine and spirits, quality labels now apply to agricultural products and foodstuffs as cheeses, meat products, fish, fruits, vegetables, cereals, bread, pastries and others. Most notable examples of products per country are for example Italy's Prosecco and Parmigiano Reggiano, France's Champagne and Comté, Spain's Cabrales and Queso Manchego, Portugal's Porto and Douro, and Greece's Feta and Manouri. Additional inspection of the EU geographical indications register show that 13 non-EU countries have a minimum of 1 and up to 99 products registered as either PDO or PGI, with examples including Cambodia (2 registrations), Cameroon (1 registration), China (99 registrations), Thailand (4 registrations), Turkey (8 registrations) and Vietnam (1 registration).



Figure 35: Logos of, from left to right, 1) Protected Denomination of Origin (PDO), Protected Geographical Indication (PGI), and Traditional Specialty Guaranteed (TSG). Source: European Commission official website⁶⁰.

⁶⁰ http://ec.europa.eu/food/audits-analysis/news_detail.cfm?id=69

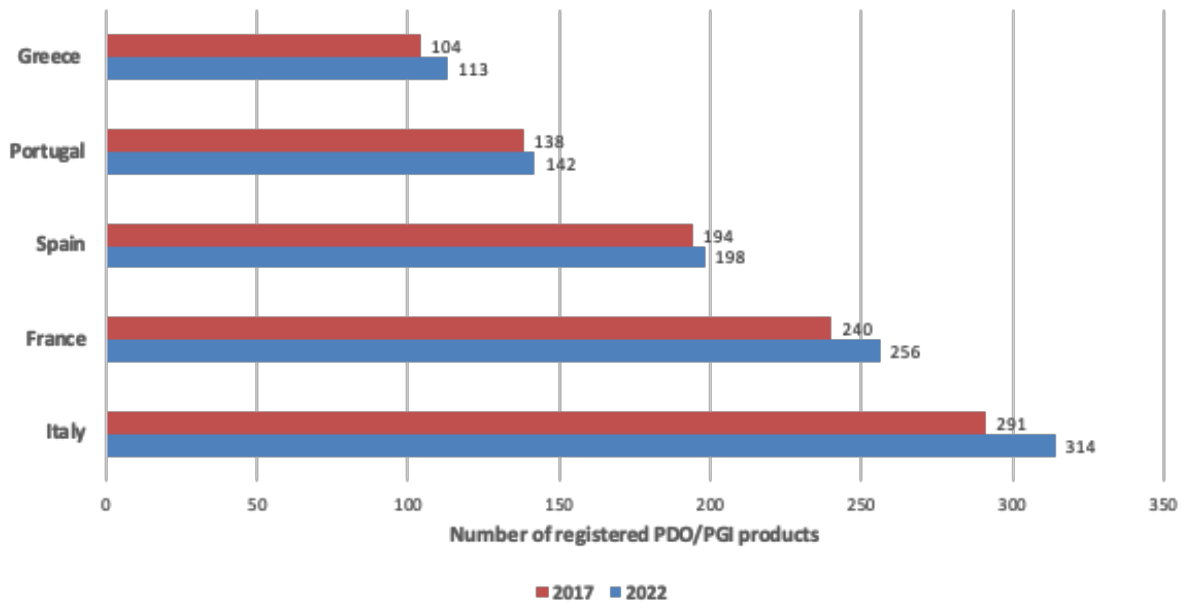


Figure 36: Highest number of registered PDO and PGI for agricultural products and foodstuffs per country in 2017 and 2022. Source: The EU geographical indications register⁶¹.

Some examples of indications labels as stated in the module IV of the WTO TRIPS publication (WTO, n.d.), include:

Darjeeling tea is a geographical indication of Indian origins registered in the Tea Board – Indian GI register along with being recognized in the EU as a geographical indication since 2011 and with the label also registered as a certification mark in several jurisdictions as in the United States, Australia, and the EU.



Café de Colombia is a Colombian ‘*Denominación de origen*’ that is registered as a geographical indication in the EU and the image is a registered trademark in several countries including Switzerland. The term ‘Columbian’ in its application to coffee is recognized as a certification mark in the United States and Canada.



Roquefort cheese has several forms and variations of labels and marks that enter into different protective geographical indications and collective marks.



Roquefort as a term is recognized under the Lisbon Agreement as an appellation of origin since 1967. In the United States, it is registered as a certification mark (top) since 1953 in reference to ‘*the certification mark is used upon the goods to indicate that the same has been manufactured from sheep's milk only, and has been cured in*

⁶¹ <https://ec.europa.eu/info/food-farming-fisheries/food-safety-and-quality/certification/quality-labels/geographical-indications-register/>

the natural caves of the community of Roquefort, Department of Aveyron, France’. Roquefort is also recognized under the WIPO Madrid system for several of its labels (bottom) as in Australia, France and Madagascar.



Kampot pepper was the first recognized geographical indication from Cambodia and was registered as so in the EU in 2016. The product is also known as ‘Mrech Kampot or ‘Poivre de Kampot’.



The system of protection of quality labels and geographic indications on one hand has been noted for its advantages. Essentially, these (especially appellations of origin and geographic indications) constitute a forms of signs that serve the functions of identification to a specific delimited geographic space and therefore are tied to a quality or reputation of that space. They are thus territorial marks which are exclusively available for use only within the borders of the territory in focus. In that approach, the benefits carried by the certification and label signs of that system infer an added value which reflects on the producers, consumers and spaces. In a national seminar on the “Use of industrial property for the protection of Iranian handmade carpets” in 2011, Matthijs Geuze mentions these benefits as being a differentiation and marketing tool for producers, a form of quality guarantee and reduced search efforts for consumers, a form of protection and stimulant of local territorial development for spaces, and finally having the ability to spill-over into other domains of positive impact such as tourism, reputation and income generation. The added value by differentiating quality products and their particular geographic origin in the national and international markets therefore constitutes an advantage of competitiveness and economic profitability of such products (Dias & Mendes, 2018). Another main benefit relates to the perspective of consumers who are becoming increasingly more health-conscious and interested in ‘identifiable characteristics’, quality, and local origin of products (Dias & Mendes, 2018). One of the probably most important characteristics of such a system rests, according to Barham (2003, p. 132) in “*The taste for history in the form of “produits de terroir,” therefore, reflects in part the ongoing construction of a collective representation of the past through food that is perhaps largely unconscious for consumers*”. On the other hand, the same author bring forward certain challenges of geographical indications when it comes to the biopolitics of food and global interests even those diplomatic in nature. It seems, according to the author, that countries such as the United States oppose geographical indications in WTO negotiations as certain producers in the US have adopted European geographical names for their products especially in areas that have witnessed heavy immigrations. The same phenomenon is also present in other countries such

as Canada and in Latin America. The troubling of the United States with such a system emerges from the country's orientation to a liberal economy based on individual ownership and in which trademarks as individual business names consist the means of intellectual property and label protection. The disagreement of the EU stems from the conviction that labels of geographical indications actually belong to the space of origin itself and are subject to the administration of state governments. This contradicts giving legal authority to individuals who, in the case of trademarks, are legally capable of buying, selling or inheriting the rights associated with the trademark. Other forms of arguments have also been raised. Bérard and Marchenay (2016) for example continue to ask the question of whether the establishing of a link between a particular product and their space of origin could, although with the intention of protecting it, could be subjecting the product to a form of complication raised from the local, national and sometimes supranational regulations required. Such concerns for example enter in the reconciliation between the regulations of different administrative levels, the facility of achieving historical proof to arrive at legitimizing the cultural and identity claim, the methods of delimiting a specific territory and its exclusivity, how to prove specificity or a particular quality, amongst others. Yet, protection approaches directly enter in the valorization of the products themselves by basing on their cultural specificity which in turn translates into an economic return. The differentiation of these characteristics as a form of guarantee enters for example in certifications such as the AOP (Appellation d'origine protégée), AOC (Appellation d'origine contrôlée) and the IGP (Indication géographique protégée). Given that, other questions also arise. These could touch issues relating to the appropriateness of marketing of such products compared to big brands especially in common commercial outlets and the position of the consumer in this system. Should products be adapted to the consumers or should consumers be brought close to the products? Information in that case plays an important role in raising the awareness of consumers and their approaching to quality information enters in the valorization process. Another concern also relates to the international regulations such as the hygiene standard of the Codex Alimentarius and whether the hygiene component could oppose in the interest of terroir or culture foods. Finally, the position of small producers compared to large manufacturer is another essential point to consider when it comes to market domination and competition.

3.1.2. Using tradition and culture as a specific economic resource – the concept of neo-endogenous and territorial development

The importance of focusing on local micro-economies has been increasingly the subject of scientific discourse. In a world governed by globalization, international commerce and global economies, favoring “the local” is being encouraged to attain development strategies able to mitigate spatial imbalances, distribution of wealth and the inclusion of localities usually considered as marginalized and mainly rural. In the words of Stiglitz (2007, p. 7), “*Globalization had succeeded in unifying people from around the world—against globalization*”. Without undermining its role in shaping global economies, a newer and smaller scale of economic activities has however emerged. It relates to the local, and more specifically territorial, levels of space and their place-based actors are progressively being recognized as economic grounds capable of reaching their own development routes. A strong belief is being

based on the activation of bottom-up development originating from internal forces of specific territories (Lamine et al., 2012). In his article, Swyngedouw (2004) described the process as “**Glocalization**” which refers to the simultaneous downscaling of institutional arrangements and economic activities to more local levels. Hence, rather than relying solely on top-down strategies directed by the state or other authorities and donors, smaller scale geographically distinct areas are being looked at as fertile spaces for the building of economic activities. The latter is usually preferred when based on the identification, capitalization and sustainable management of differentiation factors – endogenous resources – within the local context, by the local players. The so-called “markers” are inclusive of factors not only relevant to the primary agricultural and food sector, but have been noted to incorporate languages and dialects, folklore, arts and drama, archeological sites and landscape components (Ray, 1998; Solima & Minguzzi, 2014) under an overall cultural approach equivalent to a territorial identity. Hence the origin of “culture economy approach to development” which is thought of as the localization of economic control within a certain territory, valorizing its cultural resources within its local network of actors (Figure 37). This is how a **neo-endogenous approach to development**, a concept introduced by Ray (2001), can be considered as the creation of suitable conditions which stimulate local initiatives within general directed guidelines; a manifestation both the “from above” and “from within”. When considering food as a typical carrier of a culture identity, it was shown how consumers nowadays are seeking locally sourced produce characterized by less food-miles, environmentally friendly practices and turning back towards the traditional and natural rather than the commercial and industrial.

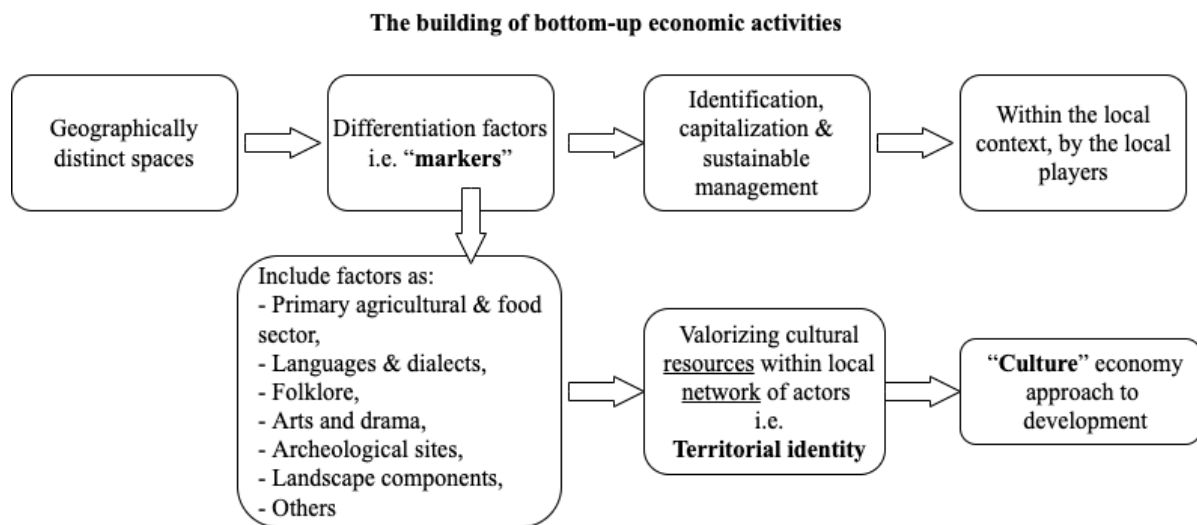


Figure 37: A schematic representation of what constitutes a culture economy approach. Source: compiled by author based on the works of Ray (2001)

Box note 13: Defining territorial development

The general purpose behind development is understood as [translated from French] “*to improve the well-being and possibly the wealth of populations, with the choice of an interest extended to territories with reduced industrial functions, by preference or lack of resources*” (Torre, 2015). A definition of territorial development was mentioned by Angeon et al., (2006) citing

Deffontaines et al., (2001) as [translated from French] “*the ability of actors located in a territory to control future evolutions*”. Pecqueur (2013) uses the term ‘territorial development’ instead of ‘local development’ as the notion of territory surpasses locality, meaning those found in a particular locality. This is the reason the understanding grew from the earlier ‘local development’ due to larger meaning that encompasses more than that of a small scale. In his article, Pecqueur defines territorial development as “*any process mobilizing actors which leads to the creation of a strategy of adaptation to outside constraints, based on collective identification with a culture or a territory*”, and continues to describe territorial development as one that “*cannot be decreed and remains a construction in the hands of local actors or stakeholders, even if appropriate public policies may be used to stimulate it over time*” (Pecqueur, 2013). From Pecqueur’s definition, Torre (2015) adds three points in which territorial development differs from regional or local development. These are first in having territorial development extend to various territorial stakeholders (local/regional authorities, decentralized services of the state, associations, and others) instead of being ‘reduced’ to the behavior of productive actors and institutional regulation. Second, by having a factor of cooperation at the level of the territory (social and institutional) and especially in the networking of local actors in steering their own development route collectively. Finally, incorporating issues relating to land use given competition, land scarcity, soil erosion, etc., therefore the role of and occupation played at the heart of development projects. According to Torre (2015), these factors make territorial development more extensive than economics and geography by incorporating a social dimension and the biotechnical elements such as ecology and soil sciences.

What is interesting in territorial development in relation to the *Beqā’* valley in this study bases on the identification of assets which are capable of differentiating a territory from others. These in fact can be in the form of ‘accumulation of knowhow’ or ‘collective goods’ (Pecqueur, 2013). This is the aspect in which *mūne* could be positioned. In fact, in the same article, Pecqueur cites a definition of ‘resources’ from Leila Kebir (2004) as [translated from French] “*a metasystem that brings into relation an object (know-how, raw material, artefact, etc.) and a system of production producing a good or a service*” (Pecqueur, 2013, p. 18). This also draws another headline under which *mūne* can be situated.

Territorial development approaches may have taken a relatively more solid form in developed countries and especially in Europe. Main reasons may be linked to the steering of rural development policies by a strong institutional capacity and the presence of well-established and stable politico-administrative framework amongst its member countries which accordingly facilitates the introduction of large-scale and innovative interventions with an experimental component to evaluate success. The LEADER project probably encapsulates one of the most relevant approaches to rural territorial development in the European Union (EU),

under the approaches that are in line with the “neo-endogenous” and “territorial” development. Neo-endogenous development can be considered as the creation of suitable conditions which stimulate local initiatives within general directed guidelines; hence a manifestation of both the “from above” and “from within” (Ray, 2001). With over 30-plus years of ongoing execution, the LEADER project is considered by the most part, despite certain levels of criticism (Petrick, 2011; Ray, 2001), as a tool which has successfully stimulated the (re)organization and/or construction of territories in the form of Local Action Groups (LAGs). One of the important areas of success consists of the engagement of local actors in reflecting on their territories, understanding their distinctions and formulating collective action plans based on the structuring of local networks and actors. Major achievements to date include, according to the European Network for Rural Development (ENRD) website⁶² the establishment of over 2,800 LAGs, covering over 60% of European rural population. During its 3 phases, LEADER I (1991- 93), LEADER II (1994-99) and LEADER + (2000-06) and excluding the LEADER CLLD (2014-2020), the overall assigned EU budget increased almost 5 folds from an initial EUR 442 million in LEADER I, up to EUR 2.105 billion in LEADER+, along with an expansion reaching over 4 folds of the areas covered (from 367,000 km² to 1,577,386 km²), to name a few of the statistics. When questioned directly with the LAGs and/or beneficiaries, the major perception of the strengths of the LEADER project registered include the promotion of networking, encouraging the cooperation between businesses and public bodies, adopting bottom-up approaches, support to innovation and the overall improvement of the localities (Bosworth et al., 2016). These results may then be probably considered as figures of the successful stimulation of local communities achieved by LEADER.

Despite having much more concrete theoretical frameworks and implementations based on developed economies, certain theoretical and case-study literatures highlight the possibility of transferring such development approaches to developing countries with a certain level of adaptations (Bosworth et al., 2016; Delgado-Serrano et al., 2015; Galdeano-Gómez et al., 2011). Not without its own set of challenges, Pecqueur (2013) for example acknowledges that the emergence of territorial development as a potential solution to the changes in the global economy applies to industrialized economies as well as developing countries. Taking a tangible form in developing countries is mainly due to the flexibility and adaptability of the model. In his paper, Pecqueur (2013) focuses on the importance of having clear understanding of the local context upon which the emergence or construction of identifiable resources and strategies of exploitation will be built. On another hand, he clearly states how the model is not spontaneous but requires a holistic approach of public action, which in turn raises itself wider than the simple, yet necessary, capability of the state and regulatory policies but for the needed mobilization and coordination amongst actors. The very same point of focus was also highlighted by Torre and Wallet (2015) when mentioning that ‘efforts and projects of local populations’ are also as important as policies when aiming for rural development. In this regard, the organization of actors plays a crucial role in defining efficient channeling of resources. This was long stated by Stöhr and Taylor back in 1981 when pointing how bottom-up development requires both territorial-specific organizations of socio-politico-administrative frameworks and systems of economic transactions (Stöhr & Taylor, 1981).

⁶² https://enrd.ec.europa.eu/leader-clld_en

Following the same logic, an integral part of the organization of local actors is reflected in the relationships governing the network of actors. Chevalier *et al.* (2017) state that studying the system of relationships amongst stakeholders helps to identify inter-knowledge and inter-dependency. In turn, this reflects the potential for collective action amongst a group within a certain network, with the latter being a prerequisite for mobilization within a territory and the building of a collective identity. Collective action is generally understood as when “*a group member engages in collective action anytime that he or she is acting as a representative of the group and the action is directed at improving the condition of the entire group*” (Wright *et al.*, 1990, p. 995).

May it be that such concepts can be transferred or adapted to developing countries having a potential to capitalize on cultural heritage in specific territories such as Lebanon? This is where this study attempts in fact to highlight that potential using the *mūne* as a cultural heritage resource. The definition of *resource* in this case falls under that which was cited by Pecqueur (2013) from Levy and Lussault (2003) which is based on the understanding that a resource is an invented form from the physical or biological world, even after being discovered, and can only be considered as so if it partakes in an identified production process originating from society. It is also worth mentioning the distinction that is noted between an existing (active) factors which as considered ‘assets’ and latent (virtual) factors which are considered as ‘resources’ in reserve until they get transformed into assets following their revelation or valorization (Colletis & Pecqueur, 2005). Therefore, the recognizing of a resource and its transformation into an asset infers an active effort that enters into a process and its engagement in the organization and mobilization of actors under given institutional, geographic and other efficiencies of contexts within relevant territories and administrations. In that sense and considering food as a resource or asset for development, it should be mentioned that the topic around the geography of food has gained growing attention especially for developmental purposes for territories. This fact has been noted for example by Atkins in 1988 when he acknowledged that the field of geography has indeed previously neglected such important approaches knowing that 87% of the world’s farmers live in countries with low income at around \$1,600 per capita and that 50% of the value of shelf food in supermarkets is added to the products downstream in the value chain after the farm gate (Atkins, 1988). In a parallel sense, the field of social geography interrogates the role that food could play in development specifically in terms of inequalities and differences as well as accessibility and justice. In a review paper, Del Casino (2015) focuses on this wider discipline of geography and its spatial analytics by not only addressing food deserts, food security and food justice movements but by mentioning the complex sociality and relationship between space and identity. The review paper cites Costa and Besio (2011) in their examination of the Hawaiian Regional Cuisine (HRC) as an example of the effort required in building identity. The authors state that the rise of the local food did not simply occur naturally but was rather built through the works and efforts of chefs in the hotel industry by the early 1980s who wished to improve the quality and organoleptic properties of their cuisine. This is how the construction of that identity revolved around the politics of food to finally arrive at the appropriation and reinforcement of that specific Hawaiian indigenous food culture. The same is also reflected in the structure of processes for the identities of Mexican national cuisine and its positioning at the border region between Mexico and the United States thus circulating a local space for tourism and border

identity (Del Casino, 2015). This is the way in which Del Casino (2015) stresses on how ‘*space and identity are intimately intertwined*’ and giving the French market “*Marché Paysan d’Antigone*” in the city of Montpellier as an example where the *paysan* identity plays an underlying role in the quality foods and the asserted position of the producers as ‘*unique custodians of terroir heritage*’ (Del Casino, 2015, p. 4). Finally, the system of recognition (of the territorial resource), its specificity, its appropriation and identity building manifests in a valorization through a protection mechanism that allows for its differentiation. This is where the topic of protection, in the material (tangible) or immaterial (intangible) approaches, re-enters to complete the process.

3.2. THE CULTURE OF *MŪNE* – A CONCEPT MUCH LARGER THAN THE PRESERVATION OF FOOD

The above representation showed how food can serve as a tool upon which entire socioeconomic systems can be built whereby food not only could serve as a carrier of culture, but that culture could become the basis of material (tangible) and immaterial (intangible) protection. This structuring of the typicity which distinguishes food geographically and links it directly to its *terroir*, territory and social atmosphere of its space has also been shown to consist of resources and assets upon which organized valorization and mobilization of relevant players can take place. Such constructs ultimately form active contributions where resource, once revealed and appropriated, would serve as a basis for the development of territories and benefit of the communities. In this section, *mūne* will be looked at from the perspectives presented in the earlier sections, especially how *mūne* and its entire system of production exhibits strong geographic and spatial dynamics. This section will also link the culture of *mūne* food preservation with the concepts discussed prior such as those of territorial and neo-endogenous development and will stress on the importance of properly integrating that culture into the national economy for its protection and efficient valorization across its value chain.

3.2.1. The multiple purposes and dynamic geographic activity demonstrated by the *mūne* system

When considering the entirety of the information collected around the traditional preservation of *mūne* foods, it becomes evident how the system of production and consumption displays an array of different dynamics and functions. These rise above the direct act of preserving food to increase its shelf life but include a system that displays strong linkages to the surrounding space, history and culture, and socio-economic activities. These for instance range from a strong geographic tendency of activities to a clear social and economic organization reflected at the level of households, the region and even domestic gender roles. In addition to being a tool of food security, community mobilization and solidarity, the annual seasonal production of *mūne* foods has also transformed into a more modern means of economic inclusion which is characterized by cultural added-value, rural-urban bridging and gender socio-economic empowerment. The strength behind that transformation remains the evidence of a cultural value which is held within these dynamics in both tangible and intangible forms.

First and foremost, the original direct purpose of preserving seasonal produce into shelf-stable foods initially served as a **means of survival and for the food security** of rural households and communities. This came historically as a form of self-reliance and building of resilience in circumstances with restricted transportation, geographic isolation and in times of crisis. The tradition originated in rural villages and especially the Mount Lebanon which is a rugged mountain chain facing the Lebanese coast longitudinally and which housed numerous villages that were distant from each other and that became easily isolated during wintertime. At the time, men acted mostly as farmers who cultivated the lands around them and when the agricultural produce were harvested during peak seasons, **women would play a major role**. In addition to being major contributors to their household's regular maintenance, women were mainly responsible of the wellbeing of their families and managed the daily upkeep of their homes, food, storage and preparation. Yet, the role of women was heightened especially during spring and summer when harvest reached maximal intensity. At these times, women would manage what their family would consume from the raw harvest and would preserve and store the remaining of the harvest into pantry products. Women mobilized the knowhow, skills and techniques that they built with information they acquired through generational transfer, from mother to daughter, to create the recipes they knew and perfected. The techniques they used were labor-intensive and required days and sometimes months to complete and used a variety of tools and storage techniques. Common preservation methods relied on several factors. These included for example drying, fermentation, distillation, pickling, jamming and others. Most importantly, it was generally the relationship between people and their lands that dictated what types of products (raw material) they could preserve. Given that meats were generally rare and expensive, the majority of foods that were preserved consisted of what was cultivated and available to rural families. These included mainly fruits, vegetables and forages along with animal by-products as dairy coming from the modest few heads of ruminants that were raised usually underneath or next to the household. It is in this type of relationship between humans and food from which the array of *mūne* foods was progressively born and shaped. The application of preservation techniques and recipes over hundreds of years became fed by the remembrance and skills of the past history, taken into a strong sense of pride and was used to display the hospitality of families during gatherings. Being labor-intensive, *mūne* became an activity that organized and linked communities together during the cooperation and collective assistance in harvesting, preparation and processing. Men and women of a community assisted each other during harvesting processes, and it was specifically women who grouped their efforts together to collectively aid each other in the preservation of certain laborious products such as with *kīshk* (section 1.2.3.3). Such times created **rich social settings** that became characterized by the consolidation of efforts at a collective scale for solidarity and neighborly relationships. At that level, it becomes clear how the dynamics of *mūne* have a strong link with the surrounding *terroir*, discussed in section 3.1.1.1 around a specific community. It was the factors that came altogether that sculpted and created not only the available raw material and surrounding natural conditions for preservation, but also the **mobilization and organization of people**, their inherited skills and knowhow, their techniques, and social interaction prior to, during, and after the production of *mūne* that emerges the specificity factor. In addition, the relationship of humans with *mūne* continued long after the production of the many seasonal harvest is finalized and entered in the daily life of the Lebanese people. Rural residents planned

a significant part of their life around securing food. Not only from cultivation to harvest and preservation, but the planning and scheduling that was required before that, such as for example the maintenance of households, storage rooms and storage containers. A yearly cycle was established whereby regular management and interaction with such activities was established. Maybe one of the clearest evidence of the position that *mūne* held within households was its **effect on architecture** (Figure 4). People at the time designed their homes with food and *mūne* taking a central location. A separate *mūne* room (*ḥzēne* or *beit el mūne*) as shown in Figure 5 was even built to incorporate various storage spaces for the different preserved foods. These included for example silos for the different dried grains and different sized clay jars and containers for the other forms of dry and wet foods, oil, pickles, jams and others. Families at the time also placed a special form of cupboard called *namlīeh* (Photo 11) which, before the introduction of refrigerators, helped keep food a longer time in Lebanese kitchens. Traditional rural households were additionally supplied with a small space, usually underneath households, called *kaboo*. This space was designed with ventilation in mind and was used to house a few heads of animals (usually small ruminants), tools, and for other activities including food preparation and preservation as well. Ultimately, preserved *mūne* foods have become a main ingredient that enter into the Lebanese table, either consumed alone separately or as ingredients in meals. The Lebanese cuisine has today grown into a global trend with hundreds of restaurants in numerous main cities around the world. The name of these restaurants and their menus commonly include that of the country as a sign of pride around the national cuisine.

Technically, it would be **difficult to create a unified list** of specific preserved foods that can be considered as *mūne*. Similarly, it would be difficult to directly assign *mūne* products to specific territories. This is because the very idea behind *mūne* is fluid in its application and the types of products directly depended on the surrounding cultivations of each region and these were highly variable even sometimes from one village to another. As we have seen in note box 6 (end of section 1.2.5), no one characteristic exists that is capable of framing the specificity of *mūne* products. It is in fact an assembly of various different elements that enter in the specificity which also vary from one product to another. Sometimes it is the quality of raw material that is in play, whereas at other times it is the mastered skills and knowhow, recipes, or geo-climatic conditions and the effect of the *terroir*. Certain **regional variability** can still be found to this day depending on the type of recipes and slightly different techniques that each family or village was used to. Yet, the production of *mūne* is able to display a pool of products that resemble at a national level, regional level and local level in some products, whereas at the same time portray some form of specific variability and typicity at the same scales. Certain areas and even villages became reputable for certain of their *mūne* items due to that differentiation of not only the geo-climatic conditions and therefore the quality of raw material, but also the human factor that created that typicity. Examples would be the reputable *makdūs* from the northern *Beqā'* valley, olives and olive oil from North and South Lebanon, dairy products (as *kīshk* and *labneh* in olive oil) from the *Beqā'* valley, and many others. It is also important to mention that people not only used the agricultural produce that was available to them but optimized their surrounding environment to benefit from the natural environmental resources around them to facilitate preservation. For example, the *Beqā'* valley to this day is known for its lower humidity and higher mean temperatures during the day since the valley is encased from its east and west by the two mountains chains of Mount Lebanon and the Anti-

Lebanon. This creates a specific geoclimatic condition which in by itself is far from uniform around the valley. Studies have shown how the soil around the *Beqā'* is one of the most fertile and Darwish states that its striking diversity in “*topography, geology, climate, hydrology, vegetation and human impact results in a remarkable mosaic of soil types that rarely can be found in comparable areas*” (Darwish, 2013, p. 158). In addition, the dominant activity in the *Beqā'* valley to this days includes agriculture and food processing which, considering the entire food chain, makes in one way or another “*almost every resident a farmer*” (Bou-Antoun, 2014, p. 15) adding to the distinguished atmosphere of the valley at its natural, historic and social aspects. These components makes the valley able to provide conditions that are specific to itself and these in turn reflect that on the quality of agricultural produce and end product as well. This is how the *Beqā'* became reputable and known for dairy products as *labneh* and *kīshk*. The reputation is due to different reasons such as the valley’s long history in cultivating ingredients needed for these foods (wheat), the reputation of their quality, and the climatic conditions that enhance certain preservation such as drying. For example, these include wheat, the semi-nomadic/semi-sedentary and seasonal migratory transhumance system of small ruminant breeding and the endemic vegetation on which they feed. When coupled with the more efficient drying process under lower humidity within the valley compared to other regions, the individual quality parameters that emerge from each of these conditions finally meet and give rise to the end product and its publicly desirable characteristics.

Another key aspect to consider with the preservation of *mūne* foods would be its **evolution into today’s times**. Today, the domestic and community collective production of *mūne* has greatly decreased due to several reasons. These normally include the development in the ways of life whereby technology, spread of urbanization and the introduction of commercial markets made food readily available to rural areas and decreased the need to preserve foods in every household. Additionally, the increased integration of women in the labor market also affected these trends along with the significant national rural-urban migration of people to cities in seeking education and employment along with significant global immigration as discussed in sections 1.3 and Figure 27. With these came a shift in *mūne* production from domestic households to local producers. At this stage, the consumption of *mūne* became integrated in the country as a form of habit and direct link to the past metamorphizing into a form of heritage rather than direct need. Public demand therefore remained vibrant in both rural but especially urban spaces as it is expectedly fueled by the significant numbers of residents originating from rural origins. Accordingly, this would have been responded to by food producers in meeting that demand through the processing of *mūne* foods. Indeed, many different types of producers manufacturing preserved *mūne* foods can be found in the market. These include those industrial or semi-industrial in nature as well as those smaller in size such as cooperatives and small to medium enterprises. However, there is **no clear distinction** when it comes to differentiating between the end products, manufacturing methods, raw material, ingredients or practices in terms of maintaining the traditionality of the past. This lack of clear distinction opens the regulations for any form of entity, legal and sometimes even non-registered startups, to engage in the market exchange of such products making control difficult. The only categorization emerges from the registration processes of enterprises rather than any control or regulation over processes since no specifications exist in differentiating *mūne* foods (and their traditional character) from any other processed foods in the market. In that subject, the issue of regulation

and differentiation become essential means for protection, valorization and effective integration in the economy; a topic that will be discussed in the next section.

Another point that is important to mention at this stage would be the link of *mūne* foods and the **re-emergence of their original food security function** in today's context as urgent needs to meet given the growing risk of food insecurity. As explained in section 2.3.3, Lebanon has been facing one of its worst crisis that extends on multiple levels. In addition to the onset of the COVID-19 pandemic that had grave economic impacts at a global level coupled with disruptions in transportation and global trade, Lebanon witnessed the onset of an unprecedented economic collapse by end-2019 which is still evolving and unraveling to this day. By June 2022, the national currency (the Lebanese Lira) has lost over 90% of its value that pre-pegged to the United States Dollar prior. The repercussions of the crises have affected multiple scales, especially at the economic, social and humanistic levels. Poverty and unemployment have multiplied and the loss of the currency in addition to restrictions in global trade have in turn limited access to many resources, raw material and services. Being a predominantly consumer-oriented economy based on services rather than production, the Lebanese people suddenly found themselves unable to afford many of their basic needs. Even those who could afford found extreme rationing in electrical supply, fuel and gas, medication, and basic food necessities many of which are imported or require imported raw material for their production. In these highly uncertain and unstable times, many families returned to their hometowns to cultivate their lands and many became or were even obliged to (re)engage in the preservation of food. This response was raised to contribute to the domestic supply of shelf-stable food and/or to engage in sales to generate income. Despite the extremely serious condition which is facing the entire country and its diverse residents, the re-emergence of this form of food preservation is an indication of a valuable opportunity. In fact, *mūne* has been re-emerging to meet one of its original functions, which is to ensure the supply of food for food security purposes during times of scarcity; i.e. today's crisis. This reignited interest in stocking preserved foods indicates that there is a true public concern that needs to be addressed urgently at an institutional level. However, so far, no serious actions have been taken by the Lebanese authorities, neither at the quick impact nor longer term planning with regards to actions that would ensure accessibility or feasibility to food, neither in the valorization of *mūne* in the economy.

Given the above context and when looking at the dynamics and multiple functions relating to the preservation of *mūne* foods, it becomes clearer how *mūne* fits well within the theoretical content presented earlier. *Mūne* can now be understood to have multiple dimensions coming from its different elements. It is not only a system of producing and selling products, but the practice also has effects on the organization of communities, cooperation between residents and families at the internal level of households and externally at the level of society. *Mūne*'s key position in the daily life of families has also exhibited its presence as seen in evidence on architecture, annual cyclic pattern planning, and around habits and customs of consumption and hospitality. These indices convey similarities in parallel with other systems such as for example products that are described as closely linked to their *terroir* and culture foods that have a strong heritage component in both tangible and intangible aspects (to be discussed in the next section). This reflects a direct link that *mūne* has created with the people, tradition,

skills and knowhow, societal organization and mobilization, and the core of the social environment; therefore, to be considered as a system by itself.

Box note 14: Notion of a system

The reason behind that statement can be correlated with what a system with social integrations is understood. In a social aspect according to Parsons and Shils, it is a “*a system of interaction of a plurality of actors, in which the action is oriented by rules which are complexes of complementary expectations concerning roles and sanctions*” (Parsons & A. Shils, 2017). This considers therefore the *mūne* in its entirety as a whole which together, as it mobilizes an interaction between several components, players and their environment, would be greater than the simple sum of its parts. This notion of a system moves in parallel to what was mentioned by Angeon *et al.*, in 2006 with regards to territories carrying the same norms and rules which are produced by their actors as coming from material, identity and organization they follow. These norms and rules can be even carried by tacit agreements and not necessarily formalized. In that way, the actors therefore become directly implicated in defining the possible routes of development of their territory, labeled as ‘territorial development’ and defined as [translated from French] “*the ability of actors located in a territory to control future evolution*”, which the authors (Angeon *et al.*, 2006) cited that definition in their first page from (Deffontaines *et al.*, 2001).

The *mūne* system also exhibits a clear link to the past heritage with **spatial and a-spatial characteristic** when thinking of its dynamics locally, regionally, and nationally. It serves as a rural-urban bridge which connects communities in a production cycle at the local territorial scale while it supplies moving individuals with a direct link to their original rural environment and simultaneously being a doorway in which past heritage is being mobilized and transported. The seasonality of products in by itself as a pattern emerges not only from the need to feed the surrounding local spaces but has also been seen to be transported to the urban environment as part of its habitual dynamic established since the past. Therefore, the geographic localization of production activities locally and the movement of traditional territorial products between spaces (rural-urban) therefore enter in the natural cycle of *mūne* since these have been witnessed in the sector across history. The *mūne* system has the ability to exhibit typicity along with more generic dynamics at several geographic scales. Not only are there indications for typical products that are able to be correlated in their characteristics and quality within specific spaces (natural environment and human factor), but *mūne* is also shown to serve at a larger and more elaborate scale. Common products and consumption/production patterns exist at wider scales encompassing larger regional and national spaces along with commonalities existing at extremities that enter, normally, in the common practices of neighboring countries. Culture has no borders and the *mūne* displays equally links with different geographic levels such as local, trade with urban environment and diffusion with neighboring countries in certain products (such as the *makdūs* with Syria and *frīke* with Palestine). So *mūne* does not only carry a regional

identity but is also able to reflect similarities beyond administrative borders. The **mobility of *mūne*** is also of significance as it integrates products that travel well and are desired by locally displaced individuals as well as the large international diaspora. It is thus an occasion for the Lebanese to accept that mobility while starting to think of its protection as a culture that is capable of supporting individuals who have moved from their rural origins and is also capable of acting as an economic tool internally in its potential to contribute in the mitigation of the effects of today's crises and food insecurities (the point on mobility will be further expanded in section 7.4.2). In order to achieve that more efficiently, the *mūne* should be thought of as a non-valorized cultural and economic resource that has specific markers which distinguish it at a territorial and national scale. This falls in line with the concepts of resources and specificity of products where the *mūne* system, its economic cycle and key players could theoretically become the motor behind arriving to a form of territorial and neo-endogenous development if properly optimized (section 3.1.2). Accordingly, the *mūne* as a heritage and its tangible products should be thought of for a form of national strategy. In that approach, Lebanese authorities should be advised to start looking at the rural space generally, and distinct territories separately, as fertile geographic spaces that are capable of mobilizing their local actors using their local resources towards inclusive socio-economic growth.

3.2.2. The need and challenge of recognition and strategic protective differentiation for an effective valorization of preserved *mūne* foods

Systems of tangible and intangible protection such as the geographic indications and UNESCO's ICH have been adopted by several countries as means of protection and valorization of heritage and *terroir* products. Such systems have recognized the value that emerge from the material aspect of products along with immaterial nature of heritage, and have accordingly elevated their value via their recognition, documentation, and appropriation into economic life (as seen in sections 3.1.1.3 and 3.1.1.4). These have been especially present in countries of the European Union but the integration of other global nations including developing countries has been also successful. In Lebanon, such an approach has yet to be established for an immaterial heritage and its subsequent material products with an inherent but still hidden and unexploited value, such as the practice of traditional *mūne* food preservation. Although it displays clear signs of a vibrant economic activity, which will be further inspected in Part 3 of this dissertation, the production of *mūne* foods remains a highly unregulated activity. This leaves the sector and the manifold value chains that enter into it not properly controlled, un-protected, left under the exploitation of commercial exploitation and at risk of a fading link with the valuable traditional past practices. The range of traditional preserved *mūne* foods that are available in the Lebanese market today certainly lack any national recognition by means of official specifications or built valorization system. This fact is suspected to strongly affect consumer perception, and consequently sustainable consumption, due to an inability in clearly identifying origin and quality (Zurayk & Abu Ghyda, 2009). This is therefore a main reason why *mūne* foods are seen to urgently require a means of official recognition and differentiation from other similar but industrial products. In her study, Abou-Habib *et al.*, (2013b) described small-scale women companies using markers as “homemade *mūne*” to distinguish their products from those similar but mass-produced. This

was adopted since the latter versions did not follow traditional practices or have used additives in their ingredients. The study however recommended placing more focus on gender differentiation by advertising the support to women producers rather than the product themselves, considering that products with similar features are available in the market. However, in order to arrive at constructing an efficient differentiation system, several conditions have to meet as prerequisite.

Before entering in these prerequisites and the challenges faced in Lebanon, it would first be important to highlight certain distinguished characteristics and added-value advantages that are held by the *mūne* system. Arguments have been presented in the earlier section debating how the preservation of traditional *mūne* foods exhibit strong geographic dynamics and a variation in its objectives and purposes. The *mūne*-related activities simultaneously show signs of typicity and a-typicity with activities extending over multiple scales starting from close linkages within the territory to those reflected regionally and nationally. This spatial and a-spatial nature of the practice also shows how *mūne* has a component of mobility in its products which ultimately are the core that directs people towards it whereas it in itself does not reciprocate. This means that there are desired characteristics that are innate and spatially connected to the territorial space of origin emerging from the *terroir* conditions as well as the human factor (knowhow, skills, heritage, memory of the past, customs and habits, etc.) and societal organization capabilities. These movements, linkages and dynamics have been natural to the culture, its practices and output array of different products for generations. Therefore, this consists as one of the pillar of the specificities connecting rural players to a much larger audience within the territory but most importantly beyond the territory at the national and global levels. This mobility of a direct link to the past through food that can be directed to a significant pool of loyal consumers can therefore become a central question to the immaterial component of *mūne* and therefore its considerations as an Intangible Cultural Heritage (ICH) that the UNESCO system portrays. The Lebanese form of sung poetry called *Zajal* has already been recognized and inscribed as an ICH since 2014, therefore proving that a successful introduction is possible. In fact, the *mūne* system when thought of in terms of its totality, fits well in the implicit and explicit factors that emerge from the definition of ICH which were identified by Federico Lenzerini (2011, p. 108) and which are:

a) the self-recognition, by the communities, groups, and individuals concerned, of ICH as part of their cultural heritage; b) the constant recreation of ICH as a response to the historical and social evolution of the communities and groups concerned; c) the deep connection of the heritage concerned with the idiosyncratic identity of its creators and bearers; d) the condition of ‘authenticity’ as an implicit requirement of ICH; and e) the profound interrelationship of ICH with human rights, under the twofold perspective of human rights standards as a parameter for the ‘legitimacy’ of the heritage concerned and of the latter as a tool for fostering the actual enjoyment of human rights. These listed factors are normally interrelated and interconnected to each other.

In fact, it is imperative to look at the *mūne* as a holistic system with the entirety of its components which can now be understood to hold both tangible (material) value and intangible (immaterial) cultural composition. *Mūne* can now be seen as a large system that holds multiple components and spatial scales including culture and direct food provision at the territorial (local) and national scale; henceforth it acts as a tangible and intangible patrimonial system

whereby is able to construct society through gastronomy. It serves as a double accented system with both tangible and intangible nature, and the question at this point becomes how to balance both these nature and what type of system, if any, takes into consideration these two essential and fundamental aspects. As far as the author can tell, there is no system that currently exists, and which equates both tangible and intangible characteristics. Rather, these exist separately whereby the ICH is based on the immaterial side and systems such as the geographic indications is based on the physical material of the product itself (through a set of normalized specifications) in addition to equating one product at a time (or its landscape) instead of a collectivity of products together. This level of question should investigate what type of system could work and the methods of its construction with, for example, whether a specifications system per separate product should be considered or should the food landscape (foodscape) be identified, revealed and documented inclusively of the products within it. This in fact is a process which has not been performed before. Given the spatial and a-spatial nature of *mūne*, another equally important question to introduce would be, if *mūne* is a natural practice and products, can the approach of territorial development be used to describe and frame its production sector? What would be the best approach in identifying specific territorial spaces and their specificities within a system that includes dynamics that cross borders regularly and is based on common customs, habits and foods?

Despite these questions that exist prior to the initiation of any systemic approach, it is essential to recognize that *mūne* today, as a culture, set of practices, and array of end products, remain unregulated thus unprotected. It is imperative to launch any thoughts with the idea that *mūne* is an unexploited resource today. This resource needs not only to be revealed but also to be well constructed, mobilized and appropriated. Certainly, the simple transfer of such concepts from developed countries to a developing country as Lebanon are not straightforward. Rather, the territorial and neo-endogenous forms of development call for a mix between bottom-up and top-down routes to take place for the construction process of developmental strategies. This means that players and stakeholders from around the entire value chain should be included in the construction approach to equate their insight, roles and active participation. Investing the effort in such a process would ultimately reap much larger rewards at the territorial and national scales as well as the vibrancy of the entire socio-economic health. Such a recognition would be needed to elevate the position that *mūne* holds and increase its outreach as an added-value heritage activity with its differentiated output of various products from which certain products hold clear characteristics emerging from their territories. This issue remains key and fits in the concerns that have been stated by Laurence Bérard et Philippe Marchenay. In their book “*Les produits de terroir. Entre cultures et règlements*”, the authors ask the question of how should traditional *terroir* products be marketed differently although it is clear that local productions and big brands do not move together nor correlate (Bérard & Marchenay, 2016). To answer this question, I will use the logic that was presented by Claude Challita’s dissertation study on the valorization of typical agro-foods in Lebanon. Challita (2010) first recognizes that the type of services and relations in an economy would require two types of relationships: horizontal (found in between producers of the same product) and vertical (between the different players and stakeholders of a sector leading up to the consumer). He also considers that the added value of a product is core to its marketing rather than simply marketing the sales of an end product.

Challita proposed accordingly three marketing approaches which he believes would work well in the Lebanese framework. These included:

- 1) Authentic marketing. This form of marketing is understood that which moves in reverse to that of globalization. It connects consumers to an identity and feeds on the link with the past. Authentic marketing therefore builds on the ‘authenticity of products’ and enters in the process of heritagization; with the definition of authenticity he used from Cova and Cova being [translated from French] “*as a constructive process of inventing traditions, ethnicity, heritage and museumification from a more or less existing potential*” (Cova & Cova, 2001, p. 71). Attention should however be placed in possible paradoxes such as ways of innovation and certain trade-offs at the expense of the ‘truth’ of a products and its, not necessarily so great, relationship with the historical reality; a technical-ideological paradox as named by Latour (2005).
- 2) Tribal marketing. This type of marketing approach considers the link between individuals of a group in the sense of a common experience that a set number of individuals’ behavior towards a product or service rather than other forms of social segmentation (sex, age, income, etc.). The good or service therefore becomes a type of representative bond that joins a group together by experience in a form of community or postmodern tribalism. The relationship therefore does not join a company to a consumer, but the core becomes consumer-consumer links.
- 3) Ethno-marketing. Challita uses the definition of ethnicity in this type of marketing by basing it on the set of criteria that brings an ethnic group together, such as language, space, customs, and values in addition to other dimensions such as mutual aid, social solidarity, religion, morale, etiquette, and others. This type of marketing therefore positions itself on the identity and sense of belonging within a specific community that shares such fundamental values and characteristics which in turn, when the process is well constructed, opens the opportunity for more international markets. This is considered possible with maximal efficacy when merging between the characteristics of individuals/groups and that of the perceived context (physical, social environment, time, etc.) and supported by means of dissemination such as with media.

The above marketing strategies by Challita (2010) correlate with those mentioned by Florek and Gazda (2021) after their inspection of 7 case studies of traditional food products in Poland. The authors stress on three key success elements when its comes to marketing. These include 1) Geographic indication branding which reinforces visibility and outreach, 2) targeting niche markets in which no price reduction would be witnessed when managing volume supply and therefore ensuring economic return, and 3) accessing new markets specially to avoid negative impacts of uncertainty during times of instability or crisis. In addition to having smart and adapted marketing methods within an overall integrative strategy, there exist certain key elements of success that are worth mentioning. In the same article, Florek and Gazda (2021, p. 5) mention four elements for that and which are: “ (1) specific quality formally indicated in specifications or a code of practice, (2) capacity for collective action and good governance, (3) an effective marketing strategy and (4) a legal/institutional framework”. Other key factors of

success relating to the role in which culture plays in local development were also listed by Bujdosó et al., (2015) and included those reproduced in the below table:

Table 11: Factors of success for local development and the role that culture plays, as adopted by Bujdosó et al., (2015).

Success factors	Cultural tasks
Intention	Definition of needs Motivation improvement Self-regulation Conflict management
Capability = knowledge and technology	Knowledge and skill development Lifelong learning Application of knowledge Information management
External verification	External communication Knowing the rules Understanding the ‘language’ of each other Forming alliances

Such considerations are therefore essential and the presence of these success factors as prerequisite could optimize the successful achieving of a developmental plan based on cultural assets. Some additional questions should also be posed prior, as those interrogated by Bérard and Marchenay (2016) (in section 3.1.1.3) and which stand relevant to the Lebanese context. These questions relate to the reconciliation between the regulations of different administrative levels, the facility of achieving historical proof to arrive at legitimizing the cultural and identity claim, the methods of delimiting a specific territory and its exclusivity, how to prove specificity or a particular quality, amongst others. Additionally, perspectives and position of the product compared to the consumer should be raised in the sense of whether products be adapted to the consumers or should consumers be brought close to the products. In turn, marketing and information dissemination would be constructed accordingly especially when thinking of *mūne* producers compared to the large manufacturers and commercial brands, along with their competitive advantage. As we will see in Part 2, this dissertation is based on cooperatives as the main producer of *mūne* foods due to their mobilization of women and their knowhow in respecting traditional practices and production methods. Finally, a fundamental interrogation of the institutional framework and infrastructure of Lebanon becomes proper. Once reviewing section 2.3, it becomes evident that major challenges exist in the local and national contexts. These will be linked with Part 2 when discussing cooperatives as the relevant producers of *mūne* foods, but one information is worth mentioning at this stage, and this is the difficulty in establishing clear geographic bordering (Map 5) to this day and the weak infrastructure in data and institutions which have been yet culminated by today’s multiple crises. The reform of such conditions and infrastructural elements remain fundamental for the proper structuring of any national strategy that requires clear geographic demarcations and clarity in data and information. Additionally, and as stated prior, the framing and construction of strategies that

enter in territorial and neo-endogenous approaches to development would require the mobilization and coordination between state agencies. These could include for example the Lebanese Standards Institution (LIBNOR), and other relevant ministries and local authorities as municipalities and chambers of commerce for example. Although efficient coordination and organization efforts at a collective level between national agencies has been weak, the efforts exerted to establish such an initiative would reap much larger rewards when it comes to the recognition, protection, and proper integration of the *mūne* system and its players and stakeholders as active local levers in the economic fabric. This would render the economy more productive and decentralized, rather than its rentier current state, and would be effectively using territorial resources to mobilize local actors in activities and skills they perfect, while protecting a vanishing cultural heritage.

3.3. CONCLUSION OF CHAPTER THREE

From this chapter, we see that the preserved *mūne* foods can be looked at as carriers of culture and identity and could therefore be utilized as a means for heritagization and cultural gastronomy. In addition to its several dimensions of specificity, we see that these dimensions of *mūne* are capable of being reflected at the territorial level, but also exhibit at the national level equally. *Mūne* thus encompasses larger dynamics than just the preservation of food. In fact, it holds several functions including the original objective of food security, the central role that women hold, it stimulates the organization of communities and their cooperation together in rich social settings, its connections to external spaces such as urban cities, and therefore the consolidation of all these factors into vibrant socio-economic production cycles. When looked at together, the cross between the geographic and cultural dimension reveal a system which is rooted in the social life and organization of producers along the value chain. These two axes reveal the core heritage of *mūne* which is constituted in two components; its material (physical and tangible) dimension and its immaterial (immaterial, social, cultural) dimension. We see that the multiple functions of *mūne* have been constructed throughout history, are deconstructed in this work to attempt to frame their understanding and can thus be reconstructed again in ways to help serve the contemporary context and needs. As such, it would be essential to acknowledge the importance of recognizing and protecting the *mūne* as a material and immaterial culture. This is imperative for its survival and sustainability especially if it was to be supported by a proper appropriation and optimal integration in the economy in a way that can ultimately contribute to the development of territories. Therefore, it would be possible to think of a shift towards a productive economy based on specialized goods while directly benefiting producers and especially those traditional in nature who still respect the specificity and authentic practices of production. In order to arrive to that, the institutional perspective should be considered in finding ways to valorize the multiple added-value characteristics and their differentiation through means of certification and quality labels for examples. We see that the culture of *mūne* is still very lacking in that aspect and is subject to risks from being unprotected. We also see examples of quality labels and protection systems that are put in place and applied by many countries such as the indication of sources, appellations of origin, and geographic indications. These are based on the physical product itself but other systems such

as the Intangible Cultural Heritage (ICH) by the UNESCO focuses on the protection of culture and heritage emerging from its immaterial specificity. Food products generally and that of *mūne* in specific incorporate both tangible (material) and intangible (immaterial) dimensions which are well reflected in the double accented dimensions in *mūne* as a combination of several products and as a culture. The challenge remains in building a system of protection that is capable of balancing both these characters and finding ways of their normalization.

PART TWO

THE COOPERATIVE MOVEMENT – CHARACTERISTICS AND POTENTIAL IN LEBANON AND THE *BEQĀ'* VALLEY

Cooperatives play an important role in the collective benefit of a significant number of individuals around the world today. It is estimated that 1 in 6 people on the planet are on average directly or indirectly linked to cooperatives. Recognized as starting from the mid nineteenth century England, the modern cooperative movement has evolved as a particular business model which differ from profit-driven companies by focusing on collective benefit, participation, solidarity and democracy. A main motor behind the spirit of cooperative is in fact based in its name 'cooperation' in which efforts of individuals are consolidated in economic initiatives which separately are not able to be achieved. When individuals group their efforts and resources together in the form of a cooperative, they are able to reduce production costs, create jobs, secure income and plan for a specific common objective desired by that specific group. In that sense, many different types of cooperatives are possible. These could include primary agricultural production, marketing, consumer, financial, housing, worker's cooperatives, and so on. This is why most designations refer to cooperatives as cooperative societies which highlight the significance of society building, operations, and ultimate community impact. Cooperatives have gained impressive success at a global scale. In developed countries, cooperatives today contribute to a significant value of the GDP of certain countries such as in New Zealand (20%), France (18%), Netherlands (18%) and Finland (14%). Cooperatives are also able to achieve important impact in developing countries and especially in support of livelihoods, income creation, access to resources and others, with the added benefit of mobilizing and sustaining marginalized groups and women employment / empowerment. This is why cooperatives are looked at as efficient tools for local and territorial development that are capable of contributing to several of the United Nation's 2030 agenda's Sustainable Development Goals (SDGs).

The reason why I chose cooperatives as main players in this study is due to the reputation that food processing cooperatives hold as producers of traditional *mūne* foods that still retain the inherited practices and recipes. This is not necessarily the case with other producers, especially the larger industrial brands. Food processing cooperatives in Lebanon are known to be small in scale and size, are strongly linked to their surrounding agricultural environment, are led and managed by women, and accessible to both rural and urban consumers mainly

through direct contact or through seasonal events such as food shows and exhibitions. When it comes to the cooperative movement in Lebanon, the first cooperative - the Abadih Farmer cooperative - was established in 1937 while the Cooperative Association Law was introduced in 1964 which provided a definition as a legal entity. Since then, the sector has witnessed many ups and more lows especially during the 1975-1991 civil war and remains to this day an overall marginalized and inefficiently exploited economic contributor. The majority of cooperatives in Lebanon engage in primary agricultural production and, on a lesser extent, in food processing i.e., preservation of traditional *mūne* foods which is a cooperative activity carried out and managed by women. Only very few cooperatives in other economic activities exist, such as in artisanal handicrafts, housing, or marketing. I shall be referring to the cooperatives that are the main subject of this study as food-processing cooperatives; meaning cooperatives that produce the traditional preserved *mūne* foods. This type of cooperatives are known to be strongly linked to their territory for provisions of their raw agricultural material from surrounding farmers and are at the same time linked to the urban environment for marketing and sales of their end products where they can be encountered in many seasonal festivals and food exhibitions. Additionally, these cooperatives respect the traditional aspect of recipes, ingredients and production processes for *mūne* and still retain the practices that were used in the past but with controlled measures that use modernized processes for enhanced food safety and quality control. Despite the many challenges, the cooperative sector in Lebanon has long constituted a highly attractive tool that is capable of channeling donor support from the international or top medium down to the local scale directly to the territorial rural producers. It is specifically women cooperatives that are engaging in the production of preserved *mūne* foods who are equally as attractive to donor funds, even more during the ongoing post-2019 economic collapse. Today more than ever, Lebanon is in urgent need of boosting its productive sector to shift from its conventional rentier economy. Cooperatives can therefore be considered as essential legal business models that could contribute for a path towards this objective while creating a multitude of territorial, community-based and collective socio-economic benefit.

This part therefore provides a transition from the starting point which first addressed the traditional preservation of *mūne* foods and focuses on their main territorial producers and cultural protectors in Lebanon who have a relevant and hidden economic, social, and societal potential. During this part, I will introduce and address cooperatives in different forms. I will first provide a general introduction on the theoretical idea behind cooperatives, their seven principles of cooperation, their global movement and international impact. After that, I will move on to discuss the cooperative movement, its evolution and dynamics in Lebanon. This will be coupled with the first on-field data collection method (the first type of mobilized survey) and analysis of results targeting the territory, the *Beqā'* valley. As elaborated earlier, the *Beqā'* valley is a main agricultural region in Lebanon consisting of a geographically natural valley that is surrounded by two mountain chains from its western (Mount Lebanon chain) and eastern (Anti-Lebanon chain bordering Syria) fronts. Its natural geographical formation creates unique conditions that are specific to the valley especially in terms of its macro-and-micro-climates as well as its soil fertility and primary production environment. In addition to being a major producer of many agricultural produce and animal products, the social environment of the *Beqā'* valley is also characterized by its residents who are directly or indirectly strongly involved in agriculture in their daily lives. Food-processing cooperatives in the *Beqā'* valley

are therefore located in close geographic proximity to primary agricultural producers, commonly individual farmers, therefore making it an interesting territory to study. During this step, the methodology will be elaborated in its aim to provide an in-depth categorization of the different types of cooperatives that exist in the territory today, a general typology, in line with four specific themes I have identified. These are the structure, spatiality of operations, dynamics of external support received, and finally the labeling and extent of conformity. After that, these characteristics of cooperatives will be positioned in the given context of the territory and of the country for their potential to serve as players of local development. Certainly, the challenges will also be elaborated, yet highlighting how underdeveloped the cooperative sector remains today despite the dormant positive impact they could achieve if the sector is to become more organized and integrated in the economy with cooperatives as collective players of positive change.

CHAPTER FOUR. COOPERATIVES IN THEIR THEORETICAL FRAMEWORK AND GLOBAL-NATIONAL MOVEMENT

This chapter serves to bring information on the belief system behind the cooperative movement at a general, global and national scale. This type of information is essential before entering in the Lebanese context and that of the territory as it brings forward fundamental misconceptions that are either not well understood or not well adopted, or both, in the case of Lebanon. When the optimal presentation of a theoretical business model is provided, it would then become easier to understand the points of weakness that need reform and development in a certain applied case. Therefore, this chapter begins by introducing the notion of cooperatives, the idea and stimulus behind the rise of the movement, along with a quick elaboration on the historical evolution of the movement globally. After that, this chapter will enter in the seven principles of cooperation which constitute the fundamentals upon which the movement is based and is ideally supposed to operate. Next, an explanation will link the success of the cooperative movement in acting as an entity that is capable of directly linking its achievements to the United Nations 2030 agenda's Sustainable Development Goals (SDGs) before finally presenting the successes that cooperatives were and still are able to achieve around the world in both developed and developing countries. Finally, an overview of the status and evolution of the cooperative sector in Lebanon will also be presented. This overview inclusive of an in-depth reading and critique of the national law on cooperative associations and on the elaboration of conventional challenges of the cooperative sector along with those emerging following the economic crisis of 2019. Such information is important to build the understanding of the context prior to entering in the characterization of cooperatives in the *Beqā'* valley in the next chapter.

4.1. COOPERATIVES, PURPOSE AND PRINCIPLES

4.1.1. General introduction on cooperatives and the theory behind the movement

It would be useful to commence this section by defining what cooperatives are. According to Smith (2014, p. 2) who cites the definition adopted from the International Cooperative Alliance⁶³, cooperatives are defined as "*an autonomous association of persons united voluntarily to meet their common economic, social and cultural needs and aspirations through a jointly owned and democratically controlled enterprises*". This definition is recognized internationally and adopted in the global arena by organizations such as the International Labour Organization (ILO) and the United Nations. 'Cooperative' as a word is engaged in two meanings as stated by Margaret Digby in the introduction of her 1960 book "The world co-

⁶³ Found at: <https://www.ica.coop/en/cooperatives/cooperative-identity>, and later adopted by the International Labour Organization (ILO) in its Recommendation No 193.

operative movement”. Digby mentions that on one hand, the word cooperative refers to the meaning of ‘working together’ or being ‘ready to help’, whereas on the other hand, the word refers to a particular type of business (Digby, 1960, p. 7). Indeed, this form of legal business model is not far from the meaning of the word and the definition enters in the theory of the model itself by being linked to helpfulness and cooperation. When considering this definition and its fluidity, one can understand how cooperatives can exist in any sector where private businesses exist. It is in fact the internal organization of the entity which differs in its core principles and values and which is people-centric rather than driven by profit. In a training for trainers package specific for the managing of cooperatives called My.Coop initiated by the ILO in partnership with several other organizations (including the FAO, ITC-ILO, WUR, UCA, NCDC, etc.), the following statement is mentioned:

Cooperatives are enterprises for which the primary aim is not making profit but responding to members’ needs and aspirations. Cooperative members own their enterprise through cooperative shares, they control their enterprise through democratic mechanisms, and, finally, they are the principal users of the cooperative services. This makes the cooperative a resilient but also a complex and challenging business model.
(My.Coop, 2011, p. 1)

A cooperative is therefore a voluntary grouping of individuals to legally consolidate their efforts and resources for a collective shared benefit from an economic initiative which otherwise would have not been possible at an individual basis. Ownership, control, and benefit are all directed to members, therefore the types of cooperatives that exist depend on who owns the cooperatives (are eligible members) and what activities they perform. Cooperatives therefore can exist in practically any sector and, although a universally unified list is not specifically developed, these could include according to the World Cooperative Monitor report of 2014 and cited by Carini *et al.*, (2015) in Table 12:

Table 12: A list of cooperative sub-types and the definition of each as defined by the World Cooperative Monitor report of 2014 and cited by Carini *et al.*, (2015).

Sub-type	Definition
Worker cooperative	A co-operative owned and democratically controlled by its worker-owners. Worker co-operatives enable members to obtain more favourable working conditions than those available on the market, both in terms of quality and economy.
Producer cooperative	A co-operative owned and democratically controlled by producers who band together to process or market their products.
Retail cooperative	A co-operative formed to purchase and supply goods and services at competitive conditions in the interest of members (retailers).
Consumer cooperative	A co-operative owned and democratically controlled by its main consumers. Consumer co-operatives enable members to obtain supplies and/or durable goods on more favourable conditions than those available

	on the market. They work to safeguard the quality of products and services as well as sales prices.
Purchasing cooperative	A co-operative formed to aggregate demand to get lower prices from selected suppliers. It is often used to reduce the costs of procurement.
Financial cooperative	Co-operative bank, credit union, insurance, and other financial service co-operative. Private co-operative enterprise providing banking and financial intermediation services, democratically controlled by its member customers (borrowers and depositors). Consider credit unions and banks whose capital is composed by individuals without rights regarding the management of the bank. An insurance co-operative owned and democratically controlled by its main insured. Insurance co-operatives enable members to obtain insurance policies on more favourable conditions than those available on the market.
Housing cooperative	A co-operative formed to provide an owned or rented property on more favourable conditions than those available on the market. This category includes both housing co-operative and co-operatives in the construction sector.
Social cooperative	A co-operative that manages health, social, or educational services and productive activities for the work integration of socially disadvantaged people.
Other types	Co-operatives not classified in the previous types.

The Indiana Cooperative Development Center Inc. provides another categorization⁶⁴:

- Consumer cooperatives include the consumers who purchase goods or services from a cooperative and are for example housing, credit unions, electricity providers, healthcare, etc.
- Producer cooperatives include producers who use the services, delivery or sell products through the cooperative. Producers pool their resources to decrease production costs while increasing their economy of scale and negotiation power with more efficient transfer of knowledge and knowhow (Henry, 2012). These could include agricultural cooperatives, purchasing cooperatives, food systems cooperatives, farmers markets, renewable energy, etc.
- Worker cooperatives include those in which the workers of a cooperative are the collective owners who consolidate together to create better working conditions and income, and are for example restaurants, processing centers, arts and education, retail store, etc.
- Purchasing/shared services cooperatives include those that are owned and governed by independent small businesses and that aims to provide products or services to its members at a lower cost than if they were to purchase those separately. Examples would be healthcare purchasing, pharmacy purchasing, educational services, etc.

⁶⁴ <http://www.icdc.coop/types-of-co-ops-2/>

Another categorical division of cooperatives is listed by Williams (2007) who stresses the importance of clear categorization by evidently having legislative differences between them in certain countries such as the United States (section 4.1.3). Eight categories are mentioned by the author, including 1) Producer cooperatives as farms, fishing, manufacturers (equipment, solar, sugar, etc.), dairy, and agricultural distributors; 2) Value-added cooperatives as dairy and agricultural distributors; 3) Supply and distribution cooperatives as farm equipment, fertilizers, seeds, hardware, pharmaceuticals, and wholesale food; 4) Service cooperatives as shipping, information/press, communication, graphic design, legal, entertainment, transportation, etc.; 5) Retail/consumer cooperatives as dry goods, food, bookstore, and distribution; 6) Workers cooperatives as artisans and weavers; 7) Housing cooperatives; and 8) Financial cooperatives as credit unions and cooperative banks. Regardless of the type of categorization, cooperatives are evidently bottom-up enterprises that are based on collective ownership rather than individual, governance, and decision making which merge social values and solidarity with economic objectives (Ketilson et al., 2015). This is how cooperation is situated at the very heart of the business model.

Box note 15: Notion of cooperation

Cooperation has been undertaken by humans since ancient history when organization of group activities aimed for mutual benefit. By definition in social semantics, **cooperation** is “*a behavior which provides a benefit to another individual (recipient), and which is selected for because of its beneficial effect on the recipient*” (West et al., 2007, p. 416). Prior, literature on cooperation was scarce during the 1800’s but increased quickly after that between 1913 and 1973 with a diverse geography for the origin of theorists from many countries (as Argentina, Belgium, Canada, Columbia, France, India, Italy, Mexico, and many others) in addition to the ideology behind cooperation. These originate from areas as religious bases, sociobiology, human solidarity, mutualism and social economy, and even socialism and Marxism (Shaffer, 1999). In reference to the application of the term in the cooperative movement, Williams (2007, p. 1) warns on avoiding the confusion between the terms ‘*cooperation*’ and ‘*collaboration*’. He declares: “*Collaboration can refer to group activity within any corporate conglomerate or subsidiary activity and can easily be little more than assent to authority according to a feudalistic, hierarchical organizational system. Cooperation, on the other hand, is rooted in a highly democratic, participatory, and group-directed process. Cooperation demands a move away from a mere collaborative attitude within a typical corporate command chain*”. Yet, the origins of the modern principles of cooperation is recognized by many to be with the establishment of the Rochdale cooperative in the nineteenth-century England (Merrett & Walzer, 2016). According to the International

Cooperative Alliance website⁶⁵, it is when a group of 28 artisans came together in 1844 in the English town of Rochdale and helped supply alternatives to basic food commodities (including flour, oatmeal, sugar and butter) at an affordable price during times of high food prices and adulteration. The evolution of the cooperative model based on that benchmark is the accepted basis for the **seven cooperative principles** which guide the international movement. These are (1) **voluntary and open membership**, (2) **democratic member control**, (3) **members' economic participation**, (4) **autonomy and independence**, (5) **education, training and information**, (6) **cooperation among cooperatives** and (7) **concern for community** (S. Smith, 2014). These principles will be further elaborated in the next section.

A few decades after the establishment of the Rochdale Equitable Pioneers Society in 1844, new cooperatives were being erected in other countries' rural areas such as in Germany and the Netherlands (S. Smith, 2014). The main aim of their establishment was to follow the same model as the Rochdale cooperative in the lines of self-help in the sector of agricultural credit. They focused on meeting the daily needs of the working class and improve both their social and economic conditions and wellbeing; a movement which quickly spread. With time during in the next two centuries after the establishment of the Rochdale principles, the movement of cooperatives and their model has grown and expanded at a global scale with the 1970s also becoming a second important date in that evolution with the economic crisis that stimulated change within that movement as well (Merrett & Walzer, 2016). Given the definition, principles and values behind the cooperative theory as bottom-up players, it becomes evident how cooperatives are local in nature and the majority of their activities are practiced at the local scale rather than national or regional. They are considered vectors of social and gender inclusion, creators of employment and enhancers of livelihoods operating under democratic governance, participatory approaches and respecting cooperative principles (S. Smith, 2014). Their role has also been highly praised for their impact on **decreasing production costs** coupled by increased **income generation**, **improving producers' access to markets** and **elevating their bargaining powers**, facilitating **access to services and inputs**, enhancing **capacity building and skills**, and empowering producers in **influencing policies** that are relevant to them (Ghadban, 2013). Cooperatives also appear as typical territorial actors whose characteristics make an attractive focus for local development strategies such as those under the UN 2030 agenda's Sustainable Development Goals (SDGs) (elaborated in section 4.2.1). The significance of these social and human-centric differences between cooperatives and other types of enterprises has even led organizations such as the United Nations to recognize the importance of differentiated cooperative legislation by declaring the year 2012 as the International Year of Cooperatives (IYC) (United Nations, 2010). The ILO has also joined in recognizing that significance and has published their Promotion of Cooperatives

⁶⁵ <https://www.ica.coop/en/cooperatives/history-cooperative-movement#:~:text=In%201844%20the%20Rochdale%20Pioneers,surplus%20to%20benefit%20the%20community.>

Recommendation in 2002 (ILO R. 193)⁶⁶ and their Guidelines for Cooperative Legislation under the theme “*Cooperative enterprises build a better world*”, with aims to “*encourage governments and regulatory bodies to establish policies, laws and regulations conducive to cooperative formation and growth*” (Henry, 2012, p. vii).

Today, the significance that cooperatives play around the world is immense. A global census on the size of cooperatives with statistical summaries from 145 countries in 2014 estimated that over 1 billion memberships and clients of 2.6 million cooperatives exist making almost 1 in 6 people on the planet directly or indirectly engaged with a cooperative (Grace, 2014). France for example alone holds 147 million of those memberships and clients compared to its population of 65 million, reflecting a membership/client of 2.25 per capita. The same source states additional important figures such as the movement creating employment for around 0.2% of the global population (770,000 cooperative offices and outlets employing 12.6 million individuals), and generating US\$ 3 trillion in revenues from US\$ 20 trillion in assets, making cooperatives the fifth largest economic unit if the movement was to be considered a country, surpassing France’s economy and coming right behind that of Germany. Additionally, its largest contributions enters to the GDP of countries as New Zealand (20%), France (18%), Netherlands (18%) and Finland (14%) (Grace, 2014). The report lists the top ten countries in which cooperatives play the major role in the ratio of membership/clients per population, employment per population, and annual gross revenue (Table 13), with agriculture being the largest sector in which cooperatives operate. Interestingly, the benefit of collective efforts and the gaining of economies of scale for farmers has been especially evident in countries such as India and China where a large number of agricultural cooperatives exist and control relatively immense share of certain sectoral markets. India’s cooperatives for example control 36% of the fertilizer market, whereas that percentage increases in China’s cooperatives to reach an impressive 60% for the cotton market, 68% of agro-food processing, 70-80% of tea production, and an immense share surpassing 80% of the fertilizer market (Grace, 2014).

Table 13: Top ten countries where cooperatives contribute from most to least in 1) memberships and clients per population, 2) employment per population, and 3) annual gross revenue per GDP. Source (Grace, 2014).

Rank	Memberships and clients / population	Employment / population	Annual Gross Revenue / GDP
1	France	New Zealand	New Zealand
2	Finland	Switzerland	Netherlands
3	Switzerland	Italy	France
4	Austria	France	Finland
5	Dominica	Malta	Luxembourg
6	Netherlands	Finland	Germany
7	Ireland	Germany	Ireland
8	Germany	Netherlands	Italy

⁶⁶ Available at:
https://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO::P12100_ILO_code:R193

9	Cyprus	Spain	Denmark
10	Australia	Norway	Poland

4.1.2. The values and principles of cooperation, and their challenges

Cooperation goes back as far as organization between humans was performed for mutual benefit, from tribes and hunter-gatherer groups to today's modern form of society. The global movement of cooperatives around the world has been governed under the 7 principles of cooperation with the first 6 being with their establishment by the Rochdale Equitable Pioneers Society in 1844 and the seventh added as a form of responsibility towards the environment and the community. The origins of the modern cooperative society principles is recognized by many to be with the establishment of the Rochdale cooperative in the nineteenth-century England (Merrett & Walzer, 2016). It is when a group of 28 artisans came together in 1844 in the English town of Rochdale in response to the working and food conditions afflicted by the industrial revolution (Williams, 2007), and helped supply alternatives to basic food commodities (including flour, oatmeal, sugar and butter) at an affordable price during times of high food adulteration. The cooperative began with the first objective of accessing these basic services to its members by consolidating their limited resources together, but later expanded these services for the benefit of the general consumer. That was achieved by considering the consumer a member and allowing them to participate in the sharing of profits and democratic control of the cooperative. This is the accepted benchmark and inspiration upon which the modern form of the cooperative principles and movement was launched, according to the International Cooperative Alliance website⁶⁷. The Rochdale principle is described by Fairbairn (1994) as part myth and part reality with the available evidence that is accessible to us today through records and documentation at the time, although some debates around their application have been witnessed. The success of that pilot form of cooperative remains a strong symbol being used today to help many countries and millions of people understand the power of cooperatives and cooperation. This is mainly due to the problems of the 1840s being resonating with those of today's developing world, thus the cooperative as a solution symbolizes the possible sustainable social solutions that could be applied also today.

The seven principles of cooperatives in their final form were adopted by the ICA in 1995 and are strongly encouraged to this day, although certain principles could be modified according to the local culture or legal constraints of some countries (Williams, 2007). In a declaration on their official website⁶⁸, the ICA states that "*Cooperatives are based on the values of self-help, self-responsibility, democracy, equality, equity, and solidarity. In the tradition of their founders, cooperative members believe in the ethical values of honesty, openness, social responsibility and caring for others*". The ICA additionally declares that the seven principles are guidelines that should be used for cooperatives to put these values into practice. The seven cooperative principles are, as listed and described by the ICA:

⁶⁷ <https://www.ica.coop/en/cooperatives/history-cooperative-movement#:~:text=In%201844%20the%20Rochdale%20Pioneers,surplus%20to%20benefit%20the%20community.>

⁶⁸ <https://www.ica.coop/en/cooperatives/cooperative-identity>

1. Voluntary and Open Membership

Cooperatives are voluntary organizations, open to all persons able to use their services and willing to accept the responsibilities of membership, without gender, social, racial, political or religious discrimination.

2. Democratic Member Control

Cooperatives are democratic organizations controlled by their members, who actively participate in setting their policies and making decisions. Men and women serving as elected representatives are accountable to the membership. In primary cooperatives members have equal voting rights (one member, one vote) and cooperatives at other levels are also organized in a democratic manner.

3. Member Economic Participation

Members contribute equitably to, and democratically control, the capital of their cooperative. At least part of that capital is usually the common property of the cooperative. Members usually receive limited compensation, if any, on capital subscribed as a condition of membership. Members allocate surpluses for any or all of the following purposes: developing their cooperative, possibly by setting up reserves, part of which at least would be indivisible; benefiting members in proportion to their transactions with the cooperative; and supporting other activities approved by the membership.

4. Autonomy and Independence

Cooperatives are autonomous, self-help organizations controlled by their members. If they enter into agreements with other organizations, including governments, or raise capital from external sources, they do so on terms that ensure democratic control by their members and maintain their cooperative autonomy.

5. Education, Training, and Information

Cooperatives provide education and training for their members, elected representatives, managers, and employees so they can contribute effectively to the development of their cooperatives. They inform the general public - particularly young people and opinion leaders - about the nature and benefits of co-operation.

6. Cooperation among Cooperatives

Cooperatives serve their members most effectively and strengthen the cooperative movement by working together through local, national, regional and international structures.

7. Concern for Community

Cooperatives work for the sustainable development of their communities through policies approved by their members.

The first principle (voluntary and open membership) is based on non-discrimination (positive or negative) with regards to race, gender, social status, political affiliation or religion, and an open-door policy which is to be detailed in the internal by-laws of each cooperative. This provides a free will of suitable members to join the cooperative and work together for a collective benefit and to freely withdraw from the cooperative with collecting the value of initial shares, while avoiding the imposition of any certain members (Henrÿ, 2012). The first principle of cooperatives despite being labeled as 'open' does not necessarily mean that membership is available to anyone. According to Antonio Fici (2013), this principle can be interpreted in two ways. The first is in the meaning that membership is 'open' with regards to

prospective members who would fit the economic and performance profile of the cooperative. This includes being producers, consumers, and users of the services or goods provided who are willing to commit to roles and responsibilities that come with the membership, including contribution to the capital – Principle number 3. The second interpretation considers the ‘open’ character of cooperatives with regards to the disallowing any restrictions or refusal of possible memberships based on any of the above areas of discrimination (gender, race, social background, political affiliation, religion, etc.). This ensures a social function of a cooperative in its attempts to benefit the maximum possible collective group. This principle therefore presents a difference with shareholding companies which their ‘open’ feature is based on the proportion of shares. The second principle of cooperation (democratic member control) ensures that the voting power is equally distributed amongst members regardless of capital shares as the case with stock-owned companies (Fici, 2013). This principle therefore aims to reach an equality in the representation of member voices and avoid any member having a greater voice. Although this principle is still dominant in cooperatives in most countries (My.Coop, 2011), that principle is in fact sometimes even modified in networks of cooperatives (in case of a smaller cooperative compared to a larger one) if it was to result in any inequities (Williams, 2007). However, if such modifications are to be made and steer from the exact implementation of the principle, this raises questions around what constitutes a democratic member control in such cases (Fici, 2013). Yet, principle 2 overlaps with principle 4 (autonomy and independence) which together can be read in line with the definition of a cooperative, meaning an “*autonomous association of persons united voluntarily*”. In that sense, it is the group (members) that democratically controls (principle 2) their voluntary and autonomous association (principle 4); hence the group decision of for example entering into agreements with other organizations, receiving capital aid from external sources, etc. (Fici, 2013). This is also applicable in the case of secondary and higher level cooperatives as in cooperative unions and federations as well (Ghadban, 2013). Principle 4 therefore focuses on the providing cooperatives with the level of autonomy that would allow them to regulate their internal affairs without any external influence whether from the government or any other entity (Henry, 2012). As for principle 3 (member economic participation), it refers to the different forms in which the financial relationship of members with their cooperative can manifest, especially in terms of capital and returns. Certain countries also allow such an economic contribution to the capital equity by non-members (My.Coop, 2011). This principle, by having equitable contribution and a limited form of compensation suggests that the capital is a tool that serves a cooperative and not the objective (Ghadban, 2013). This is why, even though the surplus is divided into dividends and its distribution is decided upon by the members democratically, a part of the capital remains fixed and indivisible. The fifth (education, training and information), sixth (cooperation among cooperatives) and seventh (concern for community) principles reflect the outward aspect of cooperatives and their commitment to their own members and to others. In the perspectives of Fici (2013), principle 6 is based on the strength of cooperatives which when networked together in cooperation at different levels, would be elevated and greatly augmented. This resonates with the original objective of cooperatives in the consolidating of efforts and resources for a common benefit among similar and or complementary bodies. Principle 5 is reflected in the elevation of knowledge and dissemination of information internally for the benefit of members (whether technical or otherwise) and externally as

awareness building on the benefit of cooperation for the general public. Principle 7 is the relatively new principle that was added to the original 6 introduced by the Rochdale cooperative as a form of responsibility for the environment and the community. Fici (2013) also states that the legislations have yet to consider that principle seriously since it was not mentioned in the two first versions of the ICA principles. However, this principle links cooperatives to their surrounding environment and clearly states how they are partly responsible to develop their communities, a contribution that could be made possible by the serving of the wellbeing of their members (Ghadban, 2013). The means in which the positive impact on the environment and the wider community can manifest in many socio-economic ways according to the types and success of the cooperative. For example, these could include the creation of employment opportunities or services (for example establishing a school or community center) from which non-members and their families can benefit (My.Coop, 2011). This last principle is in fact a main distinguisher of cooperatives from other stock companies and is considered as a main competitive advantage for cooperatives in that regard (Henry, 2013).

Although in theory, the seven principles of cooperatives provide the general guidelines upon which the ideal cooperative model should operate, the fact remains that the application of these principles is highly complicated in practice. This is due to the many complications that arise from the heterogeneous contexts and legislation framework which are highly variable or overlapping in national, regional, and local levels of different countries and even that could exist within the same country. As previously noted, since the principles are guidelines, then the direct application of them could differ and even become modified in certain countries to adapt to their context or culture. In principle 2 for example (democratic member control), conglomerates such as cooperative unions could in fact alter the one member one vote principle according to the proportion of trade volume or number of ownership shares, which adds a level of complication in the manifestation of democratic control. The financial relationship of members with their cooperatives (principle 3) is another example where the identification of that relationship with regards to the extent of transactions and the consequent division of surplus becomes complicated. Four challenges have also been mentioned by the ILO's Module 1 on cooperative management (My.Coop, 2011). These are, first, having members obliged or enticed to join cooperatives in order to access subsidies or other forms of benefits originating from external donors or sources of support from governments or development agencies. This artificial encouragement reason to join a cooperative undermines the sense of member ownership and the voluntary collective effort/resources/benefit objective of a cooperative. Extensive influence of external players, whether governmental or development agencies, could therefore interfere with the overall autonomy of a cooperative. Being a temporary source of benefit, the in-genuine membership could lead to a serious risk to the sustainability and even the maintaining of daily operations of such cooperatives. This is due to having members driven solely by the temporary aid rather than having a true commitment and long-term engagement. Second, principle 1 (voluntary and open membership) is not always applied equally in practice from which possible members could be faced with discrimination. This is especially true in countries where women find themselves with unequal rights, such as in access, owning or inheriting land. Such property rights limit or could even entirely disallow the equal access of women to practice the rights of membership in cooperatives. On another hand, it is through the

power of cooperatives where such women can group together and create new cooperatives to circumvent such restrictions by working together to create new cooperatives to generate income, such as for example credit unions, marketing cooperatives, etc. The third challenge relates to governance, and specifically agency problems, that could arise in the cooperative model. Agency problems in the case of cooperatives could be summarized as the relationship between the members and the leadership (BoD), or between the leadership (BoD) and the management. For the first issue, the challenge is raised when the member decisions are not fully committed to by the BoD's private interests. Although the means of control in attempts to avoid such a problem exist with the supervisory committee and re-election of the BoD, members do not have adequate resources or competences to fully oversee the actions and decisions of the BoD. As for the second type of agency problem (relationship of the BoD with the management), similar personal interests could be the reason that gets in the way of aligning the member interests, which are delegated to the BoD, with the actions and strategies of the management that implements and manages the daily operations. Other than diverging personal interests, the mismatch could be due to incentives such as salaries or working times when delegating the vision and interests from members to the management. Lacking complete control, access to information and supervision could be met by a lacking responsibilities or less effort in meeting deliverables or expectations. The best scenario would therefore be in finding a suitable balance between the incentives provided and the control measures. Finally, the fourth challenge consists of the negative impact of excessive government control over the work of cooperatives. This is the case in certain developing countries where governments subject cooperatives to heavy control in the pricing of their output for political reasons or in providing little incentives that would not encourage farmers to neither increase quantities nor improve quality.

4.1.3. Insights on cooperatives' organizational structure, governance and legislation

The characteristics of cooperative structures differentiate them at the core level from other types of enterprises such as the private sector's investor-owned or stock companies and even non-profits. This normally would translate into a legislative difference as well. The seven principles of cooperation govern and guide the international movement while the "Promotion of Cooperatives, Recommendation" of 2002 by the ILO (**ILO R. 193**) constitutes the sole universal public international law on cooperatives worldwide, and which some argue is legally binding (Henry, 2013). The ILO R. 193 recommends the establishment of cooperatives in line with the promotion of workers' rights with compliance to national labor laws while combating 'pseudo cooperatives' that violate these worker rights (S. Smith, 2014). Under that law, each country then adopts its own national or even subnational legislations to govern cooperatives which should also specify their management and organizational structure under its jurisdiction, including roles and responsibilities of each member. Governance in relevance to corporate structures is defined as "*the structures and systems of control by which managers are held accountable to those who have a legitimate stake in an organization. It is particularly about the decision-rights of the board and managers, and the need for transparency in decision-making*" (My.Coop, 2011). In a cooperative, the conventional organizational structure and

governance is based on four main bodies. These are the **General assembly**, **Board of Directors (BoD)**, **management**, and **supervisory committee** (My.Coop, 2011). First, the **General assembly** consists of the totality of the members together (i.e. users and collective owners) and is the most important stakeholder in a cooperative. It is the general assembly that ensures the democratic control of a cooperative by its members (one membership one vote principle) on some of the largest and most serious issues such as work strategies, division of surplus, annual balance sheets, membership initiation in a union or federation, dissolution, etc., (Ghadban, 2013). The General assembly meets once a year during which it elects the Board of Directors (BoD) and supervisory committee, and it could possibly be convened to hold exceptional meetings if needed. The **BoD** is the general governing and policy-making body of a cooperative which is normally delegated the decision-making right on behalf of the General assembly (i.e. totality of a cooperative’s members). The BoD and its elected chairperson report back to the general assembly on achievements and progress and it directs the management in a general fashion without entering in the small details or daily tasks. The BoD mainly ensures that the decisions taken by the General assembly are being implemented by the management in the best possible extent. It is then the **management** (manager, staff, etc. who could be recruited and not necessarily members, although that too could be possible) who handle day-to-day operations in a way that is similar in power and responsibilities as an investor-owned company and is in fact a delegation to implement the policies and decisions taken by the General assembly (Ghadban, 2013). Finally, the **supervisory committee** (sometimes also called supervisory board), is the independent body that is elected by the General assembly and that supervises and controls the BoD and reports back to the General Assembly. Figure 38 and Figure 39 are schematic diagrams that represents the internal relation and major responsibilities between these four main governing bodies of a cooperative.

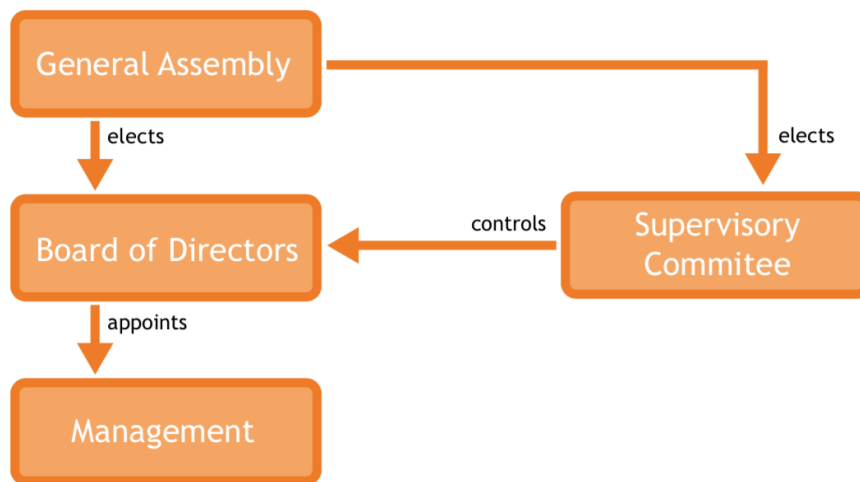


Figure 38: Schematic representation of the four main governing bodies and the relationship between them in a classic cooperative model. Source: (My.Coop, 2011)



Figure 39: An infographic summarizing the responsibilities undertaken by the four main governing bodies of the cooperative model. Source: Website of the University of Wisconsin-Madison Center for Cooperatives⁶⁹.

As for relationships between cooperatives together as a movement, Ghadban (2013) has detailed sources that explain four different levels in which cooperatives can unit and work together. These are the levels of the primary individual cooperatives, the union, federation, and confederation/apex which altogether unite under the International Cooperative Alliance (ICA). The below elaboration of these are based on these sources. When cooperatives find some tasks difficult to achieve separately, they can form a **cooperative union** which groups cooperatives that are similar to each other interests or that complement each other in their functions so that to help each other realize these plans. In theory, cooperative unions are able to provide services to its members (as accounting, development of strategies, etc.) and should be able to reach a better economy of scale. At least two cooperative unions can join together and form a **federation** which has its own separate structure (board, management, staff, etc.) and which an individual cooperative has the right to join directly without being part of a union first. Cooperative federations mainly represent and defend the common interests of the member unions and cooperatives. The interest of doing so for cooperatives would be to benefit from services that are offered by federations and which normally are banking and/or international marketing, although a certain extent of their autonomy would have to be given to federations. The level higher than that would be a minimum of two federations uniting together under the form of a **confederation** (also known as Apex organization) which functions at the national level of the movement. Confederations therefore are able to represent the movement of their cooperatives (knowing that the different federations uniting in a confederation should be functioning in different economic sectors) facing the government, regional scale and international scale. Being at a national scale, confederations therefore should be knowledgeable of the movement in their respective country and are also able to conduct research, data structuring, and publishing. Finally, all these levels of organization and the entire movement

⁶⁹ Available at: <https://uwcc.wisc.edu/resources/governance-2/>

of cooperatives around the world is represented by the ICA which main objective is to protect the identify of cooperatives and encourage their impact, especially in the socio-economic development. Figure 40 represents a schematic of the ideal structure of relationships between cooperatives, which falls under Principle number 6. Yet, it has been stated (My.Coop, 2011) that this structure is not hierarchical but rather reflect the lower number of organizations affiliated in consolidated entities, but instead the higher organizations are in fact operating for the service of the lower levels. Such a schematic does not exist in all countries today and even the nomenclature can vary, such as in Lebanon for example, where the Confederation/Apex organization is instead called the **National Cooperative Union**. Other differences for example could entail the name of a cooperative federation that could be called central/sectoral cooperative union, and a cooperative union which could be called a regional or district cooperative union (My.Coop, 2011).

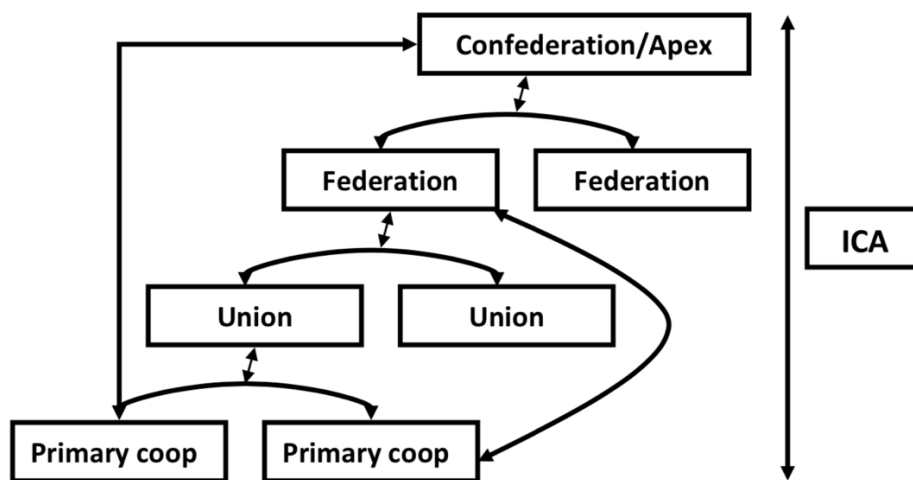


Figure 40: Schematic representation of the cooperative movement and possible relationships between cooperatives together. Source: (Ghadban, 2013)

As the organizational structure of a cooperative is more clearly elaborated, we can now see how the cooperative governance touches on issues larger than the allocation of decision-making rights, and is more widely inclusive of for example accountability, the relationship between members and BoD, and that between the BoD and managers. This is because cooperatives are collectively owned and democratically controlled by its members unlike other ‘autocratic’ economic entities. This means that clear chain of command, means of control and reporting should be established especially since cooperatives operate by delegating their decision rights (My.Coop, 2011). This means that the General assembly generates one vote per each member on the major decisions and delegates the implementation of these decisions to the BoD (that reports back to the General assembly) which in itself delegates these to the management (that reports back to the BoD), and the overall control is made by the supervisory committee.

Cooperatives’ form of organizational difference has led organizations such as the ILO to recognize the significance of well-defining and developing the legislative and institutional framework of cooperatives worldwide. The ILO considers that the seven principles of cooperation, although they help understand the definition, do not provide clear or sufficient

elements to construct legal framework that could serve as a guide for lawmakers (Henrÿ, 2012). These would specifically enter in the distinction of cooperatives as social enterprises with legislative elements that would recognize that through the mode of profit distribution, ownership of assets, capitalization, and others. In thinking of what judicial framework to construct, it is important to understand what differentiates cooperatives from other forms of entities. A good starting point is therefore to understand certain fundamental differences between cooperatives and other legal entities. In a seminar by the United States Department of Agriculture (USDA) called “Introduction to Cooperatives” in 2017⁷⁰, it was stated that cooperatives tend to be created in one of two ways; either as a defensive strategy or as proactive entities. When social or economic needs are unmet, or when there is some sort of market failure, cooperatives tend to be created when people conglomerate together to defend their needs and meet those imbalances. Today, however, more and more cooperatives are being created proactively by individuals coming together to organize themselves and take collective ownership while creating wealth in this form of sustainable business model. The same seminar described the main differences between cooperatives and other legal entities according to the USDA as shown in Table 14, and these touch on aspects related mainly to the legal purpose, governance, and financing. Cooperatives’ main ideology is people-centric, i.e. directing benefit and democratic control to its members (principle of one member one vote), while others do not. Stock companies for example are controlled by its investors according to their shares while non-profits tend to focus on a community level and on charitable or public benefit. In the perspectives of the ILO, the differences between cooperatives and stock companies revolve around three key points; their **capital structure, management, and control**, noting that little content has been published on that subject. These are published in their Guidelines for Cooperative Legislation (Henrÿ, 2012). The ILO first clearly explains the same elemental differences highlighted by the USDA regarding the main beneficiary and ultimate objective of the entity (member-centric in cooperatives vs. investor-centric in stock companies). They state that pro-profit companies are obligated by law to generate the highest possible revenue (return on investment) which pushes them to prioritize market opportunities and product value. That is not the case with cooperatives which main objective is to meet their member needs economically, socially and culturally by producing positive and not-for-profit results in that matter. Additionally, the ILO stresses on the type of relationships that exist between the users and the entity. This point especially explains how a fundamental structure of cooperatives consists of having the members as the main users of the services that are offered by a cooperative or constitute its major workforce, whereas that type of relationship is not obligatory and could exist by accident in stock companies. Investors that own the highest shares receive the highest level of control in stock companies whereas control is distributed democratically in cooperatives regardless of the number of shares which in by itself can be named differently, such as in France being called *actions* and *parts sociales*. Issues related to profit (generated from transactions with non-members) and surplus (generated from transactions with members) differ in the ways they are generated and the mechanism of their distribution in cooperatives as well. Profit is usually re-invested in the cooperative (are not distributed) whereas part of the surplus is distributed to members according to the extent of their transactions with the

⁷⁰ Available at: <https://www.youtube.com/watch?v=SunNRYcDXXY>

cooperative, and this is a mechanism that occurs usually at the end of each financial year which should normally be detailed in legislative texts but is not always the case. Challenges relating to that issue have also been mentioned in relation to the difficulty in clearly dividing the surplus from profit and in the means of measurement of participation per member to decide on the extent of dividends received per member from that surplus (Henry, 2013). Stock companies on the other hand do not have such a system nor face such challenges since they distribute the entirety of their generated positive (profit) to shareholders according to the extent of their investment (number of shares). The extent of invested capital plays yet another role in the control of stock companies which unlike in cooperatives dictate voting rights, whereas cooperatives assign these rights equally upon members regardless of their shares (democratic member control). This links to a reason why cooperative capital, which should always serve the needs of existing and future members, should be preserved over time (indivisible), whereas stock companies actively invest towards the growth of their capital. Cooperatives also have another essential element which distinguishes them from stock-controlled companies; their concern on the environment and community at large, and which is clearly stated in Principle number 7. That element is considered as a main competitive advantage for cooperatives in that regard.

Table 14: A comparison of legal entities between cooperatives, investor-owned companies, and non-profits. Source: USDA 2017 seminar “Introduction to Cooperatives” (refer to footnote).

	Cooperative	Investor-owned	Non-profit
Owned by	Members	Investors	Community
Legal purpose	Serve its members	Return on investment	Public benefit, charitable purpose
Governed by	Board – of members	Board – of investors	Board – of community representatives
Financed by	Member investment, earned income	Investors, earned income	Grants, donations, fundraising, earned income

The ILO Guidelines for Cooperative Legislation proclaims that no cooperative entity can prosper without having a legal cadre specifically applicable for them and that is for several reasons. These include the necessity for achieving the application of a cooperative policy that formalizes economic entities and their relationships as a legal/juridical person that has rights and obligations, liability and control, and to contribute via the effects of tax systems and labor laws as a form of social security. National laws are therefore strongly considered as a necessity to help implement the cooperative law which is centered around the ILO R. 193, and therefore ‘*juridicize*’ any informal activities in economic sectors in which cooperatives still exist to this day. Cooperatives can thus serve as vectors of the formalization from the informal to the formal economy, a fact that has already been witnessed throughout the past 160 years (Henry, 2012). The judicial considerations per country therefore differ from one country to another but remain guided by the seven principles of cooperation that originated with the Rochdale Equitable Pioneers Society in 1844 and that later evolved and solidified into the principles of the

International Cooperative Alliance (ICA). When categories of cooperatives are assigned in a country, legislation can in turn vary accordingly. This is an essential point which could help avoid challenges raised from the division of surplus, proportion of transactions per member, and the clarity on the dual relationship of each member with the cooperative. This dual relationship is on one hand organizational (member, contributor) and on the other hand transactional (provider, user, consumer, worker, etc.) but can greatly overlap and the distinguishing of one from another could be very difficult if not clearly dictated in legal texts. This is why certain countries adopt a general cooperative law and subsequent specific cooperative laws per category, but these also vary greatly from one country to another (Henrý, 2013). Williams (2007) elaborates that in the United States for example, farming cooperatives have less restriction than other categories of cooperatives especially with their liberty in engaging in activities related to distribution and direct sales. Contrarywise, the other types of cooperatives are obliged to perform these activities by passing through other cooperatives. Value-added cooperatives on the other hand are able to procure their raw material from other cooperatives or corporations, perform their added-value form of processing and packaging, and can finally dispatch their output to retailers that can be either individuals, other cooperatives, or corporations. Another disadvantage of legislative restriction in the US mentioned by Williams (2007) consisted of the inability of cooperatives belonging to different categories to conglomerate under a single corporate charter therefore bypassing such restrictions. This limitation is not applicable to other forms of legal entities but is a sanctioned activity deemed as 'unfair trade' for cooperatives; a constraint that has affected cooperatives' ability to obtain capital. In fact, it is stated that banks and corporations in the US have argued that the expansion of cooperative rights would be providing unfair advantages in pricing and market competition, to which they have responded by actively introducing bills into federal or state legislatures that would curb that path for cooperatives. Such legislative performance by the US is thus considered as undermining to the first principle of cooperation; voluntary and open membership.

This is not the case with other countries around the world where some have formed alliances in their understanding and legislation around cooperatives. Some are even applicable to certain sectors. The below information is extracted from the analysis of the ILO on that matter (Henrý, 2012). The Organization for the Harmonization in Africa of Business Law (OHADA) Uniform Act on Cooperatives for example is a result of over ten years of work for the sixteen country members in the statute. It consists of a uniform law that was adopted by the member states in 2010. In the European Union, a Statute for a European Cooperative Society (SCE) (Regulation 1435/2003) was developed in 2003 and enacted in 2006 and that took over thirty years of preparation. The SCE however does not provide a uniform law on cooperatives at a national scale of the EU member states but the SCE in itself is considered to be a creation of a new form of cooperatives. The statute is not regulatory of all legal aspects of cooperatives and in certain extent of complicated cross-referencing refers back to national legislation rather than having one uniform law, which therefore actually creates 27 different SCE types. The Southern American trade bloc Mercosur countries have also developed a Common Cooperative Statute in 2009 (the Estatuto de las Cooperativas - Mercosur/PM/SO/ANT.NORMA 01/2009) to facilitate the establishment of cooperatives in its members states. However, similar to the OHADA, the statute does not enter into the national level of legislations and its application

actually requires its formulation into a national law; a step performed only by Uruguay so far. The ILO also recognize two additional but non-legally binding laws that have been developed. The first is the Framework law for cooperatives in Latin America (Ley marco para las cooperativas de América Latina). It was initiated by a private entity called ICA Americas in 2008 and represents a modern depiction of a ‘model law’ in terms of proposals for legal texts coupled with comments per article. This framework is expected to be considered for the future legislative developments similar to what happened with its predecessor edition that of 1988. The second developed but not legally binding document is called the WOCCU model cooperative law. It was developed by the World Council of Credit Unions (WOCCU) in which the proposed legislation is specifically developed for savings and credit unions under one of the major schools of thought for this type of cooperatives.

Understanding model governance and legislative framework is pivotal for the building of a strong cooperative movement in any country. This remains an important keystone even though legislations vary greatly from one country to another or do not even exist altogether. Having clear legislation could avoid challenges that would arise in the movement such as those related to the governing of the dual relationship between members and their cooperative, the categorization of cooperatives accordingly and the subsequent mechanisms of division of surplus. In a later chapter, I will enter in the legislative framework of cooperatives in Lebanon and explain its theoretical content in line with the headlines presented above. This will help position the available legislation in Lebanon, which was introduced in 1964 (Decree No. 17199/1964), compared to the 7 principles of cooperation which consist the basis of the public international law on cooperatives, the ILO R. 193.

4.2. COOPERATIVES AS A GLOBAL MOVEMENT OF DEVELOPMENT

4.2.1. Cooperatives and the Sustainable Development Goals (SDGs)

The cooperative movement under neoliberalism are considered are part of the social economy, specifically as private organizations belonging to the tertiary sector of non-profit which deals with socio-economic initiatives that neither the private nor the public sectors address properly (Ghadban, 2013). Since the expansion of the cooperative movement at a global scale, cooperatives have, and are still looked at today as vectors social justice in the face of the injustices that are inherent to competitive capitalism (Hoyt, 2004). Being a social model of business that differs from profit-driven companies by focusing on collective benefit, participation, solidarity and democracy, cooperatives are seen to fit well as development agents. The role of cooperatives as contributors to the United Nations 2030 agenda of Sustainable Development Goals (SDGs) has been highlighted on different levels. The SDGs (also known as the Global Goals) are a universal urgent call by the United Nations to push for global action towards the ending poverty, protecting the planet, and working towards enhancing people’s prosperity by the year 2030. The path towards the 2030 SDGs started with the establishment of the Millennium Development Goals (MDGs) at the New York Millennium Summit in the year 2000 where the largest number of heads of states were grouped at the time and pledged to fulfill the MDGs by 2015 (Birchall, 2004). The MDGs had 8 goals, 18 targets and 48 indicators. The 8 MDG goals that precluded the SDGs included 1) to eradicate poverty

and hunger; 2) to achieve universal primary education; 3) promote gender equality and empower women; 4) reduce child mortality; 5) improve maternal health; 6) combat HIV/AIDS, malaria and other diseases; 7) ensure environmental sustainability; and 8) develop a global partnership for development⁷¹. But by the agreed end date of the MDGs in the year 2015, however, critiques began to surface regarding their achievement and scope. Despite having quantifiable targets looked at in a positive light, the voiced concerns revolved around the inexistence of a gender and empowerment component, the lack of clarity of the targets, diverted attention to measurable targets rather than other important objectives, talks of fiddling with international poverty line to push the success of the achieved rates in poverty reduction, and comments on the diversion from important questions in political economy (Ziai, 2015). In June 2012, the member states decided to build on the outcomes of the MDGs and further develop those into the SDGs. That decision was adopted during the United Nations Conference on Sustainable Development (Rio+20) in Rio De Janeiro, Brazil. On their official website, the United Nations Foundation declares that the SDGs are “*the world’s shared plan to end extreme poverty, reduce inequality, and protect the planet by 2030*”⁷². The SDGs have been adopted by 193 countries as of 2015 and consisted one of the most inclusive and comprehensive negotiations performed in the UN’s history. The SDGs include 17 main goals, each consisting of a list of sub-goals and a total of 169 targets measured by 232 indicators⁷³. These are based on 5 main pillars known as the 5 P’s, and which are: *people, planet, prosperity, peace, and partnership*. To contribute to the achieving of these global targets, this requires the global mobilization of numerous actors from different sectors, geographies and cultures. This makes the SDGs relevant to all countries and inclusive of all players. The 17 SDGs are listed in Figure 41.

Coupled with the definition, the seven cooperative principles are probably the first indication to the values of such enterprises. Although different experiences suggest their respecting to a various extent in different countries, they fall well in line with the SDGs. As shown earlier, the cooperative principles are based on (1) voluntary and open membership, (2) democratic member control, (3) members’ economic participation, (4) autonomy and independence, (5) education, training and information, (6) cooperation among cooperatives and (7) concern for community (S. Smith, 2014). A report by The International Labour Organization (ILO) exclusively analyzed the link between cooperatives and the SDGs even prior to the announcement of the specific goals, targets and indicators by late 2015 (Wanyama, 2016). The report stressed how “*cooperatives are well-placed to contribute to sustainable development’s triple bottom line of economic, social and environmental objectives plus the governance agenda [...]*” (Wanyama, 2016, p. 1). That specific point was further stressed on during a public seminar held by ILO’s Simel Esim in Tokyo 2017 which main elaboration is summarized in Figure 42. Such strong statements are supported by figures which reflect the extent and recognized achievements of cooperatives globally. An extensive database on

⁷¹ <https://www.un.org/millenniumgoals/bkgd.shtml>

⁷² Available at: https://unfoundation.org/what-we-do/issues/sustainable-development-goals/?gclid=Cj0KCQjw8uOWBhDXARIsAOxKJ2FGCfy45hQy3l0GFuqgFAzaw8EG9fonLlr83-N_WvZvdtXiuIctaAaAqzLEALw_wcB

⁷³ Full list available at: <https://sustainabledevelopment.un.org/topics/sustainabledevelopmentgoals>

cooperatives created for the United Nations Secretariat reported the existence of 2.6 million cooperatives of which 770,000 employ 12.6 million individuals and generate US\$ 3 Trillion in annual revenue (Grace, 2014). Highest contributions of cooperatives to national economies were noted to reach 20% of New Zealand’s Gross Domestic Product (GDP), 18% in the Netherlands and France and 14% in Finland.



Figure 41: An infographic presenting the United Nation's 2030 Sustainable Development Goals (SDGs). Source: United Nations official website⁷⁴

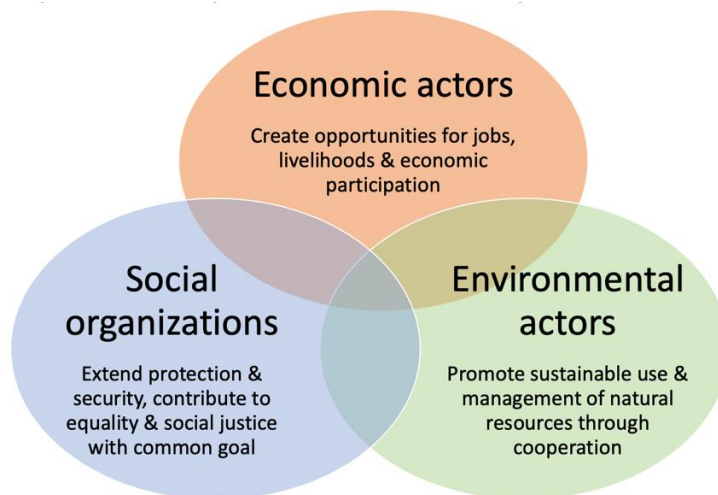


Figure 42: How cooperatives serve the triple bottom line as social, economic and environmental actors which can contribute to the 2030 Agenda of the SDGs. Source: (Esim, 2017)

Besides their grand achievements in developed countries, cooperatives have also been recognized by the same ILO report (Wanyama, 2016) for their impressive input in developing

⁷⁴ Available at: <https://www.un.org/fr/sustainable-development-goals>

economies within different SDGs headlines. Relevant examples include successful initiatives from Tanzania, Egypt and Ethiopia where agricultural cooperatives improved marketing, sales, income generation and the livelihoods of millions of farmers, thus contributing to Goal 1 of poverty reduction. Other figures from East African countries and Arab states highlight cooperatives' input under Goal 5 of gender equality mainly by enhancing women's economic participation and social inclusion. A strong and apparent link was also presented between cooperatives with Goals 2 and 8 relating to food security and good nutrition, and job creation and equitable growth; interestingly adding an element of preserving indigenous food crops. Cooperatives in developing economies have also been praised for enhancing access to - and management of clean water (Goal 6) as in Bolivia and Latin America; provision of sustainable and renewable energy (Goal 7) to rural populations as in Bangladesh's rural electrification cooperatives; and sustainable management of natural resources (Goal 9) with diverse experiences from Indonesia, Columbia, Philippines and others, relating to waste collection, sanitation and sustainable use of resources. Moreover, a positive impact of cooperatives has also been reported in conflict-affected countries. Such is the case in Nepal for example where different types of cooperatives reported positive growth during the insurgency period of 1997 to 2007 (Bagchi & Gautam, 2019) especially in rural settings. Impressive growth was attained specifically by microcredit cooperatives owed to their provision of financial means to rural populations when banks failed. In Africa, a long-term strategy for cooperatives is being encouraged as a suitable path to mitigate the root causes of conflict. These include peacebuilding and development of post-crisis economies for countries as Burundi and Liberia (Okem, 2016). Such suggestions were further emphasized following successful applications in Rwanda and Kenya where cooperatives supported thousands of farmers in financing their productions. For conflict and post-conflict Arab states, and even with a set of barriers and limitations, cooperatives stepped up mainly in their inclusion and empowerment of women. In Palestine, the political mobilization of women during the first Intifada protests was greatly linked to cooperatives although sources mention they later became marginalized after the Oslo Accords (Esim & Omeira, 2009). Even in Lebanon, food cooperatives were reported to engage in the rebuilding of societies in regions that were significantly affected during the 2006 war (Esim & Omeira, 2009). More relevantly, they were acclaimed to revive traditional foods on the verge of extinction and were even praised for playing an active role in rebuilding the 'memory of the village'.

The connection between cooperatives and their contribution to the SDGs has been so evident and recognized that the ICA has published a report that links how cooperatives can intervene in each of the 17 SDGs (ICA, 2019) as summarized in Figure 43. In relation to the agriculture and food sectors, which are relevant to the scope of this study, the report finds that this type of cooperatives is able to contribute to a significant number of goals such as Goals number 1, 2, 4, 5, 8, 9, 10, 11, 12, 13, 15, 16 and 17. Certain goals are general and apply to all types of cooperatives to which they are able to participate in (Goals 1, 4, 5, 8, 10, 11, 16, and 17). This relates back to the multiplicity of principles under which cooperatives are framed and operate with respect, and which in turn gives cooperatives the fluidity to intervene at a social, economic, and environmental scales, including their concerns for education, cooperation and community (principles number 5, 6 and 7 respectively). As for the remaining (Goals number 2, 9, 12, 13, and 15), these apply specifically to the category of agricultural and food producing

cooperatives. For Goal number 2 (Zero hunger), agriculture and food producing cooperatives are directly implicated by their ability to raise productivity, invest in added-value processing operations, organizing producers collectively, and return the benefit at a larger scale than for individual producers therefore manifesting possible and real increase in income potential. Studies have already linked the stimulation that SDGs was able to achieve in that sense with wine cooperatives in Spain and in Dairy cooperatives in India (Mozas-Moral et al., 2021; Sudan, 2019). The vertical integration in the agri-food value chain that cooperatives are able to attain similarly transfer the trickle-down effect to Goal number 9 (Industry, innovation and infrastructure) in which cooperatives can invest in infrastructure and industry such as storage and processing. This integration opens the opportunity for further economic benefit by boosting secondary productivity, employment and overall benefit.

SDG	Type of cooperative	Some key contributions
 1 No poverty	All Credit Insurance Social	<ul style="list-style-type: none"> 10% of world employment Micro-credit to the poor Micro-insurance to the poor Employment for disadvantaged people
 2 Zero hunger and food security	Agricultural Fishery	<ul style="list-style-type: none"> Estimated 32% of food products market share; providing food security; enhancing diversified agricultural production
 3 Good health and wellbeing	Consumer Health	<ul style="list-style-type: none"> Providing quality foodstuff at lower prices Health services including HIV/AIDS to over 100 million patients
 4 Quality education and lifelong learning	All Student Worker / social Credit Consumers	<ul style="list-style-type: none"> Education as one of founding principles Providing practical training on how to run a cooperative for children and teenagers Imparting education (in particular through around 2700 cooperatives) Providing educational micro-lending and financial education Providing consumer education
 5 Gender equality	All Worker / producers'	<ul style="list-style-type: none"> High ratio of women's inclusion in membership and elected positions as shown in several studies Important cooperative networks are exclusively dedicated to women
 6 Clean water and sanitation	Water	<ul style="list-style-type: none"> Safe water filtration and distribution
 7 Affordable and clean energy	Energy	<ul style="list-style-type: none"> Energy channelled to rural and remote areas; generation of renewable energy
 8 Decent work and economic growth (including sustainable tourism)	All Social Worker / social Producers' / freelancers	<ul style="list-style-type: none"> 10% of world employment; decent, stable and resilient work; market access; more value in hands of members Providing employment to disadvantaged people Sustainable tourism, cultural heritage Providing shared services and social protection
 9 Industry, innovation and infrastructure	Worker / social Agricultural (agro-industries) New types (multi-stakeholder, community, platform etc.) Water, energy & telephone supply	<ul style="list-style-type: none"> Virtually all industrial activities, maintaining enterprises in their communities Innovating in new business forms and democratizing online platforms Promoting energy, water and internet infrastructure in remote areas
 10 Reduced inequalities	All Credit	<ul style="list-style-type: none"> Redistribution of surplus to members, reinvesting in communities, lower wage gap than average Financial inclusion
 11 Sustainable cities and communities	Housing All	<ul style="list-style-type: none"> Upgrading slums and providing affordable housing for a significant part of the population in a number of countries, either through ownership or rental Resilience to disaster and contribution to after-disaster measures
 12 Responsible consumption and production	Agricultural Consumer New food coops	<ul style="list-style-type: none"> Networks between agricultural and consumer cooperatives increasingly promote responsible consumption, including organic food, food chain and fair trade products, limiting food waste, promoting circular economy
 13 Climate action,  14 Life below water and  15 Life on land	Worker / social Fishery Agricultural	<ul style="list-style-type: none"> Green jobs, protecting natural spaces, dealing with waste recycling
 16 Peace, justice and strong institutions	All Social / worker	<ul style="list-style-type: none"> Key role after several armed conflicts, participation in reconciliation processes Increasing involvement in welcoming refugees and addressing their plights
 17 partnerships	All	<ul style="list-style-type: none"> International development cooperation developing within the cooperative movement and with other actors, including South to South cooperation

Figure 43: Connection between cooperatives and each of the 17 SDGs of the UN's 2030 Agenda per type and key contributions. Source: (ICA, 2019)

Cooperatives in the agri-food sector could also be directly linked to Goal number 12 (Responsible production and consumption) and 13 (Climate action) as being primarily engaged in primary agricultural production and processing operations. This is highlighted in the original identity of cooperatives which is based on ethics, values, and unity. Cooperatives, given their concern for the environment and community under Principle number 7, have the capability of raising public awareness on responsible consumption and production which ultimately have an effect on the planet's climate potential. Agriculture and its practices to this day remains the one sector that majorly contributes to climate change and is directly affected by it consequently. This relationship has been described as a "cause-effect" with the sector accounting for 19 to 29% of global greenhouse gas emissions (GHGs, which are the gases that lead to global warming) according to a 2021 article by the World Bank (2021). The impact does not stop there but more figures show that one third of food produced globally is either lost or wasted after major water and natural resources being invested for their production in the first place. Agriculture therefore has been significantly impacting climate change in several of its dimensions and practices that emit GHGs including 1) nitrous oxide being emitted from soil, 2) the application of fertilizers, 3) dung from grazing animals, and 4) methane emissions from ruminants, in addition to emissions and impact originating from secondary practices such as changes in land use as clearing and deforestation (Agovino et al., 2019). The potential positive impact that cooperatives are able to attain with regards to Goals 12 and 13 is therefore evident and direct. A systematic review by Gigi Owen in 2020 describes five indicators and a list of accompanied examples in which the effectiveness in that regards can be adopted and attained by cooperatives (Table 15). The dynamics of cooperative operations naturally transfer to Goal number 15 (Life on land) and case studies by the same author (Owen, 2020) showed how cooperatives in Uganda, Kenya, Vietnam, Mexico, and Bolivia were able to reach positive relationships when it comes to collective action and increased adaptive capabilities. These were improved by sharing of knowledge, conservation and management of natural resources, improved community access and mobilization, rehabilitation of natural environments, improved market access, and other shifts in practices. Another study also shows how cooperatives engaging in community-based recycling in Brazilian peri-urban settlements are also capable of contributing to a cluster of SDGs (5, 6, 7, 11, 12, 13, 14, 15, and 17) making them efficient organizations capable of achieving multiple levels of impacts (Lopes et al., 2020). This shows how cooperatives have the innate dynamics to meet several of the SDGs by having their principle focus on collectivity in addition to environmental concerns and community engagements. In that lies interestingly the natural link that 'platform cooperatives' have with the SDGs as Zhu and Marjanovic (2020) explain. According to the authors, platform cooperatives are those that work with- and are enabled by digital platforms and their contribution to the SDGs is still in its early stages and are rarely studied. Yet, this type of newly emerging and growing cooperatives have the possibility to further contribute to the SDGs in new and different ways. This is mainly possible by having democratic control over their platforms and thus achieve an equitable sharing of valued information. Yet, much more investigation in that area has also been noted to help fill the research gap.

Table 15: List of efficiency indicators and associated examples in which cooperatives can be attributed to positively adopting climate change adaptations. Source: (Owen, 2020)

Type of effectiveness	Indicators addressed	Examples of activities
Reduce risk and vulnerability	Biophysical and social vulnerability to potential climate hazards	New reservoirs and irrigation systems; efficient water use; rainwater harvesting; information and communication technologies; knowledge sharing platforms; early warning systems
Enhance social wellbeing	Relationships, community building, collaboration, improved access to resources and information	Cooperative associations; financial incentives; information sharing; social networks; changes in agricultural practice
Improve environment	Ecosystem health, environmental quality, natural resources	Ecosystem-based adaptations and policies, erosion control, restoration and conservation, adaptive management, fisheries management, biodiversity
Increase economic resources	Income levels, access to economic resources	Changes to agricultural, aquacultural, or livestock practices; livelihood diversification; cooperative associations; agroecology and agroforestry
Strengthen institutions	Institutional policies, governance structures and practices, partnerships, conflict resolution	Decision support tools, building information networks, fisheries co-management, community-based natural resource management

4.2.2. The global success of cooperatives and their function as effective players in local development

The success of the cooperative movement has been praised for its positive impact on the livelihoods of billions of people around the world. Cooperatives have been acknowledged as a source of credit, food, social protection, energy, health services, shelter, employment and representation from which over three billion people have benefited worldwide, one billion are members, and 100 million are employed (S. Smith, 2014). Their global success is reflected in their contribution to the global GDP which was estimated at 3 to 3.5% in 2014, and with the highest national significance in countries such as New Zealand (20 to 22%) and France (18%) (Grace, 2014). The highest national contribution to GDP originating from cooperatives and credit unions was estimated to exist in Kenya and reach about 45% (S. Smith, 2014). In 2014, cooperatives have been found to generate US\$ 3 trillion in revenues from US\$ 20 trillion in assets, making cooperatives the fifth largest economic unit if the movement was to be considered a country, surpassing France's economy and coming right behind that of Germany (Grace, 2014). The employment generated by cooperatives in countries such as France, Italy,

Spain and the UK surpass that of the general economy in general. In a study by Smith and Rothbaum (2013), it was shown that cooperatives generally maintained a higher level of employment when compared to the general economy in these countries and were less likely to lay off personnel. This made cooperatives less volatile in times of crisis where wages were more likely to be reduced rather than the number of personnel. The study also showed that for example in the years of slow employment growth, such as between 1976 and 1981, cooperative-sourced employment exhibited 12.1% compared to the national 1.4% in France, 86.2% compared to 3.8% in Italy, 31% compared to -8.1% in Spain, and 133% compared to -2% in the UK; with the entire European Economic Community (EEC) registering 76% compared to 2%. The authors even acclaim that the increase in unemployment (even by 1%) is met with a much larger increase in the creation of cooperatives (by 10%). This is claimed to be an indicator of how the creation of cooperatives during times of crises is attributed to these performances witnessed in such countries.

As for developing countries, cooperatives have exhibited an evident performance in activities related to microfinance and support to microenterprises which stabilized much needed income generation and creation of stable employment. In that way, people reverting to benefit from this type of support found themselves capable of creating stable incomes and in turn uplifting their quality of life and the livelihoods for themselves and their families. It is especially in the varying contexts of developing countries that the value of cooperatives has been of interest since the initiatives would be owned and controlled by the very people in a way tailored to meet their needs at a collective scale. These areas of impact were noted mainly in **poverty reduction, education, health, food security, access to water and resource management, sustainable energy and gender inclusion**. Savings and credit cooperatives (known as SACCOs) have been acclaimed for uplifting poverty in developing countries and specifically rural territories by providing affordable and accessible microcredits and small loans without complicated bureaucracy and paperwork. This is especially important since 80% of the poor are reported to reside in rural areas (World Bank, 2020). They are said to have contributed to the building of a spirit of self-reliance and independency of their beneficiaries who are commonly low-income owners, small farmers or individual producers. Their activity has gained interest of development agencies and policymakers along with academic studies in countries such as Uganda, India, Nigeria, Kenya and Tanzania (Schmidt, 2017). Relatively young SACCOs in East Ethiopia have been noted to have attained an impressive level of outreach and even financial sustainability when considering the reasonable profit margin generated with the return on assets from doing business with the poor (Semaw Henock, 2019). Similarly, agricultural cooperatives have been attributed as efficient players in impacting rural farmers and in the elevation of rural economies, hence contributing to the reduction of poverty in the rural regions of countries. Cooperatives have been reported to attain positive effects on farm revenue thus farmer income, producer prices and market participation even though with heterogeneous extents according to the size of farms in countries as Rwanda, Ethiopia, Kenya (Verhofstadt & Maertens, 2015) and Bosnia and Herzegovina (Gava et al., 2021). In Egypt and Ethiopia, 4 million farmers 900,000 individuals are estimated to respectively sell produce and generate income through cooperatives (Wanyama, 2016). Because cooperatives in general including agricultural cooperatives aim to meet the needs of their farmer members, then many of the small farmers' challenges are being collectively resolved by cooperatives. This creates

solutions at a wide scale which improves efficiency, reduce costs and therefore equally contributes to elevating food security and good nutrition. Common support is seen in bulk purchases for the group, access to marketing and new markets, elevated capacity building and technical skills, improved negotiation power in face of middlemen, logistics as warehousing and storage, access to credit, etc. Cases in Argentina for the protection of indigenous potatoes have been reported to improve food security, and a success story from west Cameroon COOVALAIF dairy cooperative have been reported to increase household consumption of fresh milk and household income from \$430 in 2008 to US\$3,000 in 2012 (Wanyama, 2016). Besides their direct activities in agriculture, some primary cooperatives also diversified their activities to expand to a larger scale of impact on organic farming, sustainable management of resources, tourism, green landscaping, waste prevention, and others. Such is the case with what is called as 'waste-pickers' who established recycling cooperatives to improve their working conditions and incomes in countries as Argentina, Brazil, Columbia, India, Indonesia, Mexico, and Philippines (MEDINA, 2007; Tirado-Soto & Zamberlan, 2013). Other cooperatives have actively intervened in finding solutions to access clean water and sewage in their urban cities. The largest water cooperative in the world is found in the city of Santa Cruz in Bolivia which serves three-quarters of the city's residents with sanitized water. In cities such as the Binangonan city in the Philippines and the Olavanna panchayat in India, cooperatives were given special authority to deliver water and manage distribution systems that served tens of thousands of households during water shortages. In Ghana, Ethiopia, and South Africa, cooperatives have also registered success stories in accomplishing improved access to water by drilling boreholes and managing maintenance (Wanyama, 2016).

In terms of education, although cooperatives were not specifically registered to interfere in the primary education of youngsters, they are known to have filled gaps in education where governments failed. Cooperatives are said to have used their own funds to build and support schools, and the positive impact they had on increased incomes alone encouraged youngsters to pursue their education and provided families with the means to do so (Birchall, 2004). These positive impacts in income generation similarly reflected the elevation in the wellbeing and livelihoods of rural poor communities in developing countries also in in improving overall health statuses including reduction in child and mother mortality rates (.ibid). Cooperatives have also been able to spread awareness and promote health-related information to relevant rural populations. Such role was positioned strategically in territories where the more rural they are, the less access to healthcare services exist. Such important impacts have been registered in countries even as the United States where cooperation between healthcare centers improved staffing, interdependence and in turn survival rates of people as well as services overall (Birchall, 2004; Wagner, 1994; Zeuli et al., 2004). In countries in Africa and Asia, cooperatives have also engaged in combating the spread of malicious diseases such as HIV/AIDS, malaria, and tuberculosis. In 2002 India for example, 181 hospital cooperatives organized over 370 awareness programs on HIV/AIDS that benefited over 7,000 individuals. Even non-health-based cooperatives, such as the Indian Farmers' Fertiliser Cooperative, participated in such health organizations and the provision of medical assistance (Birchall, 2004). Figures also state that millions of people in Canada's eight provinces benefit from over 100 healthcare cooperatives, Columbia's second largest national employer is a healthcare cooperative called SaludCoop that serves 25% of the population, and Japan's over 125 medical cooperatives are

able to extend health services to over 3 million individuals (Wanyama, 2016). The latest impact of cooperatives on health was during the spread of the COVID-19. Experiences in a webinar by the ICA showed how health cooperatives from Spain, Italy, India, Cameroon, and Columbia were able to mobilize front liners treat patients, redesign operations, manage the spread, distribute health kits, train staff, and raise public awareness⁷⁵. For sustainable energy, in the case of Bangladesh and Nepal for example, cooperatives have been essential in the ‘rural electrification’ by delivering access to electrical power to remote regions as a response to the highly privatized sector (Yadoo & Cruickshank, 2010). In the sector of energy, cooperatives in the United States are still predominantly active to this day in the electrification of the country where 930 of such rural cooperatives are divided between 864 for distribution and 66 for generation and transmission. These cooperatives provide power to 47 states serving 42 million people, equivalent to 12% of the populations, and are said to own assets of up to US\$ 112 billion (.ibid).

One specific report consolidated results on the impact of cooperatives as an output of a four-year project implemented by the USAID (United States Agency for International Development), the OCDC (U.S. Overseas Cooperative Development Council), and the International Cooperative Research Group. These organizations aligned their efforts in the project called “What Difference Do Cooperatives Make? (WDDCM)” from 2017 to 2020, and their consequent global outcomes report provided findings from the four target countries; Kenya, Peru, Philippines, and Poland (Hermanson et al., 2021). In that report, cooperatives in these four countries have displayed a higher performance than the national average which in turn meant higher incomes (economic status/class) and thus a higher ability to raise the wellbeing and alleviation of poverty. This economic average of cooperative members compared to the national average is presented in Figure 44. Expectedly, results have shown that it was not only economic development that was attained by cooperatives, but the benefit was also reflect on the social aspect of the members’ wellbeing. These were evaluated by using a group of indicators such as 1) economically (income and likeliness of poverty alleviation), 2) holistically (overall wellbeing, financial stability, improved access to social support, etc.), 3) benefit to women members (independence, agency, capacity building, leadership, etc.), and 4) cooperative members (common identity in line with the principles of cooperatives, social programs, etc.). In summary, the WDDCM report (Hermanson et al., 2021) divided the headlines of their publication to highlight the positive impact that cooperatives have attained directly from the analysis of their data. They report that cooperatives:

1) Achieve an **increase in the economic status** of households by providing an average income higher than the national average and therefore elevating the members from the lower socio-economic groups and decreasing inequality among the population.

2) Contribute to the **economic development** of their communities by creating jobs, attracting investment, supporting infrastructure, etc. In fact, the benefit that cooperatives bring to their surrounding communities, in their direct and secondary impacts, was a suggested analysis specifically performed by Larry Leistrifz (2004). The author depicted direct impacts as those witnessing changes at the level of outputs, income, employment, and proportion of

⁷⁵ Available at: <https://www.ica.coop/en/newsroom/news/how-healthcare-cooperatives-are-making-difference-during-covid-19-crisis>

expenditure in the area surrounding operations. Secondary impacts were further divided into indirect effects, being the effects coming from the benefits of purchasing inputs from other businesses, and induced effects, being the expansion of businesses leading to possible increase in household consumption as a result of the additional income.

3) **Strengthen social capital and resilience** of communities by providing their members with a comprehensive support network and becoming more integrated with their surrounding communities; with social capital being an indicator reflected in characteristics such as trust, social networks, and access to support during emergencies of crises.

4) Are able to achieve a **positive social impact** on communities given cooperatives' concern for the environment and community under principle 7, where for example health and education services can be provided to members and the wider community along with overall awareness building.

5) Help in **closing the gender gap** by leveraging **roles and pathways for women** and provide them with an enhanced socio-economic status, shift from informal to formal economic engagements, benefit from leadership and skills development, and overall improvement of livelihoods.

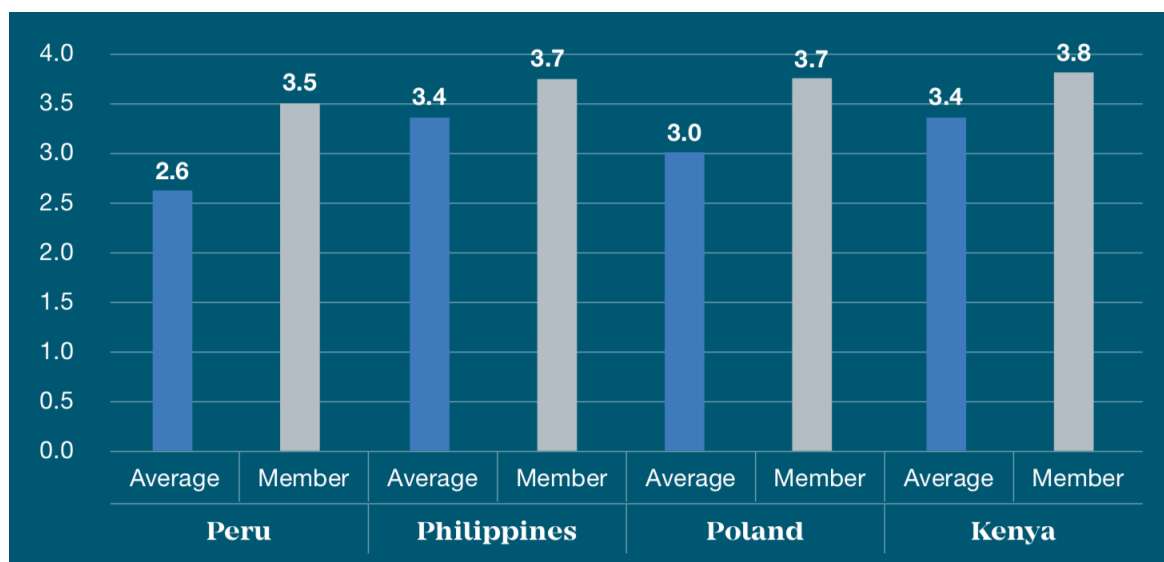


Figure 44: Economic status (index from lowest to highest) of cooperative members compared to the national average in four countries; Peru, Philippines, Poland, and Kenya. Data collection and analysis performed under the WDDCM project between 2017 and 2020. Source: (Hermanson et al., 2021)

Generally, studies have acclaimed cooperatives for their outperformance of other types of enterprises and the national average of many countries. Data in 2008 from Quebec have shown that cooperatives attain a longer survival rate compared to that of the private sector in both the duration extending over 5 and 10 business years (Ontario Co-operative Association, 2008) (Table 16). The survival rate of cooperatives was a point also addressed by the ILO's Director General, Guy Ryder, in 2013 mentioning that "*survival rate of worker cooperatives in several countries appears to equal or surpass that of conventional firms*"⁷⁶.

⁷⁶ Available at: https://www.ilo.org/global/about-the-ilo/how-the-ilo-works/ilo-director-general/statements-and-speeches/WCMS_212653/lang--en/index.htm

Table 16: Survival rate of cooperatives compared to private sector businesses in Quebec in 2008. Source: (Ontario Co-operative Association, 2008)

	5-year business survival rate	10-year business survival rate
Cooperative survival rate	62%	44%
Private sector survival rate	35%	20%

As a recognition to the impact that cooperatives have achieved around the world on the development of socio-economies and in turn quality of life, the United Nations in their resolution of 2009 (A/RES/64/136) proclaimed the year 2012 as the International Year of Cooperatives (logo in Figure 45). This proclamation remains unique to this day since the UN has never before dedicated a year to a specific form of enterprise (S. Smith, 2014). The UN specifically sites the particular contribution that cooperatives have had on **poverty reduction, employment generation and social integration**⁷⁷, with the Secretary General quoted declaring the following statement:

"Through their distinctive focus on values, cooperatives have proven themselves a resilient and viable business model that can prosper even during difficult times. This success has helped prevent many families and communities from sliding into poverty."

United Nations Secretary General, Ban Ki-moon



Figure 45: Logo of the 2012 Year of Cooperatives declared by the United Nations. Source: United Nations official website⁷⁸

Cooperatives have also proven to be efficient and resilient enterprises that are able to withstand hardship and protect people in times of uncertainty. In the 1980s, it was the creation of cooperatives that helped save thousands of family-based farms in the Midwestern United States from the banking crisis at the time. Cooperatives emerging in India and Southeast Asia were also attributed to the alleviation of poverty by engaging in microfinance, while those in

⁷⁷ <https://www.un.org/en/events/coopsyear/>

⁷⁸ <https://social.un.org/coopsyear/use-the-logo.html>

1990s Mexico have been acclaimed in saving not only the economy but also the culture of thousands of Mayan families. Between 2007 and 2011, only 7% of banks that experienced write-downs and losses were cooperative banks, knowing that they covered 20% of the market share at the time (S. Smith, 2014). Even in today's multiple economic and health crises, cooperatives once again have proven their resilience. The World Cooperative Monitor is a project that has been monitoring for the past 10 years the global performance of over 4,500 cooperatives from 10 different economic sectors around the world including 1,152 from Europe, 3,218 from the Americas, 197 from Asia-Pacific, and 8 from Africa. In their 2021 report "Exploring the cooperative economy", the impact of cooperatives during times of crises and especially that of the global spread of the COVID-19 pandemic was addressed (World Cooperative Monitor, 2021). The report highlighted how even though cooperatives were as severely affected by the global pandemic as the other form of businesses worldwide, they were however quick to respond and put in place efficient adaptive measures. They shared risks with farmers and small producers and aided in the accessing of markets. Some cooperatives even achieved an increase in revenues during the pandemic such as certain consumer cooperatives in Italy. The adaptive measures adopted by cooperatives were normally directly linked to the severity of the spread in their surrounding locality and community. Consumer cooperatives in Japan for example initiated home-based delivery of groceries, while others as the Norwegian Coop Norge arrived to do so through agreements with postal services, and finally those in the United Kingdom as the Midcounties Cooperative rallying over one thousand volunteers from 100 communities to perform more than 100,000 deliveries to members. Cooperatives have proven themselves to be resilient business entities during times of crises and the income generating opportunities they create to their member allow the latter to increase their ability of financial saving and therefore resilience during uncertainty along with overall livelihoods.

Today, cooperatives exist all over the world in a large variety of sizes, capacities, sectors, and types of membership services in both developed and developing countries. A map showcasing the top 300 cooperatives around the world by turnover and by turnover per GDP capita can be found in Map 24 and Map 25. These were compiled by the World Cooperative monitor in 2014 from which the top 3 largest sectors of operations included insurance and mutual (over 40%), agriculture and food industries (over 25%) and wholesale and retail trade (over 20%) (World Cooperative Monitor, 2014). In France, the first organic distributor called BIOCOOP is a cooperative that has attained significant market share (15% of the organic market in 2012) and which has grown from 190 outlets in the year 2000 to 345 in 2014 (Lamine, 2015). In the United States for example, popular brand names as Sunkist, Land O'Lakes, and Ocean Spray all belong to cooperative businesses. Land O'Lakes alone covers 86% of the national dairy market. Land O'Lakes, specifically, grew from a grouping of 320 dairy farmers in Minnesota's St. Paul in 1921 to one of the United States' main producer of butter. The development of Land O'Lakes in the past 100 years did not stop there and the cooperative further expanded into four additional businesses to capture the agricultural value chain 'from farm to fork'. These businesses (WinField United, Dairy Foods, Feed, and Truterra) engage in product development, innovative technology, animal feeding and nutrition, and land and resource preservation⁷⁹. The success of that cooperative is today attempted to be transferred to

⁷⁹ <https://www.landolakesinc.com/Our-Business>

other developing countries through Land O'Lakes's development initiative called Venture 37 in which offices are found today in 22 countries around the world and including Lebanon⁸⁰. Other examples that show the immense success of the cooperative model is the largest distributor and retailer of convenience stores in the United Kingdom, The Co-op Group. And even one of the major outdoor gear and recreational organization in the United States, Recreational Equipment Inc., is a cooperative that has geared, outfitted and employed the first American to summit Mount Everest and has registered over 300,000 memberships in 2007 (Williams, 2007).



Map 24: Largest 300 cooperatives worldwide by turnover. Source: (World Cooperative Monitor, 2014)



Map 25: Largest 300 cooperatives worldwide by turnover on GDP per capita. Source: (World Cooperative Monitor, 2014)

In Europe, cooperatives usually are more engaged along the subsequent stages of the value chain when it comes to agriculture and food processing, unlike their American counterparts whose influence is more prominent at the primary production stages (Ollila & Nilsson, 1997). Their emergence in western European countries, as is generally is the case, has been associated

⁸⁰ <https://www.landolakesventure37.org/where-we-work>

with a response to times of need, and their presence is still as prominent today. Farmers' cooperatives around the European Union, despite having a varying degree of membership rates across member states (shown in Map 26), have been estimated to hold around hold of the agricultural trade (Gonzalez, 2018). In countries such as France, it has been estimated that over 75% of farmers are members of cooperatives (Peres et al., 2010). When it comes to policy, it is the Common Agricultural Policy (CAP) that provides the framework along the European Union. It was back in 6 September 1958 when the COPA (Committee of Professional Agricultural Organizations) was created and which provided a role for farmer organization, and which one year later in September 1959 provided the basis for the organization of agricultural cooperatives with the founding of the COGECA (General Committee for Agricultural Cooperation in the European Union) (Gonzalez, 2018).



Map 26: Membership rate in cooperatives per member state in the European Union. Source: (Gijssels & Bussels, 2014)

Countries around the European Union have generally a long history with cooperatives dating back to the 19th century and reflect a long experience in their engagement in meeting social and economic objectives especially in the agricultural sector (Gijssels & Bussels, 2014). It is specifically interesting to mention the scope of cooperatives in France under the context of this study since the country is one of the leaders of the movement not only in the EU but globally and has had influence on various legislations and policies in Lebanon. In countries such as France, cooperatives engage significantly in the agricultural and food industry. Rates of

membership are the highest and figures from 2014 show that, for a population of 65 million, 147 million clients and members of cooperatives exist thus reflecting a significant engagement and multiplicity of relations (Grace, 2014). In France, cooperatives are geographically constraint. They are authorized to exercise their operations within a restricted territory. Despite being thought as a disadvantage, this factor played in the localization of French cooperatives and using their territorial specificities to build their added-value qualities of their products, their differentiation and their valorization through quality labels. In fact, a study by Malyrine Filippi (2014) did not only acknowledge this observation but theorized how territories cannot be described solely by the quality sign, but it is the actual localization and organization of players around which territories are risen and produces the dual physical and relational spheres. The author equally stresses on how this form of activity in the case of French cooperatives has even played a key role in the cooperative scope by reinforcing social capital, using the opportunity as a governance tool, farmer remuneration, and product valorization. This in turn reflected on the reinforcing of social links between members, enhanced commitment and improved decision making. Today, many popular brands in France are owned by cooperatives and have grown in popularity, size and market share, making them true successful organizations when compared to those of stock-owned enterprises (as shown in Figure 46).



Figure 46: An extract of brand logos that belong to cooperative enterprises in France. Source: Online article by Avise.org in 2018⁸¹

⁸¹ Available at: <https://www.avise.org/articles/des-formes-cooperatives-pour-des-filières-durables>

4.3. AN OUTLOOK ON THE NATIONAL CONTEXT OF THE COOPERATIVE MOVEMENT IN LEBANON

4.3.1. Cooperatives in Lebanon – General introduction and historical perspective

Cooperatives in Lebanon have had a long but unstable history in Lebanon. They existed in the country first under a government decree that organized cooperatives in 1941 (Esim & Omeira, 2009) but that manifested much later in 1964 with the introduction of the Cooperative Association Law which was further re-amended in 1972, 1977, and 1983. The introduction of the national cooperative law came at one of the rare prosperous times the country has witnessed, the Chehab era between 1958 and 1970, during which many initiatives for social reform and nationalizing the economy took place. Under that legislation's Decree No. 17199 dated 18/08/1964 and in Article 1, cooperatives in Lebanon are defined as:

“... each association consisting of persons with unlimited capital and not aiming for profit ... and whose aim is to improve the economic and social status of its members by concerting their efforts in accordance with the principles of public cooperation.” (translated from Arabic). That definition was reiterated by the ICA in their Legal Framework Analysis National Report of Lebanon as: *“any non-profit association composed of persons, having a variable capital, established according to the provisions of the present law whose objectives is the improvement of the socio-economic conditions of its members by joining their efforts according to the general principles of cooperation”* (ICA, 2020, p. 4). The first look on the definition of cooperatives under national law highlights the important weight that the Lebanese government places on paper on the joint cooperation between members and where this character distinguished them in their business form from other types of enterprises. A simplified explanation of the different types of organizations in Lebanon can be found in Table 17.

Yet, Lebanon in its different governments has been criticized for not always following through with the proper implementation of its enacted national laws. By law, cooperatives are limited to the local geographical scale and can be established with a minimum of 10 members. Only one cooperative per specific objective (i.e. set of activities) is permitted to be established in any one village unless the number of inhabitants surpassed 20,000 people. This therefore positioned the cooperatives within the local spaces of their villages or towns as is the case with cooperatives in France for example (Peres et al., 2010), making them typically territorial and local organizations. Additionally, under the framework of the law, the cooperative movement is further encouraged by their exemption from various taxes such as the profit tax, VAT, municipal renting and construction taxes, contract fees, real estate taxes, vehicle importation taxes, stamp taxes, laboratory testing fees from affiliated laboratories, and others. However, the national legislation of cooperatives in Lebanon remains tailored to agricultural cooperatives and is lacking in the differentiation of legal text for other categories of cooperatives while is rather ambiguous in its interpretation. A deeper investigation and critique of the national cooperative law can be found in section 4.3.2.

Table 17: Key terms relating to the main types of organizations existing in Lebanon and their definition. Source: (Al-Saadi et al., 2016)

Type of organization	Definition
Non-governmental organization (NGO)	A civil association dissociated with governments. It is non-profit and often volunteer based. NGOs may seek to provide social or political services, or advocate for policy change.
Cooperative	An organization or enterprise that is managed and owned by its members and by those who use its facilities and services.
Social enterprise	An organization that applies commercial strategies to prioritize human and environmental well-being over profit.
Profit organization	An organization concerned with making revenue, returns, or proceeds in its work.
Non-profit organization	A non-business entity, which uses its surplus revenue to further achieve its mission, rather than as a means to earn money.

After the national cooperative law was enacted, The National Union of Cooperative Credit (NUCC) and the Lebanese Federation of Cooperative Societies were established in 1968 and 1969 respectively. Following the promulgation of the national law in 1972, the cooperative sector took off and that was further boosted by the establishing of the Ministry of Housing and Cooperatives in 1973. However, the onset of the civil war in 1975 and its extended duration to 1991 resulted in devastating effects on the cooperative sector as it has had on many other humanitarian, economic, and social aspects of the country. It was during these times that almost one million Lebanese people were displaced (NRC/IDMC, 2004) and with significant numbers migrating internally to the city and its suburbs (Esim & Omeira, 2009) leaving villages with previously active cooperatives empty and stagnant. When the civil war ended, reconstruction efforts were not equally distributed neither in the sectoral nor geographical forms. Post-war reconstruction focused on the city of Beirut and encouraged the rise of the tourism, services and trade sector. This left the productive sectors (agriculture and industry) and their associated cooperatives much more marginalized just as many rural regions located at the extremities of the country. The Lebanese economy from that point forward became much more rentier and much less productive. As stated by the ICA in their National Report on the Legal Framework Analysis for Lebanon, this type of policy directly resulted in the dissolution of the Ministry of Housing and Cooperatives and annexing the Directorate General of Cooperatives (DGoC) to the Ministry of Agriculture (ICA, 2020). This act resulted in the direct focusing on the revival and prioritization of primarily agricultural cooperatives at the expense of other categories. At the same time, centralized financing by the NUCC was reported as “never effective as other regions” despite being designed to provide cooperatives with starting credits to launch their businesses. In fact, only 8% of the entire pool of cooperatives found in the country have received such funding in 2018, raising questions of the funding being channeled on political basis (Scolding & Nour, 2020). Despite the great neglect cooperatives faced during the civil war, they later re-emerged thanks to donor funds (Esim & Omeira, 2009). A “boom” in the

number of cooperatives was even registered after the year 2000 following the end of the occupation in South Lebanon (ILO, 2018). From the 63 cooperatives that were registered in 1973, the number then jumped to 695 in the year 2000 (Polat, 2010) and then to an estimated 1,238 in 2014 (MoA, 2014). That number today has decreased to a reported number of 875 according to interviews conducted with the staff of the DGoC in 2021 as a result of a decision taken to dissolve 300 cooperatives believed to be inactive (Scolding & Nour, 2020). The evolution of the number of registered cooperatives in Lebanon can be found in Figure 47.

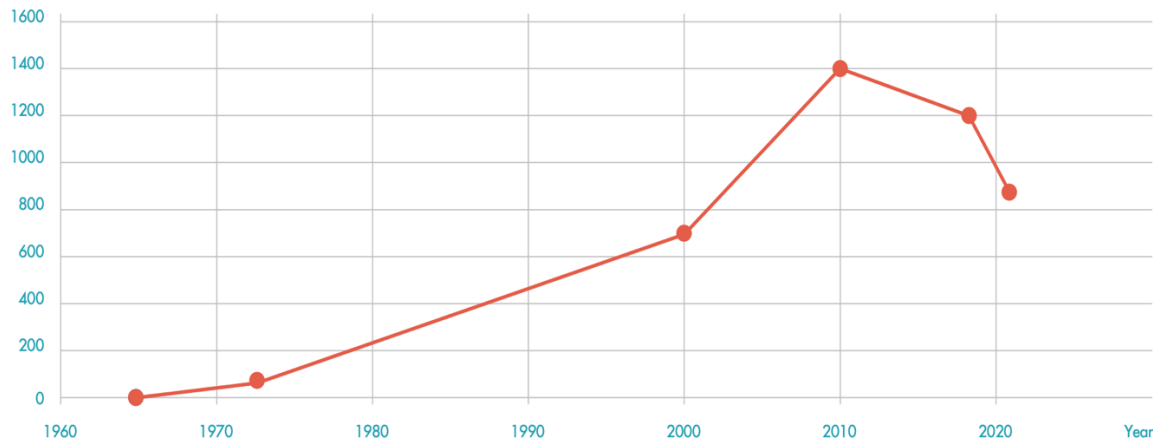


Figure 47: The changes in the number of registered cooperatives in Lebanon between 1964 and 2020. Source: (Scolding & Nour, 2020)

Today, the cooperative sector is organized at the different geographic scales including at the sub-national, national, regional and international levels. Sub-national and national organization are executed by the DGoC and its regional offices (Map 27) while the Lebanese Federation of Cooperatives (LFC) since its establishment in 1968 consists the apex organization that represents the movement at a national scale and to which membership is mandatory by all cooperatives on the Lebanese territory. The international organization is normally performed by the ICA as it is for the international arena. Yet, the capability of the DGoC to properly regulate the sector has been also criticized for low staffing and for inaccuracy of information and data on the cooperatives themselves including number, status (active or not), and correctness of contact information (Scolding & Nour, 2020). As for the regional organization, the National General Federation of Lebanese Associations was a member of the Arab Cooperative Union (ACU) which was founded in 1981. However, a quick online inspection reveals a declaration by the Union of International Associations (UIA) regarding the lack of any reported activities registered by the ACU since 2005⁸². Latest figures report that over half are registered to function as agricultural cooperatives (Dal et al., 2021). The remaining sectors constitute much lower proportions, as shown in Figure 48, with food processing at 12%, habitation at 9%, and dairy at 7%.

⁸² Available at: <https://uia.org/s/or/en/1100013853>



Map 27: Mapped location of the central administration (Directorate General of Cooperatives) in Lebanon and its regional departments. Source: (Osta, 2020)

Cooperatives are also well distributed around the country and their highest number (30%) is registered in the governorates of South and Nabatiyeh while their lowest is in the capital governorate of Beirut (4%), knowing that the primordially agricultural governorate of the *Beqā'* is not far behind at only 7% in the *caza* of *Zahlé* (ILO, 2018). It should also be noted that a much higher percentage (14%) of small-to-medium enterprises (SMEs) is found in the economic center Beirut compared to cooperatives. The reason behind the concentration of cooperatives in rural spaces is due to the nature of their activities, meaning by being located in proximity to their resources and benefiting members (Daleel Tadamon, 2020). One of the main reasons behind the establishment of cooperatives was to help create income generating opportunities for limited-income and poor families and especially those that reside in Lebanon's rural regions which are much more marginalized than the urban settings or towns with higher concentration of population. Cooperatives therefore were strategized as rural development tools for their potential in contributing to the economic fabric of towns and villages. This dual objective equally served to sustain the rural population and help reduce rural-urban migration which is a widely common phenomenon in Lebanon since many years (Osta, 2020). Many success stories have been achieved by the cooperative sector around Lebanon and many of these belong to women cooperatives working in the transformation (processing) of fresh produce into traditional preserves. In fact, women cooperatives, which are estimated at 125 cooperatives in the country, are said to be more successful today than their male-dominant agricultural counterparts. Despite that observation and the tremendous prospects at the time, the sector has however evolved from an economically active sector to one that is much more passive and highly dependent on funding. Many reasons are attributed to that passiveness but were mainly driven by the effects of the 1975-1991 civil and its negative

impact on infrastructure, internal migration and re-sharing of the socio-geographic rearrangement of the social fabric of the country on politico-sectarian basis. The results were an increased level of inorganization caused by lack of proper or coherent planning at a sectoral level, poor legal framework, weak official regulation, strong political influence, and others. At the same time, international aid saw cooperatives as strategic bodies capable of achieving collective impact in the marginalized rural environment, meeting development objectives of donors and their bridging with the local context. This further encouraged cooperatives to seek sources of funding individually, thus, adding to the loss of organization and skewing from original objectives caused by these enticements rather than prioritizing member needs and creating a spirit of dependency rather than autonomy.

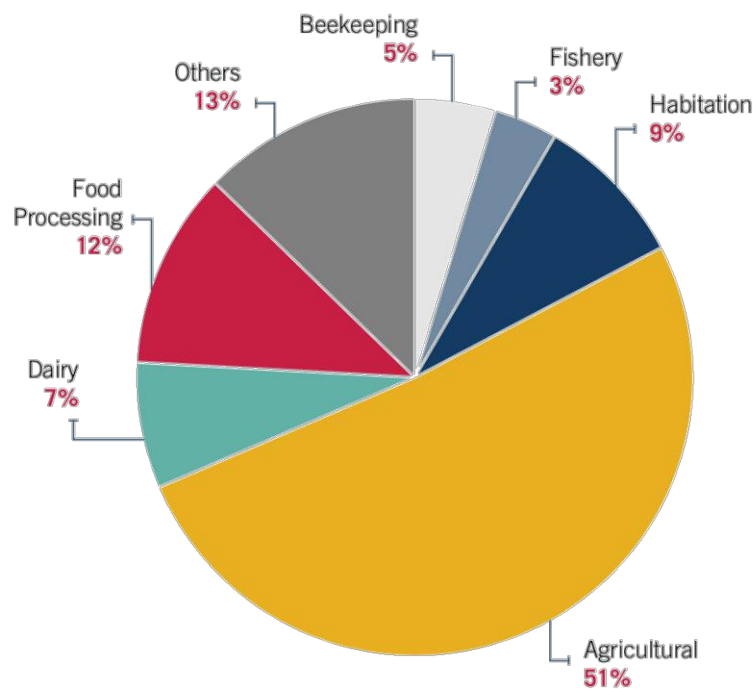


Figure 48: Distribution of cooperatives per sector of operations using data from 2017 collected by personal communication by the author of the report with the DGoC. Source: (ILO, 2018)

Box note 16: The difference between agriculture cooperatives and food-processing cooperatives

The way that agricultural cooperatives operate in Lebanon is normally by working with farmers who themselves conduct their cultivations independently and separately at an individual level. The cooperative extends services to each of its farmer members and possibly non-members according to its scope of work, such as for example in the provision of seeds and inputs, or extension services, equipment use, storage or cooling, marketing, training, etc. Each of the farmers is therefore a separate producer who is capable of cultivating with or without the existence of the cooperative but seeks the services of the cooperative for their collective benefit and added-value services. Their dealing with the cooperative is usually performed on the basis

of certain factors such as size of production capacity of each individual farmer, their capacity, quantity of produce supplied to the cooperative, etc. On another hand, food processing cooperatives in Lebanon comprise of atelier-like production centers in which the mostly women members group together to transform primary agricultural produce into processed end products; i.e. preserved *mūne* foods mostly. The production ateliers (micro-to-small-scale processing centers in the majority of cases), although they vary in the advancement of their equipment and set-up, are equipped with the necessary tools which the group of members can use to perform their operations. For the most part, cooperatives working in food processing are led and managed by women and mostly engage in the preservation of traditional *mūne* foods (ILO, 2018). These types of cooperatives therefore offer a centralized production center that is equipped and should be normally compliant to the basic norms of food safety and hygiene, such as for example be installed with tiled floors and walls, utilizes stainless steel surfaces and tools that come in contact with food, apply quality control measures using pH meters, refractometers, thermometers, etc. The equipped and compliant center is put to use for women members of the cooperative to group together. Women in this case, or the producer, conduct their processes together and it is their collective effort that results in the cooperative's end products. Each member therefore does not perform any production separately at their individual level as is the case with agricultural cooperatives. This is also due to legal restrictions which impede household food processing activities destined for the market. This is how food-processing cooperatives behave as worker cooperatives rather than productive (or agricultural) cooperatives that deal with separate producers collectively. In the case of Lebanon, the national cooperative law does not provide clear distinction between the different categories of cooperatives. This raises many questions and ambiguity in interpreting the legal framework and especially in points that differ between one category of cooperatives to another. The national law is instead tailored to agricultural cooperatives and important issues such as the size of a member's dealing with the cooperative versus distributed dividends are not clearly elaborated for food processing cooperatives. A deeper reading of the national cooperative law is found in section 4.3.2.



Photo 17: Cooperative women preparing eggplant *makdūs* at the production center located in the Northern *Beqā'* Valley. Source: Taken by the author in summer 2018

Cooperatives in Lebanon have been described most recently by the FAO in 2021 as a weak sector with mostly inactive (dormant) cooperatives that have limited access to markets, are inefficient in their collective activities of providing services to their members, and that are focused on receiving funds from external bodies as international donors, local development agencies, and the state (Dal et al., 2021). The same report mentions a weak link between cooperatives and the food industry characterized by less than 5% of cooperative sales. Similar dynamics are also mentioned in the cultivation of fruits and vegetables as well as citrus and banana farming. In these value chains, low levels of cooperation are noted along with ineffectiveness in both sales and marketing and farmers not even belonging to any cooperatives. Many sources estimate that only 10 to 20% of registered cooperatives are active, i.e. have actual operations, whereas the remaining are phantom or dormant cooperatives that are only registered on paper and are said to have done that to obtain external funds, equipment, or various support from donors, the state, or officials (Dal et al., 2021; E. Y. Ghadban, 2013; ILO, 2018; McKinsey & Company, 2018). Some have even clearly state that such activities were meant to channel funds for the purpose of mobilizing and attracting farmers and rural voters during election campaigns (E. Y. Ghadban, 2013). Such statements greatly affected the reputation of cooperatives in the country within the opinion of the general public and were unfortunately only reasserted by scandals involving embezzlement and fictitious cooperatives receiving public funds (Adwan, 2004; Esim & Omeira, 2009). Another reason why cooperatives in the country are lacking behind in their effectiveness to this day is because they suffer the consequences of a fragmented and heterogeneous agricultural sector that is still highly informal. The farming population in Lebanon is aging with the average age of farmers being around 52 years and only 2% being younger than 24. Most are small scale with 70% of farmers cultivating plots smaller than 1 hectare and distribution of land use varies to a great

extent from one region to another. Added to that is the inability of farmers to organize whereby only 4.5% of them are associated as members in cooperatives (Saade et al., 2021). This low percentage was attributed to the low attractiveness of cooperatives to farmers and having cooperatives not comply with the principle of open membership (ILO, 2018). All these characteristics create barriers in the face of establishing cooperatives, their ability to provide services that would meet the needs of their members, and thus in their positioning as attractive organizations with a good reputation to attract potential members. Even the Directorate General of Cooperatives (DGoC), the main official regulatory body, itself acknowledges the fact that the cooperative sector in Lebanon still has a long way to reach its potential. In the opening of the “Introduction to Cooperative Societies in Lebanon” guideline published by the DGoC in collaboration with the FAO in 2020, the representative of the FAO in Lebanon stated that in Lebanon:

[Translated from Arabic] “[...], the cooperative sector has not yet lived up to expectations in terms of performance, governance, effective participation in the rural economy, or gender equality, despite recording a number of very successful experiences. This is due to a set of complex and interrelated factors and circumstances that many initiatives and projects have not been able to transform into the components of a prosperous sector”

*Opening statement by Dr. Maurice Saade,
FAO representative in Lebanon at the time,
Introduction to Cooperative Societies in Lebanon.
(Osta, 2020, p. v).*

The text continues to describe two main problems that emerge from such a context. The first consists of having a traditional culture that marginalizes and limits the position and roles of women in society in general and in the economy in specific when compared to men and which is considered a stereotype which should be overcome with cooperatives. The second problem is described as the need in changing the practices and approaches that have been extended to provide support to cooperatives which, although intended to promote sustainability, have instead created a philosophy of dependency on external funding. The survival of today’s cooperative sector is however highly dependent on external donor aid. This situation could be described as a double-edged sword. On one hand, donor support is urgently needed to sustain the survivability of small businesses as cooperatives especially in extreme times of uncertainty and need as is the case today during the post-2019 economic crisis. However, the consistency in the provision of external support creates a state of dependency for the cooperatives and thus undermines their principle of autonomy.

Despite the many and serious challenges, the cooperative sector remains a sector that is recognized for its strategic potential for development. It is able to attain benefit at a collective level for a group of producers together by pooling their resources, reducing their individual production costs, and help create income and improve negotiation power in face of middlemen. This last point is especially important since the agricultural sector in Lebanon is highly controlled by middlemen and private traders who maximize their own profit margins and minimize that of the farmers and small producers. This type of manipulation and systemic

inequity in turn further marginalizes producers and increases the gap between primary producer and end consumer, making profit distribution highly unfair and skewed. Cooperatives therefore can help mitigate such dynamics and empower the position of agricultural cooperatives in face of private middlemen. The same can be thought of for food processing cooperatives. In addition to the same advantages help by being a cooperative model of business, this type of cooperatives can channel benefit specifically to women and therefore contribute to gender equity and empowerment of women in the otherwise marginalized rural setting. These cooperatives are also operating in a valuable activity which is the traditional preservation of *mūne* foods and which end product hold an added-value that is in high demand in the country. Other than being a vector of cultural heritage, *mūne* foods are able to contribute in decreasing the risk of food insecurity for many households, which is an activity conducted historically across many generations and is only being unfortunately revived today during the crisis. Since 2018, the management consultancy firm McKinsey & Company reported the agricultural sector as one of 6 “productive” sectors that could be utilized for development in Lebanon. In addition to recommending support to agricultural cooperatives, the report advised focusing specifically on the local food sector. Today during the post-2019 economic crisis, an increased interest can be seen around the topic of cooperatives in Lebanon, and specifically those of women food-processing cooperatives, reflected by the increase in frequency of publications. Yet, despite this interest being in its early stages, much-needed fundamental information is still needed (Akiki, 2019; Dal et al., 2021; Daleel Tadamon, 2020; Gholam, 2022; Saade et al., 2021; Scolding & Nour, 2020; UNDP, 2020).

The next section will provide a deeper look into the characteristics of food processing cooperatives located in the *Beqā'* valley's two governorates; the *Beqā'* and the Baalbeck-Hermel. It will provide an elaboration of the mobilized methodology and data analysis procedure followed by a presentation of the results. After that, the attained observations will be positioned in comparison to those noted by other reports which fall in line with the cooperative movement in general rather than women food processing cooperatives in specific. Similarities and differences will be highlighted along with the potential of impact on the territory and rural communities that could be achieved by such unique cooperatives with their main asset; the preserved *mūne* foods.

4.3.2. An in-depth reading and critique of the Lebanese Cooperative Association Law and its implementation

The national cooperative law that is currently proclaimed in Lebanon for the organization of the cooperative sector is described to be outdated and incomplete (ILO, 2018; Scolding & Nour, 2020). It was first introduced in 1964 and was later amended in 1972 then in 1977. The changes that came with these amendments touched three articles relating to the characteristics of cooperatives and the way in which the DGoC inspects the cooperatives' board of directors (Polat, 2010). The final amendment took place almost 40 years ago in 1983 with changes enacted two articles that provide increased monitoring by the DGoC on cooperative activities (.ibid). Since then, no further updating of the national cooperative law has taken place. This section aims to provide a quick dissection of the national cooperative law in Lebanon and highlight both positive notes and certain gaps in its legal texts and in its legislative framework

in the country. Specific articles extracted from the law will be presented coupled with certain set of questions that critique their viability and clarity when it comes for their effectiveness to the entire cooperative sector. Two main documents are used for reference on the national cooperative law in this section and these are the official legislation's Decree No. 17199 which is found on the website of the DGoC⁸³ in Arabic and a simplified guideline on the cooperative legislation produced by the DGoC's Head of Legal Cooperative Affairs Department also in Arabic (Osta, 2020).

- **Clear positioning of cooperatives as local development tools in line with the international seven principles of cooperation and the SDGs**

To start, and as stated earlier, Article 1 of the decree defines cooperatives under the scope of the national Lebanese law as “... *each association consisting of persons with unlimited capital and not aiming for profit ... and whose aim is to improve the economic and social status of its members by concerting their efforts in accordance with the principles of public cooperation.*” (translated from Arabic). This definition clearly shows how the national legislation recognizes the members and the consolidation of their efforts as the pivotal cornerstone of a cooperative. This means that the cooperative is capable of performing economic activities that return back a profit but maximizing that profit is not the aim of a cooperative (hence not profit driven in the commercial sense) but rather in meeting the needs of members to achieve the collective improvement of their socio-economic status. These statements fall in line with the known principles of cooperation globally which are explicitly and clearly stated. The definition by itself therefore builds on the understanding that:

- The most important element in a cooperative is the member and their consolidation of efforts
- Cooperatives do not aim for competition and maximizing profit through investments
- Members contribute to the capital of their cooperative in accordance to their financial capability and extent of need
- Cooperatives are systemically different from commercial companies and from pro-profit enterprises
- Cooperatives should seek to maintain the occurrence of small and medium-scale projects in their various scopes so that to sustain the generation of income

The position of cooperatives in Lebanon in relation to their contribution to the UN's 2030 agenda for the SDGs is also explicitly stated in the simplified guideline on the cooperative legislation produced by the DGoC. It recognizes the potential role that cooperatives can play in rural areas around Lebanon and stressing on their seventh principle of concern for the environment and the community. In fact, the concern of cooperatives for their local community and environment is clearly stated in Article 33 point 2.B. of the decree 17199/64 amended last in 1972 as: “*No more than 5% of the net surplus shall be allocated to construction, social or cultural works decided by the general assembly in the cooperative's working area.*”. Cooperatives are described by the guideline as “*social, economic, and humanitarian organization that apply the spirit of cooperation both internally and externally*” (Osta, 2020, p. 5) and which are capable of promoting social stability and justice while strengthening social

⁸³ <http://www.gdcoops.gov.lb/documents>

bonds around them, constructively investing in potentially innovative ways to finding solutions for communities in their local spaces and thus contributing to enhanced livelihoods. The guideline links the ability of cooperatives in Lebanon to contribute to the SDGs in seven aspects and these are:

- 1) ability to achieve growth thus eradicate poverty and hunger specifically through the agriculture sector;
- 2) acknowledging the role that cooperatives play in empowering women both economically and socially thus enhancing their role while becoming integrated as active members in the growth of their society;
- 3) contributing to the economic growth of cooperative members and residents in their area of activity by creating income generating opportunities and securing decent jobs;
- 4) potential to engage in industry and innovation;
- 5) advantage in protecting marginalized and vulnerable groups therefore reducing inequalities and achieving social justice with the support of the state and donors;
- 6) achieving sustainable communities and cities by assessing the impact of cooperative projects on the environment and focus on maintaining a suitable environmental balance;
- 7) arrive to a responsible consumption and production by increasing production in sound and responsible ways and at a lower cost;

Despite having clear statement by the national law on the positioning of cooperatives in Lebanon in accordance to the ICA's international seven principles of cooperation that organizes the cooperative movement globally, cooperatives in Lebanon have not been found to respect the majority of these principles. These include incompliances in the application of the principle of voluntary and open membership, not prioritizing the meeting of common needs but rather the seeking of external aid, not applying the principle of democratic member control, failure in pooling resources to reduce costs and increase influence (cooperation between cooperatives), no members contributing in economic participation for investments, unapplied principle of concern for the environment and community, constant initiatives by development agencies under the principle of education and training, and therefore an undermined principle of autonomy and independence (E. Y. Ghadban, 2013).

- **Unclear and in compliant geographical delimitation**

The law states that only one cooperative is to be establish per village having a specific objective and per set of activities; or in the case of sub-activities, then the DGoC has the right to take the final decision in issuing the permit for establishment. The only exception to that rule is having a population exceeding 20,000. A cooperative must also clearly state in the name that it uses for registration specific information such as the clear characteristics and type of work it does, and to be preceded by the word "cooperative society" in addition to the name of its headquarters (name of town or village) in which its operations are to be conducted. No other branches can be created by the cooperative in other regions except for securing needs for its business operations such as purchase of raw material or dispatch of sales and market access; on the condition that permission from the DGoC should be acquired. Several problems arise under the umbrella of this article.

First, the official lists of cooperatives registered in Lebanon and acquired by the DGoC show that many cooperatives, especially agricultural ones, tend to structure their names more generally rather than having a sort of specialization. An example of common name structures would be “the agricultural cooperative society of [name of village or town]”, or “the food processing cooperative of [name of village or town]”. Knowing that the national legislation calls for detailing the type of work in the name used at registration, cooperatives probably prefer generalizing their registered names to keep their scope of work open and flexible. As we will later see, the naming itself does not in fact stand in the way of cooperatives in diversifying their activities. In fact, many agricultural cooperatives are today actively engaging in food processing activities despite having other food processing cooperatives existing in the same spatial borders of the village or town, thus raising serious conflict of interest, competition and in compliance with the law.

It is also clear from the earlier characterization of cooperatives conducted in the *Beqā'* valley that there is an overlap of cooperatives that are located in the same geographic scale. Even if the law states that only one cooperative can be established per village, many cooperatives evidently exist in the same territory (village) and have received permission to do so by the centralized regulatory body, i.e. by the DGoC. Examples include two cooperatives found in the village of Ksarnaba in Baalbeck, and several others overlapping in the town of Hermel. Even though the town of Hermel (*not to be confused with the caza level which holds the same name or the governorate level which is called Baalbeck-Hermel*) is categorized as a dense town (Map 22), i.e. having over 20,000 population making it possible to established a second cooperative, in fact much more than 2 cooperatives have been found in that scale. It should also be mentioned that no further smaller official delimitation exists in dividing that town which is relatively one of the large towns in the *Beqā'* valley. This makes that town a single territorial unit in that geographic scale. Towns in the *Beqā'* are also generally significantly larger than those in the remainder of the country. This raises confusion in understanding the limits of villages and towns and makes the jurisdiction of a cooperative in one town highly different than another located in a different town with smaller geographical limits. The issue does not only touch instability in geographic divisions and covered surface area but also in the subsequent population size that the cooperative should be theoretically serving. This problem transcends that of cooperatives and is actually one of the major drawbacks in the lack of access and accuracy in data in Lebanon.

Lebanon is a country with a small surface area (10,452 km²) that has witnessed significant waves of internal migration and external emigration throughout its history. These have greatly affected the distribution of its populations and residents. Today, although some estimates do exist on the distribution of the resident population, it is important to acknowledge that a large number of urban residents have rural roots in villages to which they still visit to this day, even on a regular basis. Not only that, but these urban residents still have their civil status registered at their place of birth; i.e. in their rural villages and towns which are at relatively close proximity to commute to. This is why this imbalance between the number of registered civil status and the number actual residents in a specific town or village could possibly be very different and variable from one place to another (Map 19). That problem further complexifies because certain small villages are joint together under the jurisdiction of a single municipality and population data in Lebanon are far from being clear. A few examples of multiple villages

joint under one municipality include the towns of Fakiha and Jdeydeh (Baalbeck *caza*), Riyak and Hoch Hala (*Zahle caza*), and Sakiyat al Mesek and Bhersaf (Metn *caza*). A question here is posed whether the establishment of cooperatives, since they are encouraged to build on connections with local authorities such as municipalities, is around official delimitations of the level of village-town or at those of the municipality borders they fall under. Whether it be one or both cases, in addition to stating their headquarters, most cooperatives also list several villages and towns in their surrounding as territories to which their services extend. On many occasions, the same villages overlap, and the same ones are listed by multiple cooperatives as entering in the territories which they serve. Lebanon is ultimately one of the smallest countries not only in the Middle East (second smallest after Bahrain), but also globally. It is therefore understandable how cooperatives will be enticed and even obliged to expand on the territories in which they can conduct their business to survive and especially since it is common for cooperatives in nearby villages to be divided by only a few kilometers. In fact, some scholars and national experts have debated the efficiency of limiting cooperatives in Lebanon to their local spaces and some have called for a change in the legislation for that article⁸⁴. Yet, we have seen in the results of the characterization that women food-processing cooperatives in Lebanon are not exactly not entirely restricted to the borders of their territories (villages or towns). They usually do procure raw material from local farmers in most cases and acquire labor force from their environment. Yet, they are also strongly connected in the marketing and sales of their products to their expanded regions and also urban cities such as the largest city in the *Beqā'* valley, *Zahle*, and the capital of the country, Beirut. This reflects a high flexibility in which cooperatives are able to operate both within their local territory, therefore using their local assets, and in transferring their products to other spaces thus improving their outreach. This specific issue has been also noted for cooperatives in France where their similar geographical bounding by law did not actually restrict their activities with commercial firms thus extending their factual spatial reach. (Peres et al., 2010).

- Lack of clear differentiation between agricultural and food processing cooperatives

As stated previously, food processing cooperatives differ from their agricultural counterparts in Lebanon. Unlike agricultural cooperatives that serve a group of independent farmers by supplying services such as procurement and distribution of seeds and other inputs, collective purchasing, marketing and sales, food processing cooperatives on the other hand provide a centralized atelier-like workshop. That workshop, i.e. small equipped processing centers, women group together to conduct the transformation of fresh produce into preserved *mūne* foods. Food processing cooperatives therefore have a strong resemblance to what is known as workers cooperatives rather than farmers or producers cooperatives. Individual women are not able to produce separately from their group and their cooperative. This innate difference should normally be reflected in relevant articles in legal texts in order to clarify the

⁸⁴ For example, the debate attended by the author during a workshop at the American University of Beirut, Faculty of Agriculture & Food Sciences, on 26 and 27 June 2018 titled: "Climate Smart, Innovative Food Preservation and processing Technologies Applied by Women in Rural Environments in the Near East and North Africa".

specificities of each and the methods in which specific articles of the law apply to each type. Without that clear differentiation, then it would be very difficult to effectively regulate the cooperatives belonging to different sectors and having different types of operations. Attention on the cruciality of this point has already been raised such as by Euricse (European Research Institute on Cooperative and Social Enterprises) in their 2013 International Handbook of Cooperative Law. In its second chapter, the author Hagen Henry (2013) reports that the clarity in a legislation's differentiation between the working of different types of cooperatives helps in illuminating on the dual relationship that each member hold with their cooperative (organizational and transactional). This in turns helps in avoiding many problems such as the division of surplus which is based on the proportion of transactions conducted per member. Although some countries have adopted a general cooperative law and a subsequent specific cooperative laws per category, Lebanon has yet to do so. No clear differentiation exists so far. The officially amended legislative text mentions this point very briefly in Article 39 as:

[Translated from Arabic] The work of cooperatives can cover various fields of human activities, and its objectives are to work for the benefit of its members, either to facilitate and organize the practice of their work and activities of various kinds, or to provide and secure what they need in goods, services, means and materials, etc... or to improve the quality of goods, services and materials that are provided to them or that are produced by them and presented to consumers, either marketing and selling their production, its packing, or converting and manufacturing collectively.
*Article 39 of the Decree Nb. 17199/64
last amended in 1972*

The simplified guideline on the national cooperative law in Lebanon categorizes cooperatives in 8 divisions but does not provide any further elaboration on how they differ in their operations or subsequent relationship to the law or with their members. In fact, it categorizes food processing cooperatives together with agricultural cooperatives and any other type of cooperatives that could exist under the agri-food value chain. It only lists 8 categories as follows:

- Agricultural cooperatives: those engaged in any activity that enters in the frame of agriculture and its value chain, and include for example agricultural production, processing, packaging, cold storage, marketing, and so on.
- Cooperatives for savings and credit for housing.
- Cooperatives for savings and credit.
- Consumer cooperatives.
- Artisan or craftsman cooperatives.
- Cultural cooperatives.
- Environmental cooperatives.
- Cooperatives relating to any other economic activities.

When categorized in that manner, crucial points in the law become obscure and especially those that detail the size of transaction conducted by each member and upon which the size of the dividends they are to receive is specified. The national law in Lebanon addresses this point generally and in what applies to the model of agricultural (productive) cooperatives directly

but not to others. In addition to specifying the mechanism of how the surplus is to be divided between reserves, the Article 33 of the Decree 17199/64 specifies the rates at which members are to receive interest on their shares and states that the remaining surplus is to be distributed to the members. This is where the core issue with this legal text exists. The distribution of interest rate for members is clear and the decree explain that the specific rate is to be specified in the internal by-laws of each cooperative provided that it does not exceed the rate specified by the NUCC and that the total amount of interest to be paid not to exceed 25% of the amount of the surplus. However, the decree only simply states that the dividends, referred to as ‘the return’ received by each member, is on the basis of the size of ‘*how much a member has dealt with the cooperative*’. This ‘dealing with the cooperative’ is not further elaborated but is normally understood by legislation of other countries as the size of transaction dealt between a member and their cooperative (size of services received and/or products supplied). This could be easily calculated in the case where a cooperative deals with a group of separate producers who the cooperative serves. That is not possible to perform in the case of women food processing cooperatives in which working members do not transact any size of produce but are actually tasked in working hours to process foods at the equipped center of the cooperative. In addition, the guideline mentions another direct benefit pertained to members through their cooperatives and that is by their receiving of services which are at a lower cost (i.e. cooperative price) than that of the market. This point is also not applicable to food processing cooperatives since the services they receive is for the most part in the form of working hours. Producer cooperatives on another hand are capable of applying that by receiving inputs (seeds, fertilizers, phytosanitary products, technical support, etc.) and access to use machinery or equipment collectively and at a lower price than the market. The national decree should therefore specifically consider the core difference that exists between agricultural cooperatives and food processing cooperatives (or other types) in Lebanon. This recognition and distinction will help in clarifying the different financial mechanisms of different types of cooperatives and avoid risking the treatment of women members of food processing cooperatives as simple workforce being paid wages by the hour.

- **Encouraged seeking of external aid**

The encouragement to seeking aid is not explicitly mentioned in the national legal text of the decree but rather explains how cooperatives are permitted to accept donations and grants. However, the simplified guideline is produced by the DGoC and therefore reflects how the official regulatory body of the cooperative movement in Lebanon reads and understands that text and under which the spirit of seeking aid from external sources is evidently highly encouraged by the DGoC. In multiple sections through the guideline, such clear statements are made:

- In their explanation of how cooperatives are well suited to contribute to the UN’s 2030 Agenda of the SDG, the guideline states that cooperatives are capable of [Translated from Arabic] “*Reducing inequalities through achieving social justice and protecting marginalized and vulnerable groups within the same society **through the support of the state and the parties supporting the cooperative sector***” (Osta, 2020, p. 5); thus considering external aid by both the state and other external agencies as a means to achieve support and protection of marginalized social groups.

- In the section that depicts the conditions for establishing cooperatives in Lebanon (being individuals with limited income, have the Lebanese nationality, be minimum 18 years of age, etc.), the last condition, which is condition number 6, in fact clearly states that: [Translated from Arabic] “*The applicants should be of low and middle income, in order to be able to benefit from the support of the state and donors for this sector*” (Osta, 2020, p. 7). This statement not only encourages the seeking of external aid but even stresses on the importance of their receipt by cooperatives. The same section is even further supported by a schematic diagram that depicts an equation showing how governmental spending (supposedly directed to cooperatives) is believed to result in the preservation of the middle class and in contributing to economic growth. This diagram is translated in Arabic in.

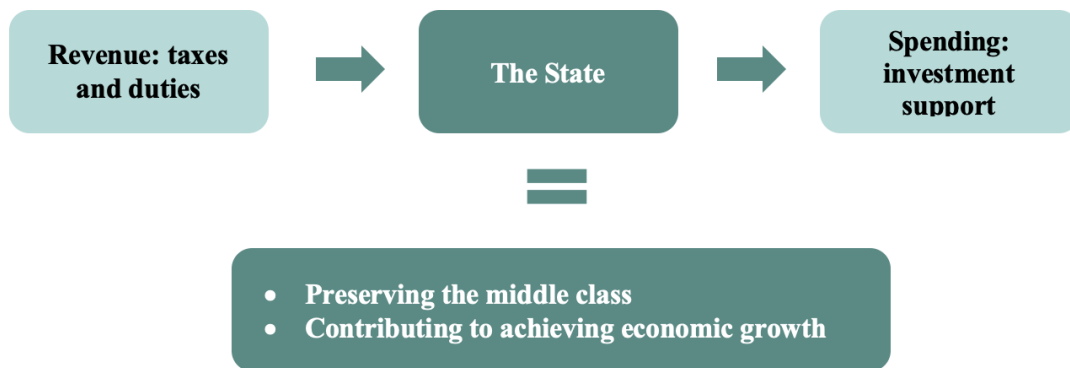


Figure 49: A schematic diagram depicted by the DGoC in explaining how government spending through cooperatives can achieve the preservation of the middle class and economic growth. Source: (Osta, 2020, p. 7)

- In another section, the DGoC explains that it also prioritizes the support of cooperatives by funding exhibitions through which cooperatives are able to access end consumers and achieve their sales. Cooperatives are seen as organizations with the weakest link in the production chains and this is why efforts in supporting the access to markets through exhibitions is believed to be important especially since this type of support is weak or lacking. The DGoC very clearly expresses that its interest is not only limited in the provision of support during exhibitions (which actual extent, frequency and application is not entirely clear), but it actually aims to introduce cooperatives to relevant stakeholders engaged in supporting the cooperative sector in Lebanon, such as international donors and NGOs. The statement is formulated as: “*In this context, we are interested in clarifying the purpose of support by the Ministry of Agriculture - the General Directorate of Cooperatives for Exhibitions, as this support is not limited to assistance in marketing the production of cooperative societies and the immediate financial results that are achieved through the sale of cooperative products during the exhibition, but also aims to introduce the stakeholders, who are relevant in supporting the cooperative sector including international organizations and those working in the marketing of cooperative products, to the quality of their production as well as their prominent features with the aim of opening new markets for*

production enterprises and ensuring the sustainability of the production process” (Osta, 2020, p. 32).

- Not only are individual cooperatives positioned to attract external aid, but its significance is further transferred to the collective cooperative organizations such as the NUCC. In fact, the guideline states that the financing of the NUCC is actually dependent not only on advances from the Lebanese state treasury but also depends on funds received from international organizations and even names an example of such sources of aid including the European Union. The statement is formulated as: *“The financing of the Union depends mainly on treasury advances provided by the state and advances from supporting parties and international organizations interested in the cooperative sector with state sponsorship, such as the European Union”* (Osta, 2020, p. 34). The section continues to describe how the NUCC is working with the concerned authorities as the MoA so that to provide advances to cooperatives so that to transfer the movement from a rentier to a productive sector. However, the NUCC is not considered effective in its provision of credit support to the cooperative movement in Lebanon. Its efficacy has been questionable especially since only 8% of all cooperatives registered in Lebanon have received funding in 2018, thus raising questions of political influence (Scolding & Nour, 2020).

The above encouragement of cooperatives to seek funds is almost like a call made by the DGoC and adds to the serious problem and complications that rise from it. It first makes cooperatives behave as if the receiving of funds is an objective to which their organization becomes stimulated by. By becoming an objective, cooperatives would thus tend to easily skew away from their original objectives which are to meet their member needs and would be tending to accept assistances which do not necessarily suit their activities. The worst-case scenario, which is not uncommon in Lebanon, is to have cooperatives established for the objective of receiving aid, thus making some of them phantom (or dormant) cooperatives, and the worst of all would be cooperatives being used to channel funds destined for political mobilization of local communities. Second, such dynamics driven by the objective of attracting foreign aid greatly adds to making cooperatives more inactive in their operations and more dependent on that aid and thus becoming stagnant shell organizations that do not attain any real benefit. Finally, these conditions would mean that the centralized and official regulatory body of the Lebanese state (MoA’s DGoC) is in itself encouraging the undermining of the principle of autonomy and independence thus affecting the viability of the entire movement around the country. However, the issue of aid today is a highly critical topic since the country is in dire need today given its suffering from the hardest economic downfall of its modern history. Despite the seeking of international funds by a developing country and practically bankrupt country as Lebanon in such unprecedented and urgent conditions is understandable and the survival of small-scale producers as cooperatives would be highly unlikely without any external support, the trend of being dependent on external aid is not a new phenomenon. It would be only logical to seek the aid of other countries during crisis and for a limited period of time during which urgent and impactful recovery initiatives would be implemented. This is however not the case in Lebanon. The entire Lebanese state has a long history, especially since the end of the civil war in 1990, of positioning itself in an attractive and capable light in the perspective of the international community so that to receive substantial aid on a repetitive

basis. The return for these aid have been a long-awaited achievements in various types of promised but repeatedly failed development such as generation and supply of electricity, public transportation, education, health, communication, agriculture and food, and many other basic services. Even MoA's former Minister of Agriculture in the most recent 5-year National Agriculture Strategy (NAS) 2020-2025 calls upon international donor agencies to prioritize the information shared in the NAS to help guide and strategize their initiatives (MoA, 2020). On one hand, the position and potential of cooperatives has been acknowledged by the 2020-2025 NAS and a specific section was allocated for their attention. This is Program 3.5: "Promote and organize cooperative work and farmers' associations and groups at the level of the value chains (targeting smallholders producers)"; which falls under Pillar 3: Enhancing efficiency and competitiveness of agrifood value chains. Yet, the documented recognition and positioning in the NAS is not considered as enough especially since the same has been repeated in past NAS such as that of 2015-2019 but which did not attain any significant results.

Finally, it is worth mentioning that many of the points highlighted above have been equally voiced in recommendations by the ICA in their 2020 legal framework analysis of the Lebanese legislation. The ICA specifically notes on four specific recommended amendments and one general recommendation. These are (ICA, 2020, pp. 8–9):

- Means of notification to attend the general assembly (which is still outdated and requires written and delivered by hand)
- Incorporating gender equality
- Reducing bureaucratic procedures that are time consuming need revision
- Issuing specific laws to each kind of cooperative, rather than changing the current law
- Finally, the ICA acknowledges the challenge of implementing the national law and in convincing people to work together to achieve a collective form of socio-economic benefit. More importantly, the ICA concludes by recognizing and specifically commenting on the influence that external sources of support play by writing: "*In addition, eliminating the idea of continuous financial support is essential and this should be substituted by self-dependency to ensure sustainability of the cooperative enterprise.*" This is why under the complications carried by the current context; it would only be logical to begin with a reform of the legislation of the national cooperative.

4.3.3. Conventional and post-2019 emerging challenges of the cooperative sector in Lebanon

Before arriving at shaping the cooperative sector for its potential, the challenges the sector faces in the national and current context should be described. This is because, theoretically, cooperatives do in fact hold significant positive potential, but the application of the cooperative model has been shown to be highly diverse from one country to another which equally leads to varying degrees of success. The same applies to Lebanon, whereby even if the legislative documents as shown earlier do portray cooperatives as active players in rural development, the prior section has equally identified significant gaps and areas for improvement in the legislative status. This section will describe additional challenges that exist in face of the cooperative sector in Lebanon. Mainly, the challenges exist at two levels; **internal to the cooperatives**

themselves and **external to the cooperatives** meaning relating mostly to the national context. These include the conventional challenges that existed prior to the post-2019 economic crisis in addition to the culmination of the same challenges after that period along with new emerging ones.

- **Internal factors**

It is important to consider that the performance of cooperatives is not only dependent on the external conditions they are placed in at the local, regional and especially national levels. Many of the challenges faced are caused by internal factors relating to each cooperative independently. Many similarities exist between the cooperatives in general. These could be looked at as in two ways; either **technical or managerial – governance** performance. In many cases, it is the cooperatives' sub-standard compliance to the minimum technical requirements that impede developing the growth of the organization. The requirements are not particularly stated or communicated to the cooperatives in any formal document but enter in the logical frame that the market needs. This is at the basis of growth, the product characteristics, which would therefore complicate all the remaining economic integration if not performed properly. This is also an important point since many cooperatives are not even aware of these requirements and do not consider that they are lagging in their technical knowhow. However, to this day, many cooperatives do not follow a strict or standardized production practice and control. This reflects directly in the quality of end products in issues relating for example to the standardization of recipes (if the same product has changing organoleptic qualities with time as color, taste and consistency), food safety and hygiene (which greatly reduces shelf life and causes common problems on the shelf as molding). If the production chain is not properly established, applied and controlled, then the quality of the end product would be highly variable. This in turn affects the market performance and trust of both consumers and retailers in the product making sales unstable and unsustainable. Technical challenges cover the production process from its start to its end. This means it is inclusive of steps such as reception of raw material, preparation, processing, filling, packaging, labeling, and storage. Each of these steps would normally require a specific set of control and indicators. Systems such as the HAACP have been set in place to reduce and control critical points relating to the risks of food safety during the production process with pre-requisites of the processing center's structure set in systems such as the Good Manufacturing Processes (GMP). It is not quite known whether the cooperatives follow such systems or not. Rarely are they certified but they declare that they have been highly trained in such topics. Yet, some cooperatives are still facing challenges in the quality of their end products which indicate a deviation from such control systems or the probable incompliance to a standard recipe. Technical challenges also touch on the labeling quality which, as seen in the results, is highly variable from one cooperative to another. Labels remain an important tool of communication which conveys information directly from the producer to the end consumer. If the label is unclear or is missing major information as nutritional facts, ingredients, special storage condition, allergy notices, contact information, etc., then the knowledgeable consumers of today would grow uneasy and lose trust in the brand even though it serves a socio-economic objective. This stands true even in the rare cases where third-party re-sellers are to provide the label themselves. Information should be shared in a transparent and clear manner, which in many cases, the cooperatives themselves do not seem to have the technical capacity to handle. In addition, and as results show, most cooperatives

produce limited quantities with their production centers being highly variable in the extent of equipping and technology. Some still use relatively primitive means of production which in fact increase the risk of inconsistency in quality especially if quality control tools are not properly applied either. Other than the issue of actual equipping, many cooperatives are still behind in their integration of information technology (IT) or any form of digitalization of their processes and logistics. This causes greatly limits in any form of traceability or control over processes and even financials. Probably one of the very few ways of doing so would be the annual financial report which the cooperatives are obliged to submit to the DGoC after gaining the approval of their general assembly.

As for the other internal challenge of cooperatives, it generally relates to a **weakness in governance, management and overall non-compliance to the seven principles of cooperation**. Being primarily located in distant and marginalized rural spaces, this means that food processing cooperatives are usually managed by middle aged women who normally are not very apt to have easy access to information. Although many external initiatives have attempted to train cooperative members of good governance and management, many cooperatives still stick to their usual and primitive ways. Many cooperative do not seem to properly understand the principles of cooperation nor the national legislation (which is by itself lacks in clarity). Cooperatives in fact seem to be sometimes managed like private enterprises that are driven by external factors. Some focus on adapting their operations to meet what they consider is market demand whereas others prioritize connections with donors and development agencies to receive aid. Rarely do cooperatives mention that meeting their member needs is what drives the operations. Discussions with cooperatives also did not seem to be directed by any form of strategy. In fact, it was not clear whether cooperatives provide the basic expectations to their members, at least in the case of food processing. It seems that the administration considers that members are benefiting from the creation of employment and their remuneration in return to working hours. This logic means that working members are compensated like regular employees and are not being considered for any additional benefit such as the annual dividends and interest rates. In fact, some cooperatives have stated that they were unable to distribute any of the additional benefits to their members since their initial date of establishment. Other governance issues are also unclear such as in the methods at which cooperatives organize their general assembly or distribute roles across their internal management system. Ghadban (2013) analyzed the extent to which cooperatives in Lebanon comply to the seven principles of cooperation; and many were found not to comply. The study showed that at the initiation phase, many cooperative members did not share any financial contribution to the implementation of their collective group. This leads to a low completion of the required capital which is needed for the implementation of the collective project behind the supposed cooperative project. This leaves such cooperatives undercapitalized and their members not engaging in the financing of the projects from which they should benefit. Even the objective behind the initiation of as much as 80% of cooperatives was noted to receive development aid. This means that from their establishment, the cooperative structure is launched with an unstable foundation and skewed objectives. In terms of the organizational structure, Ghadban's analysis showed that only a few members were aware of the roles and responsibilities and that these few who were in fact engaged in the initiation of the cooperative were controlling the remaining members. This observation revealed major inefficiencies in the organizational structure and in fact occurrence

of mismanagement and even cases of corrupt practices. As for their partnerships, cooperatives were also found to rarely cooperate with each other (only 22%) but by being directed through external sources of development aid. Additionally, no cooperatives were recorded to engage in any community project which is required by law. Even overlapping of managerial responsibilities were recorded along with some chairmen being chairmen in the corresponding municipalities in which the cooperatives were located. Education, which also plays a main position in the principles of cooperation, was noted to be provided from external organizations which provided funds and aid. Even acceptance of new members, which should be open and voluntary, was applied as a form of including new members upon receiving aid projects.

The above elaboration focuses on the major internal challenges faced within the cooperative sector in Lebanon and which reveals major imperfections. It shows that many cooperatives are still facing many technical and management incompliances. Cooperatives are mostly not even acting as cooperatives in their theoretical model and collectively, the movement remains highly inefficient and behind in achieving any significant contribution in the form of member benefit or in the national economy. In addition to those listed above, a report by Daleel Tadamon (2020) dissects internal challenges (as shown in Figure 50) as reported by cooperatives (in red) compared to SMEs (in white). These reiterate certain challenges stated above such as in capitalization and finances, skills, legal awareness, integration of information technology, and overall administrative management. It also adds issues relating to high production costs, marketing, raising awareness on the cooperative project, expanding to new markets, and production methods. Interestingly, it reveals how cooperatives tend to blame their underperformance mostly to financial difficulties, high production costs and marketing rather than acknowledging their own weaknesses in technical skills, legal knowhow, and management.

- **External factors**

Just as much as the internal factors dictate the performance of cooperatives on an individual level, it is important to also consider the impact that external factors have on the creation of an enabling environment. Although the cooperative model of business has been reported as more resilient in face of crisis (Hermanson et al., 2021; S. Smith, 2014; World Cooperative Monitor, 2021), cooperatives in Lebanon are operating in highly unstable conditions which are caused by various reasons but mostly emerging from a **poor state performance and capacity**. Even the establishment of the cooperative movement in Lebanon since the introduction of the national cooperative legislation in 1964 has been highly unstable and has since then not quite reached an effective status. Instead, the performance and development of the sector has been linked with the performance of the state overall. Only a short reformist period has witnessed true efforts for developing the sector and creating social reform and that was during the Chehab era between 1958 and 1970 (Scolding & Nour, 2020). After that, the country went through a destructive 15-year war between 1975 and 1991 during which the sector halted. That period was followed by extensive international interference for reconstruction efforts and it was during that time when the current political system took shape. Unfortunately, the culmination of these factors created a sectarian (religious)-based consociationalist political system based on power sharing.

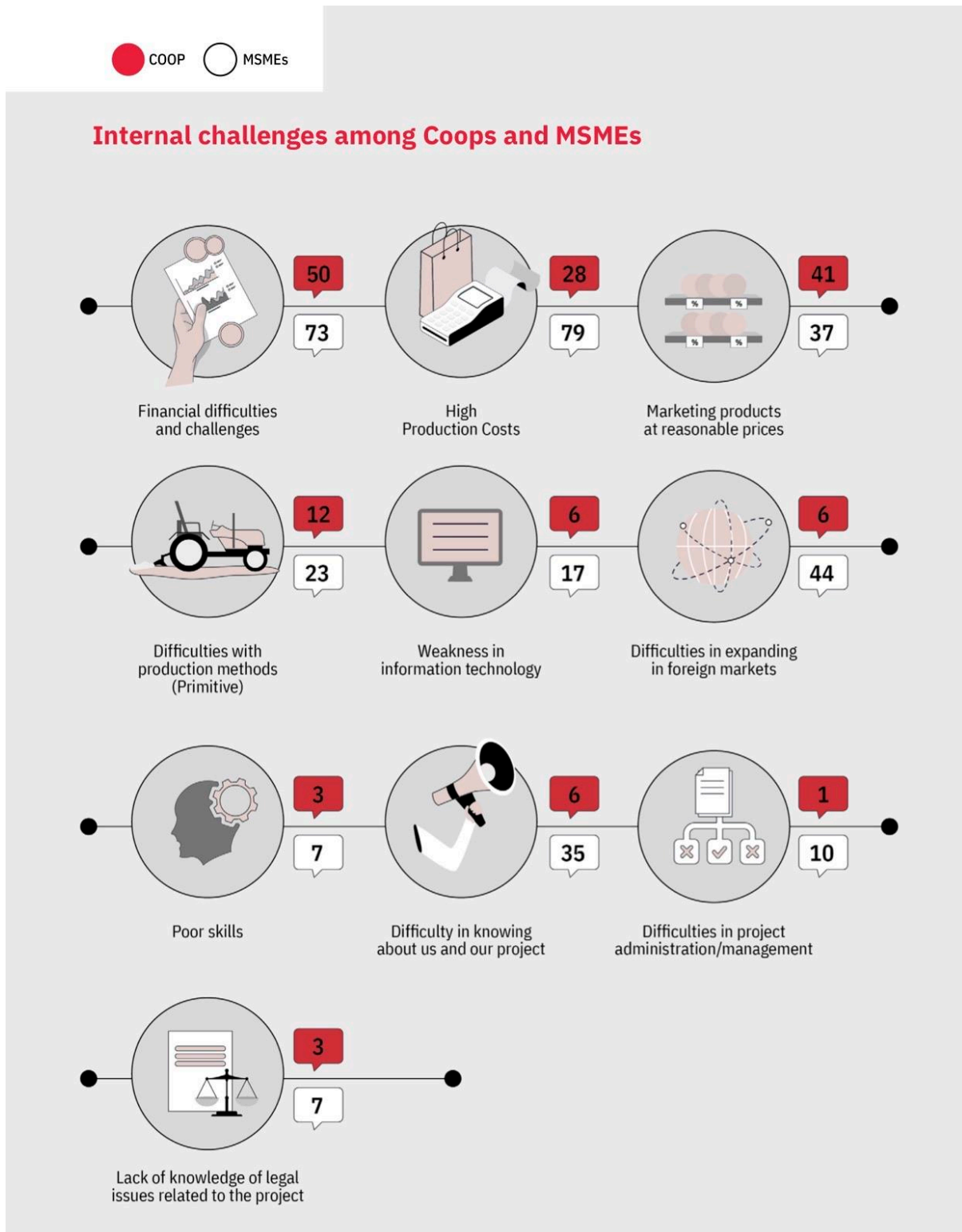


Figure 50: Internal challenges reported by cooperatives (red) and SMEs (white) in Lebanon as assessed by (Daleel Tadamon, 2020)

With reconstruction concentrated on urban areas mostly at the capital of Beirut, this led to the marginalization of rural spaces and that was prominent especially at the extremities of the country. South Lebanon witnessed some rebuilding efforts after the 30-day war in summer of 2006 and women food processing cooperatives actually played an interesting role in the revival of traditional foods on the verge of extinction while creating socio-economic impact (Esim &

Omeira, 2009). Despite the efforts of the international community to stimulate development and reform, **weak institutional and regulatory framework** is still the dominant character. No effective policies have been initiated to truly support the sector and as explained in the previous section, the current national **cooperative law is outdated** and contains many major gaps and unclarities. Just as in the agricultural sector, the government is mostly inactive in taking any concrete action or effective policy, and those that have been taken were limited in their impact. Despite attempting to encourage cooperatives through waivers and tax exemptions, **public institutions are under-resourced and unable to properly control** the sector neither from the central administration of regional offices. As a matter of fact, relevant public bodies have not been even able to control the overlapping of activities between the different types of cooperatives. Many agricultural cooperatives which are supposed to engage in primary production are today conducting their own food preservation and production which intersects with those of food cooperatives and creates confusion and unwarranted competition. Even if cooperatives wished to take initiatives themselves, the **limited access to finance** restricts these ambitions. The formal banking system makes requirements too difficult for cooperatives to comply, usually requesting valuable collateral and property mortgage asset which the cooperatives not only do not wish to risk, but which sometimes amount to values higher than the loan itself. As for the loans offered by the alternative credit system for informal sectors which are mostly micro-credit institutions, these are provided in return for a high interest rate (E. Y. Ghadban, 2013). Moreover, the post-war political system created major **societal and economic complications** which repercussions are still affecting millions of lives to this day both socially and economically. On the social dimension, what majorly touches the women food producers is the fact that women rights and hereditary laws remain primitive. The inexistence of any civil law that unifies social rights of all individuals and women specifically remains the major gap. Individuals are still obliged to this day to revert to religious courts to resolve any family disputes, divorce or inheritance which most of the time leaves women highly sidelined. On the economic dimension, by encouraging a rentier-based economy and by having a national state depending on international aid, the productive sectors themselves became stagnant and these were replaced by a dependency on importation. This dependency grew so much that it is estimated that over 80% of the food in the country is imported (UN.ESCWA, 2016). Not only that, but the raw material required for any productive business is similarly imported. Today, this dependency on importation is being once again highly **compounded by national and international crises**. At the national level, the post-2019 economic meltdown has caused a severe instability and practical meltdown of the economy which in turn fueled major public fears relating to food insecurity, general security and political instability. The crisis has translated into a **devaluation of the local currency** by over 90% and is being faced by a highly unstable increase in the exchange rate of hard currency of the US\$. This has rendered any expense and operational cost multiplied by many folds, knowing that certain suppliers have been charging in the black-market exchange rate and even in the dollarized amount. Subsequently, the already **underdeveloped basic infrastructure** (Verdeil, 2018) has extremely degraded since then and is impeding the execution of any effective production efforts. These for example include massive inconsistency and rationing in the supply of electricity which the conventional private generators also monopolizing on given the fuel costs in terms of pricing and even rationing of supply themselves. Drinking water supply is also

affected along with waste and sewage (mis)management, neglect in transportation substructure, multiplication of communication prices and others. Food-processing cooperatives are being negatively affected by the **multiplied costs of production**. These touch for example on their access to basic infrastructure and services such as electricity and water and also more importantly on the availability of and access to fuel sources. Since the onset of the crisis, Lebanon has also witnessed major interruptions in the availability of many basic food and non-food products such as fuel and medication. At many times, fuel became absent from the country and many people were obliged to wait long hours in queues at fuel stations. This normally affected business operations significantly both in personal transportation potential and also in the supply of fuel for private generators of cooperatives along with that of private suppliers as well. Other costs also multiplied, and cooperatives became forced to purchase imported material which are priced at the high black market or Sayrafa (official governmental exchange platform) rates. These material include for example granulated sugar and glass jars which are not produced locally, whereas their agricultural produce is supplied by local farmers. At the international level, the effects of the **several global crises** that have been affecting many countries have similarly impacted to a great extent the Lebanese economy. During the COVID-19 pandemic, the country was greatly affected by the disruption in food supply chains and especially those caused by reduced international trade. Local public life also came to a halt with the periodic issuing of general mobilization and lockdowns. The period witnessed high levels of public fear, major reductions in personal transportation, and halting of production life altogether. Most recently, the Ukraine-Russia war has been adding a lot of pressure on access to resources as well. Lebanon imports over 80% of its wheat from Ukraine and Russia, and with the destruction of the grain silos in the Beirut Port explosion of August 2020, backup supply has been greatly depleted. This led not only to surging of bread prices, but global fuel and gas prices have majorly impacted the pricing and supply of fuel to the country given the exponential changes witnessed in the pricing given the devaluation compared to the US\$. With fuel and gas being at the foundation of energy in Lebanon, entire value chains and public life have been impacted, including those of cooperatives. The above challenges were also resonated by the Daleel Tadamon (2020) report as shown in Figure 51.

The above challenges have created many complications that manifested into an unstable and sub-optimal context. The cooperative sector remains to this day an **unfulfilled sector that lacks differentiation in both the organizational structure and in end products**. As mentioned previously in section 4.3.2, food processing cooperatives which are mostly owned and managed by women are not distinguished from other types of cooperatives that exist in Lebanon. This legal gap creates major unclarities in essential points which would not only facilitate the working of these cooperatives but also in valorizing their output. For now, issues relating to mechanisms of financial distributions such as dividends remain unclear and this is creating confusion in the relationship of members with their cooperatives.

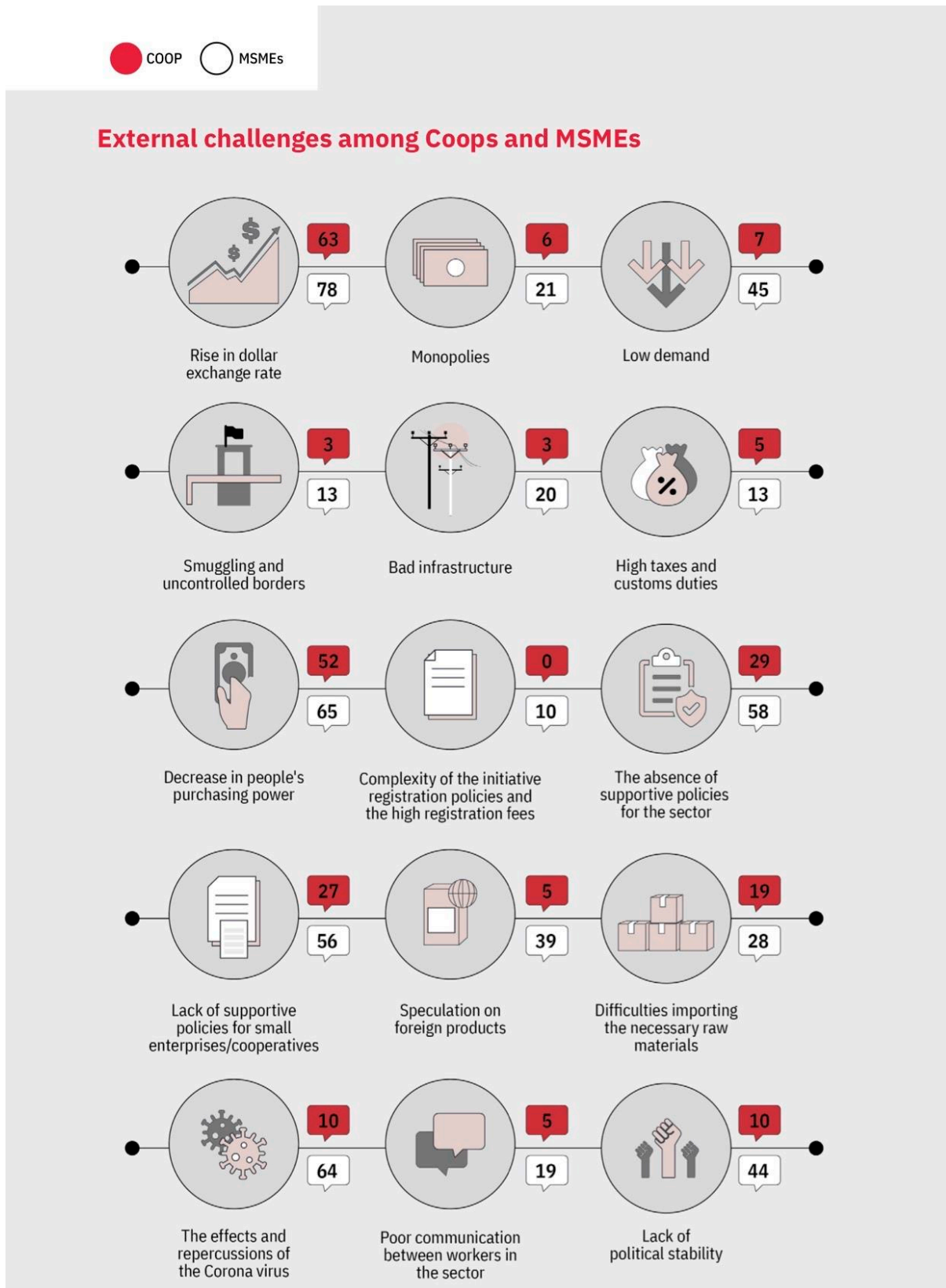


Figure 51: External challenges reported by cooperatives (red) and SMEs (white) in Lebanon as assessed by (Daleel Tadamon, 2020)

Not only that, but the differentiation of their products is non-existent as well. Traditional preserved *mūne* products are not officially recognized by the Lebanese state and do not enter explicitly in any definition or national strategy. This leaves the valuable heritage component of the practice vulnerable, unprotected, unregulated and open to fierce capitalization and appropriation by private large-scale food industries that do not particularly apply the traditional practices, ingredients, recipes, nor local supply of ingredients. These **two essential missing forms of differentiation of producer and end product** impedes any effective valorization and integration into the national and especially the international market.

Other than that, the cooperative sector is **not well integrated together in any value chain**. Cooperatives in the primary agricultural production do not seem to cooperate with nor supply food-processing cooperatives and those in turn do not do so with retail cooperatives. This leaves every type of cooperative attempting to engage in production chains separately rather than capturing and reaching their full potential which is building a parallel value chain based on cooperatives. If fulfilled, such a parallel value chain can in fact channel products differently than the conventional routes and thus work on building the added-value which is in fact centered around locally sourced material and processing. This thus directly benefits the actors in the production cycle who are rural territorial farmers and producers who are directly capturing the maximum possible economic return while building the reputation and trust around their traditional practices. Through cooperatives, such initiatives could be made possible if proper networking and bridging is established to complement the processes across relevant value chains. However, this has not been fully achieved today. Despite certain efforts in doing so, cooperatives still seem to work on a separate rather than collective basis when it comes to cooperating with other cooperatives upstream and downstream. It is only in rare cases, such as for example that with Atayeb Al Rif (Rural Delights) Cooperative (AAR) where some success has been achieved. AAR is a marketing cooperative based in the capital Beirut and which networks with over 40 rural women *mūne*-producing cooperatives from across the country for marketing of their products collectively. Since its establishment in 2002, AAR has in fact expanded its network of beneficiaries. It still focuses on women cooperatives, optimization of their preservation / production processes and overall socio-economic empowerment and marketing of end *mūne* products. Yet, AAR has succeeded in targeting different stakeholders around the value chains and encouraging their networking with various cooperatives. More information on AAR is provided in section 7.3.4. But so far, the general trend with cooperatives is described by their inability to create any sustainable linkages. In fact, only 3.7% of cooperative sales have been reported to reach such actors such as agro-industries (ILO, 2018). As for food-processing cooperatives, only 2.4% of their sales consisted of being sub-contracted for such agro-industries (.ibid). All the above challenges culminated into weakening the cooperative sector and making it a fragmented, inefficiently regulated, unintegrated economic activity and unattractive business option for the younger generations.

4.4. CONCLUSION OF CHAPTER FOUR

In this chapter, we see that the cooperative model of not-for-profit business is different than the conventional for-profit businesses and is based on principles driven by collective benefit, participation, solidarity, and democracy. It is essentially a voluntary grouping of individuals to meet their common needs while reducing costs and dividing benefit. Social objectives including concern for community are therefore core to the functioning of cooperatives. Their organizational structure is designed to comply with the seven principles of cooperation whereby the general assembly, meaning the entirety of members, hold the highest power but which is delegated in turn to a board of directors that is controlled by the supervisory committee. The cooperative model has attained a huge presence globally that 1 in 6 individuals on the planet are estimated to be affiliated with cooperatives either directly or indirectly. In developing countries, cooperatives have achieved immense success and especially in the agri-food, production and credit sectors. Their contribution constitutes significantly to the national economies of many countries as reflected by their share of the GDPs of New Zealand (20%), France and the Netherlands (18%), and Finland (14%). Even in developing countries, cooperatives have been understood to be effective models to stimulate local development, generation of income, inclusion of women, management of natural resources, health, education, and others. Their social, economic, and environmental objectives make them suitable contributors to global efforts such as those set by the Sustainable Development Goals of the United Nations 2030 agenda. In Lebanon, the cooperative sector is still looked at as weak, marginalized, and dependent on donor funds. An estimated two-thirds of registered cooperatives in Lebanon are not active, meaning they are dormant or virtual cooperatives that do not perform any function. Despite clearly mentioning their potential as local development tools, the national legislation in Lebanon is lacking in several ways such as in being formulated in one version that suits agricultural cooperatives solely but not others. It does not properly differentiate food processing cooperatives in a separate category and its rationalization by the Directorate General of Cooperatives explicitly encourage their seeking of external aid which undermines the principle of independence and autonomy. Numerous other internal and external factors also pose challenges to the sector. These include their incompliance to the seven principles of cooperation, their inefficient technical and managerial performance, their financial difficulties, and high production costs at the internal side. These are complicated by the external challenges such as those related to the poor state performance and capacity, lacking institutional and regulatory framework, economic situation and its complexities after the onset of the crisis mainly in the multiplied production costs and reduced purchasing power of the general public coupled with the lack of any proper strategies nor control to stimulate the productive sectors in the country.

CHAPTER FIVE. UNVEILING THE CHARACTERISTICS OF *MŪNE*- PRODUCING COOPERATIVES IN THE *BEQĀ'* VALLEY

The previous section provided a first description on the theory and philosophy behind the cooperative movement, an elaboration of their principles and values, legislation status globally, and optimal organizational structure and governance system. It also provided a first understanding of functioning and context under which cooperatives operate in Lebanon nationally, and especially the ones working with a valuable cultural asset as the *mūne* foods. Focus will now be shifted to the relevant cooperatives under the scope of this study, i.e. those that produce preserved *mūne* foods in the *Beqā'* valley. They will be referred to as food-processing cooperatives, or simply, food cooperatives. I will start by explaining the methodology used to identify the network (40 active cooperatives), preparation and collection of data, analysis and construction of results. The results were structured to reveal what characterizes cooperatives, how they operate, and in what way they are similar and different. This is what I call the characterization of typologies, meaning the revealing of different group types of food cooperatives, each with their own set of characteristics. This section (which can be considered as an elaborate transitional section) will present in detail the structured results in a way that describe the typologies of cooperatives in separate classes according to specific themes that were identified. Next, the structured results were compiled and re-organized to build a new understanding on the holistic network of 40 cooperatives that were identified in the *Beqā'* valley.

This chapter will seem elaborate and lengthy compared to the others because it is essential to present how the analysis is constructed and findings assembled together in order to reach to the final classification. By properly understanding the characteristics of food-processing cooperatives with their similarities and differences, we can better understand the positioning and dynamics of the food cooperatives with respect to the context explained in the previous chapter. To facilitate the reading of results, the reader has the option of skipping to the final section under each Theme (sub-heading level 5) in which the results of the earlier sub-themes are compiled together for a global understanding of the characteristics under an entire theme. Together, these characteristics per theme are finally synthesized to extract the global classes of typologies and themes crossed together and with specific variables to unveil additional correlations and understanding.

5.1. APPLIED METHODOLOGY FOR UNDERSTANDING THE TYPOLOGIES OF EXISTING AND ACTIVE COOPERATIVES IN THE *BEQĀ'* VALLEY

In order to understand whether food processing cooperatives in Lebanon and their engagement with the production of traditional preserved *mūne* foods exhibited any spatial dynamics, it was first decided to characterize the cooperatives themselves. This meant to collect and analyze data that would reveal information on how many different types of cooperatives

exist in the territory, how they operated, the similarities that were common between them and the differences that distinguish them from each other. This was performed in several steps as detailed in the sections below including the identification and revealing of the entire network of cooperatives that produce *mūne* in the *Beqā'* valley, preparation of survey questionnaires, data collection, data entry, and final analysis. A schematic representation of the typology methodology is found in Figure 52. In addition to the field data collected by the author, another source of information was used to further complement and expand the array of data acquired. This was achieved by complementing this study's topic by one performed by a student in one of IAMM's Master's programs during the end-of-study internship, and thus benefiting the field data and analysis generated. The methodology of that supportive information are detailed in section 5.1.1.3. It should be reminded that two main types of field data collection were performed under this study. The first is the categorization step which aims to extract the different typologies of food cooperatives in the *Beqā'* valley, i.e. this current section, and the second is elaborated in Part 3 and consists of another set of survey questions that aim at understanding the nature of relationships that exist between the food cooperatives themselves. The filling of both types of surveys was performed simultaneously at the same time during the field visits that were conducted between August and December 2019. Unfortunately, it should also be noted that the time at which the data was collected was prior to the onset of the complicated developments that rose from the post-2019 economic crisis. Although that consists an unfortunate timing, the data, especially non-financial in nature, still provide precious insight on the performance and relations of cooperatives and are further supported by other literature as later elaborated throughout the text.

Methodological Approach

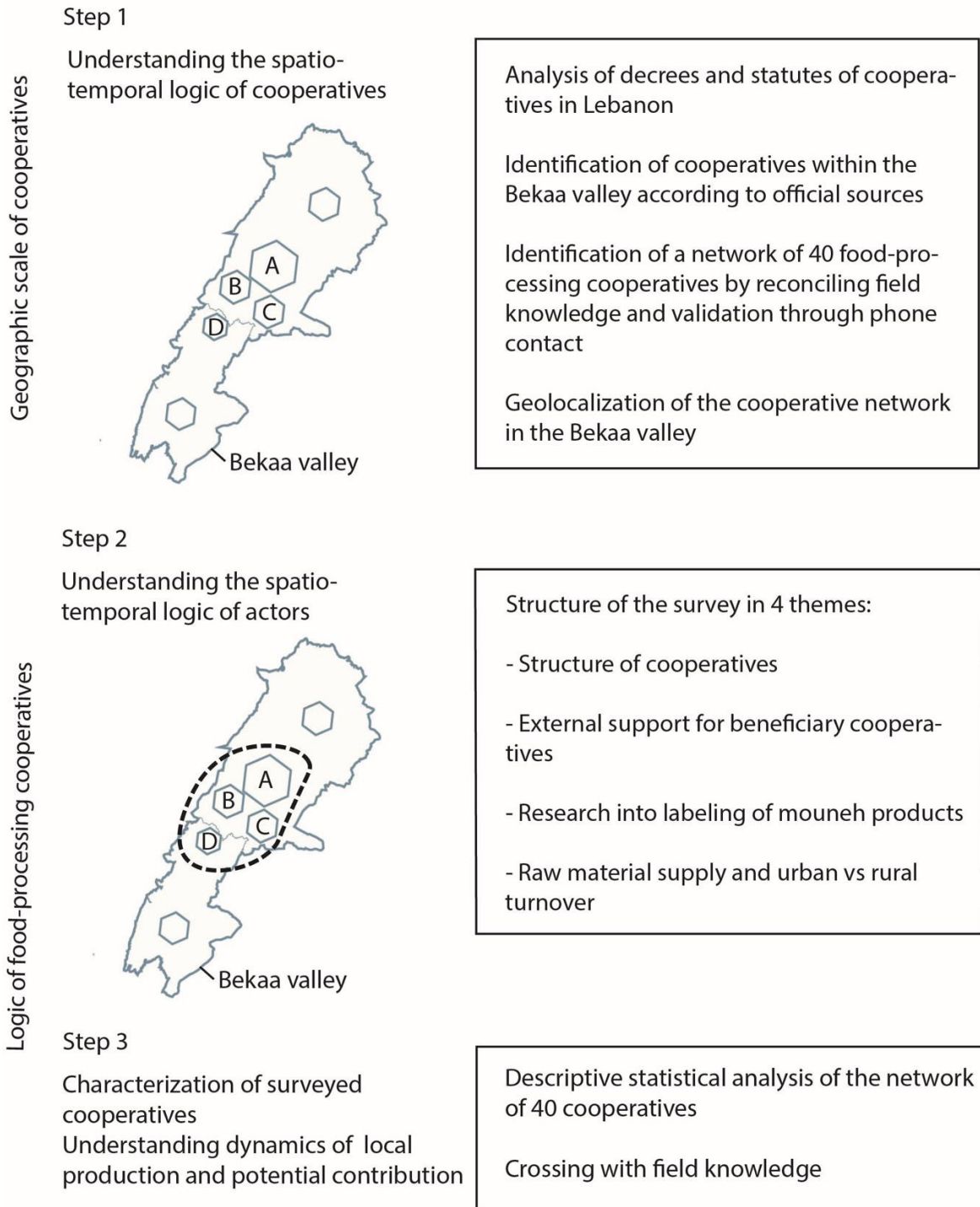


Figure 52: Methodological approach followed during the execution of the categorization step of the study. Source: Produced by author, *Jalkh R., 2021, LAGAM, UM3*.

5.1.1.1. Identification, sorting and mapping of relevant cooperatives in the study territory

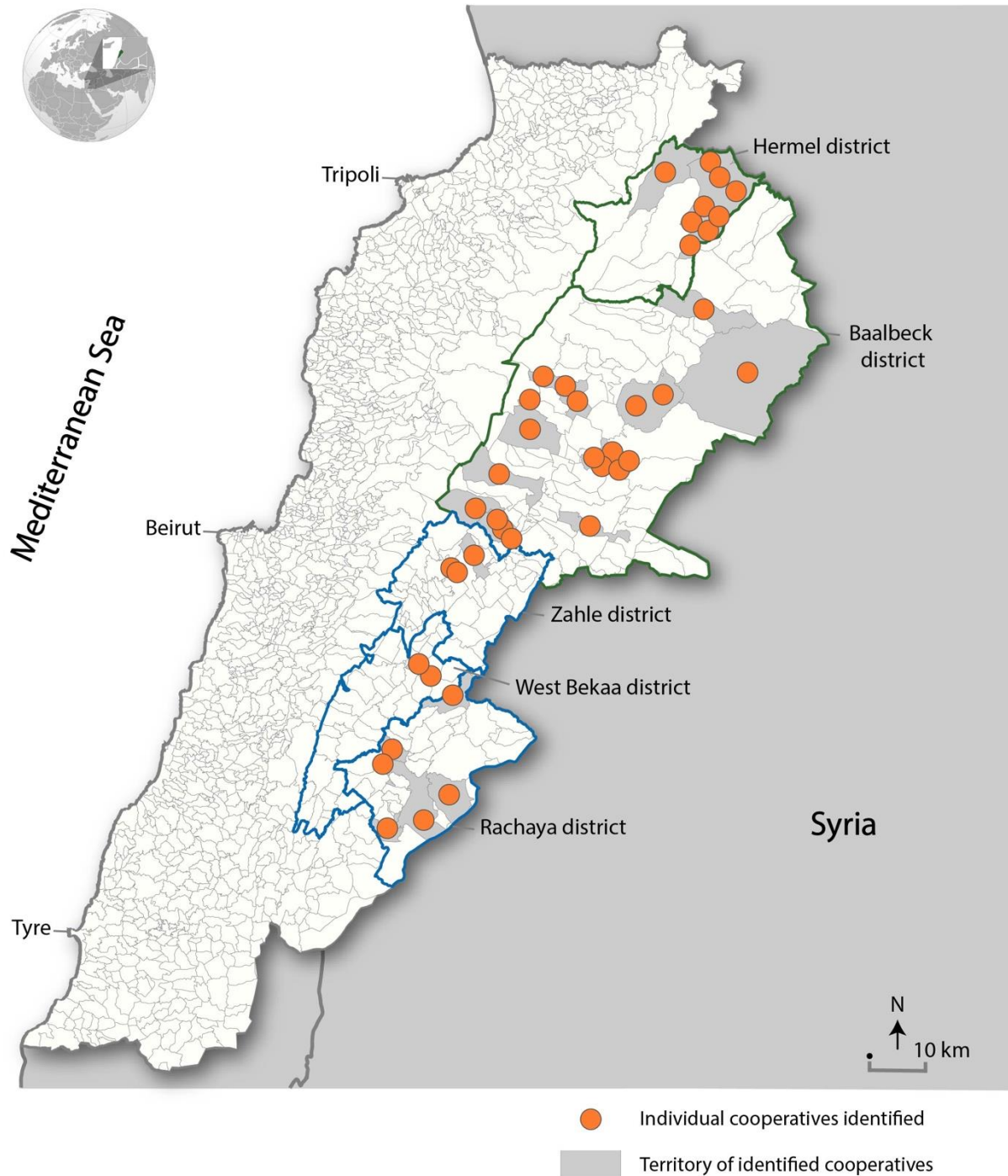
The first and one of the major steps was to properly identify the entire pool of relevant cooperatives in the territory of the study. These consisted of food processing cooperatives that transform raw agricultural produce into preserved *mūne* foods, and which are located in the *Beqā'* valley. As previously noted, the *Beqā'* valley covers 38% of the country's surface area at over 4,000 km² and includes two administrative borders at the governorate level, that of the Baalbeck-Hermel (consisting of the Baalbeck caza and the Hermel caza, sometimes referred to as Northern *Beqā'*) and the governorate of the *Beqā'* (consisting of the *Zahle* caza, the West *Beqā'* caza and the Rachaya caza, sometimes referred to as the central (*Zahle*) and West *Beqā'*) Figure 53. *Mūne*-producing cooperatives, which are mainly all cooperatives that transform and process preserved foods, in the *Beqā'* valley were identified from an official list of cooperatives acquired from the Directorate General of Cooperatives (DGoC) of the Lebanese Ministry of Agriculture (MoA), version 2010. The objective was to identify and interview the global number of cooperatives where the production of traditional *mūne* foods is their main objective. This is why the main selection criteria included having this type of activity, *mūne*-producing, listed as the main activity in their official registration, being located in the *Beqā'* valley and being active at the time of the interview. Active cooperatives were therefore considered as those who are actively transforming raw agricultural produce into preserved *mūne* foods, their processing and trading.

At this stage, one of the major challenges faced during this study should be mentioned and which in fact consists a significant limitation. It relates to the unclear division of cooperatives in the official list per sectoral activity with overlapping information and having the list outdated. The category of food processing cooperatives was not listed distinctly but was in fact merged together with a miscellaneous group of cooperatives in other sectors specifically those in services, culture, artisans, production, manufacturing and marketing. This made it difficult to directly identify suitable cooperatives that produce *mūne* foods in a straightforward way or simply by their name. Cooperatives were also sometimes misplaced in a section that does not relate to the actual sector they work in as per what was registered in their name (which is by law required to be detailed). Outdated lists also meant that the list included sometimes errors in the contact information that have changed by the time of the study, but more seriously they included the names of many inactive or informal cooperatives which have in fact ceased production, have not updated their registration (their documents being obsolete) or those that have been dissolved. Because of the outdated nature of the list coupled with challenges in the quality of its entries, such as the listing of inactive or dissolved cooperatives, errors and no clear category for food cooperatives, the list was next refined. This is why major effort was given to clean the raw list of cooperatives and to verify the viability of each entry. Accordingly, after the primary cleaning and sorting of cooperatives by sector of activity (food processing) and location (*Beqā'* valley), each cooperative in the sorted list was contacted by phone. The objective of that contact was to refine the final list by ensuring three pieces of information, if the cooperative 1) produces traditional preserved *mūne* foods, 2) is still active, and 3) is located in the *Beqā'* valley and inquire of the address. In case where some errors in contact information were found, effort was made to refer to the office where I serve as a writing officer and which

has a deep network and updated contact with many of the food-producing cooperatives in the country. In case that step was not fruitful, further contact to the municipality of the village where the cooperative is listed was made to attempt and get updated information of that cooperative's status. This refining step revealed that some cooperatives have valid registration were actually not manufacturing any products at the time of the study and were therefore excluded from the list. Additionally, a few cooperatives that were listed in the same category as food cooperatives were found to produce only fresh milk (are thus milking facilities that supply fresh milk and do not perform any food processing) and were also excluded from the categorization step due to the absence of any processing operations. However, we will see at a later stage (PART Three) that these cooperatives in fact exhibit an interest link to the network of food-processing cooperatives despite being engaged in another sector altogether. This fact reveals that even though these cooperatives are at the periphery of the network, they are still very aware of the food cooperatives and retain a strong contact and knowledge about them. This is why this type of cooperatives, numbered at 7, were excluded from the categorization step which is normally directed at extracting the typologies of only the relevant cooperatives. Yet, they were retained for analysis in the Social Network Analysis (SNA) step which described the relations between the cooperatives. So, by the end of the refining step, **a total of 40 food-processing cooperatives** were identified to exist in the *Beqā'* valley and consisted the network of analyzed cooperatives to be interviewed under this categorization step of this study. Each of the cooperatives was next given a unique identifier to enhance anonymity when dealing with data treatment. The identifier was constructed under the form of [Governorate] [Caza] [Order number]. So, the first box would be for the governorate as BH for Baalbeck-Hermel or B for *Beqā'*. The second box for the caza would be as B for Baalbeck, H for Hermel, R for Rachaya, WB for West *Beqā'*, or Z for *Zahle*. An example for the unique identifier for the ninth cooperative located in the city of Baalbeck would be BHB9. The full list of food processing cooperatives that were identified and interviewed under this study, by unique ID and location, can be found in Appendix 1. The spatial distribution of these 40 cooperatives is found in Map 28. Mapping was conducted using the software PhilCarto V.6.07–2018 and refined using Adobe Illustrator CC 19.0.0–2015.



Figure 53: Highlighted location of the *Beqā'* Valley territory including the administrative borders at the level of the Governorates of the *Beqā'* and the Baalbek-Hermel and their subdivisions called *caza(s)* or *district(s)* in Lebanon. Source: Produced by author, *Jalkh R., 2021, LAGAM, UM3.*



Map 28: Spatial distribution of the identified cooperatives (n=40) engaged in the production of traditional preserved *mūne* foods in the *Beqā'* valley per cadaster boundary⁸⁵ in Lebanon. Source: Produced by author, *Jalkh R.*, 2021, *LAGAM*, *UM3*.

⁸⁵ According to the source of the shapefile used for the list of municipalities, the United Nations Office for the Coordination of Humanitarian Affairs (UN.OCHA, 2017), the Cadastral Boundaries represent the geographic divisions of Lebanon as per the government. In total Lebanon holds 1623 Cadastral Boundaries. Each boundary could include 1 or more villages or municipalities; or 1 or more cadastral boundaries could represent one municipality.

5.1.1.2. Preparation of data collection tool, questionnaire type 1 – categorization of food processing cooperative typologies

After identifying and refining the list of food processing cooperatives, the relevant network was identified as 40 cooperatives that produce traditional preserved *mūne* foods and which are located in the *Beqā'* valley. These 40 food processing cooperatives are those that were identified for interviewing and categorization in order to extract the different typologies. It should be noted that 47 cooperatives (7 additional cooperatives that are milk dairy farms) consist the network in the SNA methodology (Part 3) which has its own survey questionnaire. As for the categorization step, a structured questionnaire was developed stel These four themes are defined as:

- **Theme 1 - Structure:** Information reflecting the structural components of the cooperatives related to the demography of members, size in terms of production, turnover and other factors.
- **Theme 2 – Spatiality:** Relating to the functions of cooperatives within their surrounding environment in activities relating to procurement of raw material and market.
- **Theme 3 – External Support:** Extent and type of external support received by each cooperative.
- **Theme 4 – Label and Conformity:** Information comparing the conformity of labels to standard norms with production components.

Questions developed for each of the identified themes were structured and compiled as summarized first in Figure 55 and as elaborated in Table 18 to include the specific questions, description and type of collected data. A copy of the full categorization questionnaire can be found in Appendix 2. The selection of themes was performed in accordance to the evidence which various reports indicate in terms of variability of food processing cooperatives and their difference from other types of cooperatives. In addition, past experience in dealing with food processing cooperatives for the past almost 10 years provided me with a background that formed the basis of my understanding on how and in what way food processing cooperatives differ from each other. The structure theme includes mainly the suspected differences in the size of the cooperatives. Different aspects enter in the understanding of the structure and these include factors such as the membership and member demographic aspect along with the production capacity, and turnover. The spatiality theme focuses on understanding the different dynamics and operations that reflect a spatial activity of the cooperatives and how these translate on a geographic scale. This type of understanding would help elaborate of the extent at which cooperatives are embedded in their spaces and whether they exhibit any external rural-urban linkages. This type of information is collected through inquiries on the sources of turnover (spaces of origin that produce most sales), marketing channels, and inspection of the current and alternative relations for procurement of raw material needed for processing. For the external support theme, it was quite evident not only from personal experience but from the numerous literature and published reports that donors was highly active in the economic fabric of the country generally and with significant focus on the agricultural sector and in turn cooperatives. Food processing cooperatives have their sectoral focuses in the same approach that in fact complements the primary production and is looked at as an added-value activity

which generates employment and income specifically for women, is capable of contributing to a productive rather than rentier economy, and creates a valuable opportunity for the development of the normally marginalized rural spaces. This is why an entire theme was dedicated to understanding how and at what frequency food processing cooperatives engage with external sources of support. Finally, the last theme focused on attempting to collect data on the quality of the productions performed by the cooperatives. This included an inquiry of the infrastructure quality which should normally be in line with certain requirements of food safety and hygiene, such as having stainless steel food-contact surfaces, if quality control measures are applied, condition of the center internally and externally, etc. In addition, an inspection of the labels used on the products was performed since it consisted the main means of communication that the cooperatives had with their end consumers. Labels should properly communicate certain basic yet very important information such as list of ingredients, nutrition facts, date of durability, net weight, contact information, storage condition, bar coding, etc. This type of investigation would therefore give a strong indication at the extent at whether the cooperatives have achieved advanced levels in their work or whether they still follow basic practices. For the labeling component, copies of labels used by each cooperative were collected during the interviews if they were available. After that, the compliance of the labels was assessed based on European standards compiled by the Ministry of Economy and Trade (2008) through its *QUALEB* Quality Programme. This comparative of compliance was realized by constructing a 10-grade scoring checklist in which the main headlines of the standard were listed as shown in the last page of the questionnaire. Labels were observed for the presence or absence of each type of information, upon which a score was added for each available information. An examples of basic versus advanced labels are found in Figure 54 and which represent two labels acquired from two cooperatives in this study. As noticed, label a (top) includes a much wider array of information that fit what is expected and required of a label destined for market dispatch. It clearly communicates vital information that the consumer expects such as list of ingredients in decreasing order by weight, nutritional facts, brand-name, name of product, weight in metric, name and contact information of the producer, storage conditions, barcoding and others. In the case of this label, it should be noted that the expiry date is usually printed by an inkjet printer at the time of filling and labeling which was the reason why this specific label did not contain a date at the time of the interview. The difference is then clearly distinguishable with label b (bottom) which is missing most of that information. This label in fact only contain two pieces of information, the product name and the brand-name. This type of label is problematic for many reasons. It impedes the ability of the producer themselves to trace back the production batches thus miss any form of post-production traceability and control. In addition, many consumers nowadays and especially urban dwellers are aware of the type of information that should be listed on labels and expect this information to carry clear and transparent communication. This is an important opportunity for a producer to build trust and a solid image with their existing consumers and build on a solid foundation for further market infiltration since labels are the first line of communication that exists between a producer and their consumers.



Figure 54: An example comparative between labels acquired from two cooperatives from the study with label a (top) considered as compliant (or advanced) and label b (bottom) as non-compliant (or basic).

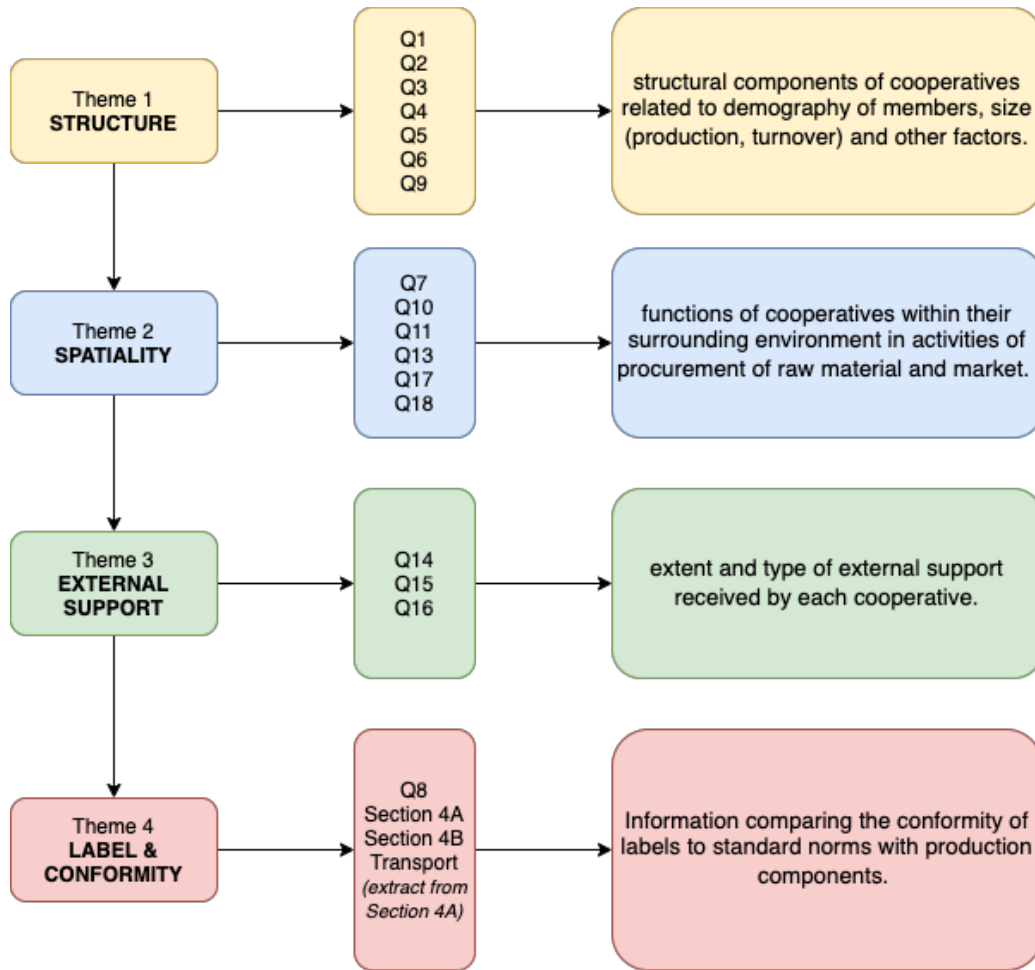


Figure 55: Visual representation of the categorization/typology themes and the corresponding set of survey questions. Source: produced by the author

Table 18: Detailed division of the categorization/typology themes, description per each theme, corresponding question in the survey questionnaire, its description and type of data responses.

Variable Name	Variable description	Question(s)	Data description	Type of data
1	Structure	Q1 Number of members at establishment	Distribution of number, age and gender of members at the time of establishment of each cooperative	<p>Number</p> <p>6 columns (summarizing the filled survey table) divided as:</p> <ol style="list-style-type: none"> (1) Number of members at establishment (divided per gender and age below) (2) Number of women at establishment (3) Number of men at establishment (4) Number of members age less than 30 (5) Number of members age between 30 and 40 (6) Number of members age older than 30
		Q2 Number of current members	Distribution of number, age and gender of current members of each cooperative	<p>Number</p> <p>6 columns (summarizing the filled survey table) divided as:</p> <ol style="list-style-type: none"> (1) Number of members currently affiliated with the cooperative (divided per gender and age below) (2) Number of current women (3) Number of current men (4) Number of current members age less than 30 (5) Number of current members age between 30 and 40 (6) Number of current members age older than 30

			<p>Q3 Current active members</p>	Number of current members actively participating in the production activities at the cooperative's center	Number
			<p>Q4 Additional staff</p>	Distribution of number, nationality and age of additional recruited staff per time-effort; either seasonal, full-time or part-time	<p>Number and binary (yes/No) data 16 columns (summarizing the filled survey table) divided in 4 main sections:</p> <p>(1) Seasonal workers</p> <p>(a) Number (one column with number)</p> <p>(b) Nationality (2 columns with binary (Yes/No) for Lebanese and Syrian)</p> <p>(c) Age range (3 columns with binary (Yes/No) for age groups (1) under 30, (2) between 30 & 40 and (3) over 40))</p> <p>(2) Full-time staff</p> <p>(a) Number (one column with number)</p> <p>(b) Nationality (2 columns with binary (Yes/No) for Lebanese and Syrian)</p> <p>(c) Age range (1 column with binary (Yes/No) for the age group that exists in the answers (between 30 & 40))</p> <p>(3) Part-time staff</p> <p>(a) Number (one column with number)</p> <p>(b) Nationality (2 columns with binary (Yes/No) for Lebanese and Syrian)</p> <p>(c) Age range (3 columns with binary (Yes/No) for age groups (1) under 30, (2) between 30 & 40 and (3) over 40))</p> <p>(4) No additional recruited staff (Note: indicated as zero for all factors)</p>
			<p>Q5 Production quantity</p>	Estimated annual production quantity in tons	<p>4 available choices (one choice per answer)</p> <p>(1) Less than 1 ton</p> <p>(2) Between 1 and 7 tons</p> <p>(3) Between 7 & 15 tons</p> <p>(4) Over 15 tons</p>
			<p>Q6 Estimated annual turnover</p>	Estimated annual turnover of the average two past years	<p>Monetary amount in the local currency (LBP) Noting that 1 Euro = around 1,700 LBP at the time of the interview (prior to the 2019 economic crisis)</p>
			<p>Q9 Land tenure & ownership</p>	Ownership status of land and production center to understand if cooperatives have granted centers which may be withdrawn in the future, rented or owned	<p>6 available choices (one choice per answer)</p> <p>(1) Granted</p> <p>(2) Granted by the chairperson (as the owner)</p> <p>(3) Household production</p> <p>(4) Owned</p> <p>(5) Partly owned</p> <p>(6) Rented</p>
2	Cooperative Spatiality	Relating to the functions of cooperatives within their surrounding environment in activities relating to procurement of raw material and market.	<p>Q7 Largest turnover source</p>	Source of the largest turnover as either rural at the level of the village and its surroundings, urban sources or export	<p>5 available choices (one choice per answer)</p> <p>(1) Same village</p> <p>(2) Surrounding villages</p> <p>(3) Urban consumers & exhibitions</p> <p>(4) Export</p> <p>(5) Social media</p>
			<p>Q10 Market channels</p>	Types of market channels regularly used by the cooperatives for product sales	<p>Binary of 4 ranges (Yes/No) (more than one choice is possible) 4 columns filled with binarized data divided as:</p> <p>(1) Marketing channels – Direct to consumers</p> <p>(2) Marketing channels – Intermediaries</p> <p>(3) Marketing channels – Retailers & specialty shops</p> <p>(4) Marketing channels – Events & exhibitions</p>
			<p>Q11 Distribution of turnover sources</p>	Percentage distribution of turnover originating from urban and rural sources	<p>Results are distributed in 2 sections that summarize a filled table under that question:</p> <p>(1) Section 1: 2 columns representing (1) Percentage (%) turnover from rural market and Percentage (%) turnover from urban market</p>

					(2) Section 2: Name of main urban city. Results are distributed in 5 binarized columns (more than one answer may exist) for (1) Beirut, (2) Hermel <i>Beqā'</i> , (3) <i>Zahlē Beqā'</i> , (4) South Lebanon and (5) export.
			Q13 Alternatives during emergency	Difficulty or ease of acquisition of alternative sources of raw material and its quality	5 available choices (one choice per answer) (1) Easily, quickly, same quality (2) Easily, quickly, different quality (3) Need time, same quality (4) Difficult (5) Impossible
			Q17 Sources of raw material	Geographic proximity from which main raw material acquisition is sourced	Binary of 4 ranges (yes/No) (more than one choice is possible) 4 columns filled with binarized data divided as: (1) Produced by cooperative (2) Surrounding farmers (3) Other areas of <i>Beqā'</i> (4) Exterior to <i>Beqā'</i>
			Q18 Distribution of raw material sources	Percentage distribution of raw material acquired based on proximity, starting from within the municipality borders up to areas located at the exterior of the <i>Beqā'</i> valley	Percentage (%) distributed for 4 sources (total = 100%) 4 columns filled with percentage (%) per each source: (1) % within municipality (2) % from nearby villages (3) % from within the caza border (4) % exterior to caza (5) % exterior to the <i>Beqā'</i> valley
3	External support	Extent and type of external support received by each cooperative.	Q14 External support status	Whether each cooperative has ever received support from the state or NGOs	Binary (Yes/No) of 3 ranges (more than one choice is possible) 3 columns filled with binarized data divided as: (1) State (2) NGOs (3) No support received
			Q15 Type of external support	What type of support has been received by the cooperative, as either equipment, training or access to new markets such as through exhibitions	Binary (Yes/No) of 9 ranges (more than one choice is possible) which are distributed in 4 main sections: 9 columns filled with binarized data divided as: (1) Equipment (2) Training (distributed per topic): (a) Food safety (b) Food processing (c) Quality control (d) Administrative & management (e) Financial (f) Marketing (3) Market access as exhibitions (4) State funds
			Q16 Frequency of external support	How frequently does a cooperative receive external support on an annual basis	3 available choices (one choice per answer) (1) Once or twice a year (2) 3 to 5 times a year (3) No support received
4	Label & conformity	Information comparing the conformity of labels to standard norms with production components.	Q8 Industrial license	If the cooperative has an industrial license which would allow direct export by the cooperative itself, rather than through intermediaries who purchase the products then export	One column with Yes or No answers
			Section 4A Estimated center conformity	Checklist used to score major areas of interest to estimate the conformity of the center to production standards	Score over 10
			Section 4B Label conformity	Checklist used to score information listed on the labels in comparison with	Score over 10

			standardized labeling norms	
		Method of transportation (extracted from section 4A)	The means of transportation each cooperative use to transport products, either vans owned by the cooperative or as personal cars owned by the members.	3 available choices (one choice per answer) (1) Cooled van (2) Regular van (3) Personal or rented car

5.1.1.3. Data collection, formatting and treatment for classification

Once the questionnaire was prepared, it was first tested with a group of 6 cooperatives to check the efficiency of its execution and whether any additional questions should be added. This testing phase was conducted around June and July 2019 with the 6 cooperatives distributed as 3 in the Hermel caza, 1 in the Baalbeck caza, 1 in the Rachaya caza and 1 in the West *Beqā'* caza. The testing phase revealed that the majority of the questions in the survey were functioning well. An optimization of the questionnaire took place after that where a few additional questions were added until the questionnaire reached its final version. The added questions were then re-asked to the six cooperatives that partook in the testing phase so that to complement the remainder of their responses. The collection of data for the categorization step was performed simultaneously with that of the inter-relations questionnaire (Part 3) during the same meetings scheduled with the cooperatives. These meetings took place between August and December 2019. The method in which data collection commenced by contacting the 40 cooperatives and scheduling suitable meeting dates. Data was then collected by way of in-person interviews with directors or decision-makers of cooperatives in order to achieve the highest possible details in responses. Questions were also formulated in Arabic to facilitate communication and understanding with the interviewees in the local language. For the section of categorization data, survey questionnaires were paper-based and filled by hand with no video or voice recording. The questionnaire relating to inter-relations was filled digitally via an online data filling tool called Kobo Toolbox v. 2.8.1. Due to the more complicated nature of the data required for the categorization step (and filling of tables), digital filling of the data was not possible. This is why printed copies of the questionnaires were filled by hand and later entered manually into digital spreadsheets for treatment. Field interviews commenced only after acquiring the verbal consent of interviewees following a proper description of the meeting's purpose and intended use of information. As noted earlier (section 5.1.1.1), anonymity of interviewees and corresponding cooperatives was ensured by assigning a unique identifier for each completed questionnaire and its later use during data entry and analysis. All original hard copies of questionnaires were stored after the digital entry of data and were kept private. Interviews were successfully realized with the entirety of the identified network of 40 cooperatives and achieved a full response rate. On average, interviews lasted around one hour per cooperative during which both types of questionnaires were filled; the categorization and inter-relations. After the completion of interviews, data was manually entered in a spreadsheet that was prepared as a template in prior and which accounted to the type and range of input and data. Once all interviews were completed, the quality of data entry was validated and after which data treatment was conducted in collaboration with Ms. Lala Razafimahefa, Statistician and Research Engineer at CNRS, ART-Dev, UM3.

The first step of data treatment was performed personally by the author whilst the holistic treatment was still ongoing by the University Statistician Ms. Lala Razafimahefa. At that time, a set of questions was extracted from the original questionnaire and mobilized specifically to develop an understanding of rural-urban linkages of the food cooperatives. This step was considered important to first provide a general introduction of the operations of these cooperatives, upon which broader results could be consolidated with an ensemble of more advanced data treatment. These extracts cover information relating to (1) the structure of cooperatives (number, age and gender of members, production types and volume... etc.), (2) extent of donor support (frequency and type of received support), (3) spatial linkages of main operations (source of raw material supply, source of turnover, means of transportation, marketing channels...etc.) and (4) labeling conformity. To elaborate on these spatial linkages, focus was given on the supply of raw material and major sources of sales turnover in order to describe rural and urban significance. This approach helped in providing a first transversal introduction to the spatial linkage and status of the food processing cooperatives in the *Beqā'* valley. The findings and analysis of this first data treatment is found in section 0.

As for the main bulk of data treatment, it was performed using the software SPAD v.8 - Coheris Analytics. The treatment performed for the categorization consisted of identifying associations between the range of data which included both qualitative and quantitative in nature. This meant the detection of certain structures in the large dataset that included multiple variables of different nature. To be able to effectively identify that, the treatment mobilized a multidimensional exploratory statistics called Principal Component Analysis (PCA) and specifically Multiple Correspondence Analysis (MCA). The detailed theory behind the data analysis and applied treatment that was followed is based on that of Ludovic Lebart *et al.*, (1995). In brief, MCA and PCA belong to a family of descriptive analysis that detect patterns in large complex datasets. The PCA usually utilizes continuous form of data, which is not the case with the datasets in the study, while the MCA is able to perform that correspondence analysis to non-continuous or cross-tabulations, making MCA a specific form of PCA. What MCA does in fact is represent the dataset as form of 'clouds' in a multidimensional Euclidean space (geometric space representing a physical space) where it distinguishes between the patterns of these points (P. S. Costa *et al.*, 2013). In simplified terms, this method refers to a way in which data is projected simultaneously on a dimensional plane and inspected for characteristics that can divide the dataset while retaining the maximum amount of information. This means that the preferred analysis consists of maintaining a maximum dispersion of points on the plane with a division of that dispersion that best describes on what basis the variables are divided; meaning the characteristics that distinguish them in their corresponding classes. The elaboration of the detection of typologies, i.e. classification, will be explained in the steps taken in the SPAD software and utilizing the MCA method.

The first step consisted of cleaning and sorting the data in constructed as categories which is the format which the software is able to read and analyze. The main idea of the analysis conducted by the software SPAD is to construct a chain of treatment methods out of the range of various treatment methods available in the software so that to arrive finally at an extraction and visualization of typological classes originating from a dataset inputted originally in the form of an Excel sheet. Once starting a new diagram in the software, this dataset which is standardized (meaning data sorted in categories) is inputted into the software. Next, a preset of

a chain of treatments specific for typologies was selected from the software. The MCA method was selected as the main treatment of classification since the nature of the data is qualitative and categorical rather than continuous (Figure 56). Each of the methods in the selected chain was next parametrized and relevant data was activated from the imported dataset according to the variables mobilized per theme. These data per theme were identified on the basis of the responses of the relevant questions in the survey for every theme to be analyzed (Figure 55).

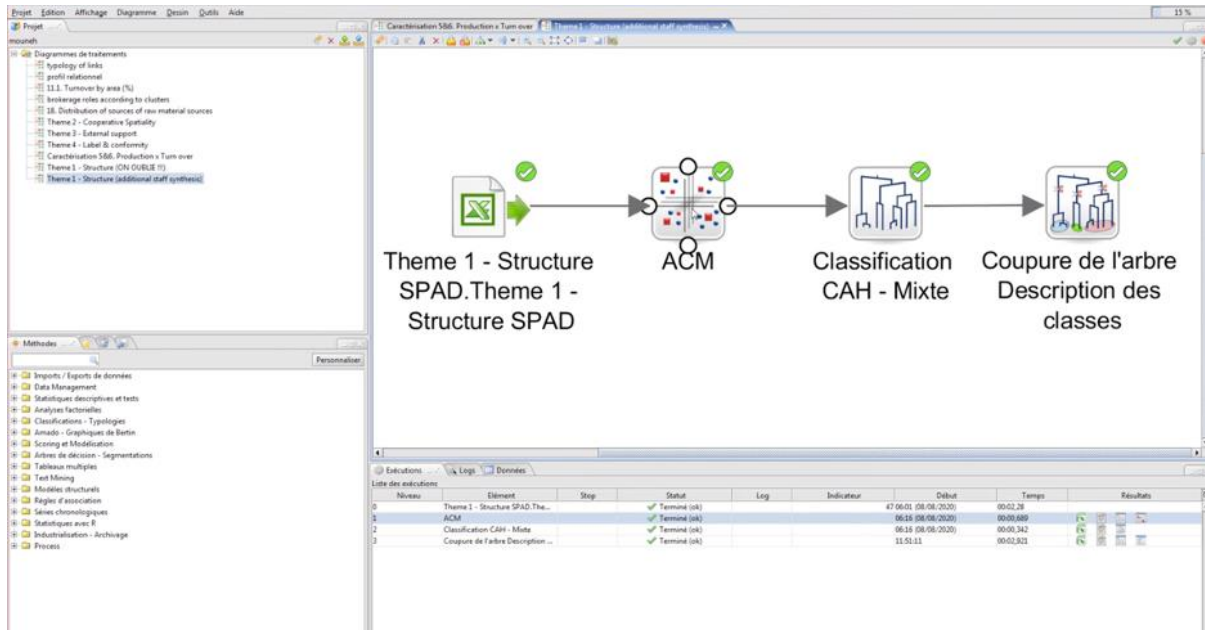


Figure 56: Chain of data treatment methods selected for typological classification in SPAD. Source: screenshot taken during an online meeting in August 2020

After that, the classification of the data was determined in the third block of the chain of treatments. One of three methods in that step can be selected. Either Hierarchical classification, Dynamic classification (known as Aggregation around Mobile Centers – AMC) or a mixed classification that merges the two methods. The Hierarchical classification consists of an algorithm which creates partitions by aggregating the two closest elements, two by two progressively, and replaces them by a center of gravity and repeats this step in an ascending manner. This form of classification suggests different partitions, compared to a tree which branches are being divided into classes in the best possible ways, from which the user can determine the most suitable partition. The ascending form means every cut in the tree forms a partition which, with the higher the partitions in the tree, the fewer classes obtained and the less homogeneous these classes become. A schematic representation of a Hierarchical classification is found in Figure 57. As for the AMC method, it begins by the user determining the number of classes desired. Upon determining that feature, the algorithm then constructs the classes upon which are closest to the identified centers of gravity. It then repeats the cyclic process that launches from the initially determined centers of gravity around which the first set of classes are constructed, followed by a re-calculation of new centers of gravity and a new construction of classes around the, and so on, until the algorithm stabilizes. A schematic representation of the AMC algorithm is found in Figure 58. The hierarchical classification method in fact tends to create partitions which include isolated (unique or atypical) classes and characteristics, so, it would for example suggest one class with a low number of individuals

within that classes whereas two other classes with a much higher number of individuals. On another hand, the AMC classification method tends to create partitions which are homogeneous and this in itself merges the atypical individuals within these groups. Both are not preferred for this study. This is why the third classification method, the Mixed Classification (MC) was selected as it tends to merge between the above two. The MC consists of three main steps. It starts with a first partitioning using AMC, then proceeds to perform a hierarchical aggregation of the obtained groups which normally suggests a partitioning into classes to possibly retain, and finally optimizes the corresponding partitions once again using AMC. This final step is also referred to as a consolidation step. A schematic representation of the MC algorithm is found in Figure 59.

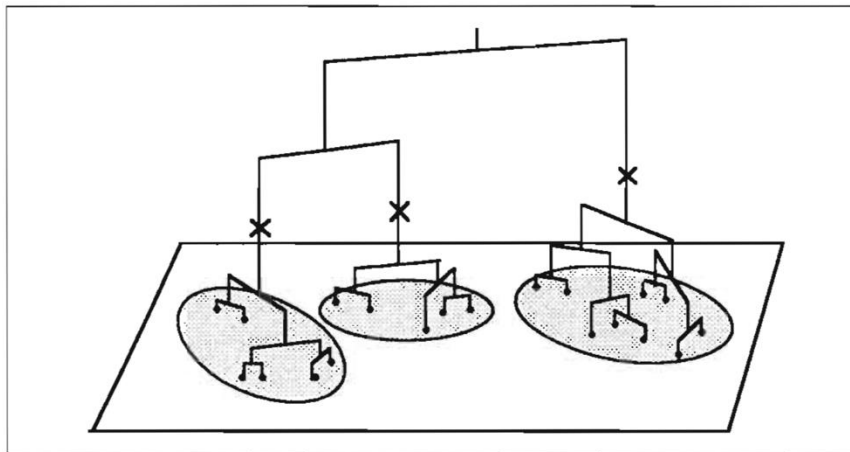


Figure 57: A hierarchical tree classification as depicted by Ludovic Lebart *et al.*, (1995)

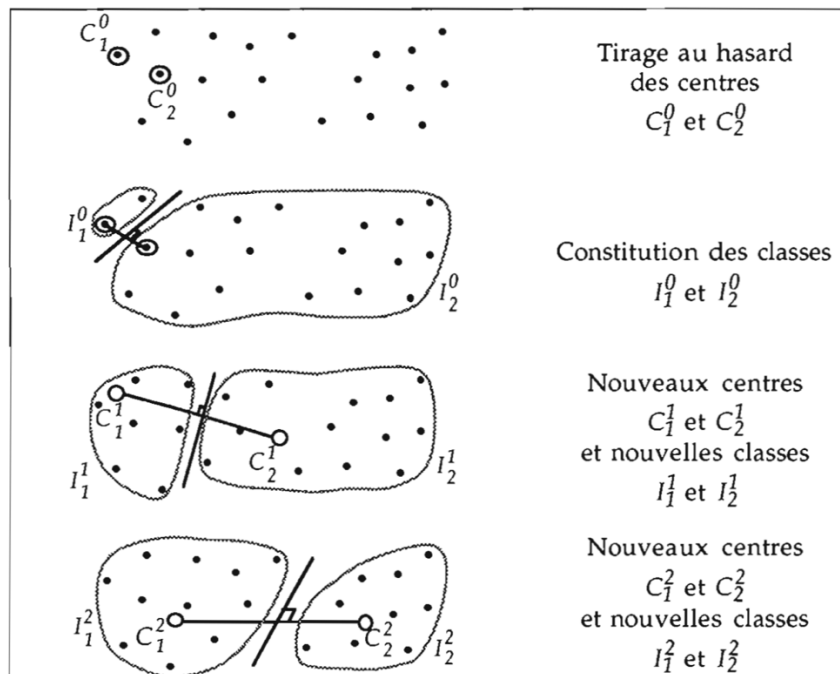


Figure 58: Steps of the Aggregation around Mobile Centers – AMC algorithm as depicted by Ludovic Lebart *et al.*, (1995)

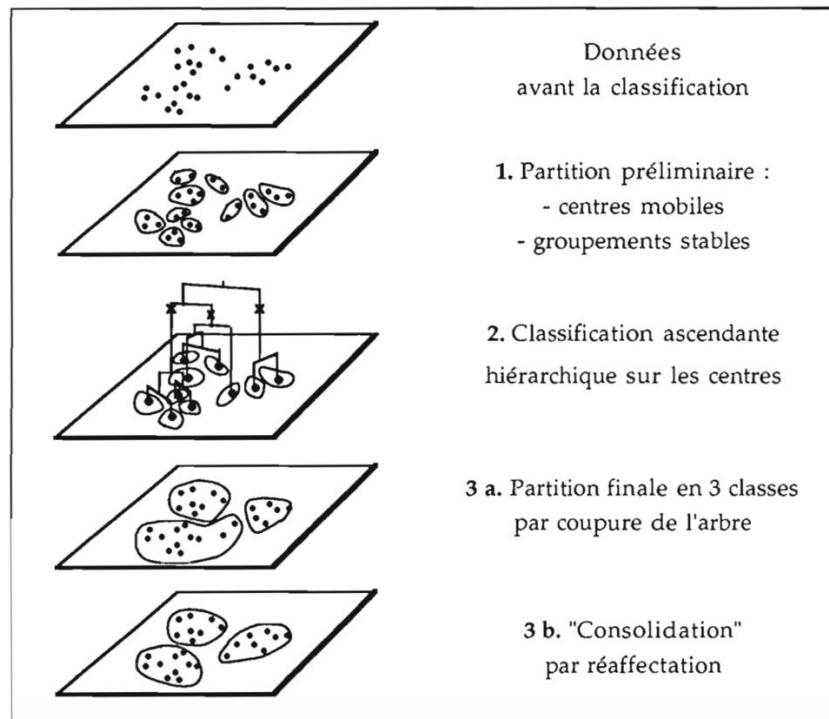


Figure 59: A schematic representation of the Mixed Classification (MC) algorithm as depicted by Ludovic Lebart *et al.*, (1995)

The final step of the typology was the actual extraction of classes from the software. SPAD was instructed to communicate an automatic search for the best suggestion of classes and upon which the sub-divisions were also later inspected. This allowed for an investigation for in what ways and in what characteristics the divisions were made, and classes constructed. These characteristics were determined on the basis of factors such as the Pearson's chi squared and probability (p -value). The chi squared is a statistical hypothesis testing which examines the difference between expected values and actual values. It mainly determines whether the difference between values is due to chance or another form of correlation. It also relates to the probability distribution (p -value) which mainly indicates the probability at whether the correlation is significant or not. Normally in the sciences domain, p -values of 90 to 95% are considered as significant and p -values of 99% are considered as highly significant. The output analysis tables from the treatment chain of classifications from SPAD were analyzed and characteristics were accordingly sorted by class on the basis of their significance (chi-squared and p -value). Multiple tables of classifications resulted from the typology and these ranged from 3 and up to 8 classes per theme. A deeper investigation took place of the different partitions and suggested classes in order to arrive finally at the selection of the most suitable and most representative typology and visualization (graphing) of the characteristics per class. Ultimately, it was decided to represent the typological classes in two ways per theme; a general classification in 3 classes and a detailed classification in a higher number of classes as shown in Table 19. Finally, the detailed classes extracted for every theme were together re-analyzed in SPAD following the same methodology in what is called a "Synthesis Analysis" which treated the classes together and suggested a holistic division of the entire dataset. Normally, the description of the typology was performed on each class per theme (and sub-theme for those that mobilized many variables) in a narrative form and a visual form. This form of

analysis and its findings are found in section 0. After being raised individually per theme, the findings were finally triangulated together via the crossing of the four themes together, referred to as thematic crossing, and with individual variables of interest separately, called variable crossing. A schematic diagram representing the entire process of data treatment method is found in Figure 60.

Table 19: Number of determined classes generated per theme in the classification typology of food processing cooperatives in the *Beqā'* valley

Theme	Number and title(s) of typological classes			
	General		Detailed	
Theme 1: Structure	3	Small 1-S	8	1-S1
				1-S2
				1-S3
	Medium 2-M	2-M1		
		2-M2		
	Large 3-L	3-L1		
		3-L2		
		3-L3		
Theme 2: Spatiality	3	Rural 1-R	7	1-R1
				1-R2
		Semi-rural 2-SR		2-SR1
		2-SR2		
	Urban 3-U	3-U1		
		3-U2		
		3-U3		
Theme 3: External support	3	Not funded 1-NF	6	1-NF
		Periodically funded 2-PF		2-PF
		Frequently funded 3-FF		3-FF1
				3-FF2
		3-FF3		
	Highly funded 4-HF	4-HF		
Theme 4: Label and conformity	3	Basic 1-B	6	1-B1
				1-B2
				1-B3
	Medium 2-Me	2-Me		
	Advanced	3-A1		

		3-A		3-A2
Synthesis analysis	-	-	4	Class 1
	-	-		Class 2
	-	-		Class 3
	-	-		Class 4

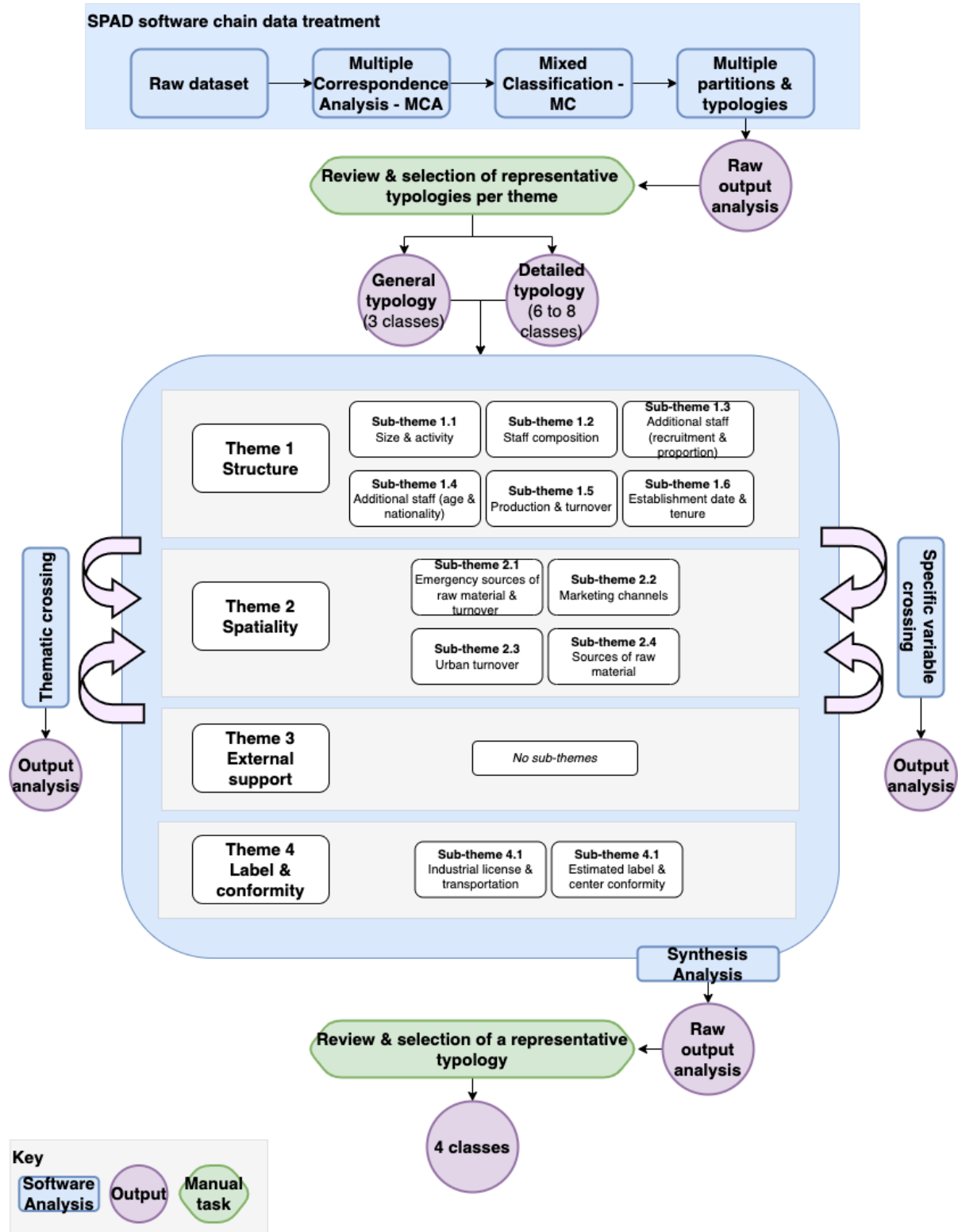


Figure 60: Schematic representation of the data treatment process for classification / typology.

5.1.1.4. Supportive information from additional field surveys under a student's Master internship

In addition to the actual data collection and analysis performed by the study, supportive data was additionally acquired under the IDTE - I3P at the Mediterranean Agronomic Institute of Montpellier (CIHEAM-IAMM) in collaboration with the Lebanese University – Faculty of Agronomy and Veterinary Sciences. The topic was complementary to that of this study and therefore provide an interesting insight for information that could support certain aspect of this study. This was especially in terms of qualitative findings that relate to how women food processing cooperatives understand and describe traditional preserved *mūne* foods and what added value it holds in their perspective. The selected student was Ms. Zeinab Mcheik and the thesis title was decided as “Analysis of the functioning of food-producing cooperatives in Lebanon using the concept of Economies of Worth” (English), “Analyse du fonctionnement des coopératives de transformation au Liban à partir du modèle de l'économie des grandeurs” (French). I, Rita Jalkh, acted as the supervisor of Ms. Mcheik with Dr. Claude Challita (Lebanese University) as Maître de stage and Pr. Salem Darwich (Lebanese University) and Dr. Mélanie Requier Desjardins (CIHEAM-IAMM) as main advisors or encadrement. The Master study took place between March and October 2020.

In short, the Master study's main objective was to acquire a deeper understanding of the functioning of food-processing cooperatives that produce *Mūne* in Lebanon, at different stages of production and on a temporal scale. As part of this internship, the concept of Economies of Worth by Luc Boltanski and Laurent Thevenot (2006) was mainly mobilized and applied. The concept was developed in the 1980s as a pragmatic form of the domain of sociology. The model applies originally in situations of dispute where actions are faced with critique and justification on the condition that the parties attempt to reach a common agreement. To arrive at justice in the face of that dispute, the model calls for activating what is referred to as the relative 'values' or 'worth'. In the generalization of that form of justification, Boltanski and Thevenot gave rise to six distinguishable "worlds" which can be linked to certain values. The worlds include civic, market, domestic, industrial, inspired and fame. Each of the worlds has a common worth which it rests on and each is expressed in diverse ways. These can be for example for the civic world as collectivity rather than individual, for the market world as the desire to optimize price versus quality or the acquisition of rare goods, in the domestic world as hierarchical position of dependency as esteem and reputation, in the industrial world as technology and science, in the inspired world as grace and imagination, and in the fame world as the recognition by others. To assess the presence and dominance of certain worlds compared to others, some scholars have used the analysis of texts or discourse which analyzed complex association of chunks of texts together using software such as the one called *Alceste* (Rousselière & Vézina, 2009). The ways in which the concept of Economies of Worth in fact do not only limit to cases of dispute. The concept and its six worlds have been used as a useful tool to reveal the orders and rationalities that exist in various types of organizations. Interestingly, an article by Jagd (2011) compiled several studies that mobilized the application of the concept on cooperatives non non-profit organizations. It showed that cooperative banks when it comes to loans exhibit the presence of the domestic, civic, industrial and commercial worlds. This revealed that although being financial cooperatives, the identity and the cooperative culture behind the business raised

more than a strictly financial rationale, but also incorporated an aspect relating to member considerations and thus made them into ‘project-oriented organizations’. The worlds of civic, domestic and inspired were also found to co-existed in non-profit theatres for example. The application of the concept even revealed conflict between small local producers who preferred traditional production compared to larger industrial groups for example in the case Camembert cheese. Even the dairy sector in France under the agricultural transformation era showed the presence of domestic and industrial worlds.

By showing the possible dynamics in which cooperatives and non-profits could exhibit in tendencies of merging various orders of worth, it was found interesting to apply that approach on the food-processing cooperatives in rural Lebanon that are primarily led by women. This is how the approach of the Master internship study was decided. The revelation of the worlds was decided to be identified following an analysis of discourse crossed against related keywords and used to qualify the organizational principles and social values that underline the institutional characteristics as that usually applied for various social systems (Plumecocq et al., 2018). Three of the concept’s six worlds were ultimately used by the Master study. These included the civic, market and domestic world. The inspection matrix of these worlds was adapted to suit the local rationale especially in the investigated keywords as shown in Table 20. These were decided following the review of literature and inspecting the tendencies in which cooperatives in Lebanon apt to have. The internship study also mobilized a questionnaire with 12 with *mūne*-producing cooperatives. The distribution of the cooperatives was made on the basis of two factors; location and operational status. Accordingly, 6 cooperatives were selected from the interior of the *Beqā'* valley and 6 were selected from the exterior of the valley. Each location’s cooperatives were further distributed into 3 operational cooperatives which are currently actively manufacturing end products of *mūne*, and 3 non-operational cooperatives which have ceased work. The methodological approach in the distribution of the cooperative sample is summarized in Table 21. The survey questionnaire was normally adapted for the operational versus the non-operational cooperatives and included questions that inquired on various aspects of their businesses. These for example were general inquiries on the member demographics and their governance system, partnerships of the cooperatives, evolution of the operations with time, questions on the employment status, the cooperative’s perspectives on *mūne* and its production, inquiries on the different production stages (procurement of raw material, production, labeling, etc.), and others.

It should be noted that the concept of Economies of Worth was in itself not mobilized under the scope of this study but the recorded interviews with the cooperatives were retained for extracting relevant evidence that were found to be of value. The special interest was in extracting information from the discourse with the president of *mūne*-producing cooperatives who were not only located in the *Beqā'* valley but also in other regions around the country which allowed to identify evidence of whether all food processing cooperatives in Lebanon have similarities. Additionally, by targeting non-operational cooperatives, the internship study provided an interesting opportunity to inquire of reasons behind the ceasing of activities by these cooperatives and link it with the raised suspicions such as for example the dependency on external sources of aid. Finally, the recorded interviews were hoped to provide input on how women cooperative producers look at *mūne* as an added-value, how they themselves have acquired the skills and knowhow in their production, their general outlook on this heritage asset

as well as the cooperative model of business, and finally the repercussions that the post-2019 economic crisis has been having on their operations. The findings of this section can be found directly in Box note 17 (section 5.3.2) and indirectly throughout this dissertation as the information extracted from the interviews were used to construct the analysis or provided supportive evidence at different sections.

Table 20: Adapted matrix and set of keywords used for discourse analysis by the Master internship study under the concept of Economies of Worth, adapted from the compilation presented by (Ponte, 2016)

	Worlds		
	Domestic	Market	Civic
Common principle	Traditional (family recipe, family know-how)	Competition, Competition (series of standard and homogeneous products, recipes and taste)	Collective solidarity (use of the terms 'we' versus 'me')
Qualified objects and processes	Specific assets	Product units	Negotiation, distribution agreements (distribution of tasks)
Questions underpinning the test of 'quality'	Does it follow tradition? Can it be trusted?	Is it economic? (quality / price)	What is the impact on society? Is it safe, healthy, environmentally sound?
Measure of product quality	Trust, repetition, history	Price (best offer)	Social, environmental, collective impact (especially on women)
Firms' organizational principle	Loyalty (purchase of raw materials from a single farmer)	Competitiveness (quality control, control tools and know-how)	Responsibility
Categories of keywords and specific keywords identified	Relationship (trust the team), trust (products of good quality, purchase of raw materials under verbal contracts), loyalty (purchase is made from a single farmer; family know-how), tradition (family recipe), geographic proximity (members are from the same region), local production/supply/marketing.	Opportunity (best offer of farmer), economic (quality / price), know-how (training), differentiated products with high added value (members control the quality using control tools; presence of a label), spaces for the purchase of raw materials, commercial spaces, competition (standard and homogeneous product), profit (cost optimization in raw material or labor force).	Collective solidarity (us; me), democracy (election of chairperson, number of candidates), negotiation (distribution of tasks), marketing spaces, relations between members (association of action).

Table 21: Methodology of distribution of food processing cooperative performed under the Master internship study as complementation of data.

		Location	
		Interior to the <i>Beqā'</i> valley	Exterior to the <i>Beqā'</i> valley
Operational status	Operational (active) cooperative	3	3
	Non-operational (non-active) cooperative	3	3

5.2. REVEALING THE TYPOLOGIES OF *MŪNE*-PRODUCING COOPERATIVES IN THE *BEQĀ'* VALLEY, THE SIMILARITIES AND DIFFERENCES IN THEIR OPERATIONS

This section presents the results and findings emerging from the classification methodology (section 5.1.1.3) following the collection and treatment of data from field surveys with the entire network of identified cooperatives that produce *mūne* foods in the *Beqā'* valley as detailed in section 5.1. The findings and typologies will be presented systematically by order of Theme in the following subsections and will be provided with a narrative description of the results supported by visualizations. They will next be followed by the results of the triangulation of themes together and crossing of specific variables of interest. The results of will also be coupled with visualization material including graphs and mapping for each theme. These maps will show the spatial distribution of the resulting typologies geographically in the territory and their subsequent inspection for any specific patterns. Each subsection will be divided as follows; they will begin by projecting two types of bar charts per sub-theme (detailed-class and generalized), followed by a definition table of the variables, and then with the narrative description. Once the entire set of sub-themes is presented, a subsection will compile an overall description of the entirety of sub-themes as a re-iteration of characteristics for the entire theme and will be supported by the spatial map. As we will later see, the maps however do not indicate that the distribution of the typologies of cooperative classes follows any spatial logic. The various areas in the *Beqā'* valley therefore seem to have food processing cooperatives with various characteristics without the dominance of any type over the other.

5.2.1.1. Theme 1 – Structure

For Theme 1, the structure component, 8 detailed and 3 general classes were identified. These include **class 1-S (small)** of cooperatives (sub-classes 1-S1, 1-S2 and 1-S3) that consists of 13 out of the total 40 identified cooperatives, **class 2-M (medium)** of cooperatives (sub-classes 2-M1 and 2-M2) consisting of 9 out of the total 40 identified cooperatives, and **class 3-L (large)** of cooperatives (sub-classes 3-L1, 3-L2 and 3-L3) consisting of 18 out of the total 40 identified cooperatives.

5.2.1.1.1. Sub-theme 1.1: Size and activity

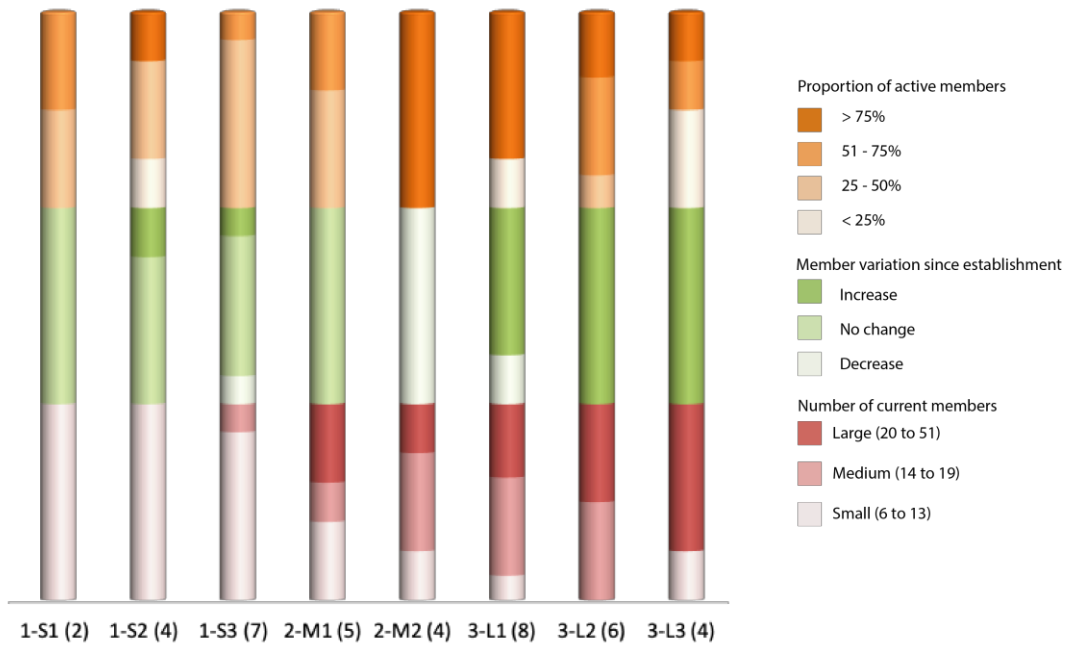


Figure 61: Detailed typology for Theme 1 (structure) sub-theme 1.1 (size and activity) into 8 classes

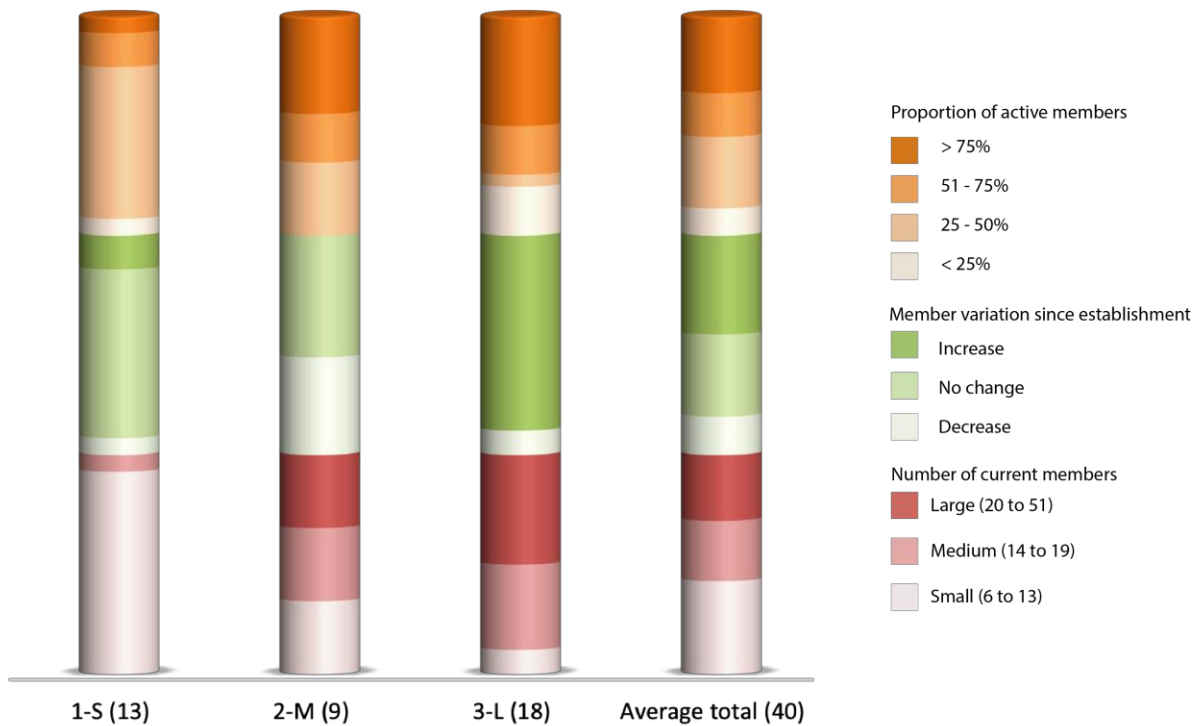


Figure 62: General typology for Theme 1 (structure) sub-theme 1.1 (size and activity) into 3 classes compared with the average total

Table 22: Definition of variables for Theme 1 (structure) sub-theme 1.1 (size and activity)

Level	Label title	Label values	Label description
variable 1	Proportion of active members	> 75%	This variable describes the proportion of current members who are active in the production processes with respect to the total number of affiliated members, reported in percentage basis.
		51 - 75%	
		25 - 50%	
		< 25%	
variable 2	Members variation since establishment	Increase	This variable describes the change in the number of registered members with time, since the establishment date compared to the date by which the interview took place.
		No change	
		Decrease	
variable 3	Number of current members	20 - 51	This variable represents the total number of members currently registered in each cooperative.

The first class 1-S of cooperatives in terms of size and activity is characterized mostly, with rare exceptions, by a relatively small number of currently affiliated members ranging between 6 and 13, which is for the most part stable since their establishment and with a low involvement of members in the production processes ranging mostly between 25 and 50%. This Type 1 consists of 13 out of the total 40 identified cooperatives of which sub-class 1-S1 represents only 2 cooperatives both of which are located in the town of Deir Al Ahmar (North *Beqā'*, i.e. Baalbeck caza). Class 2-M is considered as medium-sized cooperatives, consisting of a total of 9 cooperatives out of the total of 40 interviewed population. This type of cooperatives exhibits a higher number of current members than class 1-S, in which one thirds of this group each reach a range of small (6 to 13), medium (14 to 19) and large (20 to 51) members. No cooperatives of this type exhibited an increase in the number of issued memberships since establishment, but rather reported either a stagnation or a decrease. A clear differentiating determinant consists of the level of member involvement in the production processes, where a higher level is noticed in category 2-M2 (reaching over 75%) as compared to category 2-M1 in which a minimum of 25% and a maximum of 75% of members are directly involved. Class 3-L of cooperatives is considered relatively large as compared to the other two groups, and includes the largest proportion, almost half, of cooperatives reaching 18 out of the 40 identified pool. In terms of the size and activity of this category (sub-theme 1.1), this group is characterized by a noticeable increase in the number of currently affiliated members compared to the two other classes as well as with a general increase in the number of incoming members with time, since their establishment as well as direct involvement of members in production processes.

This sub-theme exhibits a progressive increase in the size and activity of the cooperatives along the 3 major classes. These are reflected in the number of currently affiliated members, an increase of members with time since establishment, and an overall but not exclusive higher involvement of members in the production processes.

5.2.1.1.2. Sub-theme 1.2: Staff composition

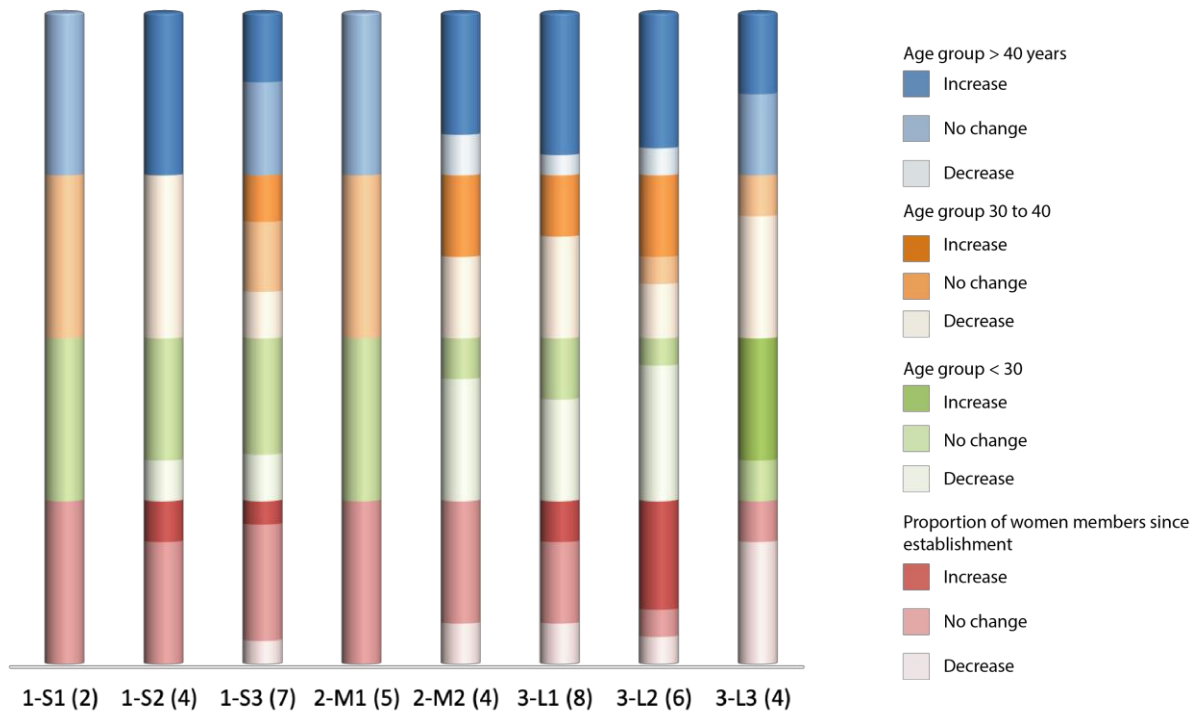


Figure 63: Detailed typology for Theme 1 (structure) sub-theme 1.2 (staff composition) into 8 classes

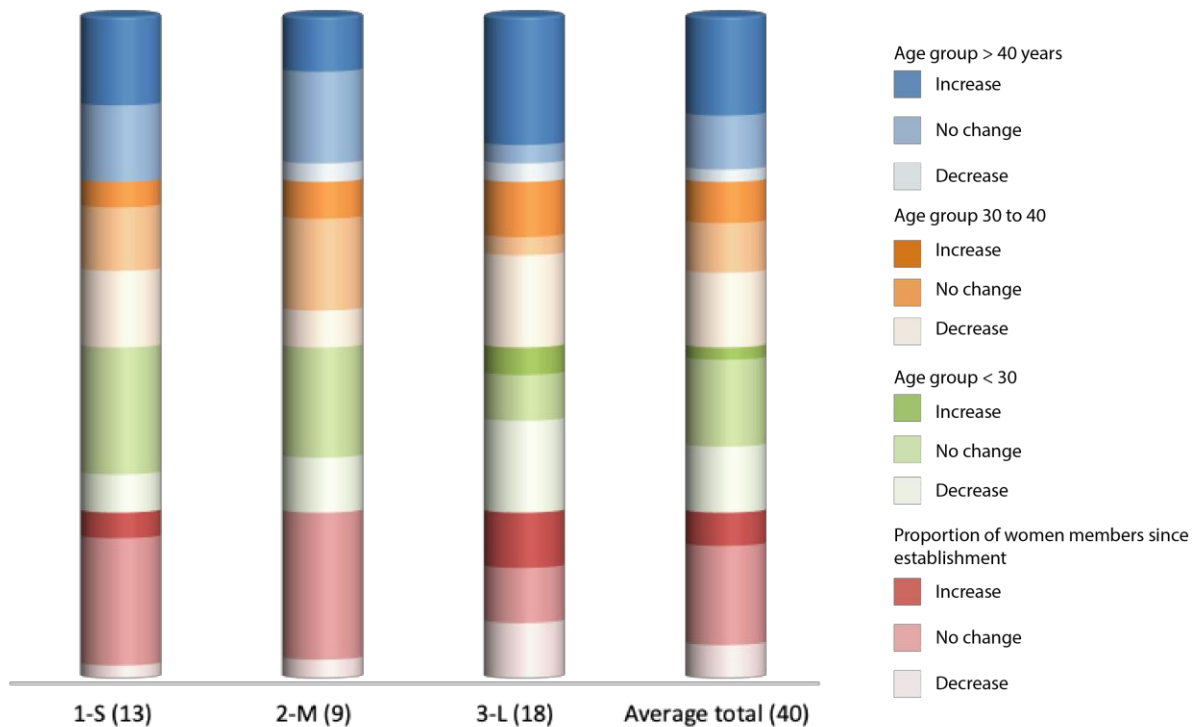


Figure 64: General typology for Theme 1 (structure) sub-theme 1.2 (staff composition) into 3 classes compared with the average total

Table 23: Definition of variables for Theme 1 (structure) sub-theme 1.2 (staff composition)

Level	Label title	Label values	Label description
variable 1	Age over 40	Increase	This variable indicates an increase in the members whose age is over 40 with time, since the establishment of the cooperative
	Age over 40	No change	This variable indicates no change in the members whose age is over 40 with time, since the establishment of the cooperative
	Age over 40	Decrease	This variable indicates a decrease in the members whose age is over 40 with time, since the establishment of the cooperative
variable 2	Age 30 – 40	Increase	This variable indicates an increase in the members whose age is between 30 and 40 with time, since the establishment of the cooperative
	Age 30 – 40	No change	This variable indicates no change in the members whose age is between 30 and 40 with time, since the establishment of the cooperative
	Age 30 – 40	Decrease	This variable indicates a decrease in the members whose age is between 30 and 40 with time, since the establishment of the cooperative
variable 3	Age under 30	Increase	This variable indicates an increase in the members whose age is less than 30 with time, since the establishment of the cooperative
	Age under 30	No change	This variable indicates no change in the members whose age is less than 30 with time, since the establishment of the cooperative
	Age under 30	Decrease	This variable indicates a decrease in the members whose age is less than 30 with time, since the establishment of the cooperative
variable 4	Proportion of women members since establishment	Increase	This variable indicates an increase in the proportion of women members with time, since the establishment of the cooperative
	Proportion of women members since establishment	No change	This variable indicates no change in the proportion of women members with time, since the establishment of the cooperative
	Proportion of women members	Decrease	This variable indicates a decrease in the proportion of women members with time, since the establishment of the cooperative

	since establishment		
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For the most part, cooperatives in the class 1-S, considered as small cooperatives, witnessed little variation in the proportion of age groups, except for sub-class 1-S3 where a variation in the age groups 30 to 40 and over 40 exists indicating a probable aging of members. It is important to note that no new young incomers under 30 years of age are recorded in any of the sub-classes. Class 2-M exhibits various trends, mainly divided in two. The first follows the same trends as sub-class 1-S1 whereby retaining stable characteristics of members in terms of gender and age groups, whereas the second demonstrates certain variations in age groups which could be linked to the aging of members, thus their shift to subsequent age groups or to a decrease due to withdrawal of members (reflected in sub-theme 1 for this sub-class). Class 3-L's characteristics are noticed to include an increase in the highest age group (over 40 years) in two of the three sub-classes (3-L1 and 3-L2) with one exhibiting an additional increase in the number of women members, whereas the last sub-class (3-L3) is the sole sub-class, which incorporates 4 cooperatives out of 40, to demonstrate an increase in the young age group (less than 30 years) on one hand but also demonstrates a decrease in women members on another hand.

An overall increase in the oldest age group (over 40 years) is evident in many of the sub-classes. In fact, a total of 24 out of 40 cooperatives recorded this increase. This signifies an aging population of cooperative members and equally raises a concern since this aging is not met by the incoming of young members, whereby only Sub-class 3-L3 recorded an increase in the youngest age group (less than 30 years). Other age trends could be understood as the aging of members from one age group to the next, the inclusion of new members especially in the 3-L sub-class, or on a lesser extent as the withdrawal of members as expected for sub-class 2-M2 for example which recorded a decrease in members under sub-theme 1. In terms of gender, having food-processing cooperatives mainly revolving around the inclusion of women producers, it is interesting to mention that no major increase in the number of women members is registered except in sub-class 3-L2. In general, only a total of 8 out of 40 cooperatives from all sub-classes registered the affiliation of new women members since their establishment with sub-class 3-L2 representing half of that total.

5.2.1.1.3. Sub-theme 1.3: Additional staff recruitment type and proportion

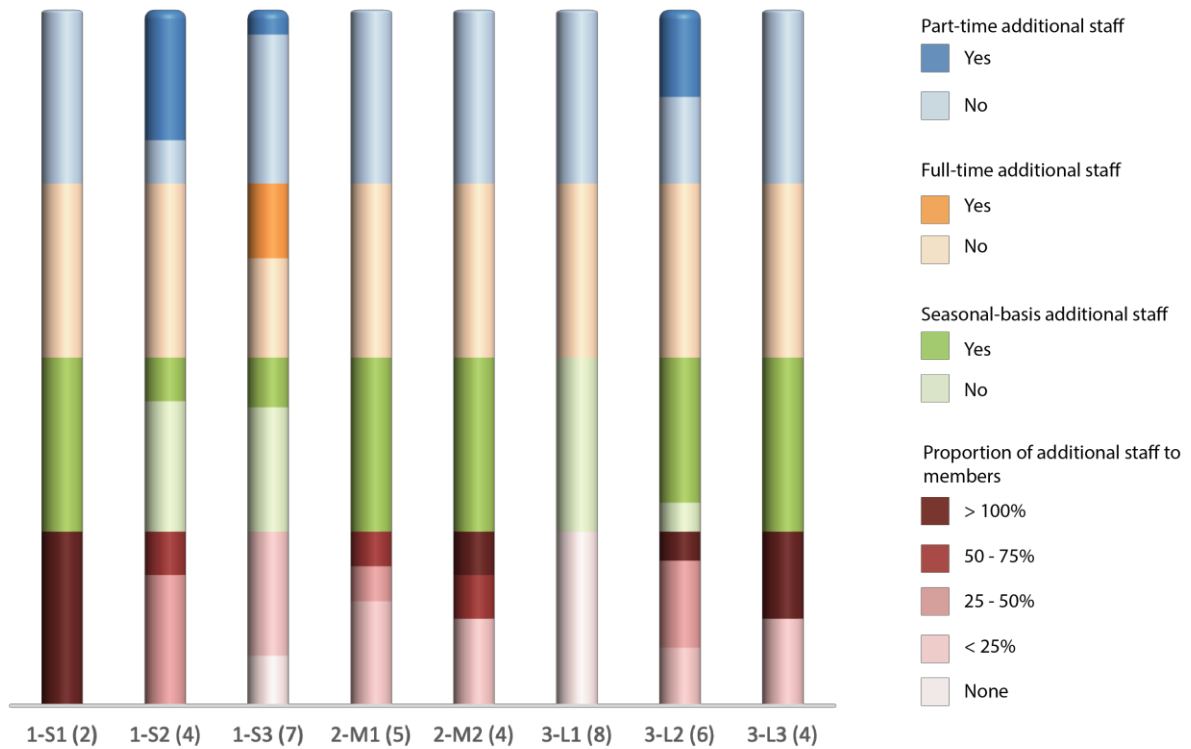


Figure 65: Detailed typology for Theme 1 (structure) sub-theme 1.3 (additional staff recruitment type and proportion) into 8 classes

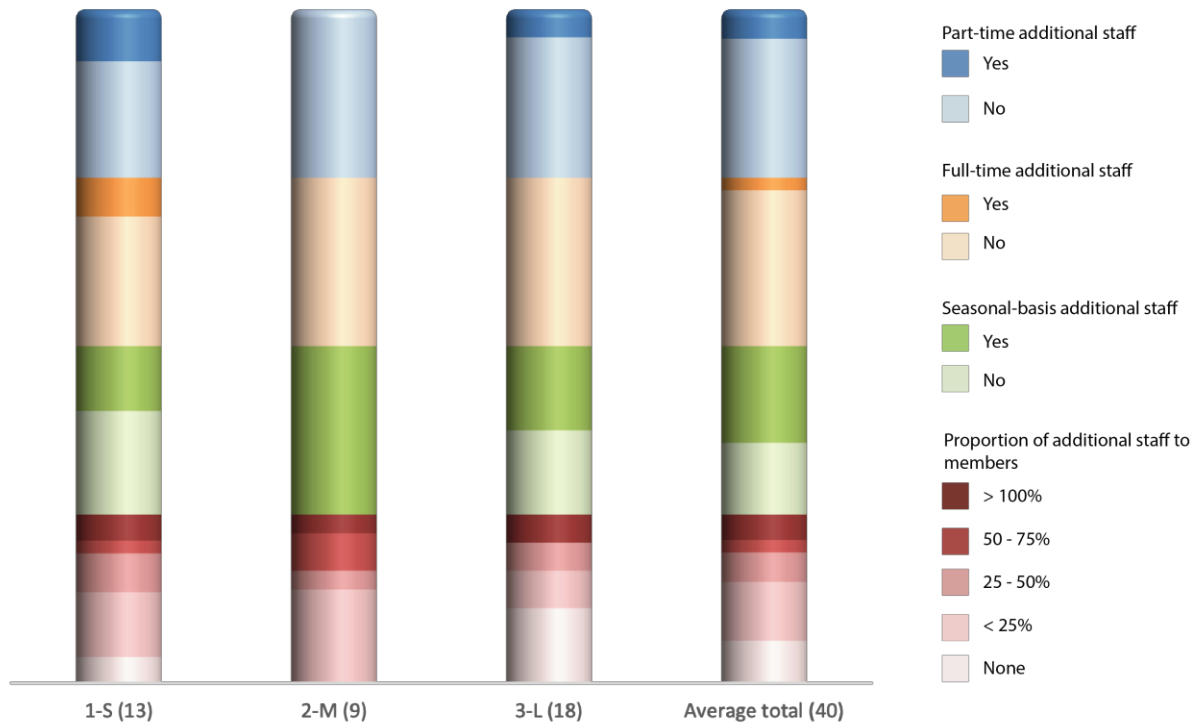


Figure 66: General typology for Theme 1 (structure) sub-theme 1.3 (additional staff recruitment type and proportion) into 3 classes compared with the average total

Table 24: Definition of variables for Theme 1 (structure) sub-theme 1.3 (additional staff recruitment type and proportion)

Level	Label title	Label values	Label description
variable 1	Part-time additional staff	Yes	This variable represents the proportion of additional recruits working on a part-time basis.
	Part-time additional staff	No	Not applicable, indicating the remaining proportion of cooperatives whose data is not relevant to this criterion.
variable 2	Full-time additional staff	Yes	This variable represents the proportion of additional recruits working on a full-time basis.
	Full-time additional staff	No	Not applicable, indicating the remaining proportion of cooperatives whose data is not relevant to this criterion.
variable 3	Seasonal-basis additional staff	Yes	This variable represents the proportion of additional recruits working on a seasonal basis, usually indicates the recruitment only during the production season which could include periods extending between May and October of every year.
	Seasonal-basis additional staff	No	Not applicable, indicating the remaining proportion of cooperatives whose data is not relevant to this criterion.
variable 4	Proportion of additional staff to members	> 100%	Percentage of additional staff recruited by the cooperatives reaching over 100% the number of affiliated members.
	Proportion of additional staff to members	50 - 75%	Percentage of additional staff recruited by the cooperatives reaching between 50 and 75% the number of affiliated members.
	Proportion of additional staff to members	25 - 50%	Percentage of additional staff recruited by the cooperatives reaching between 20 and 50% the number of affiliated members.
	Proportion of additional	< 25%	Percentage of additional staff recruited by the cooperatives reaching less than 25% the number of affiliated members.

	staff to members		
	Proportion of additional staff to members	None	No additional staff recruited by the cooperatives.

Class 1-S reflects a diversity in the type of recruitments which focuses on seasonal workers solely (case of 1-S1 which also registered the highest proportion of additional workforces compared to the number of members), part-time basis (represented mostly in 1-S2) and in few cases on full-time basis as represented in 1-S3 in which this type of recruitment is only found. Class 2-M exhibits reliance on seasonal workers solely with a common proportion of additional workers reaching maximum 25% compared to the number of members, yet with few cases registering higher proportions between 25 and 75%, and even surpassing 100%. Class 3-L exhibits two major behaviors, one where cooperatives do not recruit any additional workforce but relies solely on their members, and the second where cooperatives mostly perform seasonal recruitments with only a few cases of part-time recruitments. The proportion of cooperatives recruiting additional workforce is variable ranging between a maximum of 25% for some, between 25 and 50% and between 50 and over 100% for others.

Many cooperatives are noted to recruit additional workforce. The highest proportion of recruitment was registered in the sub-class 1-S1, which includes only 2 cooperatives, where over 100% of the cooperatives' member size increases due to that recruitment. Lower proportion of additional staff recruitment are noticed amongst the remaining sub-classes, except sub-class 3-L1 in which no additional recruitment is performed. Most common recruitment sizes reach up to 25% to 50% of the cooperatives' team size as in sub-classes 1-S3, 2-M1 and 3-L2, but could reach higher proportions that could reach 50 to 75% or higher than 100% for only 4 cooperatives belonging to sub-classes 2-M2, 3-L2 and 3-L3. An evident recruitment of seasonal workers can be clearly seen in the majority of cooperatives. Out of the total 8 sub-classes, almost 5, completely rely on such recruitments and only a few cases registered part-time basis and rarely full-time basis. From the total 40 cooperatives, 23 reported regular recruitment of seasonal workers therefore reflecting the important inclusion of such activities in the operations during production seasons.

5.2.1.1.4. Sub-theme 1.4: Additional staff age and nationality

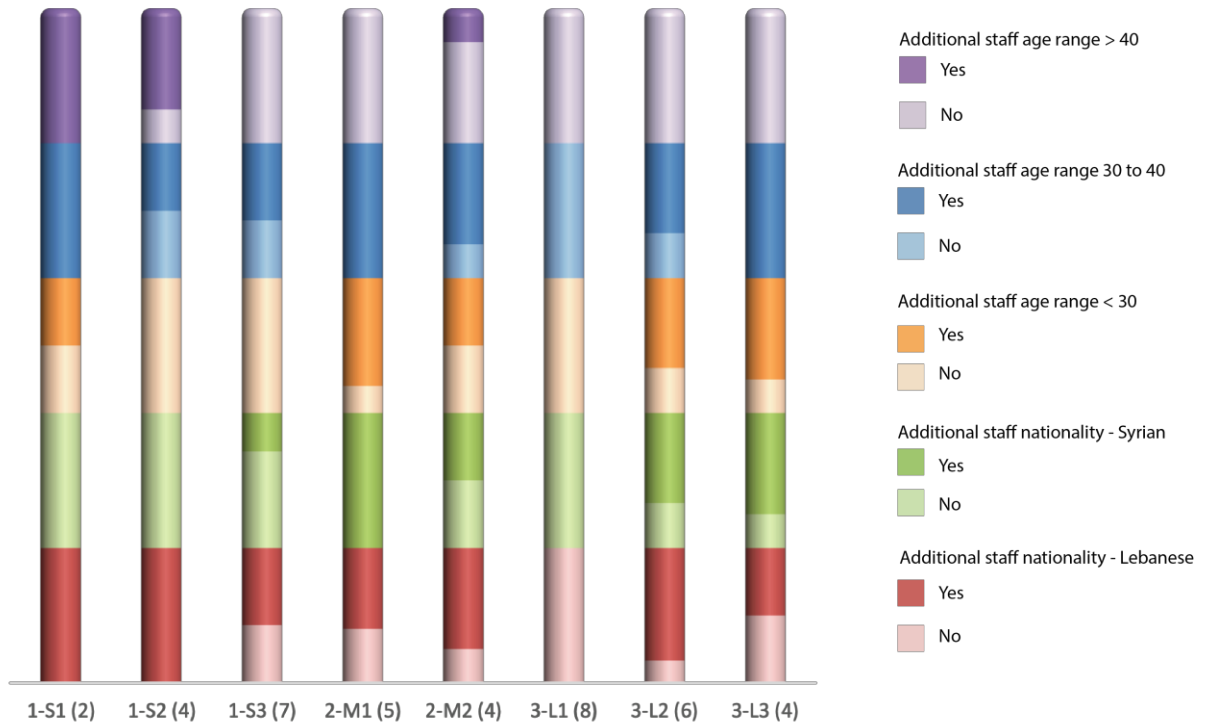


Figure 67: Detailed typology for Theme 1 (structure) sub-theme 1.4 (additional staff age and nationality) into 8 classes

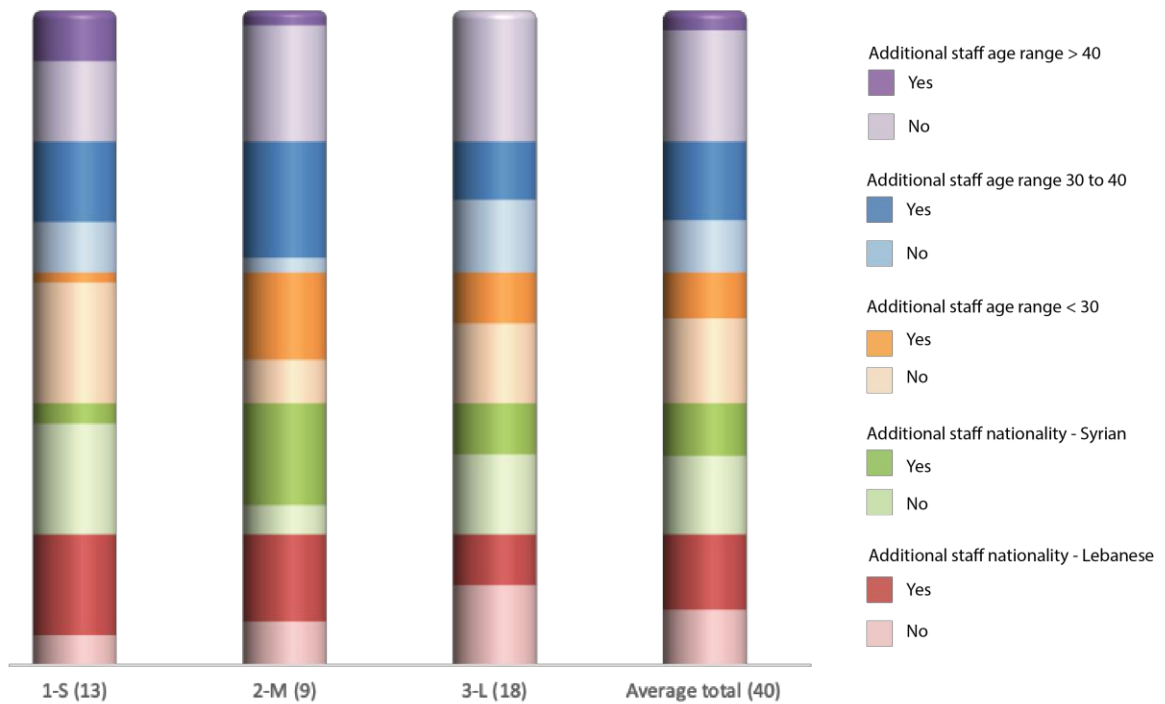


Figure 68: General typology for Theme 1 (structure) sub-theme 1.4 (additional staff age and nationality) into 3 classes compared with the average total

Table 25: Definition of variables for Theme 1 (structure) sub-theme 1.4 (additional staff age and nationality)

Level	Label title	Label values	Label description
variable 1	Additional staff age range > 40	Yes	Proportion of additional recruited staff whose age is over 40 years.
	Additional staff age range > 40	No	Not applicable, indicating the remaining proportion of cooperatives whose data is not relevant to this criterion.
variable 2	Additional staff age range 30-40	Yes	Proportion of additional recruited staff whose age is between 30 and 40 years.
	Additional staff age range 30-40	No	Not applicable, indicating the remaining proportion of cooperatives whose data is not relevant to this criterion.
variable 3	Additional staff age range < 30	Yes	Proportion of additional recruited staff whose age is less than 30 years.
	Additional staff age range < 30	No	Not applicable, indicating the remaining proportion of cooperatives whose data is not relevant to this criterion.
variable 4	Additional staff nationality - Syrian	Yes	This variable represents the proportion of additional recruits being from the Syrian nationality.
	Additional staff nationality - Syrian	No	Not applicable, indicating the remaining proportion of cooperatives whose data is not relevant to this criterion.
variable 5	Additional staff nationality - Lebanese	Yes	This variable represents the proportion of additional recruits being from the Lebanese nationality.
	Additional staff	No	Not applicable, indicating the remaining proportion of cooperatives whose data is not relevant to this criterion.

	nationality - Lebanese		
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Class 1-S in terms of the nationality and age range of additional recruits shows that this sub-class relies mostly on the Lebanese workforce and exceptionally on Syrian workforce, with age ranges being mostly in the 30's or over 40 years of age, with exceptional recruitment of relative youth under 30 years of age in sub-class 1-S1. Class 2-M exhibits a division between two nationalities, and recruits additional workforce belonging to both the Lebanese and Syrian nationalities (which is more prominent in 2-M1) and relies mainly on the age range of recruits mostly between 30 and 40 years, rarely over 40 only in the case of one cooperative in sub-class 2-M2, but also is noticed to incorporate younger recruits less than 30 years of age. Class 3-L of cooperatives also recruit additional workforce from both the Lebanese and Syrian nationalities, with sub-class 3-L1 lacking any recruitment entirely. The other sub-classes 3-L2 and 3-L3 recruit additional workforce aging less than 30 and also between 30 and 40, but do not recruit workforce over 40 years of age.

In terms of nationality, recruitments are seen to include both Lebanese and Syrian workers. Class 1-S exhibited the recruitment of workers from the Lebanese nationality majorly whereas the recruitment of workers from the Syrian nationality was more prominent in 2-M. All cooperatives in this latter sub-class recruited Syrian workforce, either solely or joint with Lebanese workforce. What can be clearly seen in sub-theme 4 is that most classes of cooperatives prefer recruiting additional staff whose age ranges between 30 and 40 years. This is probably due to the cooperatives preferring a certain level of experience from the recruited staff, especially seasonal workers, since most tasks will be related to the processing of food products thus requiring a minimum level of knowhow. The highest proportion of such cooperatives include sub-classes 1-S1, 2-M1 and 3-L3, with lesser proportions in the remaining sub-classes with the exception of sub-class 3-L1 which is the only sub-class to completely lack this type of recruitment. On a lesser extent, cooperatives do also recruit workers from younger age groups under 30 years of age, mostly evident in sub-classes 2-M1, 3-L2 and 3-L3. Only 6 cooperatives from the total 40, mostly belonging to 1-S1 and 1-S2 sub-classes recorded the recruitment of additional staff from an older age group over 40 years.

5.2.1.1.5. Sub-theme 1.5: Production and turnover

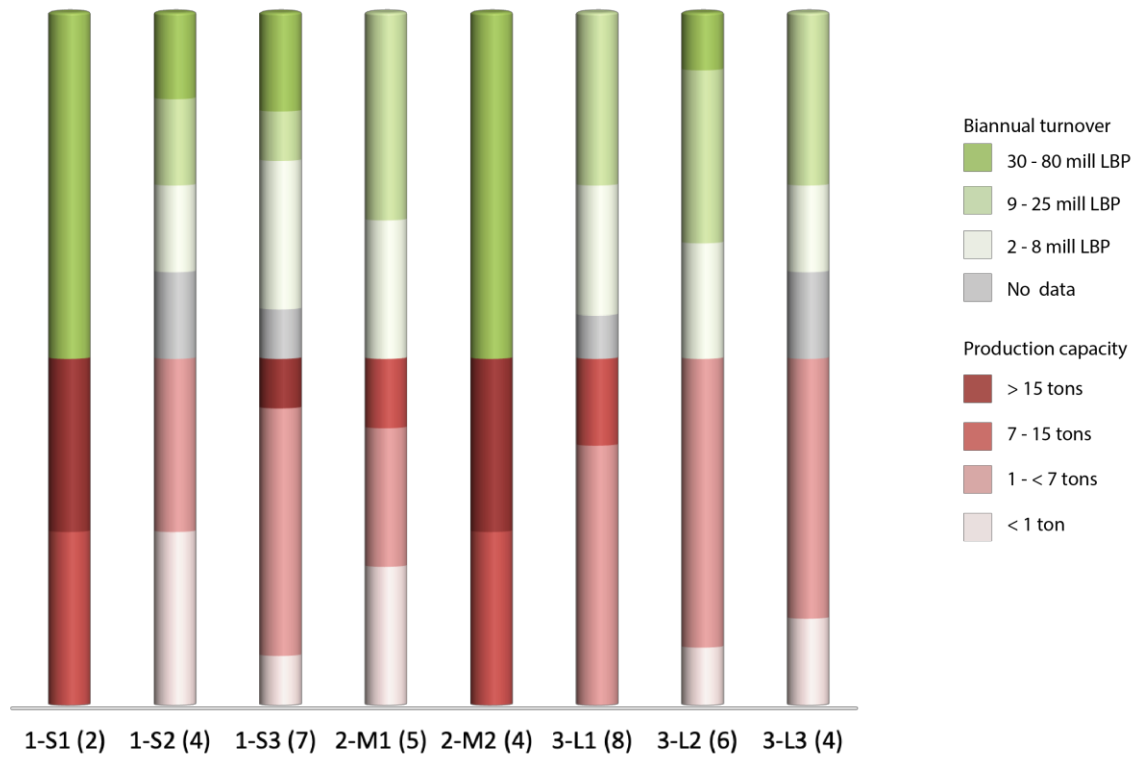


Figure 69: Detailed typology for Theme 1 (structure) sub-theme 1.5 (production and turnover) into 8 classes

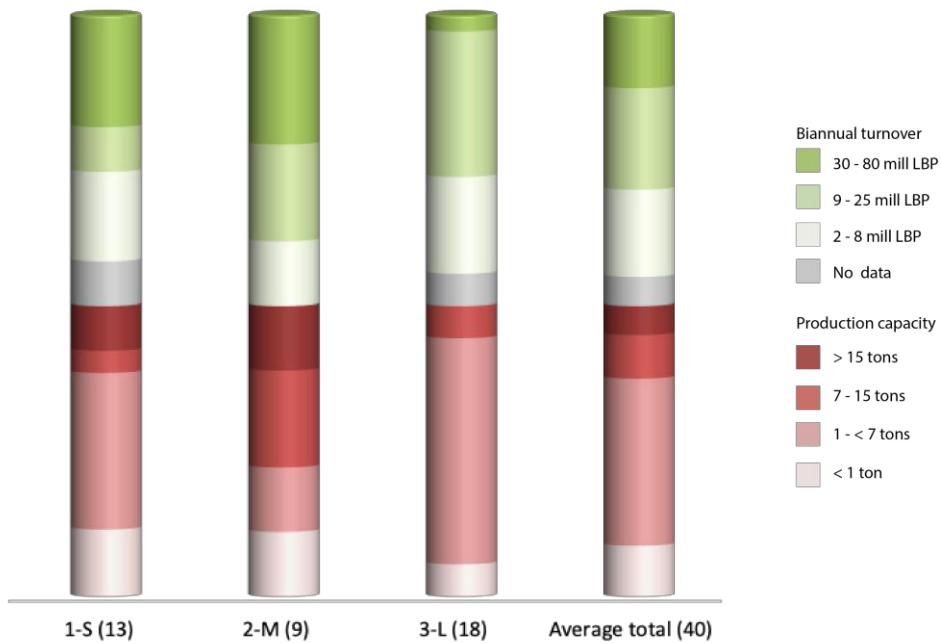


Figure 70: General typology for Theme 1 (structure) sub-theme 1.5 (production and turnover) into 3 classes compared with the average total

Table 26: Definition of variables for Theme 1 (structure) sub-theme 1.5 (production and turnover)

Level	Label title	Label values	Label description
variable 1	Biannual turnover in million LBP	30 - 80 mill LBP	This variable represents the proportion of cooperatives that produce a biannual turnover between million 30 to 80 Lebanese Pounds (LBP). <i>It should be noted that these figures have been registered when the former exchange rate, prior to the onset of the economic crisis in 2019, was pegged against the United States Dollar at 1,515 LBP per US\$. At the time when this data analysis was taking place in spring-summer 2021, black market rates have recorded values exceeding 20,000 LBP per US\$ and even 30,000 LBP by 2022.</i>
	Biannual turnover in million LBP	9 - 25 mill LBP	This variable represents the proportion of cooperatives that produce a biannual turnover between million 9 to 25 Lebanese Pounds (LBP).
	Biannual turnover in million LBP	2 - 8 mill LBP	This variable represents the proportion of cooperatives that produce a biannual turnover between million 2 to 8 Lebanese Pounds (LBP).
	Biannual turnover in million LBP	No data	No data was provided by the cooperatives on their biannual turnover.
variable 2	Production capacity	> 15 tons	This variable represents the proportion of cooperatives that reach an annual production capacity of over 15 tons.
	Production capacity	7 - 15 tons	This variable represents the proportion of cooperatives that reach an annual production capacity between 7 and 15 tons.
	Production capacity	1 - 7 tons	This variable represents the proportion of cooperatives that reach an annual production capacity between 1 and less than 7 tons.
	Production capacity	< 1 ton	This variable represents the proportion of cooperatives that reach an annual production capacity of less than 1 ton.

Class 1-S exhibits a diversity in the production capacity and generated turnover, which mostly remains small between 1 to 7 tons of annual production for 7 cooperatives or under 1 ton for 3 cooperatives. Only sub-class 1-S1 registered the relatively high production capacity of this class of between 7 and 15 tons or exceeding that amount. This specific sub-class also registered the highest generated biannual turnover between 30 to 80 million LBP, whereas others registered less, mostly between 2 to 8 million LBP. Class 2-M is also divided in two.

The first (2-M1) includes cooperatives that have similar tendencies in smaller production capacities met with an equally relatively low to medium-sized amount of biannual turnover ranging between a minimum of million 2 to 8 LBP and million 9 to 25 LBP as a maximum. The second (2-M2) a relatively higher annual production capacity (ranging between 7 to even over 15 tons) and biannual turnover which in all cooperatives of this sub-class reached the highest values ranging between million 30 to 80 LBP. Class 3-L tends to reach mostly medium-sized annual production capacities despite their classification as relatively “large” cooperatives compared to the remaining, ranging for the most part between 1 to 7 tons a year. None of the cooperatives in this class registered the highest capacity over 15 tons annual production as those noticed in sub-classes 1-S1 and 2-M2, while only sub-class 3-L1 registered the highest quantities of 7 to 17 tons maximum. Instead, the 3-L class mostly produced between 1 and 7 tons of final products annually (14 out of 18 cooperatives) and mostly generated biannual turnover between million 9 and 25 LBP (9 cooperatives) or the minimum million 2 to 8 LBP (6 cooperatives). Only one cooperative in sub-class 3-L2 registered the maximum biannual turnover of million 30 to 80 LBP.

For this sub-theme, over half of the cooperatives pertaining to the different sub-classes exhibited a relatively small-sized production capacity which ranges between 1 to 7 tons annually, which is in context considered small for the market. Yet, it is important to mention that many of the cooperatives verbally mentioned that they are able to increase their production capacities if orders come through, and that these current values are mainly driven by the market demand. Only 4 cooperatives out of the total 40, included in sub-classes 1-S1, 1-S3 and 2-M2, reported the highest values of annual productions reaching over 15 tons. On the other end, a total of 7 out of 40 cooperatives reported the lowest values of less than 1 tons of annual production capacities. These were also included the small, medium and large classes. In terms of biannual turnover, various values were reported by the different sub-classes. Only cooperatives in sub-classes 1-S1 and 2-M2 completely reported the highest registered biannual turnover of million 30 to 80 LBP. Another majority of cooperatives totaling including 14 cooperatives from sub-classes 2-M1, 3-L1, and 3-L3 in total and sub-classes 1-S2, 1-S3, and 3-L2 in part recorded biannual turnover ranging between million 9 to 25 LBP. None of sub-classes wholly reported the lowest range of biannual turnover (million 2 to 8 LBP) but it was most prominent in sub-class 1-S3, but also present in the remaining sub-classes except for 1-S1 and 2-M2. These results show that the size of annual production capacity and subsequent generation of turnover is not directly correlated with the size of cooperatives in terms of membership but could be linked to the proportion of active members in the production process, probably mobilized as a result of sizeable orders. It is also important to note that cooperatives majorly lack proper bookkeeping, clear accounting and archiving. This was evident through the provision of estimates during the interview process rather than precise figures extracted from any form of documentation. Suspicion of any ambiguous figures could therefore be due to that fact. Finally, it should be noted that these figures have been provided by the cooperatives during the field interviews when the former exchange rate, prior to the onset of the economic crisis in 2019, was pegged against the United States Dollar at 1,515 LBP per US\$. Several recent crises hit Lebanon starting end-2019 including an economic downfall, widespread protests, spread of COVID-19, the disastrous Beirut Port explosion and overall political instability have had repercussions, directly and indirectly, on the stability of the national LBP.

As a result, a grave devaluation of the LBP reached unprecedented levels. As of August 2022, the previously pegged rates of LBP to US\$ rate (1,515/US\$) increased by almost 20 folds exceeding 30,000 LBP/US\$ traded in black markets, therefore dictating a loss of over 95% of its value since October 2019.

5.2.1.1.6. Sub-theme 1.6: Establishment date and type of tenure

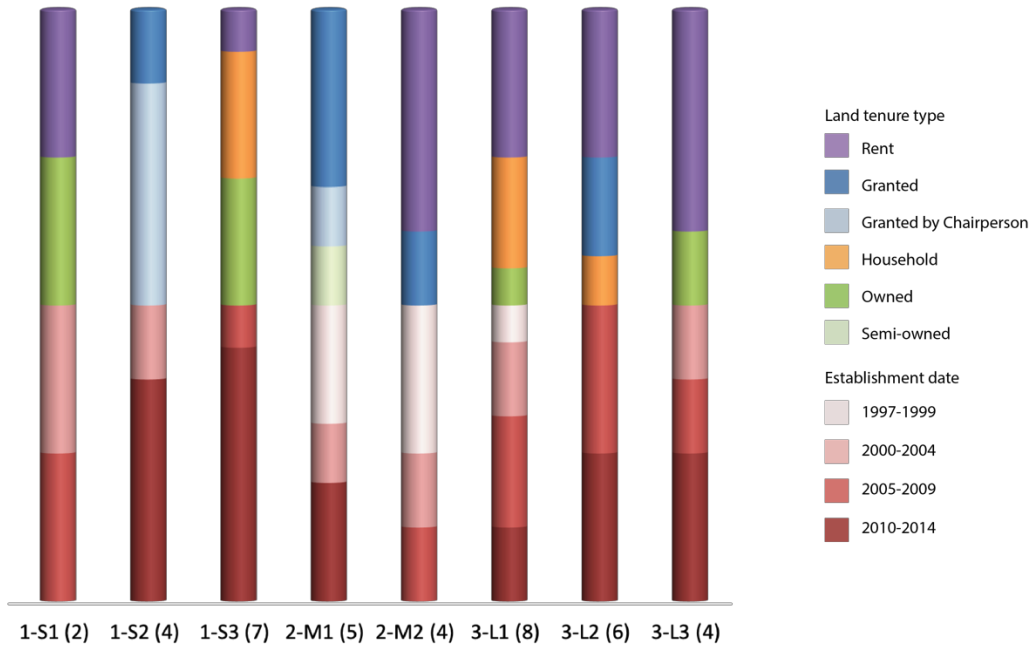


Figure 71: Detailed typology for Theme 1 (structure) sub-theme 1.6 (establishment date and type of tenure) into 8 classes

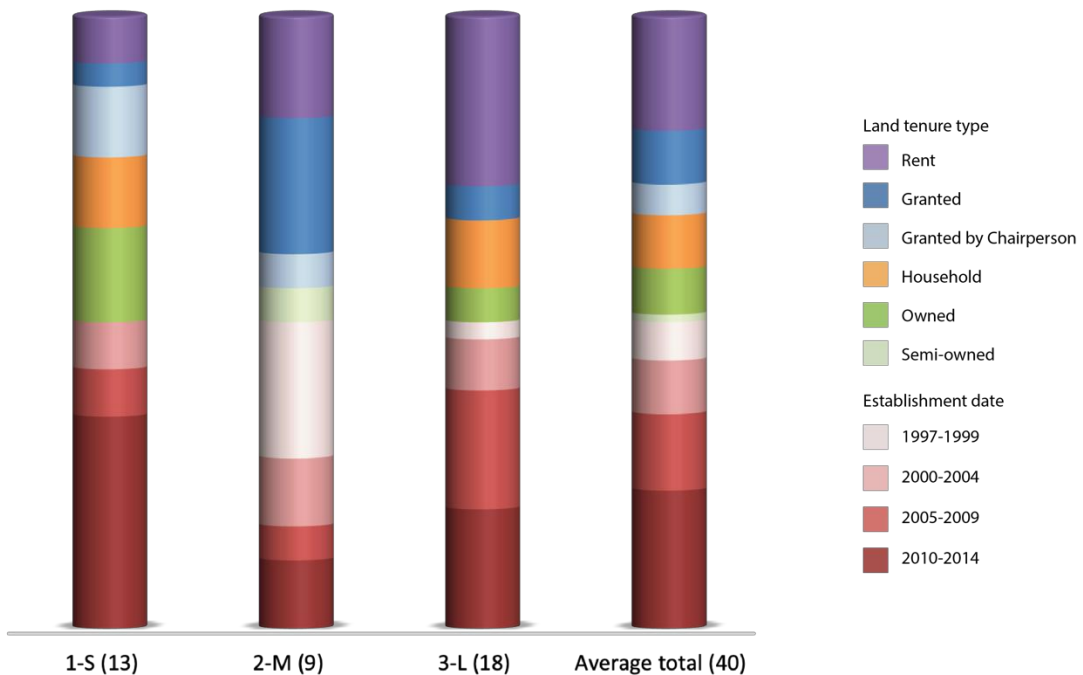


Figure 72: General typology for Theme 1 (structure) sub-theme 1.6 (establishment date and type of tenure) into 3 classes compared with the average total

Table 27: Definition of variables for Theme 1 (structure) sub-theme 1.6 (establishment date and type of tenure)

Level	Label title	Label values	Label description
variable 1	Land tenure type	Rent	This variable represents the type of land tenure which the cooperative occupies, in this case being rent of the locale where processing operations takes places.
	Land tenure type	Granted	This variable represents the type of land tenure which the cooperative occupies, in this case having the locale where the processing center is found granted for free, usually for a limited period of time, by a separate entity such as a municipality or individual donor.
	Land tenure type	Granted by Chairperson	This variable represents the type of land tenure which the cooperative occupies, in this case having the locale where the processing center is found granted for free by the cooperative's chairperson herself who is the proprietor of the location. This type of tenureship exists since cooperatives may be established in private buildings at the time of their establishment whose owners have granted use.
	Land tenure type	Household	This variable represents the type of land tenure which the cooperative occupies, in this case being a household where the processing operations take place, in most cases being the household of the cooperative's chairperson. In this case, the cooperative is considered non-conforming in terms of the center conformity component since operations could be interfered with household activities, and the overall score is therefore considered zero.
	Land tenure type	Owned	This variable represents the type of land tenure which the cooperative occupies, in this case having the cooperative complete ownership of both the land plot and the constructed processing center.
	Land tenure type	Semi-owned	This variable, which is exceptional, represents the type of land tenure which the cooperative occupies, in this case having the cooperative owning the processing center building but not the

			land plot, which was rented from a cooperative member for a limited period of time.
variable 2	Establishment date	1997-1999	This variable represents the cooperatives that were established and registered at the Directorate General of Cooperatives between 1997 and 1999.
	Establishment date	2000-2004	This variable represents the cooperatives that were established and registered at the Directorate General of Cooperatives between 2000 and 2004.
	Establishment date	2005-2009	This variable represents the cooperatives that were established and registered at the Directorate General of Cooperatives between 2005 and 2009.
	Establishment date	2010-2014	This variable represents the cooperatives that were established and registered at the Directorate General of Cooperatives between 2010 and 2014.

Class 1-S of cooperatives is firstly noticed to have been established between 2010 and 2014 (9 out of 13 cooperatives). As for the type of land tenure, this class exhibits a diversity in this factor including complete ownership (mainly sub-class 1-S3 mostly but also in 1-S1), granting of the center mainly by the chairperson and having this type of land tenure existing only in sub-class 1-S2 of its category, household production noticed only in 1-S3 of this class, and finally the renting of the facility noticed in two cooperatives belonging to 1-S1 and 1-S3. Class 2-M exhibits a higher proportion of cooperatives that were establish in the years 1990s between 1997 and 1999, with this class including 4 out of the 5 cooperatives in the entire network. Similarly, this class exhibits a variety of land tenure occupied by the cooperatives, mainly divided in two approaches. 5 out of the 9 cooperatives in this class have their centers granted for use mainly by independent donors, whereas the remaining rent the locale. Most cooperatives in class 3-L were established after the years 2000, mostly between 2005 and 2009 for 7 out of 18 cooperatives and between 2010 and 2014 for 7 cooperatives. The highest proportion of cooperatives renting their processing center is also exhibited with 10 out of the 18 cooperatives whereas the remaining also includes the same diversity as other classes.

A clear and significant increase in the establishment date of cooperatives is therefore evident especially after the year 2005 and up to 2014, on a lesser extent between 2000 and 2004. Only 5 cooperatives out of 40 were established in the 1990's between 1995 and 1997, belonging mostly to class 2-M. As for the type of land tenure, a different type of occupancy is noticed. The most prominent types of tenures include the granting of the cooperative's locations either by the chairperson who is usually the owner, as in sub-class 1-S2, or by other stakeholders (such as municipalities or individual donors) as in sub-class 2-M1. The other and more significant type of tenure is the rent of cooperative's locations as mainly seen in sub-classes 2-M2, 3-L1 and 3-L3. It is however also noticed that certain cooperatives are operating from households, usually owned by the chairperson. Although this model of production is not recommended, it still exists today even in the relatively large cooperatives as seen in sub-class 3-L1 for example.

5.2.1.1.7. Compiled description of Theme 1 – Structure

In terms of structure (Theme 1), 3 larger classes and 8 smaller sub-classes can be distinguished. The 3 main classes could be looked at as cooperatives that are relatively 1-S (small), 2-M (medium) and 3-L (large)-sized cooperatives. The classes 1-S, 2-M and 3-L comprise of 13, 9 and 18 cooperatives, respectively, therefore signifying the inclusion of a significant number of cooperatives in class 3-L and are considered as relatively large cooperatives.

The main characteristics of these classes and sub-classes are summarized in the below compiled description:

Class 1-S (small) consists of 13 out of the total 40 identified cooperatives

- relatively small number of affiliated members with no to rare variation in the number of members since establishment and relatively low involvement of members in the production processes
- little to no variation in gender and age groups, except for an increase in the oldest age group driven by a decrease in the middle age group
- highest proportion of recruitment of additional workforce in 1-S1 (includes only 2 cooperatives both located in Deir Al Ahmar (North *Beqā'*)) in the form of Lebanese seasonal workers, and whose number reach over 100% of the cooperatives' member size. This raises an interesting observation given that the cooperative is considered as small
- includes sub-class 1-S1 which reported along with sub-class 2-M2 the highest production capacities, coupled with the highest registered biannual turnover of million 30 to 80 LBP
- includes sub-class 1-S3 with significant establishment of cooperatives between 2010 and 2014
- includes sub-class 1-S2 with significant granting of production centers by the chairperson

Class 2-M (medium) consists of 9 out of the total 40 identified cooperatives

- progressively increased number of members (distributed in one-thirds between the three ranges small (6 to 13), medium (14 to 19) and large (20 to 51) members)
- no increase in number of members since establishment, but rather either a stagnation or a decrease exists
- involvement of members in the processes is divided in two sub-classes: either medium-low to medium-high involvement (25-50% / 50-75% in 2-M1) or high involvement (over 75% in 2-M2)
- partly no variation in gender and age groups but partly exhibiting variations ending in an increase in the oldest age group
- includes sub-class 2-M1 which shows reliance on Syrian workforce for seasonal recruitment

- includes sub-class 2-M2 which reported along with sub-class 1-S1 the highest production capacities, coupled with the highest registered biannual turnover of million 30 to 80 LBP

Class 3-L (large) consists of 18 out of the total 40 identified cooperatives

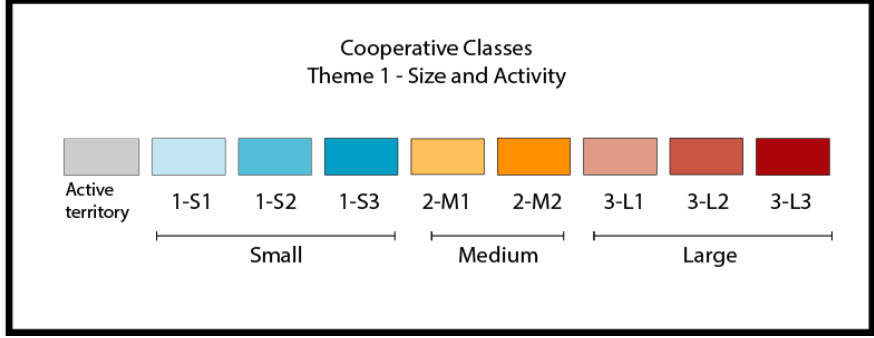
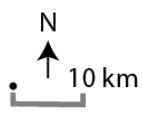
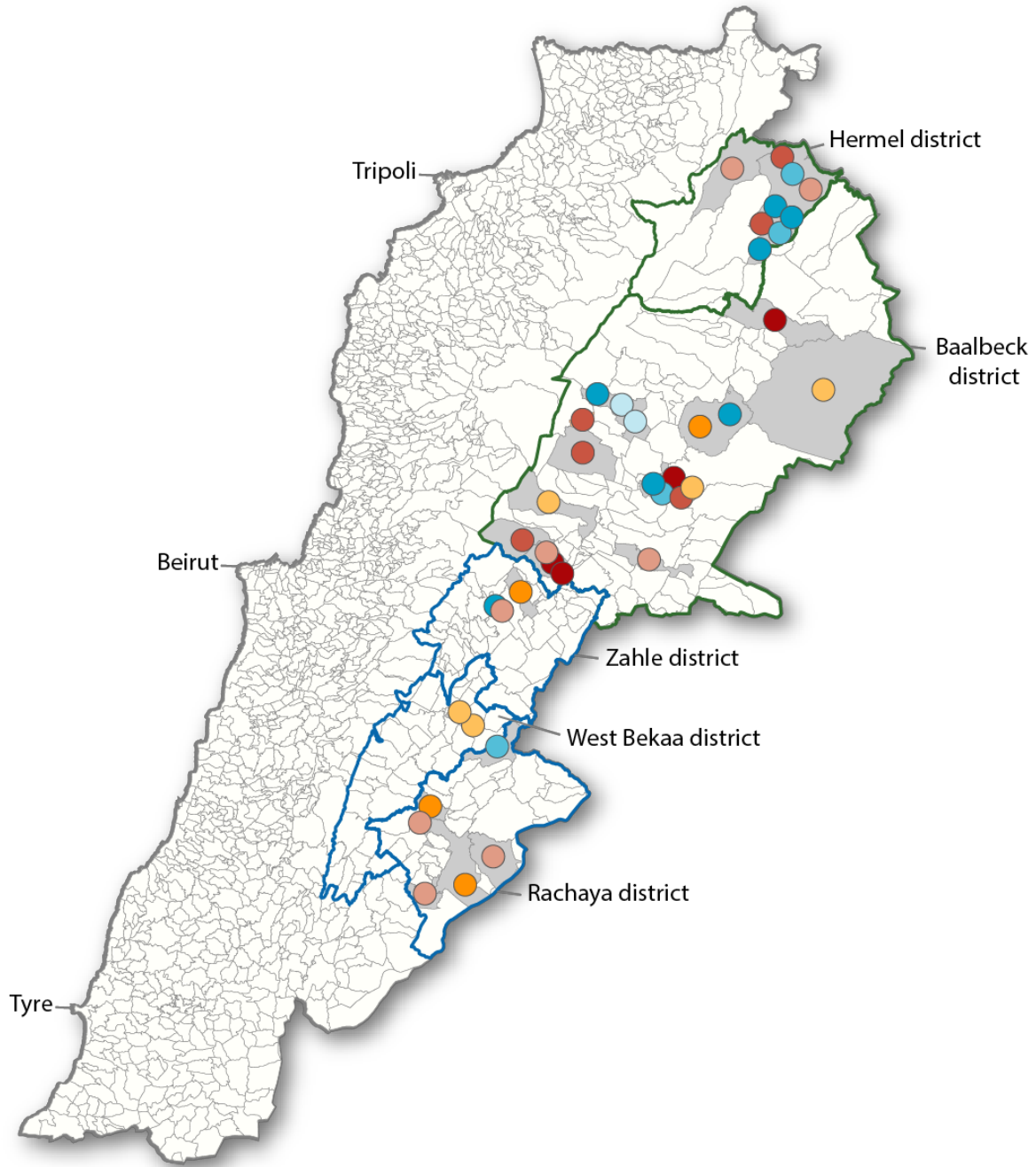
- relatively largest number of members with a general increase in the number of members since establishment
- highest proportion of members who are active in production processes
- evident increase in the oldest age group, with partly increase and decrease in women members per sub-class (only significant increase registered in sub-class 3-L2), and contains the sole sub-class with increase in youth age group i.e. less than 30 years (sub-class 3-L3)
- reaches mostly medium-sized annual production capacities despite their classification as relatively “large” cooperatives compared to the remaining, ranging for the most part between 1 to 7 tons a year.
- 3 out of the 4 cooperatives in 3-L3 are categorized as basic (class 1-B in Theme 4)
- All cooperatives in sub-classes 3-L2 and 3-L3 are located in either Baalbeck or Hermel

Common characteristics and important notes:

- evidence of an aging population evident from the significant increase in the relatively oldest age group over 40 touching 24 out of 40 cooperatives, without any incoming of youth age groups except for one sub-class (3-L3)
- no major increase in the number of women members is registered except in sub-class 3-L2. Only 8 out of 40 cooperatives registered the affiliation of new women members since their establishment with sub-class 3-L2 representing half of that total
- over half the cooperatives (23 out of 40) recruit additional workforce, the common form being seasonal workers whose ages range between 30 and 40 years and include both Lebanese and Syrian nationalities, and for the most part reach up to 25% of the cooperatives' team size
- over half of the cooperatives pertaining to the different sub-classes exhibited a relatively small-sized production capacity which ranges between 1 to 7 tons annually
- most common recorded biannual turnover ranges between million 9 to 25 LBP for 14 out of 40 cooperatives
- size of annual production capacity and subsequent generation of turnover is not directly correlated with the size of cooperatives in terms of membership
- an overall escalation in the number of established cooperatives especially after the year 2010
- most common type of occupancy is rent, however the operation from households is also prominent (although not recommended for food production) even in the relatively large cooperatives as seen in sub-class 3-L1 for example

The spatial distribution of food processing cooperatives as per their structure, meaning their belonging to the different classes in theme 1, is represented below in Map 29. The mapping reveals that there is no specific spatial pattern or tendency of concentration of food processing

cooperatives when it comes to Theme 1. Rather, the distribution of cooperatives in various different types of structure seem to exist all around the *Beqā'* valley. Small, medium and large cooperatives could exist in the territory. Therefore, there is no specific reasoning that could be identified behind that distribution although smaller-scale cooperatives (class 1-S) tend to be found more numerous in northern *Beqā'*, meaning in the Baalbeck-Hermel governorate. But that reason could be simply due to the reason that this governorate houses a larger number of cooperatives when compared to the *Beqā'* governorate, thus increasing the chance of having cooperatives belonging to the different classes.



Map 29: Spatial distribution of food processing cooperatives in the *Beqā'* valley per Theme 1 (Structure). Source: Produced by author, *Jalkh R., 2021, LAGAM, UM3.*

5.2.1.2. Theme 2 – Spatiality of operations

For Theme 2, the spatiality of operations, 7 detailed and 3 general classes were identified. These include **class 1-R (rural)** of cooperatives (sub-classes 1-R1 and 1-R2) that consists of 8 out of the total 40 identified cooperatives, **class 2-SR (semi-rural)** of cooperatives (sub-classes 2-SR1 and 2-SR2) consisting of 13 out of the total 40 identified cooperatives, and **class 3-U (urban)** of cooperatives (sub-classes 3-U1, 3-U2 and 3-U3) consisting of 19 out of the total 40 identified cooperatives.

5.2.1.2.1. Sub-theme 2.1: Emergency sources of raw material and turnover

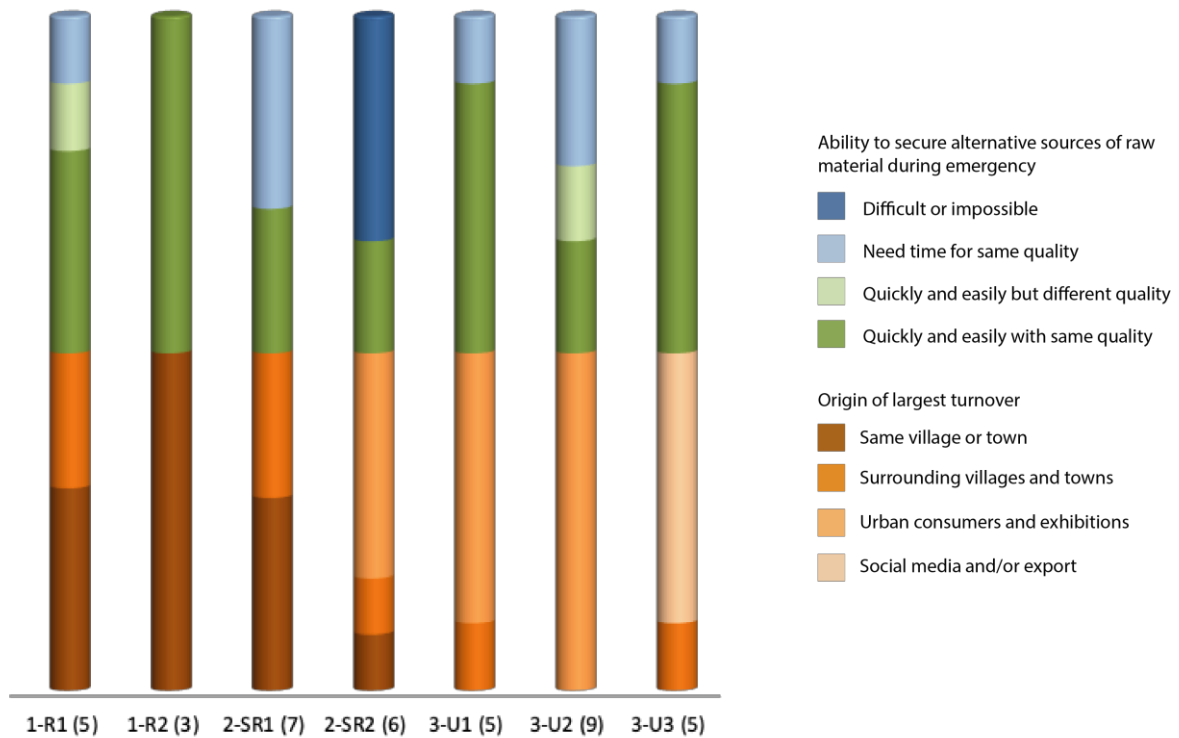


Figure 73: Detailed typology for Theme 2 (spatiality) sub-theme 2.1 (emergency sources of raw material and turnover) into 7 classes

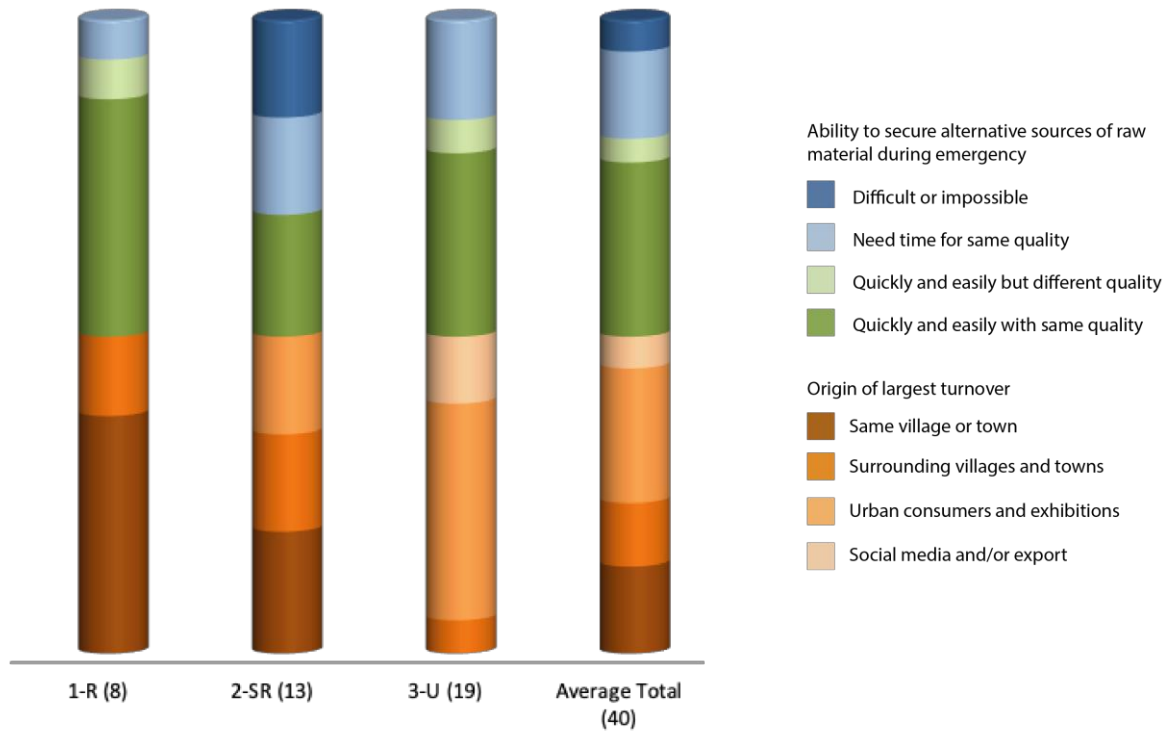


Figure 74: General typology for Theme 2 (spatiality) sub-theme 2.1 (emergency sources of raw material and turnover) into 3 classes compared with the average total

Table 28: Definition of variables for Theme 2 (spatiality) sub-theme 2.1 (emergency sources of raw material and turnover)

Level	Label title	Label values	Label description
variable 1	Ability to secure alternative sources of raw material during emergency	Difficult or impossible	This variable represents the cooperative's perspective on its ability to secure alternative sources of raw material, especially in times of emergency or sudden interruptions from usual suppliers. This question mainly touches on agricultural raw material and fresh produce needed for processing, with this label including cooperatives that find the latter difficult or impossible.
		Need time for same quality	The same definition of the question applies here with this label including cooperatives that find the above possible but requires time in order to procure alternative raw material of the same quality as those usually used.
		Quickly and easily but different quality	In this case, the cooperatives consider it is possible to secure alternative suppliers of fresh agricultural raw material relatively quickly but would however be compromising quality.

		Quickly and easily with same quality	In this case, the cooperatives consider it is possible to secure alternative suppliers of fresh agricultural raw material relatively quickly in the same quality as those usually used.
variable 2	Origin of largest turnover	Surrounding villages and towns	This variable represents the main source of the largest turnover generated from the cooperative's sales of end products, in this case being the surrounding rural villages and towns.
	Origin of largest turnover	Urban consumers and exhibitions	This variable represents the main source of the largest turnover generated from the cooperative's sales of end products, in this case being urban consumers and periodic exhibitions that are mostly usually organized in or around the capital Beirut but could also be organized in rural villages especially in high seasons.
	Origin of largest turnover	Social media and/or export	This variable represents the main source of the largest turnover generated from the cooperative's sales of end products, in this case being through social media marketing or foreign export markets.

For Class 1-R, significant proportion of cooperatives in this class consider that if any emergency emerges, they are able to secure alternative sources of raw material relatively quickly and within the same quality originally used, with all three cooperatives of sub-class 1-R2 and 3 out of 5 cooperatives of sub-class 1-R1 reporting so. Cooperatives of this class have their largest turnover exclusively from rural origins from the same village/town as the cooperative for the most part but also sometimes from other surrounding villages. Class 2-SR includes the only sub-class (2-SR1) to acknowledge that the alternative sources of raw material would be difficult or even impossible which reflects a state of dependency on their current suppliers. The remaining cooperatives believe they are able to secure such alternative raw material in the same original quality either quickly or requiring some time to do so. This class also exhibits a similar trend as class 1-R in having major turnover originating from the rural surroundings of the same town (sub-class 1-SR1) but also presents a significant turnover originating from urban consumers and exhibitions (2-SR2). This is why this class is considered a transitional class exhibiting characteristics of being both rural and linked to the urban environment simultaneously. Similarly to the other classes, cooperatives belonging to class 3-U also consider that they are able to easily procure alternative supply of fresh raw material if an emergency arises, with the same quality as those usually used, in quick manner or would need time to do so. Only 2 cooperatives from sub-class 3-U2 out of the 19 cooperatives in this class acknowledged that the alternative supplies would be of a different quality. Unlike the other two classes, the majority of cooperatives, specifically in sub-classes 3-U1 and 3-U2, almost entirely rely on urban consumers and exhibitions for the sales of their products, as these two form the major source of these cooperatives' turnover. This is exhibited for all 9 cooperatives in sub-class 3-U2 and for 4 out of the 5 cooperatives in sub-class 3-U1. Finally, sub-class 3-

U3 is the only class in the entire network of cooperatives to rely on social media and export as main sources of turnover, with 4 out of the 5 cooperatives in this sub-class stating that response.

For sub-theme 2.1, the large classes can be identified 1-R (rural), 2-SR (semi-rural) and 3-U (urban). Class 1-R exhibits having the majority of its revenue generated from rural markets, mainly those in the same village at that where the cooperatives are located for 6 out of the cooperatives in this class, and those of surrounding villages for the remaining 2 cooperatives. These cooperatives also consider that it would be easy for them to quickly procure fresh agricultural raw material from alternative suppliers in case any emergency arises, whereas only rarely do cooperative of this class believe they need time to achieve that or would compromise quality. Several cooperatives (5) in class 2-SR also believe they are capably of easily and quickly securing alternative sources of raw material whereas the remaining are divided between those who consider they need time to secure the same quality as that usually used and those that believe it would be difficult or impossible to achieve that. Class 2-SR presents characteristics linked to both rural and urban where cooperatives are seen to source their largest turnover mainly from their surrounding rural environment but also introduce those from urban consumers and exhibitions that are mostly usually organized in or around the capital Beirut but could also be organized in rural villages especially in high seasons. Finally, Class 3-U shows the highest significant tendency of cooperatives relying on urban markets (urban consumers and exhibitions) for their turnover in most cases, but also on the modern social media marketing and foreign export markets.

5.2.1.2.2. Sub-theme 2.2: Marketing channels

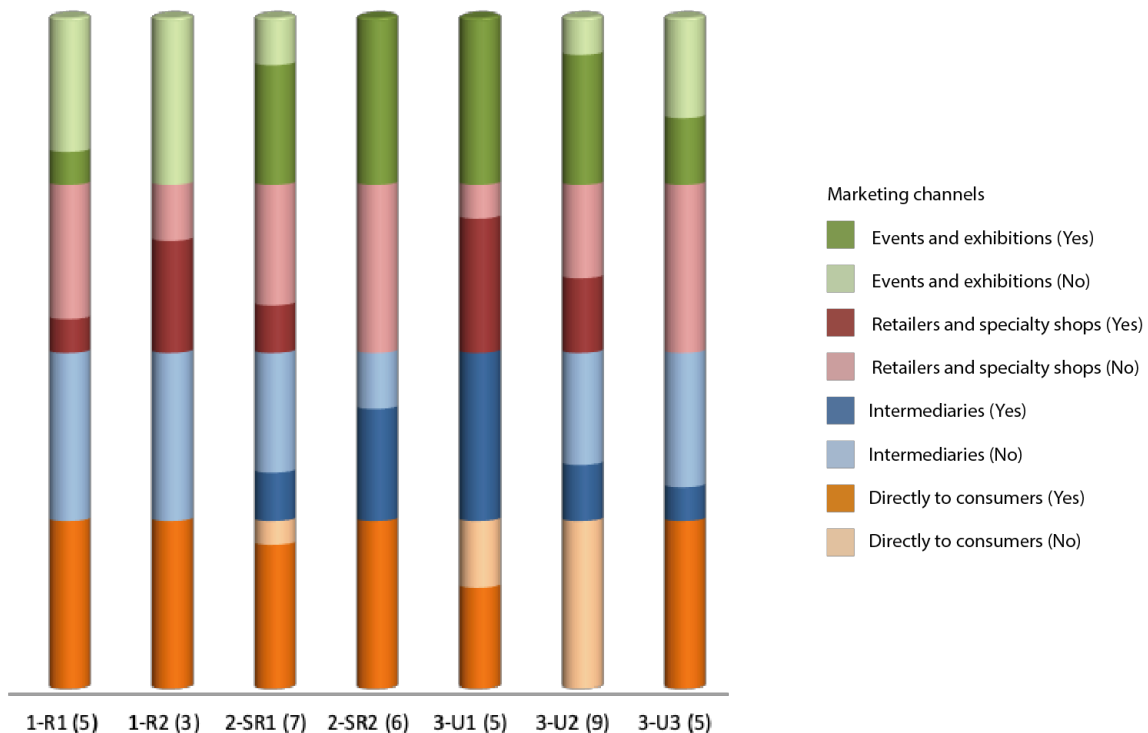


Figure 75: Detailed typology for Theme 2 (spatiality) sub-theme 2.2 (marketing channels) into 7 classes

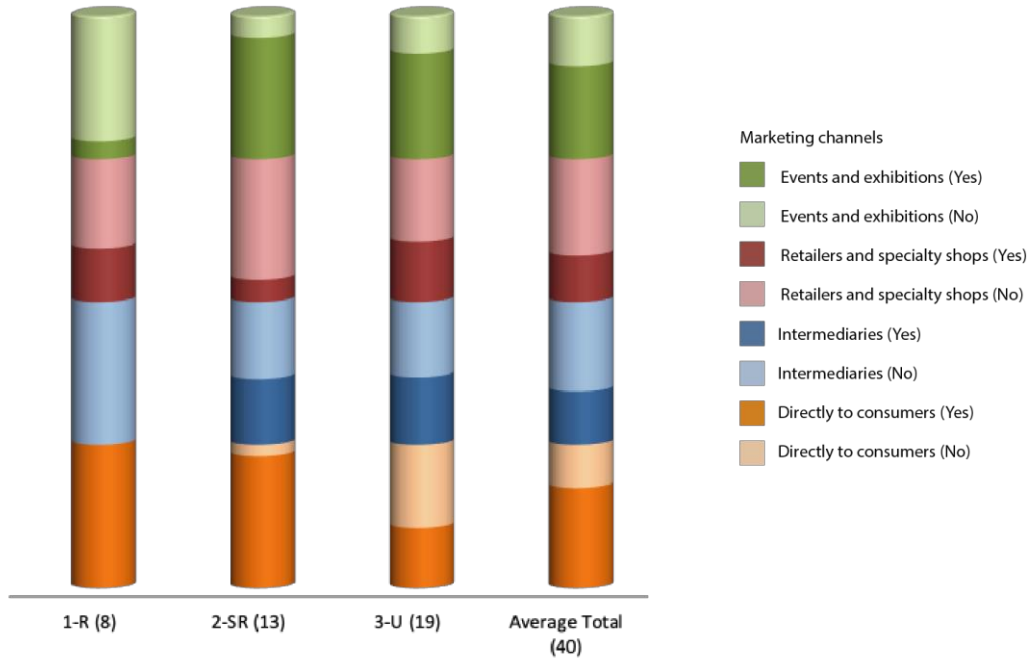


Figure 76: General typology for Theme 2 (spatiality) sub-theme 2.2 (marketing channels) into 3 classes compared with the average total

Table 29: Definition of variables for Theme 2 (spatiality) sub-theme 2.2 (marketing channels)

Level	Label title	Label values	Label description
variable 1	Marketing channels	Events & exhibitions (Yes)	This variable represents cooperatives that rely on events and exhibitions as a main marketing channel for selling their end products.
	Marketing channels	Events & exhibitions (No)	N/A
variable 2	Marketing channels	Retailers and Specialty shops (Yes)	This variable represents cooperatives that sell their end products to retailers and specialty shops.
	Marketing channels	Retailers and Specialty shops (No)	N/A
variable 3	Marketing channels	Intermediaries (Yes)	This variable represents cooperatives that collaborate with intermediaries as a main marketing channel for selling their end products. Intermediaries may include various entities, including but not limited to development agencies, other marketing cooperatives, traders and middlemen, etc.
	Marketing channels	Intermediaries (No)	N/A

variable 4	Marketing channels	Directly to consumers (Yes)	This variable represents cooperatives that sell their end products directly to consumers, hence are able to collect and possibly deliver.
	Marketing channels	Directly to consumers (No)	N/A

Cooperatives in class 1-R are seen to significantly market their end products through direct sales to customers from the village/town or its surroundings, with all cooperatives of this class practicing this method, or in some cases include the display at specialty shops also within the same rural level (case of 1-R2). Class 2-SR represents cooperatives that exhibit a diversity in their marketing channels that also relies heavily on their participation in promotional events and exhibitions along with the direct sales to consumers, rare marketing through retailers and specialty shops (only 2 cooperatives in 1-S1), but with the existence of marketing through intermediaries (mainly 2-SR2) that was missing from the first rural class. Class 3-U exhibits a diversity in the marketing of end products. Sub-class 3-U1 is noticed to significantly engage in all three types of marketing channels, whereas sub-class 3-U2 tends towards the marketing through events and exhibitions mainly and a lesser extent on retailers/specialty shops and intermediaries but not on direct sales to consumers. Sub-class 3-U3 on the other hand engages in the inverse, with all cooperatives in this sub-class engaging in direct sales to consumers but not on retailers/specialty shops and rarely through intermediaries, but still participate in events and exhibition.

Most cooperatives are seen to practice direct sales to consumers, mostly in classes 1-R and 2-SR therefore further solidifying their rural engagement at the level of their towns and surrounding environment, but on a lesser extent in class 3-U and none in sub-class 3-U2. In their case, cooperatives are seen to use a diversity of marketing channels, but with all three sub-classes engaging in marketing through promotional events and periodic exhibitions and a lesser extent on retailers/specialty shops and intermediaries. Once more, class 2-SR is representing transitional characteristics of both rural and urban features, in this case with their marketing locally at the urban level to direct consumers and at the same time their participation in exhibitions that are frequently organized in urban settings.

5.2.1.2.3. Sub-theme 2.3: Urban Turnover

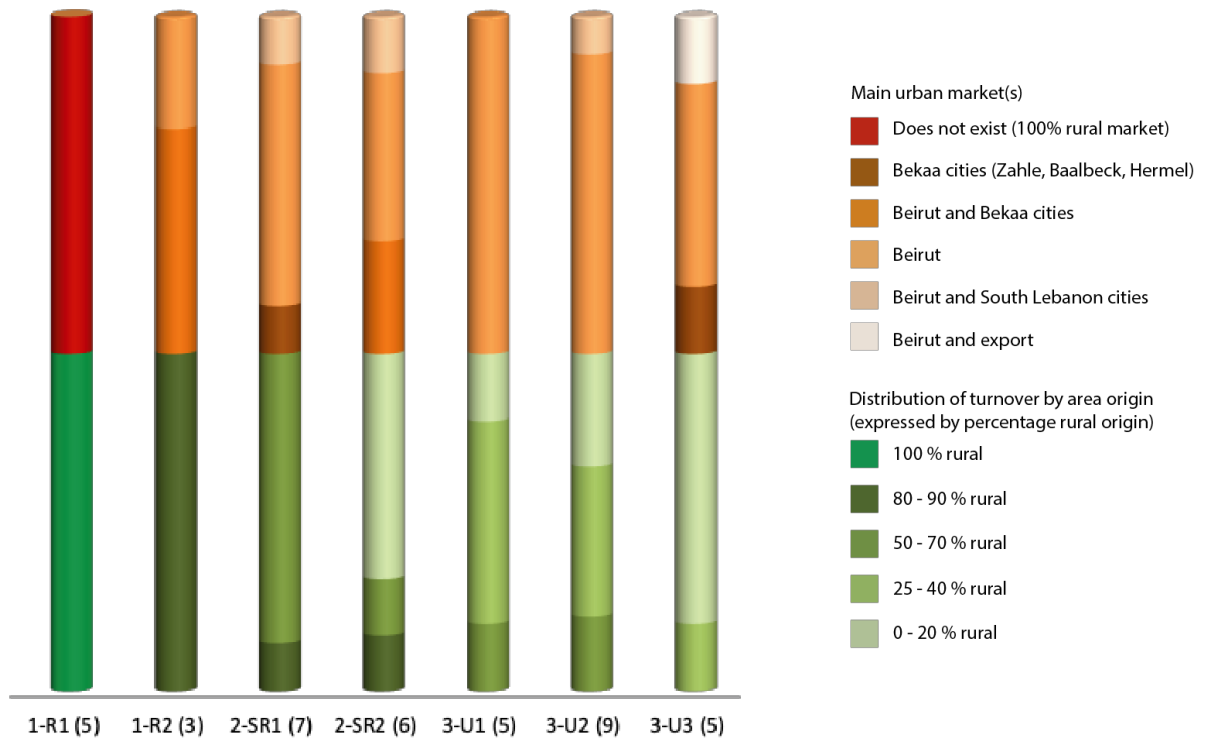


Figure 77: Detailed typology for Theme 2 (spatiality) sub-theme 2.3 (urban turnover) into 7 classes

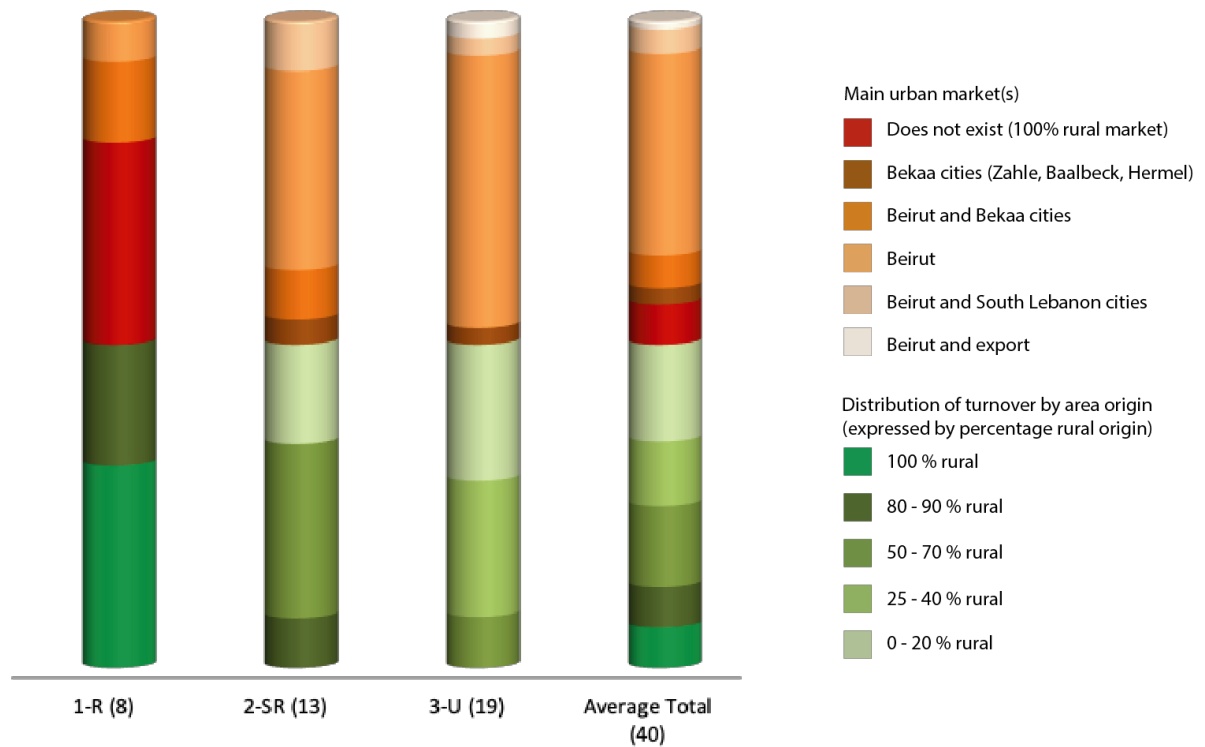


Figure 78: General typology for Theme 2 (spatiality) sub-theme 2.3 (urban turnover) into 3 classes compared with the average total

Table 30: Definition of variables for Theme 2 (spatiality) sub-theme 2.3 (urban turnover)

Level	Label title	Label values	Label description
variable 1	Main urban market(s)	Does not exist	This variable indicates that none of the cooperatives have access to urban markets and therefore sell their end products solely in their surrounding markets.
	Main urban market(s)	<i>Beqā'</i> cities (<i>Zaḥle</i> , Baalbeck, Hermel)	This variable represents the cooperatives that mainly sell their end products to cities located in the <i>Beqā'</i> valley, mainly <i>Zaḥle</i> (that has an urban atmosphere), and/or to Baalbeck and Hermel, both cities considered as retaining a strong rural atmosphere despite the high concentration of population.
	Main urban market(s)	Beirut and <i>Beqā'</i> cities	This variable represents cooperatives that rely on the urban capital Beirut and/or cities around the <i>Beqā'</i> as main urban markets for their end products.
	Main urban market(s)	Beirut	This variable represents cooperatives that rely on the urban capital Beirut as a main urban market for their end products.
	Main urban market(s)	Beirut and South Lebanon cities	This variable represents cooperatives that rely on the urban capital Beirut and/or cities in South Lebanon, such as Tyr and Sidon, as main urban markets for their end products.
	Main urban market(s)	Beirut and export	This variable represents cooperatives that rely on the urban capital Beirut and/or foreign export as main urban markets for their end products.
variable 2	Distribution of turnover by area	100% rural	This variable further details the sources of turnover generated by the cooperatives and its distribution between rural and urban sources. In this case, the variable consists of having the cooperatives generating their turnover completely from rural setting.
	Distribution of turnover by area	80 – 90% rural	This variable consists of having the cooperatives generating the majority of their turnover (80 to 90%) from rural setting whereas the remainder from urban sources.
	Distribution of turnover by area	50 – 70% rural	This variable consists of having the cooperatives generating over half of their turnover (50 to 70%) from rural setting whereas the remainder from urban sources.
	Distribution of turnover by area	25 – 40% rural	This variable consists of having the cooperatives generating the majority of their turnover from urban

			sources whereas the remaining 25 to 40% from rural sources.
	Distribution of turnover by area	0 – 20% rural	This variable consists of having the cooperatives generating their turnover mostly from rural setting, mainly the capital Beirut.

Class 1-R of cooperatives is seen to rely almost completely on their rural environment for marketing. Complete reliance is found in sub-class 1-R1 since the entire turnover is generated from the surroundings and urban marketing does not exist in that sub-class. 1-R2 exhibits similar behavior but with less intensity with the majority of turnover being generated from the rural surroundings but have a slight ability to reach cities for sales, mainly the nearby cities in the *Beqā'* along with the popular destination of the capital. Class 2-SR again exhibits intermediate characteristics that on one hand tend towards rural features as sub-class 1-SR1's turnover which over half is originated in rural surroundings, and on the other hand presents urban features as 1-SR2's turnover which is mostly originated from urban cities in Beirut and sometimes in *Beqā'* as well. At the same time, the two sub-classes rely and therefore have access to market in the capital Beirut for sales. Class 3-U clearly shows the behavior of cooperatives in line with urban tendencies, specifically generating significant portions if not the majority of their turnover from urban sources of the capital Beirut. Rural sales therefore vary between mainly 25 to 40% and reaching up to 50 to 70% in the case of sub-classes 3-U1 and 3-U2, but much less for sub-class 3-U3 with only 20% of turnover being rural and is the only sub-class to report export to foreign markets.

Sub-theme 2.3 focuses on the distribution of turnover sources between rural and urban environments in order to further detail the cooperatives' ability for sales and the ability to reach further markets with higher concentration of population. It is clear that class 1-R exhibit rural tendencies most if not the entire of the generated sales and therefore turnover originating from rural surroundings with a significant absence of access to urban markets and minor reach to the capital Beirut and nearby cities in the *Beqā'*. Cooperatives in class 2-SR on the other hand generates most of their turnover from rural sources (mainly 80 to 90%) but some cooperatives also exhibit urban tendencies in their sales and main urban markets such as sub-class 2-SR2. Finally, class 3-U exhibits the highest access and sales to urban markets with only 25 to 40% of turnover generated from the rural environment for some cooperatives, and much less to none in sub-class 3-U3 which is the only sub-class to register export to foreign markets. Generally, it is clear that the selling of end product to the capital Beirut is a major destination for over half of cooperatives. Beirut remains the country's largest and centralized hub of markets and economic activities, including the common and preferable sales method of cooperatives in exhibitions and events.

5.2.1.2.4. Sub-theme 2.4: Sources of raw material

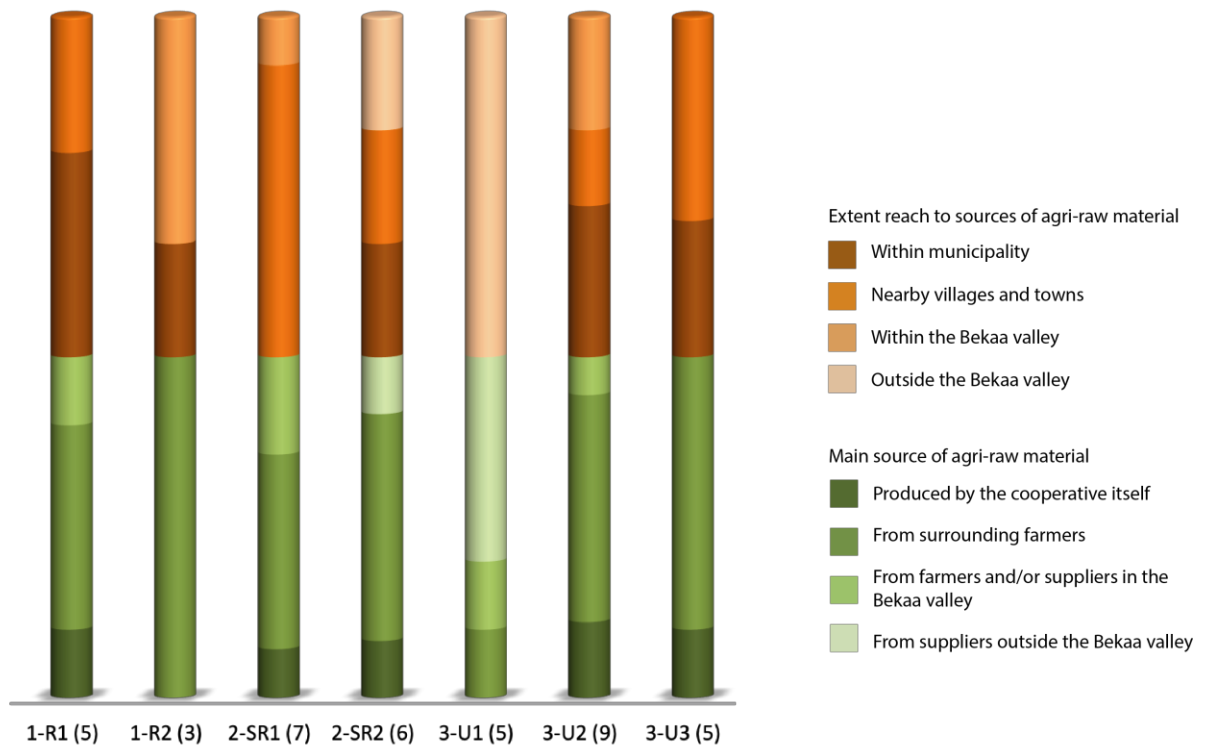


Figure 79: Detailed typology for Theme 2 (spatiality) sub-theme 2.4 (sources of raw material) into 7 classes

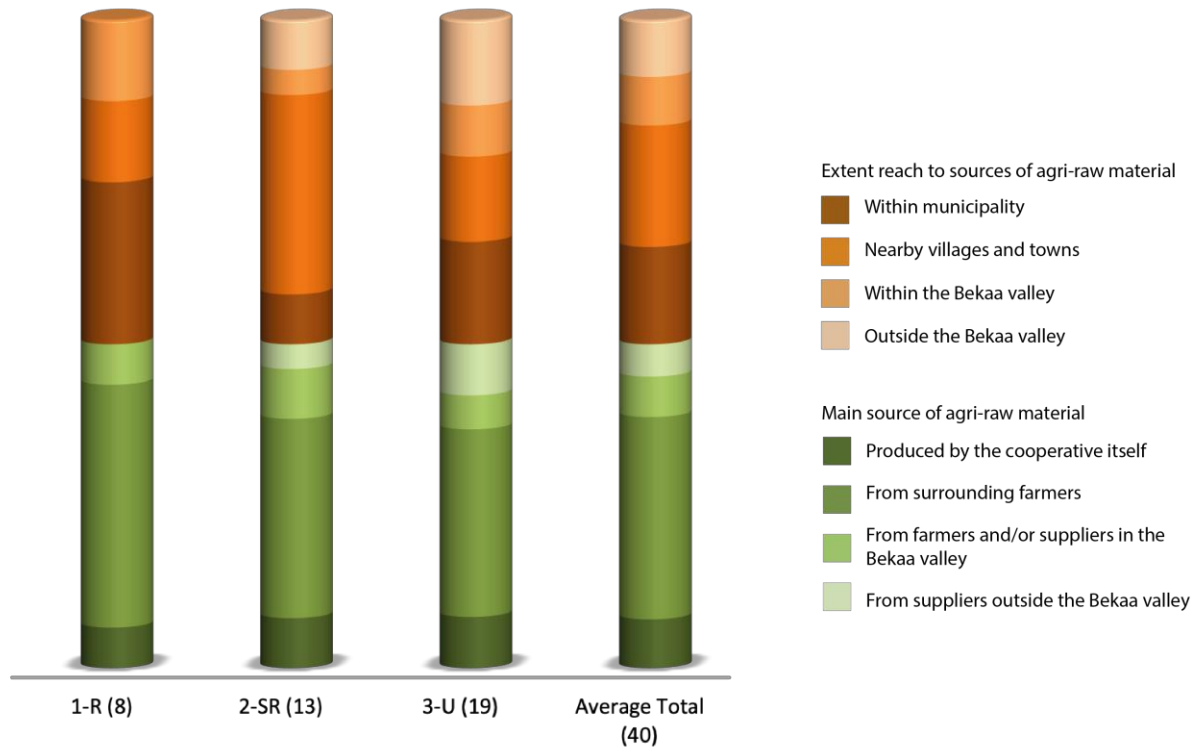


Figure 80: General typology for Theme 2 (spatiality) sub-theme 2.4 (sources of raw material) into 3 classes compared with the average total

Table 31: Definition of variables Theme 2 (spatiality) sub-theme 2.4 (sources of raw material)

Level	Label title	Label values	Label description
variable 1	Extent reach to sources of agricultural raw material	Within municipality	This variable represents the extent or maximum distance that the cooperatives usually spatially reach in order to source their fresh agricultural raw material; in this case being solely within the borders of the municipality where they are located.
	Extent reach to sources of agricultural raw material	Nearby villages and towns	The same applies for this label; in this case having the cooperative reaching to maximal distances to nearby villages and towns in its surrounding. This also includes therefore the lower level of the previous label, i.e. within the borders of the municipality.
	Extent reach to sources of agricultural raw material	Within the <i>Beqā'</i> valley	The same applies for this label; in this case having the cooperative reaching to maximal distances to areas within the borders of the <i>Beqā'</i> valley to procure fresh agricultural raw material. This also includes therefore the lower levels of the previous labels, i.e. nearby villages and towns in the surroundings of the cooperatives as well as within the borders of the municipality.
	Extent reach to sources of agricultural raw material	Outside the <i>Beqā'</i> valley	The same applies for this label; in this case having the cooperative reaching distances outside the <i>Beqā'</i> valley to procure fresh agricultural raw material. This also includes therefore the lower levels of the previous labels, i.e. areas within the <i>Beqā'</i> valley, nearby villages and towns in the surroundings of the cooperatives as well as within the borders of the municipality.
variable 2	Main source of agricultural raw material	Produced by cooperative itself	This variable indicates the method in which the cooperatives use in order to procure fresh agricultural raw material for their processing operations; in this case having the cooperative cultivate the main fresh produce itself for self-use.
	Main source of agricultural raw material	From surrounding farmers	This variable indicates that the cooperatives rely on procuring fresh agricultural raw material from surrounding farmers in their vicinities and therefore their local scale.
	Main source of	From farmers	This variable indicates that the cooperatives rely on procuring fresh agricultural raw material from

	agricultural raw material	and/or suppliers in the <i>Beqā'</i> valley	farmers and/or other suppliers (such as wholesalers) within their vicinities and therefore their local scale.
	Main source of agricultural raw material	From suppliers outside the <i>Beqā'</i>	This variable indicates that the cooperatives also procure an important portion of their fresh agricultural raw material from suppliers (such as wholesalers) outside of their local scale, from areas outside the <i>Beqā'</i> valley. Values at minimum 25% were inclusive in this segment in order to consider this geographic scale as a main source of raw material.

Cooperatives in this Class 1-R again reflect an important rural characteristics, mainly procuring their fresh agricultural raw material from surrounding farmers in the vicinity of cooperatives, with all cooperatives in sub-class 1-R2 reporting so, and the majority of cooperatives in sub-class 1-R1 (3 out of 5) whereas the remaining two cooperatives are divided between either producing their fresh produce themselves and procuring them from farmers and suppliers in further distances around the *Beqā'* valley. This class also shows that half of the cooperatives (3 in sub-class 1-R1 and 1 in sub-class 1-R2) reach a maximal distance only within the borders of their municipality to source these raw material whereas the other half are able to reach surrounding villages and further areas from around the *Beqā'* valley. Class 2-SR similarly tends to include cooperatives that majorly procure raw material from surrounding villages, especially in sub-class 2-SR1, and only minor cases of producing their own fresh produce in both sub-classes or procure the latter from further distances around the *Beqā'* (case of sub-class 2-SR1) and only rarely from sources outside the *Beqā'* (case of sub-class 2-SR2). The interesting feature in class 3-U is the significant similarity in these practices, especially in sub-classes 3-U2 and 3-U3 where cooperatives mainly procure from the surrounding farmers for 10 out of 14 cooperatives in these sub-classes and only 3 cases where cooperatives cultivate the produce themselves or procure from other further sources around the *Beqā'* valley. These two sub-classes also have a maximal distance reach focused mainly within the borders of the municipalities (6 out of 14 cooperatives) whereas the remaining are able to extend their sourcing to mainly nearby villages and on a lesser extent to further areas around the *Beqā'*. Sub-class 3-U1 is the only exception in which its cooperatives tend to procure significant proportions of their raw material from regions outside the *Beqā'* for 3 out of 5 cooperatives.

Cooperatives under sub-theme 2.4 appear to be clearly linked to their surrounding rural environment for the procurement of fresh agricultural raw material for their processing operations. 25 of the total 40 cooperatives depend on surrounding farmers in their vicinity as the main sources of these raw material, with the proportion of these cooperatives being almost equal amongst the three classes. Similarly, the extent distance at which cooperatives are able to reach to procure these materials is also significantly restricted at the level of the municipality or nearby villages. Half of class 1-R's cooperatives report that geographic scale as the maximum distance they follow, while the others reported their ability to source from nearby villages and other further regions around the *Beqā'*. Class 2-SR tends to reach further distances

mainly focusing on nearby villages around the cooperatives, but also report on sourcing from further areas in the *Beqā'* and even from areas outside the *Beqā'*, further showcasing how that class exhibits characteristics in between rural and urban. Finally, class 3-U reports the highest proportion of cooperatives sourcing raw material from areas outside the *Beqā'* valley, knowing that the majority still retain sourcing from surrounding farmers as well.

5.2.1.2.5. Compiled description of Theme 2 – Spatiality of operations

Theme 2 (spatiality of operations) focuses on describing the spatial aspects of cooperatives' main operations in an attempt to reflect the significance of rural vs. urban activities, therefore showing the dependency on such spatial origins on the sustainability of cooperatives. Theme 2 is suggested to be divided in 3 main classes further including 7 sub-classes. These include: 1-R (Rural), 2-SR (Semi-rural) and 3-U (Urban) each comprising of 8, 13 and 19 cooperatives; respectively.

The main characteristics of these classes and sub-classes are summarized as:

Class 1-R consists of 8 out of the total 40 identified cooperatives

- Have their largest turnover exclusively from rural origins from the same village/town as the cooperative for the most part but also sometimes from other surrounding villages with these turnovers being completely (100% case of 1-R1) or majorly (80 to 90% case of 1-R2) from rural origins
- Significant marketing of products through direct sales to customers from the village/town or its surroundings, or in some cases include the display at specialty shops also within the same rural level (case of 1-R2)

Class 2-SR consists of 13 out of the total 40 identified cooperatives

- Is considered a transitional class that exhibits both rural and urban characteristics
- Includes the only sub-class (2-SR1) to acknowledge that the alternative sources of raw material would be difficult or even impossible which reflects a state of dependency of their current suppliers
- Similarly depends significantly on the rural environment to generate most of turnover and therefore sales, but also introduces destinations of sales to urban consumers directly and/or events and exhibitions which are commonly organized in the urban market of the capital Beirut, along with their ability to reach intermediaries for sales.

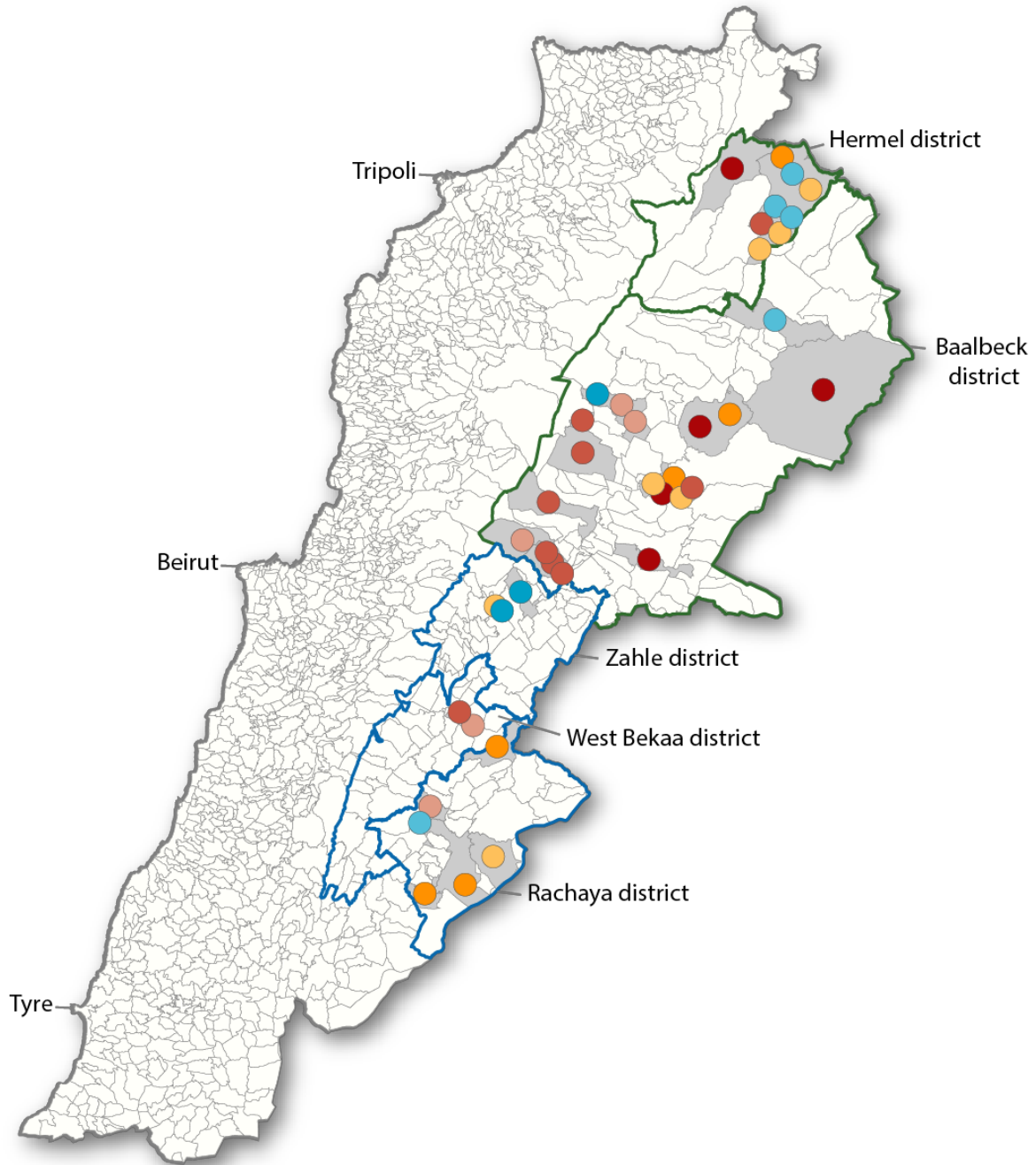
Class 3-U consists of 19 out of the total 40 identified cooperatives

- Includes the only sub-class (3-U1) which is noticed to (1) have the ability to procure raw material from further regions in the *Beqā'* and (2) is the only sub-class in which all cooperatives procure raw material from regions outside the *Beqā'* as well, and (3) which is the only sub-class to greatly incorporate intermediaries and specialty shops and retailers as marketing channels for their products
- Includes the only class (3-U3) to rely on social media and export as main sources of turnover along with the highest proportion in terms of sales through events and exhibitions, but do not generate turnover from their villages and rarely from other surrounding villages.

Common characteristics and important notes:

- All cooperatives are shown to depend highly on local sources of raw material whereby the majority procure agricultural produce from surrounding farmers, or on a much lesser extent couple that procurement with a cultivation produced by the cooperatives themselves. This is the major trend noticed for all sub-classes except for sub-class 3-U1. Cooperatives in this sub-class additionally procure raw material from further regions in the *Beqā'* and is the only sub-class in which all cooperatives procure from regions outside the *Beqā'* in varying proportions that remain much less than local sources. Rarely do food processing cooperatives cultivate all agricultural raw material themselves.
- All sub-classes are found using various marketing channels with great reliance on events and exhibitions (except for class 1-S and on a lesser extent sub-class 3-U3 since it uncommonly uses social media and export channels) as well as on direct sales to consumers (except for sub-class 3-U2).
- 4 out of 7 classes (1-R1, 1-R2, 3-U1 and 3-U3), and an overall 22 out of 40 cooperatives, report that they are capable of quickly securing alternative sources of raw material in case of emergency. This component is an important factor of adaptability in case of required change of current suppliers. Only 11 of the 40 cooperatives admit needing some time to be able to procure raw material without compromising quality and only 4 out of the 6 cooperatives in sub-class 2-SR2 admit that the latter would be difficult or impossible to achieve.

The spatial distribution of food processing cooperatives in the *Beqā'* valley based on Theme 2 (spatiality of operations) is found below in Map 30. From the map, it also seems that the food cooperatives under Theme 2 do not exhibit any specific pattern.



Map 30: Spatial distribution of food processing cooperatives in the *Beqā'* valley per Theme 2 (Spatiality of operations). Source: Produced by author, *Jalkh R.*, 2021, *LAGAM, UM3*.

5.2.1.3. Theme 3 – External support

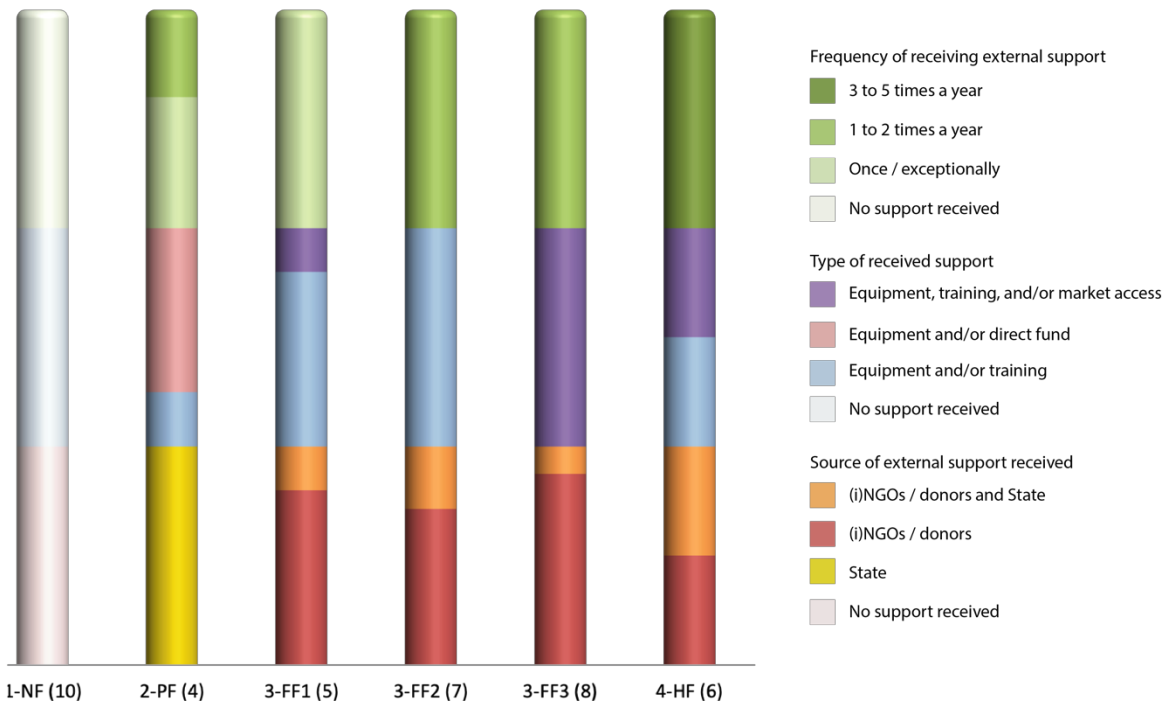


Figure 81: Detailed typology for Theme 3 (external support) into 6 classes

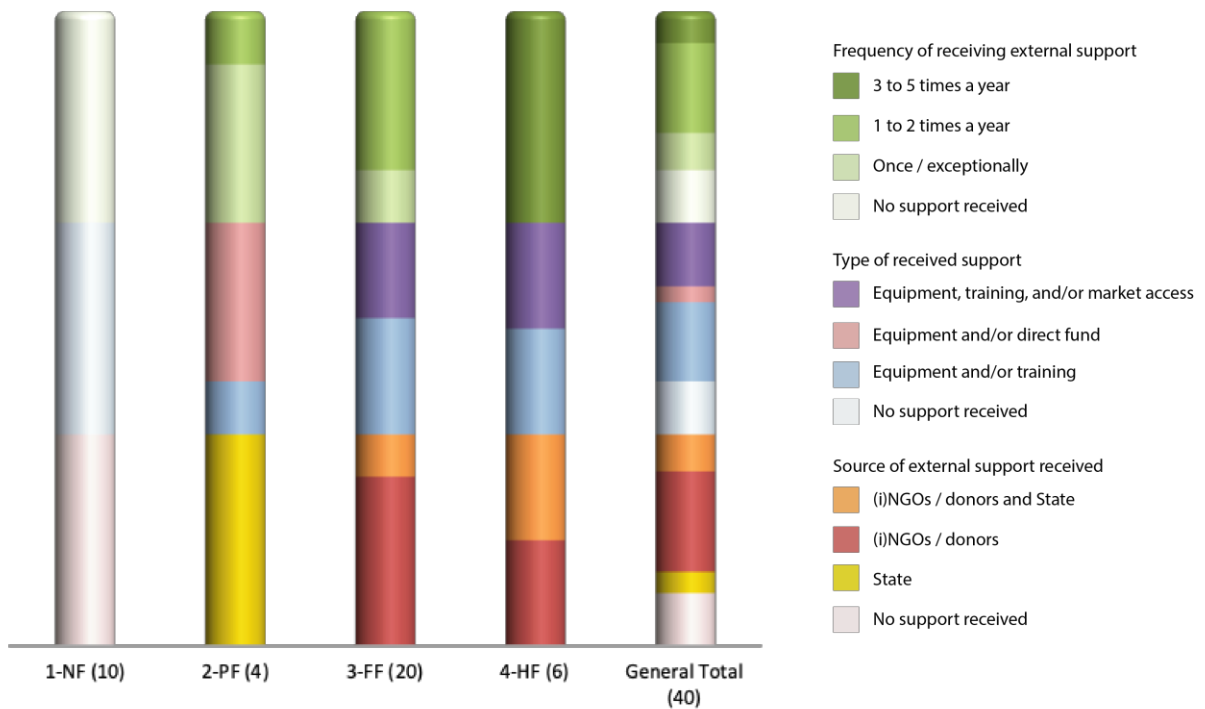


Figure 82: General typology for Theme 3 (external support) into 3 classes compared with the average total

Table 32: Definition of variables for Theme 3 (external support)

Level	Label title	Label values	Label description
variable 1	Frequency of receiving external support	3 to 5 times a year	This variable indicates the frequency at which the cooperatives receive support from donors and development agencies in the country, such as iNGOs, local NGOs, CBOs, etc., with this variable indicating that frequency at an average of 3 to 5 separate initiatives a year.
	Frequency of receiving external support	1 to 2 times a year	This variable indicates that the cooperatives receive on average of 1 to 2 separate annual interventions from donors, iNGOs, NGOs, CBOs, etc. to help support their operations.
	Frequency of receiving external support	Once / exceptionally	This variable indicates that the cooperatives have reported receiving very little external support as development initiatives from donors, iNGOs, NGOs, CBOs, etc. only once or on rare exceptional occasions.
	Frequency of receiving external support	No support received	This variable indicates that the cooperatives have reported never receiving any external support nor development initiatives in any of its forms.
variable 2	Type of received support	Equipment, training and/or market access	This variable details the type of support received from development agencies; in this case being capacity building in the form of trainings in order to elevate the skills of cooperatives and their members, and/or with market access mostly in the form of facilitated or covered expenses for participation in organized events and exhibitions or attempt to build linkages with market outlets.
	Type of received support	Equipment and/or direct fund	This variable details the type of support received from development agencies; in this case being capacity building in the form of provision of equipment and tools necessary for processing and/or in the form of direct financial funds.
	Type of received support	Equipment and/or training	This variable details the type of support received from development agencies; in this case being capacity building in the form of trainings in order to elevate the skills of cooperatives and their members, and/or in the form of provision of equipment and tools necessary for processing.

	Type of received support	No support received	This variable indicates that the cooperatives have reported never receiving any external support nor development initiatives in any of its forms.
variable 3	Source of external support received	(i)NGOs / donors and state	This variable details the source of the external support mentioned above in the past 5 years; in this case being provided by development agencies as donors or NGOs (international or local) and from the Lebanese state, mostly from relevant ministries such as the Ministry of Agriculture through its General Directorate of Cooperatives.
	Source of external support received	(i)NGOs / donors	This variable details the source of the external support mentioned above in the past 5 years; in this case being provided solely by development agencies as donors or NGOs (international or local).
	Source of external support received	State	This variable details the source of the external support mentioned above in the past 5 years; in this case being provided solely by Lebanese state, mostly from relevant ministries such as the Ministry of Agriculture through its General Directorate of Cooperatives.
	Source of external support received	No support received	This variable indicates that the cooperatives have reported never receiving any external support nor development initiatives in any of its forms.

The typological analysis of Theme 3 reveals that two types of classification can be also formed, a general and detailed. 6 detailed classes and 3 general classes were extracted under this theme which did not require any further division into sub-themes. These classes are class **1-NF (Not funded)** of cooperatives which consists of 10 out of the total 40 identified cooperatives, **class 2-PF (Frequently funded)** which consists of 4 out of the total 40 identified cooperatives, and class **3-FF (Frequently funded)** of cooperatives (sub-classes 3-FF1, 3-FF2 and 3-FF3) which consists of half of the total number of cooperatives, 20, and **class 4-HF (Highly funded)** which consists of 6 out of the total 40 identified cooperatives.

Responses of the 10 cooperatives belonging to class 1-NF indicate that they have never been actually funded and have therefore not received any source of external support or aid from any entity, being from development agencies or the Lebanese state, and neither in any of the usual forms in which support is usually provided (capacity building, equipment and/or direct fund). Cooperatives in class 2-PF are the only group to receive support from the Lebanese state and not from development agencies, usually comprising of relevant ministries such as the Ministry of Agriculture and the General Directorate of Cooperatives. The type of aid in this case is mostly in the form of direct funds as per 3 of the 4 cooperative responses and on a lesser extent in the form of equipment such as of cold storage for example. These cooperatives also report that such type of aid from the Lebanese state has occurred only once or exceptionally on rare

occasions. This class includes only 4 out of the 40 identified cooperatives, therefore reflecting how unusual this class is and hence that external support is usually provided in other mechanisms. Class appears 3-FF to be the most common in this theme as it includes half of the 40 identified cooperatives. Most cooperatives in the three sub-classes have similarly received their external support solely from donors and (i)NGOs whereas only 4 of the 16 cooperatives have received the latter from both donors and (i)NGOs as well as the state. Sub-classes 3-FF1 and 3-FF2 have a similar characteristic in the type of support they usually receive, being equipment and capacity building while they differ in the frequency in which they receive that external support. Sub-class 3-FF1 reports receiving support only once or exceptionally in rare occasions whereas sub-class 3-FF2 receives the latter once or twice a year. Finally, sub-class 3-FF3 reported receiving the three types of support usually provided in terms of equipment, capacity building training as well as direct funds. Similarly to the frequency of sub-class 3-FF2, sub-class 3-FF3 reports receiving that support on an average of once or twice a year. Cooperatives in class 4-HF are divided in two variables with half reporting receiving their external support solely from donor agencies and (i)NGOs whereas the remaining receive the latter from both donors and (i)NGOs as well as the state and also half report receiving equipment and capacity building and the remaining receiving the three types, the two mentioned earlier along with market access. Finally, this is the only class to report the highest frequency of receiving external support on average of 3 to 5 times a year.

The compiled analysis for Theme 3 (external support) represents the extent and frequency at which cooperatives receive external support from the state or donor agencies and (i)NGOs. This factor is important to attempt and understand whether certain trends can be identified and linked to the level of development or market reach of cooperatives, thus understanding a positive impact or state of “dependency” mentioned by certain sources is raised. Theme 3 is suggested to be divided in 4 main classes further including 6 sub-classes. These include: 1-NF (Not funded), 2-PF (Periodically funded), 3-FF (Frequently funded), and 3-HF (highly funded) each comprising of 10, 4, 20 and 6 cooperatives; respectively.

The main characteristics of these classes and sub-classes are summarized as:

Class 1-NF consists of 10 out of the total 40 identified cooperatives

- 1 sub-class that represents one fourth of the total number of cooperatives that reported no source of external support received within the last 5 years

Class 2-PF consists of 4 out of the total 40 identified cooperatives

- Is the only class to receive cash support solely from the state in the last 5 years without any intervention from other development agencies, however totalling to only 4 out of the 40 cooperatives
- Consists mostly of cooperatives that do not receive consistent funding and only one cooperative that receives support around once or twice a year in the form of equipment, training or isolated state cash support within the last 5 years.

Class 3-FF consists of 20 out of the total 40 identified cooperatives

- The most common class of cooperatives that mostly dependent on donor and (i)NGOs for external support rather than the state with the majority indicating a common

frequency of that support received once or twice per year in the form of equipment, training (capacity building) and/or market access. All cooperatives in sub-class 3-FF3 receive all three types of support, whereas the other two sub-classes these in part or in whole.

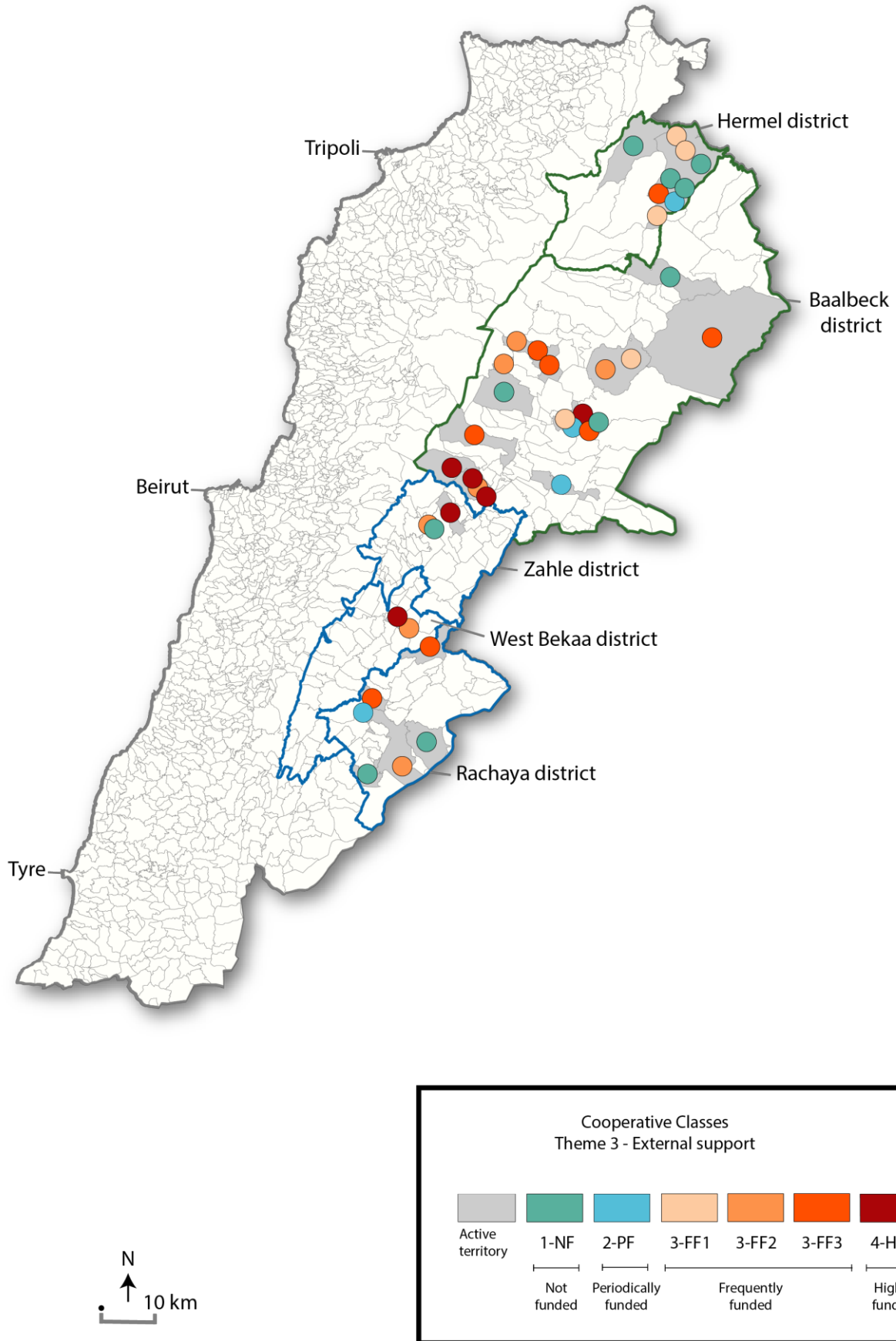
Class 4-HF consists of 6 out of the total 40 identified cooperatives

- Is the only class to include the cooperatives that report the highest frequency of received support ranging between 3 to 5 times annually with similar trends in the form of equipment, capacity building and/or market access, in part or in whole.

Common characteristics and important notes:

- Provision of support from external parties such as donors, development agencies and local NGOs is extremely prominent and visible. The majority (30 out of 40) of cooperatives received equipment, out of which 27 additionally received capacity building in the form of training sessions, and also from which 12 received additional support in the form of market access. This market access component mainly represents initiatives aiming at increasing the market outreach of cooperatives and include for example their support in participation in exhibitions or display of the cooperative products in outlets.
- In terms of frequency of support, over half of cooperatives (23 out of 40) indicate a clear recurrence of external support ranging between once to twice a year (17 cooperatives) or even more with three to five times a year (6 cooperatives). The remaining 17 cooperatives did not indicate any specific frequency, knowing that 10 already state that no support is received whereas the remaining 7 received exceptional and isolated support rather than with any specific recurrence on an annual basis.
- State support is minimal with only 11 out of the 40 cooperatives receiving isolated or separate support rather than on a consistent repetitive basis, which reflects the irregularity of the latter.

The spatial distribution of food processing cooperatives in the *Beqā'* valley based on Theme 3 is found below in Map 31. The map visually shows the extent of external support present with almost the entire network, with only 10 out of the 40 cooperatives not reporting receiving any sort of funding. Although it seems that cooperatives that are highly funded are more present around central *Beqā'*, it would be difficult to assume any patterns in the distribution of funds from this map due to the high frequency of development work and international aid commonly dispatched to Lebanon. What is important to retain from this information is that cooperatives appear to receive significant and frequent aid from external sources. As mentioned in different occurrences throughout the text, this trend could risk creating a state of dependency, which is a concern that has already been raised by various reports. This dependency then undermines the principle of autonomy and independence by impeding cooperatives from fulfilling their business model and would rather risk them prioritizing the acquisition of aid rather than meeting their members' needs.



Map 31: Spatial distribution of food processing cooperatives in the *Beqā'* valley per Theme 3 (External support). Source: Produced by author, *Jalkh R., 2021, LAGAM, UM3.*

5.2.1.4. Theme 4 – Label and conformity

For Theme 2, label and conformity, 3 general and 6 detailed classes were identified and these included class **1-B (Basic)** of cooperatives (sub-classes 1-B1, 1-B2 and 1-B3) which consists of 23 out of the total 40 identified cooperatives, **class 2-Me (Medium)** which consists of 8 out of the total 40 identified cooperatives and class **3-A (Advanced)** (sub-classes 1-A1 and 1-A2) which consists of 9 out of the total 40 identified cooperatives.

5.2.1.4.1. Sub-theme 4.1: Industrial license and transportation

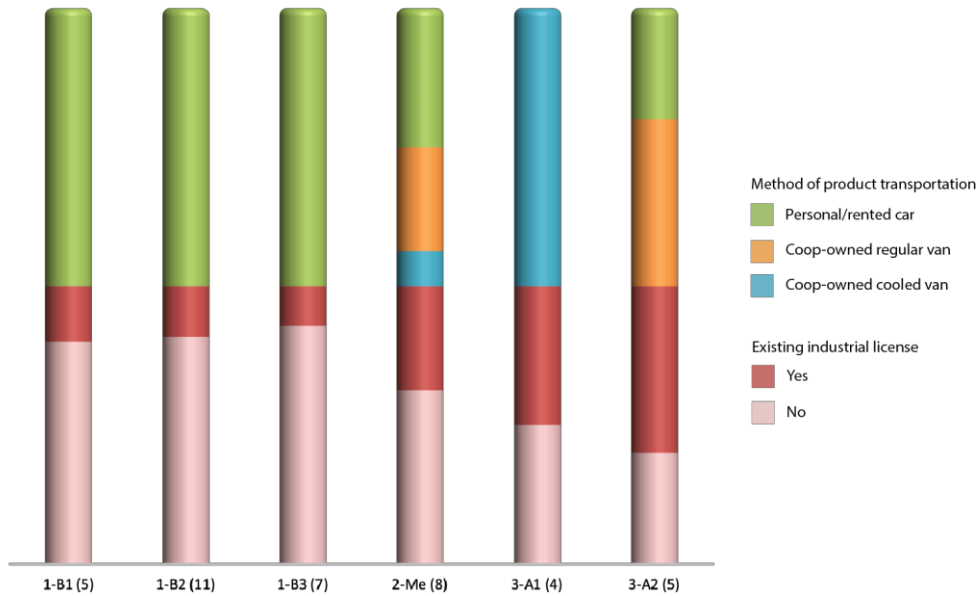


Figure 83: Detailed typology for Theme 4 (label and conformity) sub-theme 4.1 (industrial license and transportation) into 6 classes

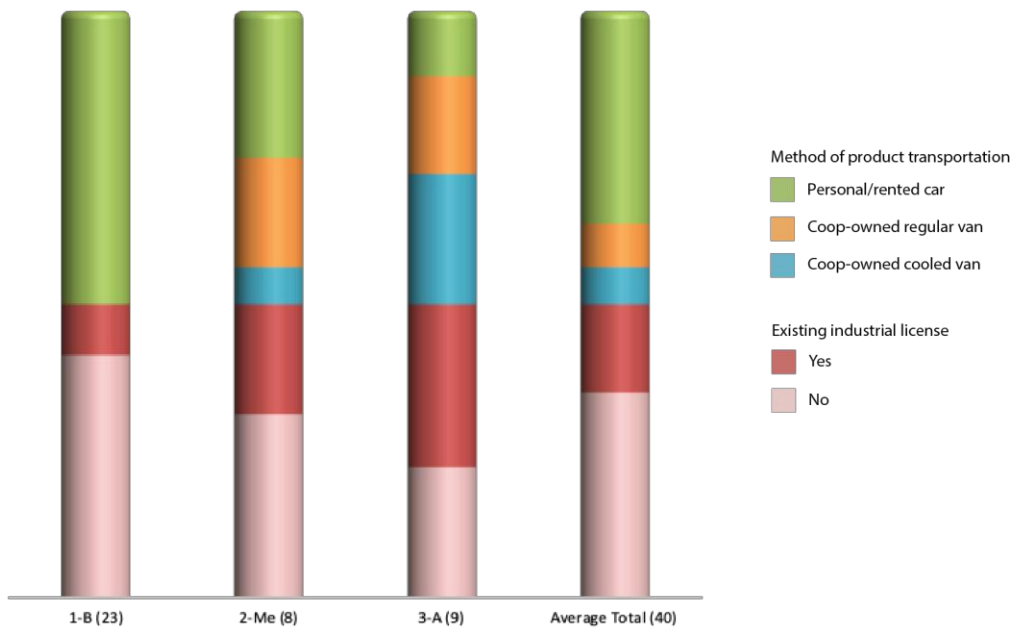


Figure 84: General typology for Theme 4 (label and conformity) sub-theme 4.1 (industrial license and transportation) into 3 classes compared with the average total

Table 33: Definition of variables for Theme 4 (label and conformity) sub-theme 4.1 (industrial license and transportation)

Level	Label title	Label values	Label description
variable 1	Method of product transportation	Personal/rented car	This variable indicates that the cooperatives use their own personal vehicles, or rent the latter, in order to conduct transportation activities such as that of end products to the market or of raw material to the premises of the processing center.
	Method of product transportation	Coop-owned regular van	This variable indicates that the cooperatives owns a cargo minivan which is used to conduct transportation activities such as that of end products to the market or of raw material to the premises of the processing center.
	Method of product transportation	Coop-owned cooled van	This variable indicates that the cooperatives owns a cooled cargo minivan that includes a refrigerated compartment in its back which is used for transportation activities such as that of end products to the market or of raw material to the premises of the processing center.
variable 2	Existing industrial license	Yes	This variable indicates that the cooperatives report holding one of the operational licenses issued by the Lebanese Ministry of Industry (MoI). Being registered under the Directorate General of Cooperatives as the regulatory body within the Ministry of Agriculture, the industrial license is not compulsory for cooperatives. Yet, this license makes cooperatives recognized and treated as other industrial units in the country, and it classifies them under one of the categories specified by the MoI based on the type and size of production ⁸⁶ . This makes cooperatives eligible to issue further licenses to conduct advanced activities such as export.
	Existing industrial license	No	This variable indicated that the cooperative does not one of the operational licenses issues by the MoI, as explained above.

Class 1-B consists of over half of the 40 identified cooperatives, which shows that a significant number of cooperatives still require major enhancements in order to uplift the

⁸⁶ Official website of the Lebanese Ministry of Industry in Arabic <http://www.industry.gov.lb/FormsApplications/PermitFormPage>

conformity of their operations under these variables. The three sub-classes (1-B1, 1-B2 and 1-B3) exhibit similar results in terms of sub-theme 4.1 where cooperatives appear to rely on their personal means of transportation for raw material and end product and while only a few cooperatives (4 out of 23) seem to hold an industrial license. Class 2-Me includes the few cooperatives (8 out of 40) that are considered having medium conformity and which show a higher proportion of cooperatives holding an industrial license and having also introduced higher capacities in transportation. Three cooperatives reported owning non-refrigerated cargo minivans and one cooperative owning a refrigerated cargo minivan relevant to its scope of operation since the cooperative produce frozen foods. Cooperatives in the two sub-classes 3-A1 and 3-A2 exhibit more advanced characteristics for sub-theme 4.1, whereby the highest proportions of cooperatives have reported having an industrial license, 50% and 60% for sub-classes 3-A1 and 3-A2 respectively. These main difference between these sub-classes consist of the methods of transportation adopted by the cooperatives. All cooperatives in sub-class 3-A1 reported owning and using a refrigerated cargo minivan for transportation and logistics activities such as those for raw material and end products. Cooperatives in sub-class 3-A2 on the other hand appear to use regular cargo minivans (60%) and the remaining 40% still rely on personal means of transportation such as personal cars.

Sub-theme 4.1 shows the main differences in the proportion of cooperatives that report holding an industrial license issued by the Lebanese MoI and the different means of transportation usually utilized. Overall, only 30% cooperatives report having an industrial license, a license that recognizes and treats its holders, the cooperatives in this case, as other industrial units in the country and classifies them under one of the categories specified by the MoI based on the type and size of production⁸⁷. This makes cooperatives eligible to issue further licenses and permits and therefore increases their potential ability to conduct advanced activities such as export. As for transportation activities, it is noticed that the majority of cooperatives, 73%, still rely on basic personal means such as member's personal vehicles or the renting of such vehicles when needed. Despite being considered as basic means of transportation, the majority of the processed products are shelf-stable and do not require refrigeration which makes these means relatively acceptable yet reflects on the non-developed capabilities of cooperatives in that area. Only 15% and 13% of cooperatives reported owning cargo minivans, non-refrigerated and refrigerated; respectively. 3 out of the 5 cooperatives that own a refrigerated cargo minivan have listed relevant products that need refrigeration during transportation, including dairy products and frozen foods.

⁸⁷ Official website of the Lebanese Ministry of Industry in Arabic <http://www.industry.gov.lb/FormsApplications/PermitFormPage>

5.2.1.4.2. Sub-theme 4.2: Estimated label and center conformity

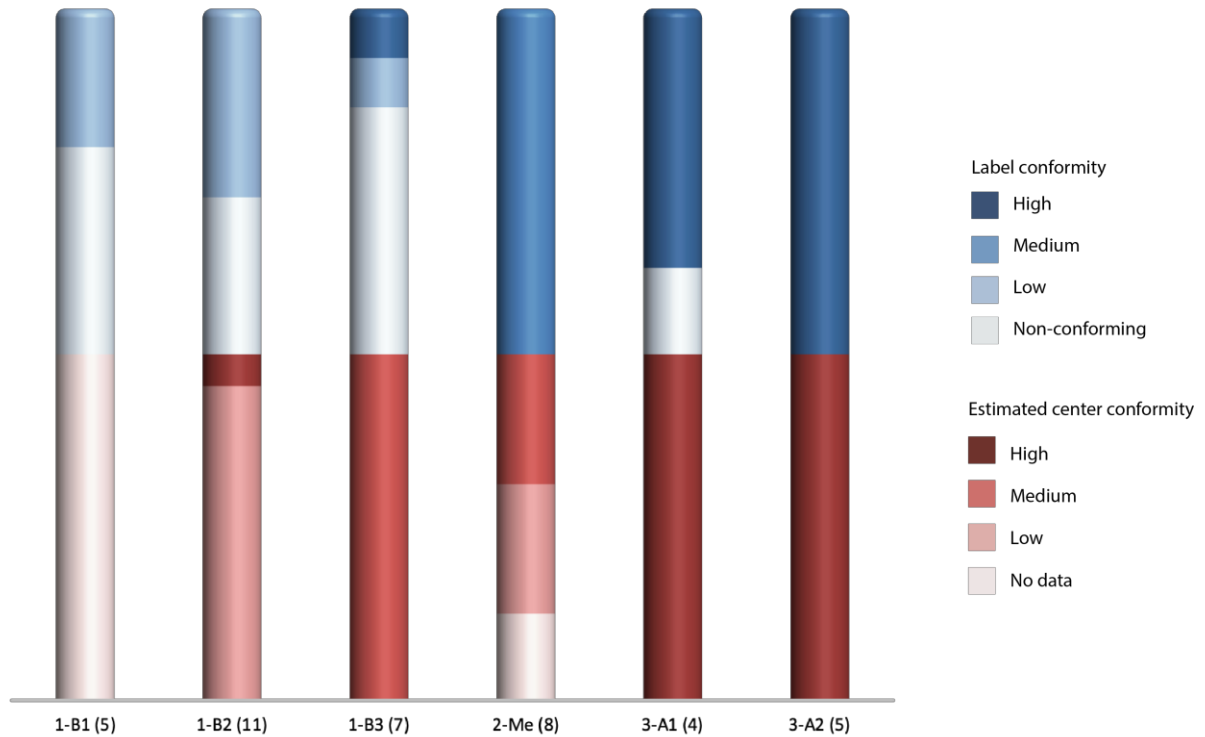


Figure 85: Detailed typology for Theme 4 (label and conformity) sub-theme 4.2 (estimated label and center conformity) into 6 classes

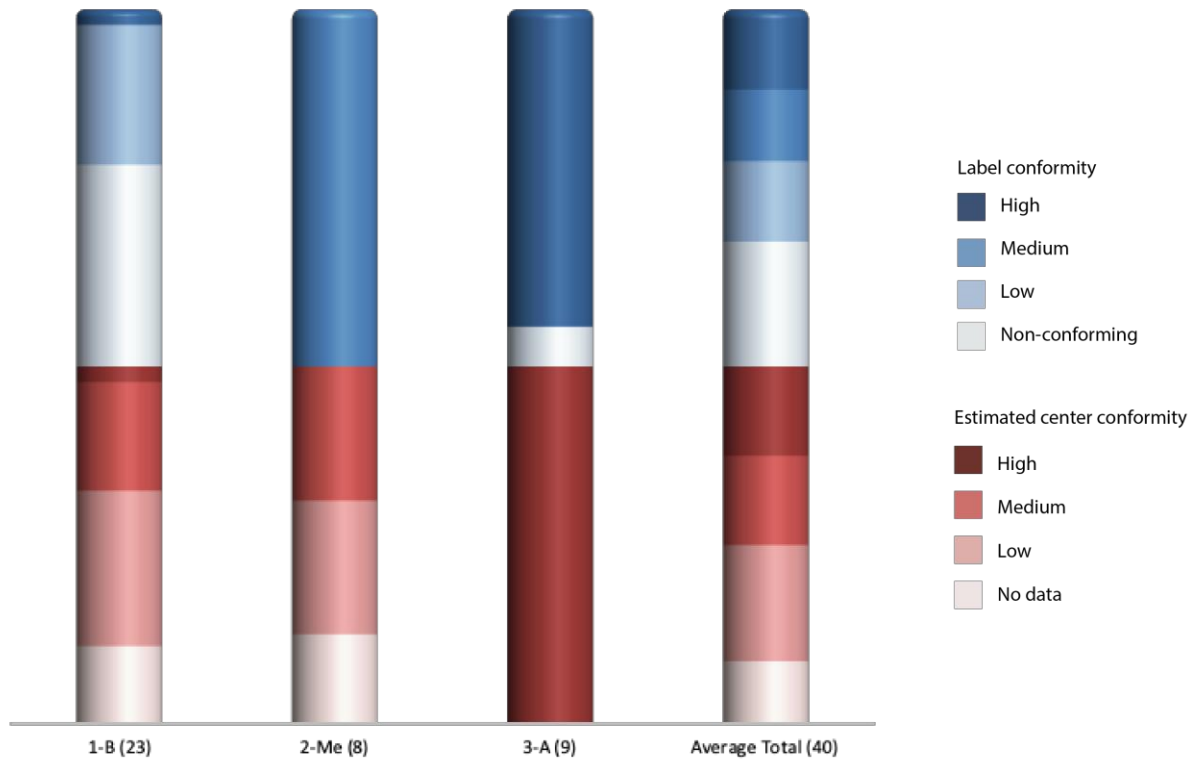


Figure 86: General typology for Theme 4 (label and conformity) sub-theme 4.2 (estimated label and center conformity) into 3 classes compared with the average total

Table 34: Definition of variables for Theme 4 (label and conformity) sub-theme 4.2 (estimated label and center conformity)

Level	Label title	Label values	Label description
variable 1	Label conformity	High	This variable represents the cooperatives that scored higher than 7 in the questionnaire relative to the label conformity in section 4.B, therefore considered as high relative to the data input.
	Label conformity	Medium	This variable represents the cooperatives that scored between 2 and 6 in the questionnaire relative to the label conformity in section 4.B, therefore considered as medium relative to the data input.
	Label conformity	Low	This variable represents the cooperatives that scored less than 2 over 10 in the questionnaire relative to the label conformity in section 4.B, therefore considered as low relative to the data input.
	Label conformity	Non-conforming	This variable represents the cooperatives that do not have or own any label or brand-name for the cooperative, and therefore having their produced items not provided with a designed and printed label but which could consist of a simple handwritten label instead.
variable 2	Estimated center conformity	High	This variable represents the cooperatives that scored higher than 7 over 10 in the questionnaire relative to the center conformity in section 4.A, therefore considered as high relative to the data input.
	Estimated center conformity	Medium	This variable represents the cooperatives that scored between 6 and 7 over 10 in the questionnaire relative to the center conformity in section 4.A, therefore considered as medium relative to the data input.
	Estimated center conformity	Low	This variable represents the cooperatives that scored less than 6 over 10 in the questionnaire relative to the center conformity in section 4.A, therefore considered as low relative to the data input.
	Estimated center conformity	No data	This variable represents the cooperatives that are non-conforming relative to the center conformity since this proportion of cooperatives conduct their processing activities at household level rather than in a production center.

As already mentioned, class 1-B consists of over half of the 40 identified cooperatives, which shows that a significant number of cooperatives still require major enhancements in order to uplift their conformity. It is also important to mention that the cooperatives belonging

to sub-class 1-B1 are all located in the town of Hermel in Northern *Beqā'*. This is interesting to mention for this variable since sub-class 1-B1 is characterized by a low conformity in both center and label characteristics. All 5 cooperatives belonging to this sub-class have “no data” relevant to the center conformity since they all are producing at household level rather than a production center, and 3 of the 5 cooperatives do not even own a label. A gradual, but non-optimal, increase in conformity is noticed for sub-classes 1-B2 and 1-B3. Sub-class 1-B2 is seen to have mostly basic scores in the center conformity with half the cooperatives still not owning a label and the other half scoring low on the label conformity. Sub-class 1-B3 exhibits an improvement in the center conformity with all cooperatives being categorized a medium, but the majority of these cooperatives (5 out of 7) still do not own any label whereas the remaining 2 cooperatives scored each low and high on the label conformity. The 8 cooperatives in Class 2-Me are all first seen to have medium conformity in the center conformity variable and are divided in diverse conformity of their label. Two cooperatives do not own a label, and the remaining 6 are equally divided amongst those that have a low and medium score in label conformity. This class once again exhibits transitional characteristics between the basic and advanced features of the cooperative network. Cooperatives belonging to the two sub-classes 3-A1 and 3-A2 exhibit almost identical characteristics in recording the highest scores in center and label conformities together, with the exception of only one cooperative in sub-class 3-A1 having no label, therefore categorized as non-conforming for this variable.

Theme 4.2 reflects the conformity of the cooperatives in terms of their production center and labels, two important characteristics in meeting marketing requirements and therefore the potential of the cooperatives to sustainably supply products and possibly attain future development given a solid status. It can be clearly seen that the cooperatives have an increased conformity per developing class with the 1-B scoring the lowest, 2-Me the intermediate and 3-A scoring the highest conformity therefore considered the most advanced in this variable. Overall, a significant percentage (35%) of the entire cooperatives still do not own any label or supply their products with basic handwritten labels which do not comply with the basic requirements, whereas only 23% have proper labels containing the required information. On the other hand, half of the cooperatives are also noted to have basic processing centers, out of which 7 cooperatives still operate at household level which is considered non-conforming. Yet, the latter household-based cooperatives are actively supplying products to mostly rural markets and only one of these cooperatives is seen to receive consistent external support from donor agencies. This observation raises the question whether donor and development agencies have had an active role in the development of operations of the other cooperatives that have received consistent support with time, or have other internal factors contributed to that development. The comparison of this variable with other the other basic and medium classes is detailed below in the section called triangulated observations.

5.2.1.4.3. Compiled description of Theme 4 – Label and conformity

Theme 4 (label and conformity) represents the extent at which cooperatives conform to market requirements. These include the labelling information and the estimated conformity of the production centers.

Theme 4 is suggested to be divided in 3 main classes further including 6 sub-classes. These include: 1-B (Basic), 2-Me (Medium), and 3-A (Advanced), each comprising of 23, 8, and 9 cooperatives; respectively.

The main characteristics of these classes and sub-classes are summarized as:

Class 1-B consists of 23 out of the total 40 identified cooperatives

- Includes over half of the network of cooperatives, which do not appear to meet the requirements needed to properly supply the market. This is mainly reflected by the poor infrastructure, equipping and operations due to the low estimated conformity of the production centers and labels, which are pivotal characteristics. Other factors characterizing this class and adding evidence to that statement is the lack of industrial licenses, which impede the possibility of considering the cooperatives as industrial units therefore export potential under the name of the cooperatives, and the use of personal or rented vehicles for transportation purposes. These are the main reasons why this class is considered basic, and therefore is in need for several levels of improvement in order to expand outreach and operations. It should be noted that all cooperatives of sub-class 1-B1 are located in the North *Beqā'* in the town of Hermel.
- Although the annual production capacity is within a similar range as other classes with the exception of only two cooperatives producing 7 to 15 tons or over along with having a various range of biannual turnover recorded.

Class 2-Me consists of 8 out of the total 40 identified cooperatives

- This class exhibits intermediary characteristics between both the basic and advanced cooperatives. This class includes cooperatives with diverse characteristics under theme 4 with more cooperatives reported having an industrial license than class 1-B but less than those of class 3-A. The same applies for other variables such as the proportion of cooperatives owning a refrigerated cargo minivan and label conformity. As for the estimated center conformity, this class also includes cooperatives that scored high, medium, low and those working at household level.
- 5 out of 8 cooperatives in this class are noticed to largely depend on rural markets for their sales (for over 50% of products), yet all cooperatives in this class have reached urban market in various extent.

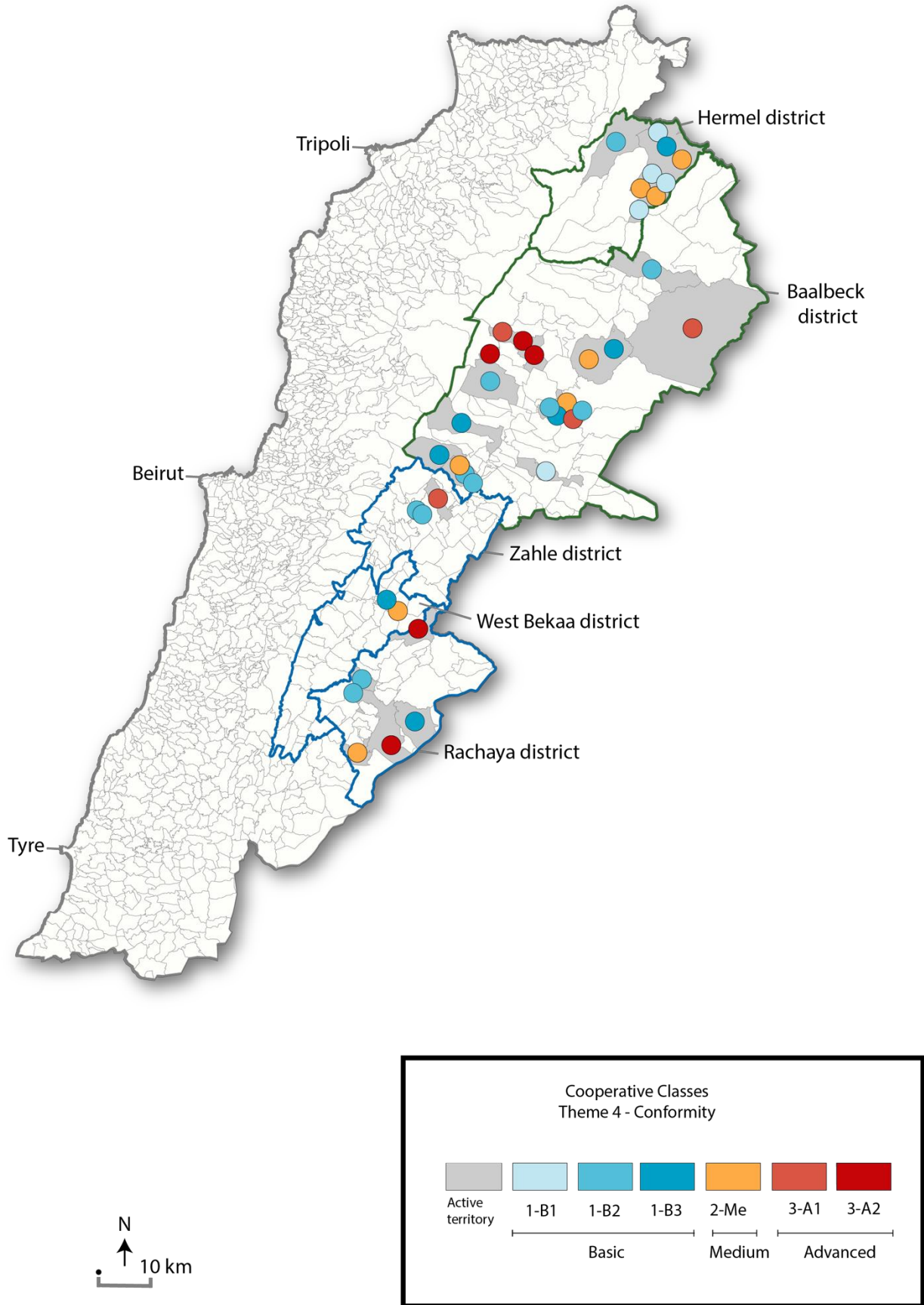
Class 3-A consists of 9 out of the total 40 identified cooperatives

- Represents the advanced cooperatives of the group. This characteristic is evident mostly by the highest scores of the estimated center conformity and labels. This class also includes the majority of cooperatives that are seen to use proper means of transportation as cooled or un-cooled regular vans owned by the cooperatives themselves rather than personal or rented vehicles. The advanced characteristic of this class is also evident by having an evident reliance on urban sales (over 50% of products for 6 out of the 9 cooperatives).

Common characteristics and important notes:

- Many cooperatives still rely on inconvenient methods of transportation of goods including personal or rented vehicles. These constitute 29 out of the 40 identified cooperatives.
- Many cooperatives do not appear to even have any existing labels, i.e. 14 of 40 cooperatives (including 6 of the 10 non-funded cooperatives (sub-class 1-NF in theme 3)).

The spatial distribution of food processing cooperatives in the *Beqā'* valley based on Theme 4 is found below in Map 32.



Map 32: Spatial distribution of food processing cooperatives in the *Beqā'* valley per Theme 4 (Label and conformity). Source: Produced by author, *Jalkh R., 2021, LAGAM, UM3*.

5.3. COMPILING OF RESULTS FOR A HOLISTIC SYNTHESIS AND UNDERSTANDING

5.3.1.1. Synthesis characterization

This last step compiles a holistic categorization process of each of the above themes that were assessed separately (Theme 1 – Structure, Theme 2 – Spatiality, Theme 3 – External support, Theme 4 – Conformity). By using the characteristics identified per Thematic basis above, the Synthesis Categorization groups these themes together and identifies an overall typology of cooperatives. The results of the synthesis characterization suggest 4 main typologies each comprising of 10, 4, 14 and 12 cooperatives; respectively. The characteristics of each typology are elaborated below in Figure 87.

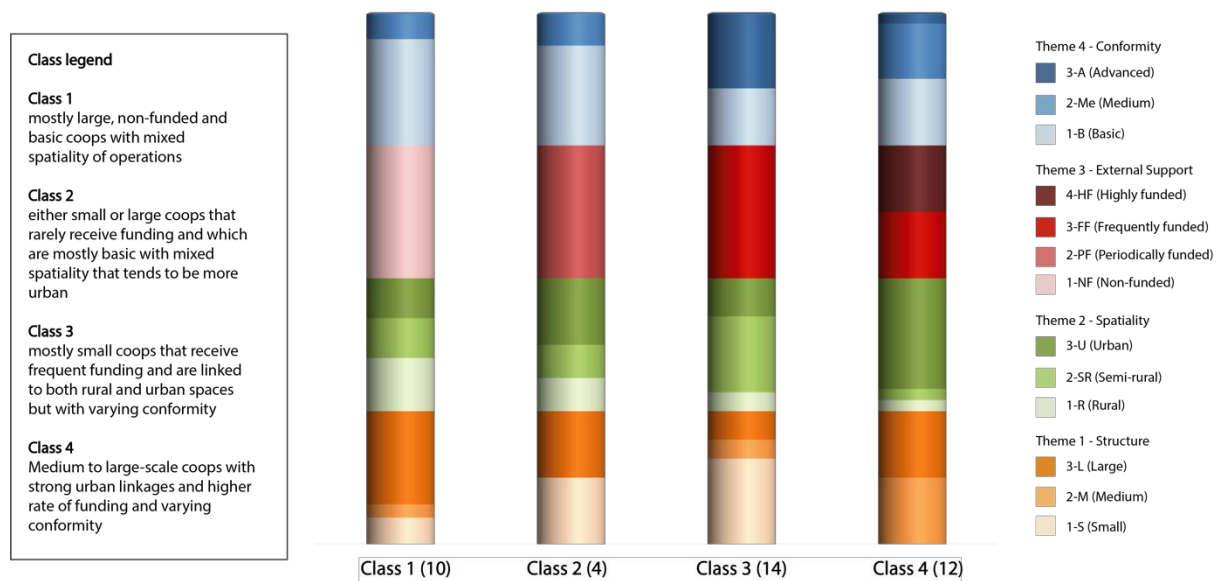


Figure 87: Synthesis classification of typologies of themes 1, 2, 3 and 4 of the study's cooperatives into 4 final classes

The characteristics of each class are summarized below.

Class 1 consists of 10 out of the total 40 identified cooperatives

This class is characterized by having cooperatives that are mostly large in size (Class 3-L under Theme 1), that do not exhibit any specific spatial trend of activities (under Theme 2), that are all not funded by any external entity as donors or development agencies (Class 1-NF under Theme 3) and that are mostly Basic in their conformity (Class 1-B under Theme 4). This class is weaker in its lack of conformity and funding which both variables have been associated with a higher tendency for turnover rather than the effect of size and spatiality.

Class 2 consists of 4 out of the total 40 identified cooperatives

This class includes only 4 cooperatives which are noticed to be equally divided between small and large cooperatives (Classes 1-S and 3-L under Theme 1), have no specific dominance of spatial activities (Theme 2) although they tend to be more urban, have been exposed to only periodic or exceptional funding (Class 2-PF under Theme 3), and are still mostly basic cooperatives (Class 1-B under Theme 4).

Class 3 consists of 14 out of the total 40 identified cooperatives

This class is characterized by cooperatives that tend to be small in size (around two thirds belonging to Class 1-S under Theme 1), are moderately semi-rural in spatiality (around 60% belonging to Class 2-SR under Theme 2), are all frequently funded from donors and external development agencies (under Theme 3), and tend to be more advanced than their former counterparts (over half belonging to Class 3-A under Theme 4).

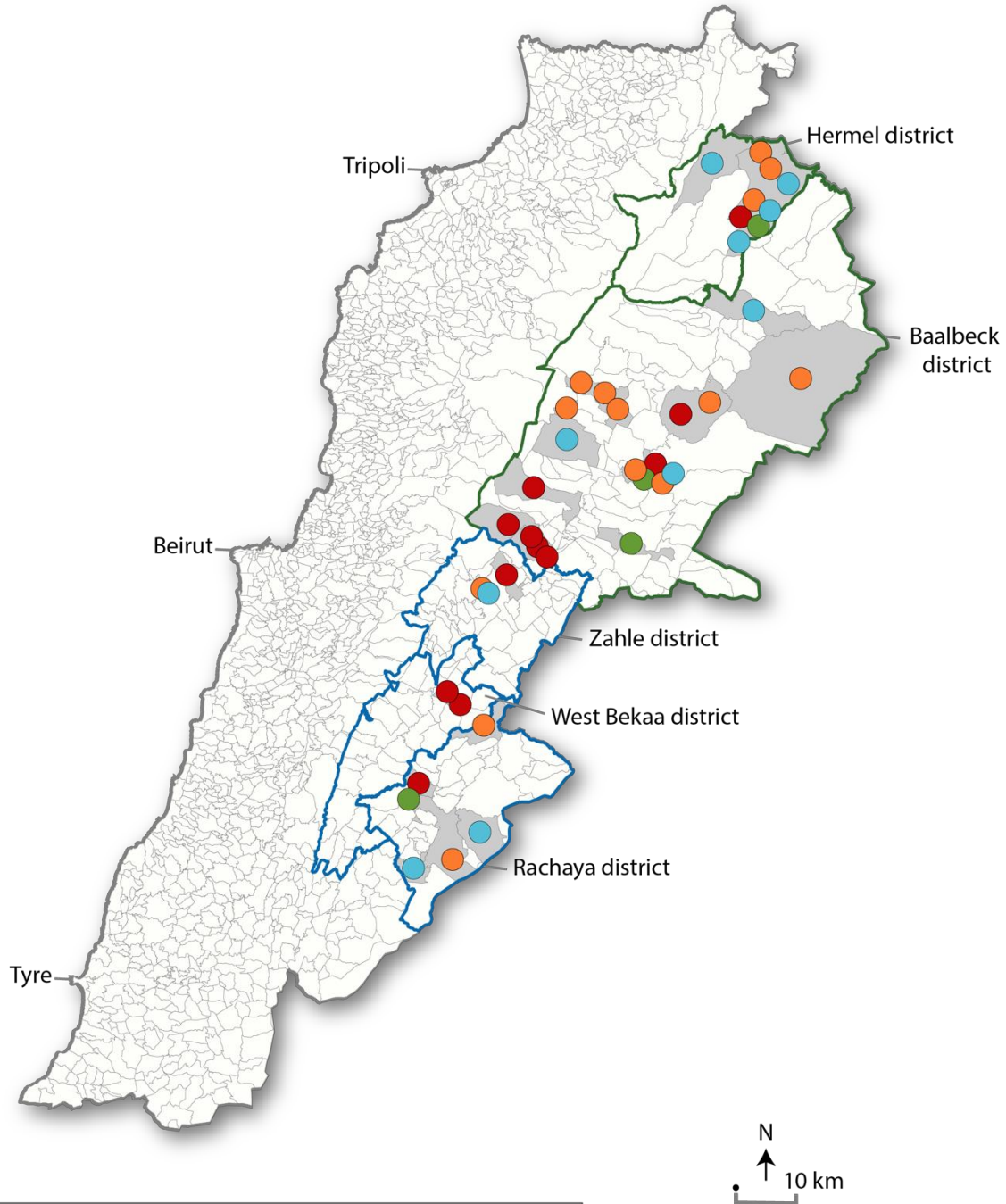
Class 4 consists of 12 out of the total 40 identified cooperatives

This class is characterized by cooperatives that are larger in size than the former classes whereby equally divided between medium and large cooperatives (under Theme 1), are mostly urban in their spatiality (under Theme 2), are more frequently funded (half belonging to Class 3-FF under Theme 3). This is also the only class to include cooperatives that are highly funded (half belonging to Class 4-HF under Theme 3). However, cooperatives in this class exhibit less advancement than the former Class 3 whereby only 1 cooperatives is classified as advanced (Class 3-A under Theme 4) and the remaining are divided almost equally between the basic Class 1-B and the medium Class 2-Me.

The spatial distribution of food processing cooperatives in the *Beqā'* valley based on the synthesis of the four themes is found below in Map 33. Once again, the distribution does not reflect any geographic tendencies to the way cooperatives belong in their respective classes. It seems that cooperatives in Lebanon that belong to the different classes, thus with their varying characteristics, exist in the territory with no specific tendencies in their spatial distribution or territorial concentration. No specific spatial trend could be identified according the findings of results. Therefore, the same geographic scale, example caza or town, could have cooperatives that could be small, medium or large in their operation, those that are rural, semi-rural or even linked to the urban spaces of the capital, those that have different extent of external aid, and finally those that exhibit varying levels of compliance in their production centers and labels.

Characteristics of the minority group of cooperatives located in the Beqā' governorate (caza of Zahle, Rachaya and West Beqā') since they constitute only 11 out of the total 40 identified cooperatives:

- All relatively large cooperatives (totaling 4 out of the 11 cooperatives located in the *Beqā'* governorate) belong to sub-class 3-L1, therefore is the only sub-class that does not recruit any additional workforce. All but one cooperative in this sub-class are not funded (sub-class 1-NF) and have basic relative conformity and are divided between rural (class 1-R) and semi-rural (class 2-SR) spatial operations.
- On another hand, the relatively small and medium-sized cooperatives are the ones found to receive more funding by being categorized in either classes 3-FF and 4-HF, and all but one being categorized as basic (1-B) or advanced (3-A) cooperatives.



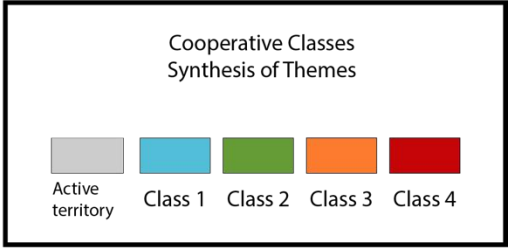
Class legend

Class 1
mostly large, non-funded and basic coops with mixed spatiality of operations

Class 2
either small or large coops that rarely receive funding and which are mostly basic with mixed spatiality that tends to be more urban

Class 3
mostly small coops that receive frequent funding and are linked to both rural and urban spaces but with varying conformity

Class 4
Medium to large-scale coops with strong urban linkages and higher rate of funding and varying conformity



Map 33: Spatial distribution of food processing cooperatives in the *Beqā'* valley according to the synthesis of typologies of the four themes. Source: Produced by author, *Jalkh R., 2021, LAGAM, UM3*.

5.3.1.2. Triangulation of results - thematic and variable crossings

5.3.1.2.1. Thematic crossing

- **Theme 1 - Structure x Theme 2 – Spatiality:**

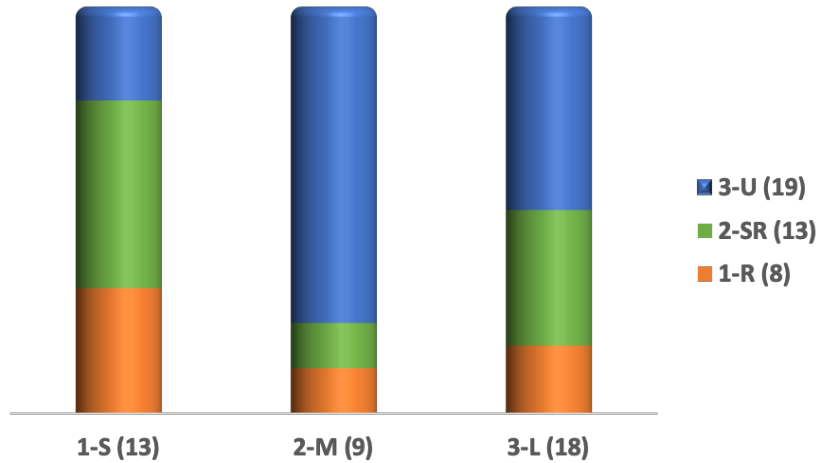


Figure 88: Thematic crossing of Theme 1 (Structure) and Theme 2 (Spatiality)

Crossing Theme 1 (Structure) with Theme 2 (Spatiality) shows that the increase in size or operations of cooperatives does not specifically translate in more expanded outreach. As such, it can be noticed that even small cooperatives (Class 1-S) do demonstrate semi-rural and even a certain level of urban activity. Yet this class is majorly characterized as rural (Class 1-R) and semi-rural (Class 2-SR) with 30% and 46% of its cooperatives respectively. The larger portion of medium-sized cooperatives tend to have urban characteristics, which would otherwise be expected for larger cooperatives. Only half of large cooperatives however demonstrate urban dominance of activities whereas the remainder show semi-rural and minor rural-like spatiality of activities. This shows that the size of the cooperatives in terms of their structure characteristics under Theme 1 do not dictate the spatiality entirely.

- **Theme 1 - Structure x Theme 3 – External support:**

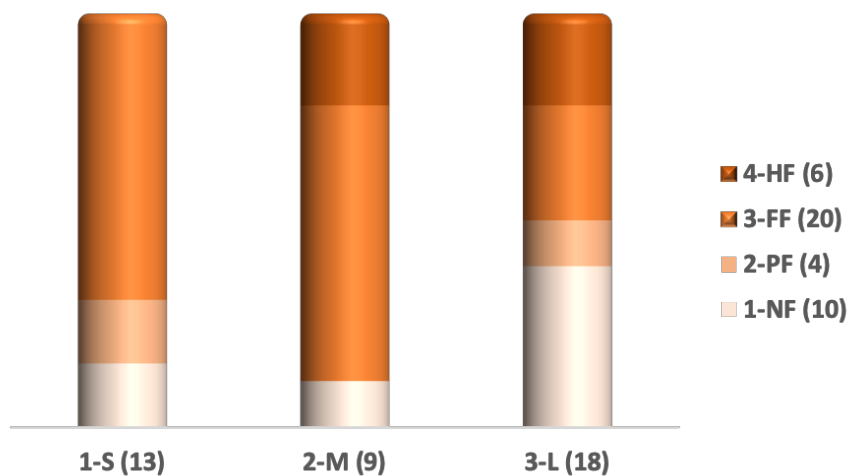


Figure 89: Thematic crossing of Theme 1 (Structure) and Theme 3 (External support)

This crossing shows that the receiving of external support (funds, equipment, training, marketing, etc.) from donors and development agencies as (i)NGOs under Theme 3 does not depend on the structure size of the cooperatives related to Theme 1. In fact, almost three quarters of cooperatives classified as small (Class 1-S) under Theme 1 are identified as frequently funded (Class 3-FF) under Theme 3, and therefore prone to receiving external support more frequently. The opposite is noticed in the large-scale cooperatives (Class 3-L). Instead of perceiving that this class should logically tend to receive support more frequently due to its larger size under the characteristics of Theme 1, in fact a large proportion of this class (40%) is seen not to receive any fund support at all, and therefore belonging to Class 1-NF under Theme 3.

- **Theme 1 - Structure x Theme 4 – Conformity:**

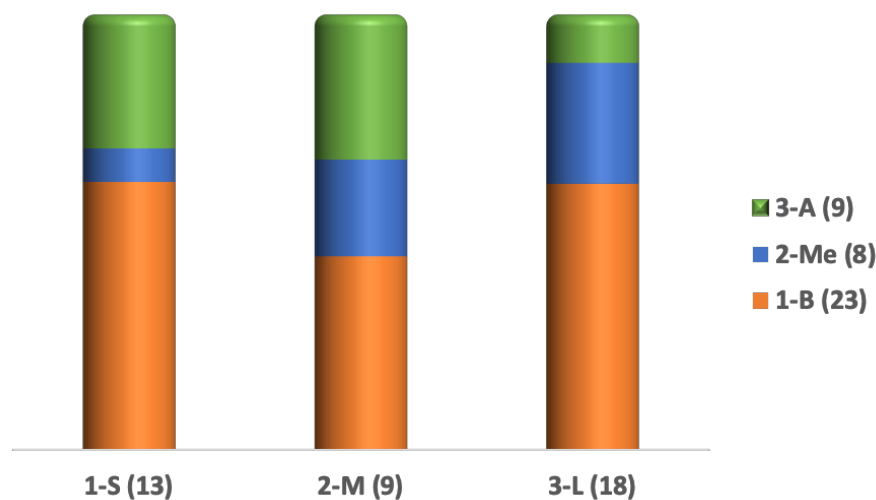


Figure 90: Thematic crossing of Theme 1 (Structure) and Theme 4 (Conformity)

Crossing the size structure (Theme 1) with the conformity level (Theme 4) of the cooperative network also shows that no proportional trend exists. Instead of believing that the highest proportion of advanced (Class 3-A) cooperatives would be large in size (Class 3-L), the opposite is quite clear. Only 2 of the 18 large cooperatives are in fact classified as advanced whereas the remaining 9 advanced cooperatives are divided between medium (Class 2-M) and small (Class 1-S) cooperatives. Even 60% of the cooperatives belonging to large Class 3-L are classified as basic Class 1-B, the most common class housing 23 out of the entire 40 cooperatives. The same proportion is noticed in the small Class 1-S whereas the medium Class 2-M registered the lowest proportion of almost 45% (4 out of 9). This shows that the level of advancement and conformity is also not relative to the assumed size of the cooperative.

- **Theme 2 - Spatiality x Theme 3 – External support:**

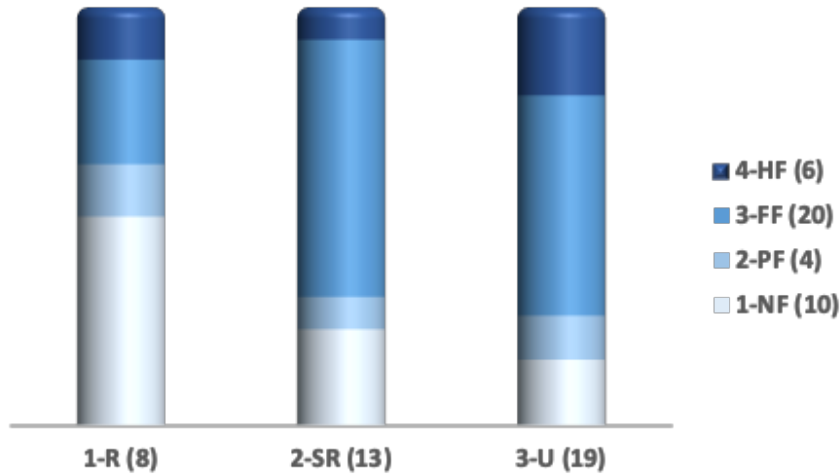


Figure 91: Thematic crossing of Theme 2 (Spatiality) and Theme 3 (External support)

This type of crossing between Theme 2 and Theme 3 reflects whether the receipt of external funding support depends on the spatiality of cooperatives, which in fact demonstrated probable proportional. It is noticed that half of the cooperatives categorized as rural (Class 1-R) under Theme 2 are also categorized as non-funded (Class 1-NF) under Theme 3. The proportion of this nonfunded class decreases gradually in classes semi-rural (Class 2-SR) and urban (Class 3-U), whereas conversely the proportion of funded cooperatives, especially the frequently funded (Class 3-FF), increases, and which overall comprises half of the total number of cooperatives. This indicates that cooperatives with expanding operations outside their surrounding rural environment is coupled with the receiving of more frequent external support from development agencies mostly. These results could be also suspect whether the received support was the reason behind the expanding of spatiality from rural to more urban environments, especially since the highest proportion of the highly funded cooperatives (Class 4-HF) belongs to the urban Class 3-U.

- **Theme 2 - Spatiality x Theme 4 – Conformity:**

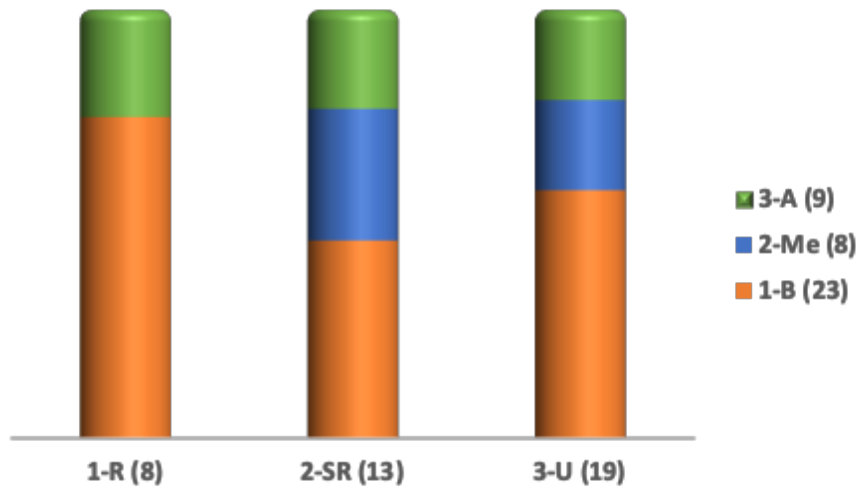


Figure 92: Thematic crossing of Theme 2 (Spatiality) and Theme 4 (Conformity)

The crossing of Theme 2 (Spatiality) with Theme 4 (Conformity) reveals that a similar proportion of advanced cooperatives (Class 3-A) ranging between 21% and 25% is distributed amongst the 3 classes of spatiality. This shows that the advancement level or conformity of cooperatives is not relative to the spatiality of operations and that even rural and semi-rural cooperatives are inclusive of what is considered as advanced cooperatives. A significant proportion of basic cooperatives (Class 1-B) is obvious in the three levels of spatiality since over half of the cooperative population belongs to that class. Class 1-B also dominates the rural type of cooperatives Class 1-R at 75%, which is also noticed to lack any cooperatives categorized as medium (Class 2-Me) in their conformity. This latter Class 2-Me consists 31% and 21% of the semirural Class 2-SR and urban Class 3-U; respectively. Interestingly, cooperatives with an urban aspect of operations (class 3-U), constituting almost half of the total number of cooperatives, also have 11 out of its 19 cooperatives categorized as basic (class 1-B in Theme 4). These figures could be considered as evidence that even though cooperatives become in contact with urban markets (the dominant class of Theme 2), that does not necessarily translate into an advancing in their operations or labeling, which could possibly reflect a weak regulation and monitoring from the authorities' end.

- **Theme 3 – External support x Theme 4 – Conformity:**

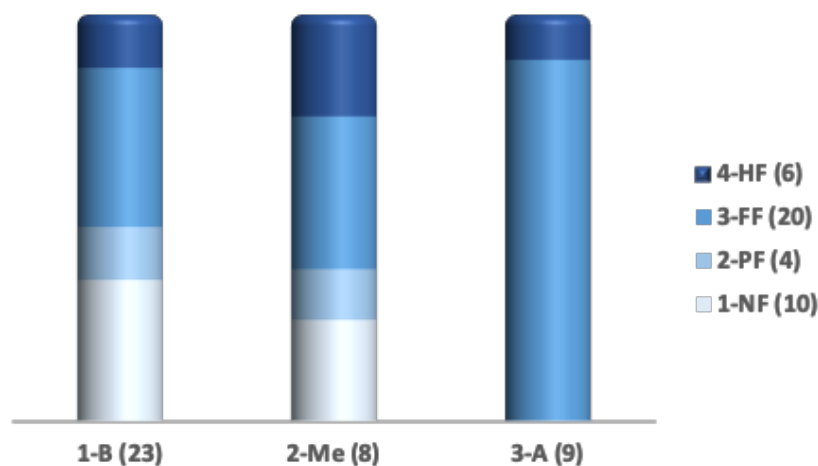


Figure 93: Thematic crossing of Theme 3 (External support) and Theme 4 (Conformity)

This type of crossing between Theme 3 (External support) and Theme 4 (Conformity) indicates that the more advanced cooperatives appear to be more prone to receiving a higher frequency of support from external sources in the development sector as donors and (i)NGOs. Knowing that half of the entire population of cooperatives are categorized under Class 3-FF therefore frequently receive support, this proportion appears more prominent in the advanced Class 3-A. Yet, that does not imply that basic cooperatives in Class 1-B do not include any cooperatives categorized as frequent (Class 3-FF) or high frequent (Class 4-HF). The latter actually consist 40% and 13% of the 23 cooperatives belonging to this class which already comprises over half of the entire cooperatives. Yet it is worth mentioning that the proportion of nonfunded cooperatives under Class 1-NF appears to decrease from 35% in Class 1-B to 25% in Class 2-Me and does not appear entirely in Class 3-A. This could support the observation that donor interventions could possibly be the reason behind that advancement of

conformity of cooperatives. This could be in line to the similar observations in Theme 2 (Spatiality) where a higher proportion of urban cooperatives (Class 3-U) are seen to receive a higher frequency of external donor support than its counterparts, therefore reflecting a benefit at the level of expanded spatiality of operations and conformity characteristics.

5.3.1.2.2. Variable crossing

The variable crossings serve to shed light on specific variables of interest with noticed trends. These specifically touch on variables related to the acquisition of external funds with other behavior such as with access to markets and level of advancement. That approach originated when the analysis of sub-theme 4.2 showed that although household-based cooperatives that are considered non-conforming are still actively supplying the mostly rural market with products. Yet, only one of these 7 cooperatives is seen to receive consistent external support from donors and development agencies. The interest in this case would be to investigate whether donor and development agencies have had a tangible effect in the operations and markets of the other cooperatives, especially those that have received consistent support with time, or have other internal factors contributed to that development. In order to help shed light on that question using the available data, a crossing between the entries was performed on the following variables:

- Theme 4 x annual frequency of receiving external support to check whether advanced cooperatives have a higher frequency of interaction in development projects with donors and (i)NGOs.
- Theme 4 x urban / rural sources of turnover to check whether advanced cooperatives have a higher urban reach which could be due to the support received.
- Annual frequency of receiving support x marketing channels x Theme 4 to check whether cooperatives participating in development projects more frequently are able to reach more markets as a result of that support.
- Annual frequency of receiving support x biannual turnover to check whether cooperatives receiving more frequent external aid from development projects are able to attain higher annual turnovers which could reflect on the benefit of this support.
- Theme 4 x biannual turnover to check whether advanced cooperatives are able to attain higher annual turnovers. This component is conducted as a whole with Theme 4 and with one of its separate variables: (1) Estimated label conformity since it constitutes the first visual representation of the products for potential market consumers.

▪ **Theme 4 – Conformity x Annual frequency of receiving support**

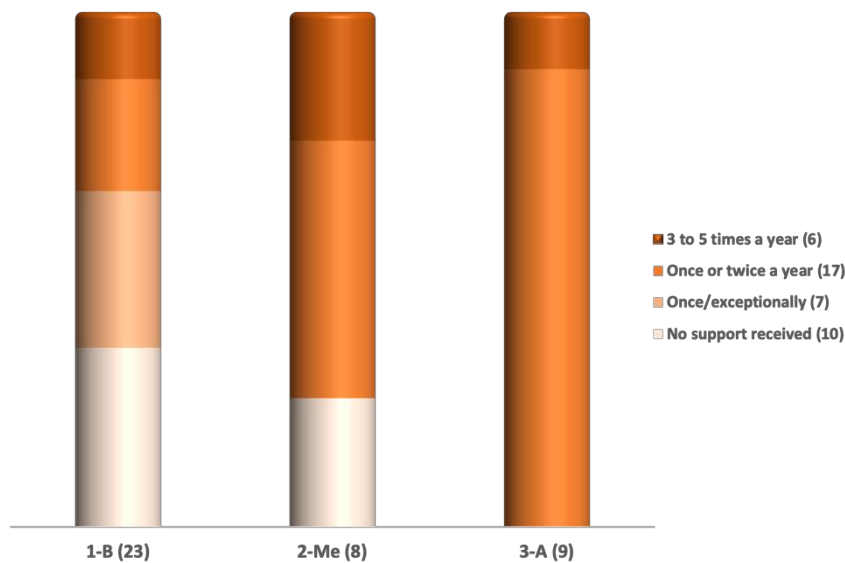


Figure 94: Variable crossing between Theme 4 (Conformity) and Annual frequency of receiving support

When crossing Theme 4 (conformity) with the frequency of receiving external aid and support, it can be noticed that the entire class of advanced cooperatives (Class 3-A) receives the highest, i.e. most frequent, categories of support. That consists of the most common frequency of once or twice a year (for 8 cooperatives) and the less common 3 to 5 times a year (for 1 cooperative). As for the class containing the highest number of cooperatives, the basic Class 1-B, it is noted that over 65% of its cooperatives (15 out of 23 cooperatives) either do not receive any support or have received it once or on an exceptional basis. The remaining 8 (almost 35%) cooperatives did report receiving frequent annual support of once or twice a year (5 cooperatives, almost 22%) or 3 to 5 times a year (3 cooperatives, 13%). The medium Class 3-Me with a total of 8 cooperatives, is positioned in between the two former classes, with 2 (25%) of cooperatives, 4 (50%), and 2 (25%) reporting not having received any support since establishment, receiving it once or twice a year, and 3 to 5 times a year; respectively. These observations show that cooperatives advanced in their conformity characteristics tend to have received more frequent external aid support than their less advanced counterparts, possibly indicating a correlation.

▪ **Theme 4 – Conformity x Sources of turnover**

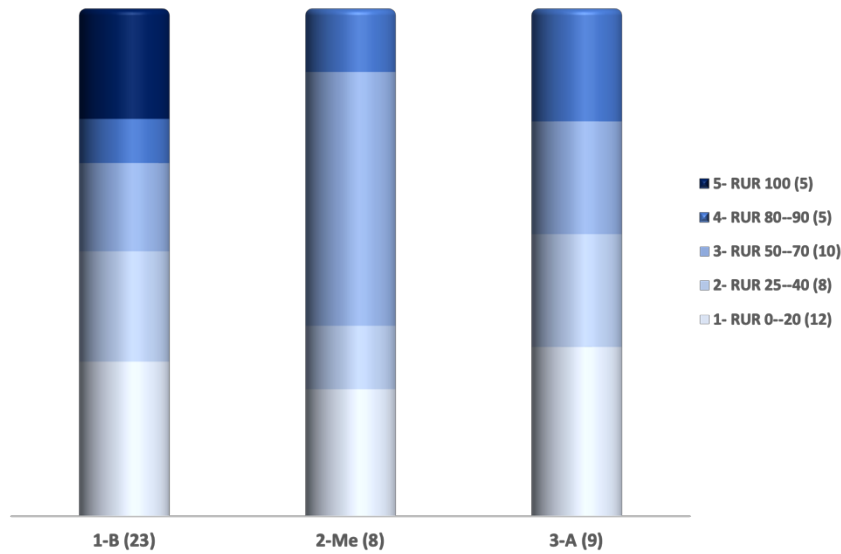


Figure 95: Variable crossing between Theme 4 (Conformity) and sources of turnover

This crossing shows that the three different classes (Basic Class 1-B, Medium Class 2-Me, and Advanced Class 3-A) are generating turnover from different spatial and geographic sources, being rural and urban. It is however noticed that the only cooperatives that are entirely dependent on their surrounding rural market for the generation of turnover belong to the Basic Class 1-B at a proportion of 5 out of 23 cooperatives (22%). Contrarily, cooperatives that depend almost entirely on urban environments for the generation of turnover (0 to 20% rural sales only) are divided almost equally between the three different classes with 7 out of 23 cooperatives in Class 1-B (30%), 2 out of 8 cooperatives in Class 2-Me (25%), and 3 out of 9 cooperatives in Class 3-A (33%). Such observations and gradation of rural/urban sales do not specifically correlate to the level of advancement in conformity of cooperatives and could instead be related to the geographic proximity of the cooperatives to the main urban sales arena in Lebanon, the capital Beirut. This is especially true since Lebanon in itself is a small country in its surface area (10,452 sqm), with an average length of 217 km and maximum width of 80 km at its North and 40 km at its South. The *Beqā'* in itself is 120 km long and around 16 km wide, with its farthest two extremity regions of the northern *Beqā'* (Hermel) and Western *Beqā'* (Ain Ata) respectively distancing around 140 km and 101 km from the capital, which require each around 3- and 2-hours ride by car. This is why the possibility of enhanced urban marketing and sales could be related to other factors than solely the receiving of external support and aid from donors or (i)NGOs, but could be a result of personal efforts, contacts or networking. This factor requires a more elaborate analysis that extends further into the intra-relations of cooperatives with other actors rather than their internal relations amongst each other.

▪ Annual frequency of receiving support x Marketing channels x Theme 4

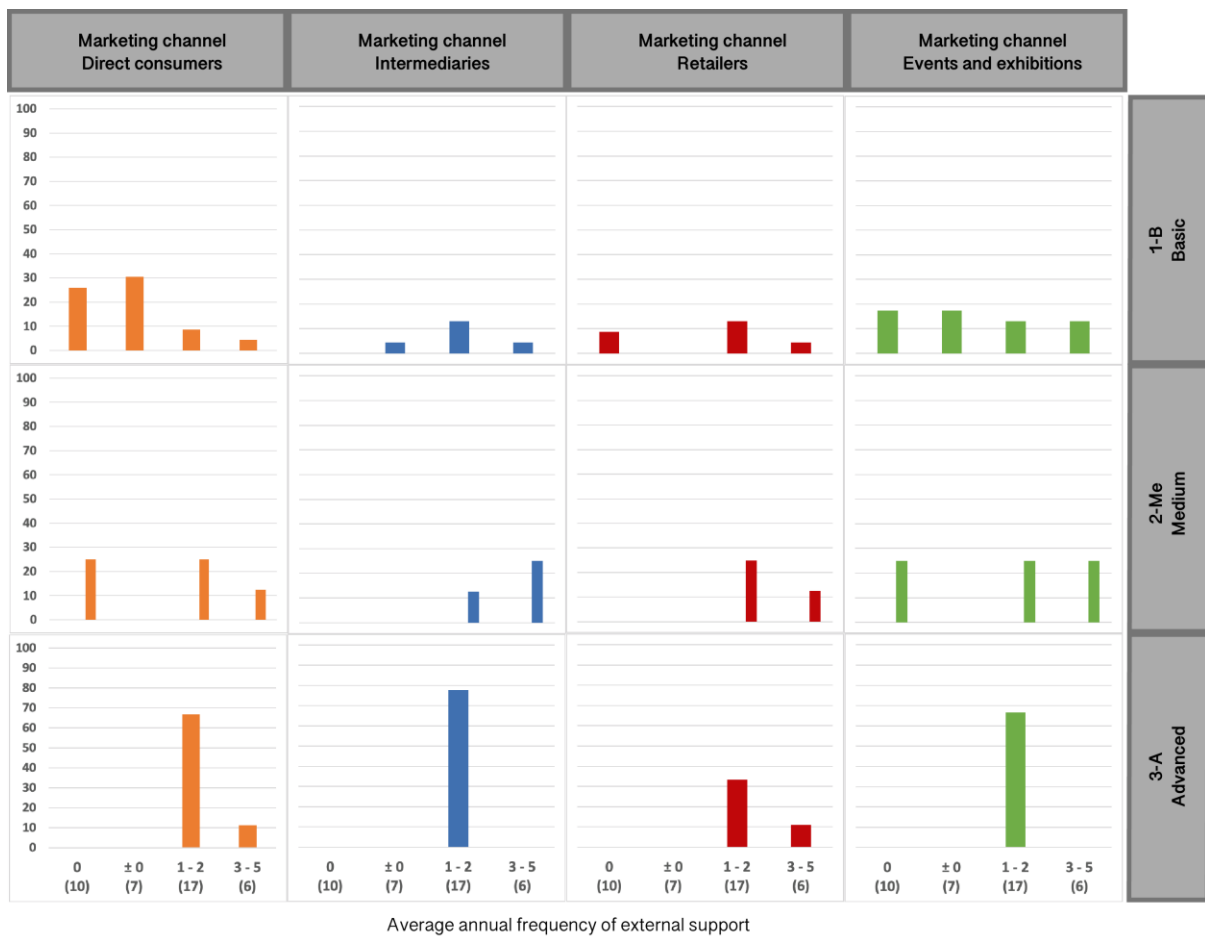


Figure 96: Variable crossing between annual frequency of receiving external support, marketing channels and Theme 4 (Conformity)

This type of crossing between three variables demonstrates the accessed marketing channels (sub-theme 2) versus annual frequency of receiving external support (sub-theme 3) per level of advancement in conformity (Theme 4). What is noticed is that the marketing channel associated with intermediaries and retailers appear to be more accessible to cooperatives with higher frequencies of support and progressively increases with the more advanced cooperatives. This is evident since almost the entire group of cooperatives that reported having access to these channels are supported at a minimum of 1 to 2 times annually. The only exceptions are 3 entries from Class 1-B with a less frequency of support (either reported not having received any support or reported receiving once or exceptionally). For the other marketing channels, no specific trend can be noticed since cooperatives are seen to engage in a variety of marketing channels regularly being the most common direct sales to consumers and exhibitions regardless of level of advancement or frequency of receiving external support. Yet, what is noticed is that the more the cooperatives are advanced (Theme 4), the higher the percentage of the subsequent class in engaging in any of the marketing channel. An example would be in the marketing via exhibitions where positive replies of cooperatives in Class 1-B ranged between 10% to 20% irrespective of frequency of external support, whereas those of Class 2-Me reached 20% to 30%, and those of 3-A increased up to 67%. The responses of the latter Class 3-A were entirely

in the same annual frequency of external support (1 to 2 times a year) since only one of the 9 cooperatives in this class reported a different frequency (3 to 5 times a year).

▪ **Annual frequency of receiving support x Biannual turnover**

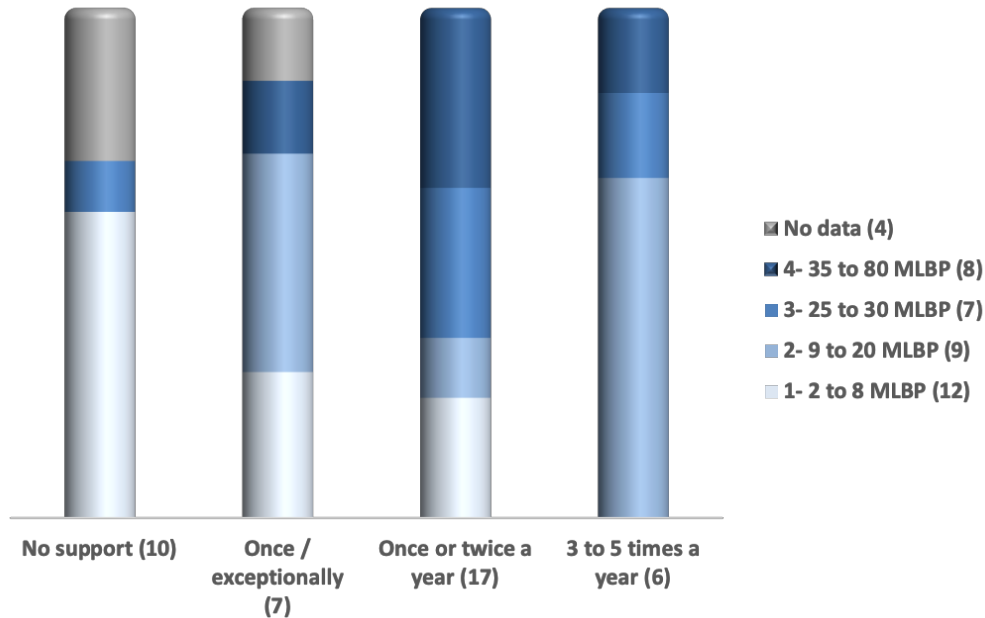


Figure 97: Variable crossing between annual frequency of receiving external support and biannual turnover

This type of crossing shows whether cooperatives that receive an increasing frequency of external support are correlated with the ability to generate higher levels of biannual turnover. Firstly, it can be noticed that the cooperatives that did not report any figures for their biannual turnover belong to the classes that do not receive any support or those that have received such support only once or on an exceptional basis. Cooperatives that reported generating the lowest range of biannual turnover (2 to 8 MLBP) were divided between their highest proportion in the class receiving no support (60%), then lesser in the class having received support only once or on an exceptional basis (almost 29%), and finally their least percentage in the most common class that received aid once or twice a year (almost 24%). On another hand, cooperatives that reported generating the highest range of biannual turnover (35 to 80 MLBP) belong in their lower proportion in the class that reported receiving external support only once or on an exceptional basis (14%), and the highest proportion in the common class receiving aid once or twice a year (35%). This class similarly reported the highest percentage for cooperatives generating the second highest biannual turnover (25 to 30 MLBP) at 29%. These observations could indicate that cooperatives may be able to attain higher biannual turnover possibly as a result of the frequently received external aid from donors and (i)NGOs.

▪ **Theme 4 – Conformity x biannual turnover with focus on label conformity**

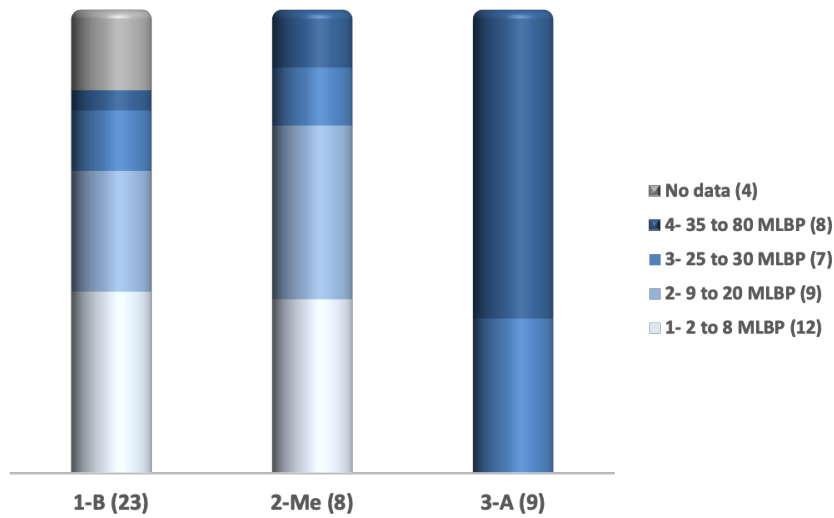


Figure 98: Variable crossing between Theme 4 (Conformity) and biannual turnover

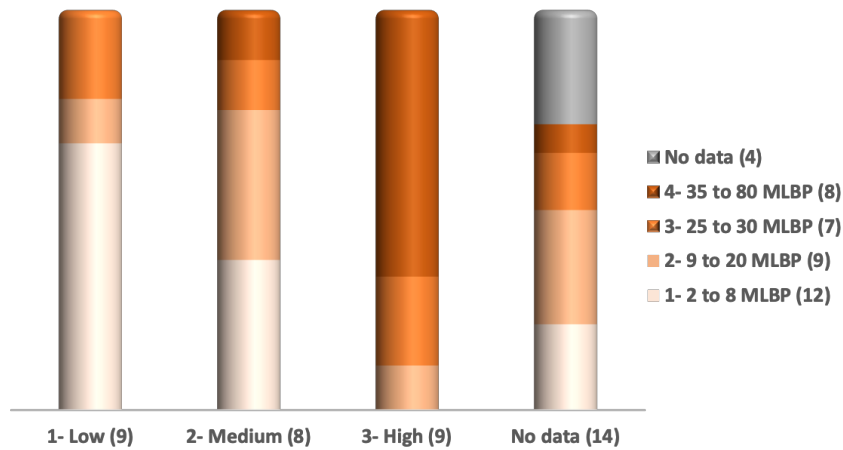


Figure 99: Variable crossing between label conformity and biannual turnover

This type of crossing demonstrates whether cooperatives with advanced level of conformity (Theme 4) generate higher biannual turnover. This crossing additionally focuses on the label conformity to check whether the labelling representation, which is the first visual conformity provided to end products in the market, possibly attracts a wider range of marketing and sales. What can be seen is that the cooperatives characterized as advanced (Class 3-A) generate the two upper ranges of biannual turnover (35 to 80 MLBP for 67% of cooperatives and 25 to 30 MLBP for 33% of cooperatives). The same is noticed for cooperatives classified with the highest label conformity (Class 3-High) from which 67% reported the highest range of biannual turnover (36 to 80 MLBP for 6 out of 9 cooperatives), followed by 22% reported the second highest range (25 to 30 MLBP for 2 cooperatives out of 9), and finally 11% (1 cooperative out of 9) reported generating 9 to 20 MLBP. Conversely, the cooperatives that reported the lowest and most common range of biannual turnover (2 to 8 MLBP) belong to the classes characterized as basic (Class 1-B) and medium (Class 2-Me) with 39% and 38% respectively. Similarly, cooperatives reporting this same lowest range of biannual turnover belong to the classes characterized with low and medium label conformity at 67% and 38% respectively. Finally, all

cooperatives that did not report any figures of biannual turnover also belonged to the group of cooperatives that did not own any label, also indicated as no data for label. Therefore it could be indicated that despite having the most common range of biannual turnover ranging between 2 to 8 MLBP for 12 out of the 40 cooperatives, the 9 cooperatives characterized as advanced in their conformity Class 3-A and label Class 3-High still reported higher ranges which could possibly be linked with their level of advancement resulting from the repetitive external support they received. Holistically, the above observations of the crossing could together indicate that receiving repetitive and frequent support from donors and development agencies as (i)NGOs be correlated with higher levels of advancement and generated turnover by cooperatives. This has been observed since the higher the level of advancement of cooperatives (Theme 4) is where more frequent aid is concentrated, which similarly is where higher turnover and percentage of cooperatives actively engaging in networked marketing channels (retails and intermediaries) are also concentrated.

5.3.2. *Mūne* and their rural food cooperatives – a socio-territorial productive system evidenced with strong rural-urban linkages and gender inclusion dynamics

This section will put in focus how the food-processing cooperatives in the *Beqā'* valley exhibit evidence of being a dynamic system that is both dependent on their surrounding environment and at the same time display clear and strong linkages outside of their territory. Cooperatives are also vectors in which women are able to participate actively in the economic life by mobilizing skills they are specialized in and which they have acquired across generations to manifest into a final cultural food asset. This section will re-iterate important findings extracted from Chapter five and compile them together to describe the overall trends that are noticed to exist in the food processing cooperatives in the territory. The description will focus also on demonstrating, with the aid of a visualization map, how cooperatives have purely territorial dependencies for their operations (production) and how these dynamics additionally extend to extra-territoriality through their linkages to the urban spaces. In that way, this section will show the fluidity of the cooperatives in terms of their variety of business operations to which they are able to use for their territorial and extra-territorial benefit.

To start, it is important to go back to understanding the significance of the findings together in unison. Results show that the 40 interviewed food cooperatives, representing the entirety of registered food processing cooperatives in the *Beqā'* valley, are mostly **small in size in both number of members and production quantities**. On average, this type of cooperatives includes less than 20 members whereas the double is usually registered with agricultural cooperatives in Lebanon (ILO, 2018). Only 18 cooperative members of the almost 700 in total were less than 30 years of age whereas almost 60% of all members were over 40. Similar concerns of an **aging farming population** and decreasing participation of youth in the agri-food sector were also recently voiced by others as Chalak et al. (2017) and ILO (2018). Comparable figures to those of ILO (2018) are also recorded by this study showing only 27% of members aged between 30 and 40. These results are concerning as the sustainability of this cooperative sector becomes in jeopardy if the younger generation are not seeing it as an attractive route for employment and income generation. Yet, a major attention should be given

to the member gender profiles. Results in fact show that these food cooperatives are comprised mostly of women even though only half of whom are active in the production process. The **engagement of women is highly evident in food cooperatives** unlike their low rates of membership in agricultural cooperatives, a fact similarly highlighted by donor reports (ILO, 2018; UNDP, 2020). Interestingly, 12 cooperatives (30%) comprised of women-only members and only 12 (30%) reported having less than 70% women members. These figures reflect an impressive participation of women in leading roles in food cooperative movement unlike other sectors in the country. A report by UNDP (2020) mentions a low participation of women in the general Lebanese labor market with only 4% of top management roles compared to 5% in the MENA region and 19% worldwide. This is further reflected in Lebanon ranking 119 of 153 in the 2022 Global Gender Gap index (World Economic Forum, 2022). For the agriculture and food sectors, the same UNDP report mentions an estimated 35% of women participating in the labor force, remaining stable and consistent with figures reported back in 1970. However, migrant men and women workers from the neighboring Syria are highly integrated, officially and mostly unofficially, in Lebanon's agriculture activities with numbers estimated between 200,000 and 1,000,000 workers (Habib & Fathallah, 2012). From these figures, it is not surprising how the majority of food-processing cooperatives as seen in the results (17 out of 40) do in fact employ additional workforce who are of Syrian nationality. This comes as a result of the conventional practice of recruiting foreign workforce who is less costly while the number of this workforce has greatly increased in the past 10 years as a result of the influx of refugees from the neighboring war-stricken Syria. Although accurate statistics remain unclear, the above UNDP (2020) report states that women have shown stronger participation in cultivation, harvesting and packaging whereas their role greatly diminishes when it comes to marketing of fresh produce. Contrariwise, it states that women in food processing cooperatives overcome these barriers and are exceptionally seen to take charge of the marketing of their processed foods, a fact also reflected in this study's results.

In terms of production, results show that the food cooperatives' total **annual volume varied between 1 and 7 tons** on a seasonal basis for over half of cooperatives. Such low figures were however noted to represent only market-driven quantities which are produced on demand and do not represent the cooperatives' full capacity, thus highlighting a scale-up potential. Yet, 23% of interviewed cooperatives reported producing over 7 tons and a maximum of 15 tons. Most interviewed food cooperatives produce an array of traditional foods most of which are based on fruits, vegetables, herbs and dairy. These include but are not limited to products such as jams, pickles, preserves, dried fruits, herb mixes and traditional dairy products. Only a few, 20%, were found to specialize in particular products (such as goat dairy for example) rather than an ensemble. This **low extent of specialized production** could be attributed to several factors. First, the *mūne* as a cultural practice is not specific to one type of product. It rather includes a large array of preservation techniques that are aimed to increase the shelf-life of cultivations that were available in the vicinity of a household. It was simply the use of what was available, meaning what the head of a household (usually a man) grew in his fields to bring back to the woman for preservation and storage. Different techniques therefore developed around several cultivations that include majorly raw produce as fruits, vegetables, and cereals, and those that were collected from the one or few heads of livestock (usually small ruminants or cattle) that were raised in-house. Only on rare occasions did meat play a central role since

meat was considered expensive and was consumed in small quantities and usually on special occasions. Therefore, when *mūne* is concerned, it would be difficult to identify a single specificity of a single product. The techniques are themselves specific and when coupled with the varieties of ingredients used, recipes, and environmental conditions, these what constituted the unique end characteristics. The practice of *mūne* is directly linked to the agricultural cultivation and therefore to the surrounding environment and *terroir*. This is why it displays both common and varying territorial and a-territorial characteristics. *Mūne* is firstly seasonal and the onset and completion of its practices are directly linked to the start and end of a production season of a specific produce. On one hand, uniform and similar characteristics can be found to extend on different territorial scales, from the local territories up to the national and even supra-national scale with neighboring countries. This is because there are similar varieties of cultivations and animal breeds that are commonly used. On the other hand, certain preserved products and territories could be characterized by their unique qualities or specific reputations that have grown with time over centuries. Certain regions or towns have today become reputable for producing certain foods. The *Beqā'* valley for example, in addition to being the major player in agricultural production and trade in Lebanon, is known for its dairy production. This stands true because the valley is known for its small ruminants rearing and specific semi-nomadic transhumance routes. When it comes to dairy types of *mūne*, the quality of milk and other ingredients (such as local wheat varieties) that enter in the recipe are all being affected by the climatic conditions. As we have seen earlier, the *Beqā'* valley has drier average humidity, stronger exposure to sunlight and a larger range in day and night temperatures. Also, by being a major agricultural producer, the valley puts the producers in proximity of many farmers cultivating a wider range of produce. These are the expected reasons why cooperatives prefer to diversify their productions to expand their output of *mūne* products rather than focusing on producing specific products. Yet, this does not stop certain cooperatives from specializing in reputable foods such as dairy. It was noticed that 14 of those cooperatives (35%) listed the typical *mūne* product *Kīshk* as one of their top 3 productions. In fact, this product was specifically mentioned by the Ministry of Economy and Trade (MoET) as one of the products with potential eligibility for geographic indication label in the Baalbeck region of the *Beqā'* valley (Abu Ghyda, 2007), and therefore constitutes an attractive pilot product for the territory as being a reputable product of culinary heritage significance. Interestingly, this study's results show that all except 2 of the network's food cooperatives with major *kīshk* production are indeed located in the Baalbeck-Hermel governorate in the northern segment of the valley.

Probably one of the most important findings of this study is showing the extent at which food producing cooperatives in the *Beqā'* valley **exhibit very strong territorial (local) and a-territorial (urban) linkages**. On one hand, food processing cooperatives are highly linked to their local environment for procurement of raw agricultural material. This means that cooperatives depend on farmers around them for the cultivation of raw agricultural produce which they mostly procure directly from. This upstream relationship between processing cooperative and farmer is also usually informal based on trust and verbal agreements rather than being under a formalized contract. At the same time, food processing cooperatives seem to be greatly dependent on the capital's urban market for sales although this certainly does not stop them from selling locally in their respective villages and regions. These dynamics are reflected in Map 34. Results show that over 80% of cooperatives are directly dependent on

local farmers within the district level, and almost 60% stated that more than half of their turnover originates from the urban capital Beirut; of those, half reach up to three-quarters of urban turnover. Cooperatives mostly rely on seasonal events and food exhibitions to access urban consumers and only 30% reported marketing to retailers and specialty food shops. However, it is not clear if these cooperatives directly reach such outlets or depend on mediators with which around 40% of cooperatives reporting having links. Comparable geographic dependence is noted in other cooperatives of developing countries such as in Ethiopia. Although not all processes are performed by the same cooperative as in Lebanon, the Ada'a dairy cooperative for example has been contributing to an informal organization of rural-urban linkages by distributing production, processing and marketing throughout diverse areas and actors (Tegegne et al., 2007). This strategy is being called for to recognize its benefit for both rural and urban scales. In that regards, a difference between European and American models of cooperatives is denoted. Although the American dairy cooperatives for example are as strong as their European counterparts in the first production stages, only that they contrarily sell their productions to processing facilities rather than conducting these procedures themselves. Going back to the food cooperatives in Lebanon's *Beqā'* valley, the exhibited rural-urban dynamics make cooperatives not only typical territorial actors, but also their produce being directly dependent on the locality of their space, thus having their *terroir* reflected in the types of products they are producing. This is an important characteristic on which **social, economic and specificity (and a-specificity, i.e. common generic) characteristics are organized**. Through *mūne*, food cooperatives have appropriated the valuable cultural asset and were able to build their economic integration. In order to complete the cycle more efficiently, this is when the marketing and sales have been successfully outreached to the urban market with their extra-territorial urban linkages. In this type of dynamic, it is important to remember two points. The first is that the *mūne* itself is a product which is historically produced in households located in rural environments that were far and somewhat disconnected. This means that households that still produce *mūne* today tend to be also located in rural villages normally where the cooperatives themselves are found. The second important point is to remember that a significant number of the population in urban spaces originate from rural villages and have retained a strong appetite for traditional foods. Given that urban dwellers do not preserve *mūne* foods as much as in rural villages, then having food cooperatives revert to the urban space is therefore logical and beneficial given the higher demand.

However, a **weakened vertical integration in the value chain** could equally describe the *Beqā'* valley's food cooperatives. Although evidence show their attempts to tackle downstream marketing, upstream provisions remain dependent on individual farmers rather than handling their production themselves or their procurement from other agricultural cooperatives. Yet, access to markets remains generally difficult for the *Beqā'* valley's food cooperatives. Although these cooperatives seem to voice their desire to building foreign links and increase export (Abou-Habib et al., 2013a), market access is found to depend on several internal factors of cooperatives as much as external. This means that the fact that food cooperatives are producing the valuable *mūne* is not enough to allow for a solid and sustainable presence in the market. Certain basic criteria should in fact be respected and applied by the *mūne* cooperatives in respect to requirements of the market. These include issues such as compliance to food safety, having stable production recipes that maintain consistent organoleptic qualities (taste,

color, etc.) and transparent communication with consumers through labeling. Not only that, but food cooperatives would need the basic means to reach markets, such as transportation and logistics. In that regards, only 11 of the 40 food cooperatives in the *Beqā'* own proper means of transportation such as cooled or noncooled vans which restricts easy access to consumers and retailers. Additionally, almost 75% of cooperatives do not appear to have proper labels. These scored less than 5 over 10 in their conformity to labeling requirements with 35% not even owning any labels. Major nonconformities of these cooperatives included handwritten label templates and missing important information such as ingredients, nutrition facts, production/expiry dates and contact information. Cooperatives that did have **higher scores (more advanced) were correlated with high urban transactions** and sales to intermediaries such as other marketing cooperatives or through non-governmental organizations support. Nonetheless, it should be noted that a large portion of such intermediaries in Lebanon collect end products from different cooperatives and dispatch into the market using their own collective branding. Indeed, 35% of cooperatives reported selling parts of their production under the private label of other intermediaries. Percentages varied between a minimum of 10% of production and a maximum of 70%. More investigation is needed in that area to clearly describe the mechanisms, market linkages and external networking of cooperative work in Lebanon as well as dynamics and quality of production. The latter plays a major role in creating a standard quality of products which in turn could affect the market's trust, especially when food cooperatives were reported to vary in the extent of their equipping and setups (ILO, 2018).

Extensive aid has been evidently received by food cooperatives in the *Beqā'* valley mainly by NGOs and on a much lower extent by the state. 65% of interviewed cooperatives acknowledged receiving support from NGOs compared to 28% from the state, mostly in the form of equipment and capacity building. The same is similarly reported for cooperatives generally (ILO, 2018). On one hand, these forms of support were reported to have developed the production quality of certain cooperatives and their ability to meet local and export standards (.ibid). These statements have also been resonated by the findings of this study in a different form. Results in fact show that cooperatives which are more advanced than others tend to receive repetitive external support, generate more turnover, and have a stronger access to urban markets. This frequent aid could be from one perspective questioned as the reason behind the higher advancement and generated turnover by cooperatives. From the opposing perspective, these observations could be looked at as the higher advanced performance of food cooperatives is the reason why more frequent aid is concentrated, and similarly is where higher turnover and market access are also concentrated. However, such findings could reinforce statements describing a state of dependency of cooperatives in Lebanon (Esim & Omeira, 2009) which would threaten their principle of autonomy and sustainability. Such concerns were most recently voiced by McKinsey & Company in their report which comments that cooperatives greatly focus on obtaining funds as well as facilitated local sales through the state and international donor support (McKinsey & Company, 2018). Further relevant results showed that over half of food cooperatives in the *Beqā'* valley receive regular support on an annual basis from which 26% receive such support more frequently, up to 3 to 5 times annually. These cooperatives did register high urban sales especially through outlets related to private labels of intermediaries. This raises the question whether such donor projects are to be credited

for bridging cooperatives with the market and whether sustainable linkages are successfully being established.

Box note 17: From the perspective of food processing cooperatives'

It would be interesting to highlight at this point what *mūne*-producing cooperatives have mentioned with regards to certain aspects relating to how they perceive the cooperative business model and *mūne* as the main asset.

To start, the main purpose behind the establishment of cooperatives as expressed by the founding presidents has been to create a **source of employment for women** residing in their town. By providing a sustainable source of income, women are believed to become more empowered and engaged in their communities. In fact, this reasoning falls in line with another main purpose of cooperatives as praised by the state and development agencies; being an important means to keep people rooted in their hometowns and avoid the risk of additional rural-urban migration. However, it should be noted that the mechanism behind the distribution of dividends is unclear and some cooperatives have even stated that they have not achieved that yet.

Mūne is described as the product of the women's skills and the area's quality of produce. It is referred to as a whole "the *mūne*, or our *mūne*" rather than to its individual products. They explain that the majority of women in their hometowns know how to preserve foods and these skills have been transferred to them as they have been for many years from one generation to another, from mother to daughter. The cooperative then becomes the place where they can put their skills to use and benefit from an economic return. Such statements describe the existence of an **innate relationship with the practice of food preservation**. The women take pride in their production practices and have all described their products as 'natural' in the meaning that they are free of any artificial ingredients and as 'produced in the ways of our grandmothers but in more controlled methods that can be marketed'. The women normally compare the natural quality of their *mūne* as opposed to those manufactured by commercial industries that tend to skew away from traditional practices. The women's comparison was mostly in mentioning that industrial *mūne* is usually not sourced from local farmers (they could be imported so could be produced even off-season), is highly mechanized with minimal human-food contact (therefore does not respect traditional practices), utilizes artificial ingredients as stabilizers and colorants, and could be packaged in uncommon containers (such as tin cans compared to *mūne* being mostly in eco-friendly packaging as glass jars). Because of these differences, the industrial version of *mūne* according to the women cooperative producers does not hold any added-value authentic characteristics.

At the same time, some women food cooperatives did show signs of **openness to innovation and adaptability**. Certain cooperatives have in fact developed new products and recipes which are not common to the local cuisine. These for example were the olive-based tapenade spread, frozen foods, and others. The integration of such uncommon products signify that cooperatives can stand in a place between traditionality and modernity. Food cooperatives in Lebanon and not only the *Beqā'* valley are also flexible and adaptable. This is said since most have mentioned how they have (or are willing) to adapt themselves to sustain their business operations. One example in particular is a cooperative that used to be an artisanal cooperative that produces handicrafts, but which later changed to food production when sales decreased. That shift was rather feasible since the women were said to all be experienced and knowledgeable in the preservation of *mūne* foods since this is what rural households depend on (preservation of food domestically rather than purchasing from the market).

The women also consider that one of the best possible ways for marketing this type of product, *mūne*, is through direct contact with consumers and therefore through exhibitions and food shows. The spaces allow for a face-to-face contact with clients which allows the producers to share the background behind the manufacturing and conveying the social element of the product and its beneficiaries. These spaces are usually also organized in the urban city where demand is much higher since rural residents are still more likely to preserve their own food and so do not particularly need to purchase all the products of the cooperatives. They consider that this method is very efficient in **building customer loyalty and increase sales**. They have also acknowledged the presence of such a circle of loyal customers and especially foreign ones such as expats or urban dwellers who are originally from the village who return to purchase local products.

Despite the potential of added-value created, the food cooperatives noted that the **youth do not seem interested** in joining. In their opinion, younger members of the rural society are not interesting in engaging in the old ways of food preservation nor learning that skill but rather prefer to seek modern types of employment and education in the city. Yet, some cooperatives have been successful in integrating youth members to assist in the use of common social media presence to improve outreach, promotion and hopefully sales.

The food cooperatives describe their **relationships with other players and stakeholders** are many and diverse. They could extend from local connections such as direct contact with surrounding suppliers and end consumers as well as collaborations with local authorities as municipalities. These could continue downstream the value chain (marketing channels) or up the chain of command with governing bodies (as the DGoC, ministries,

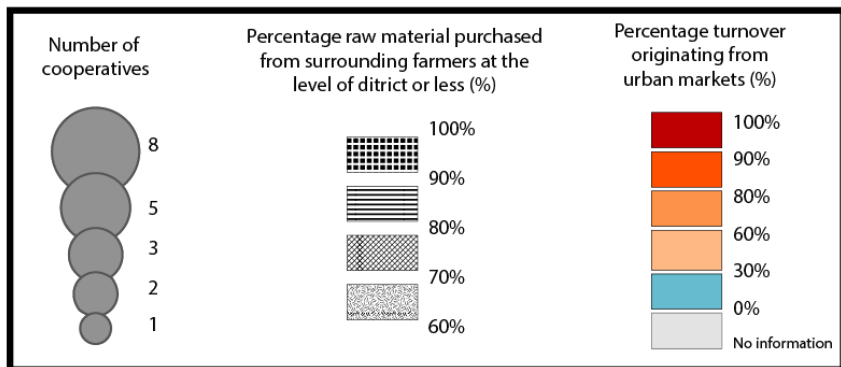
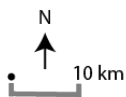
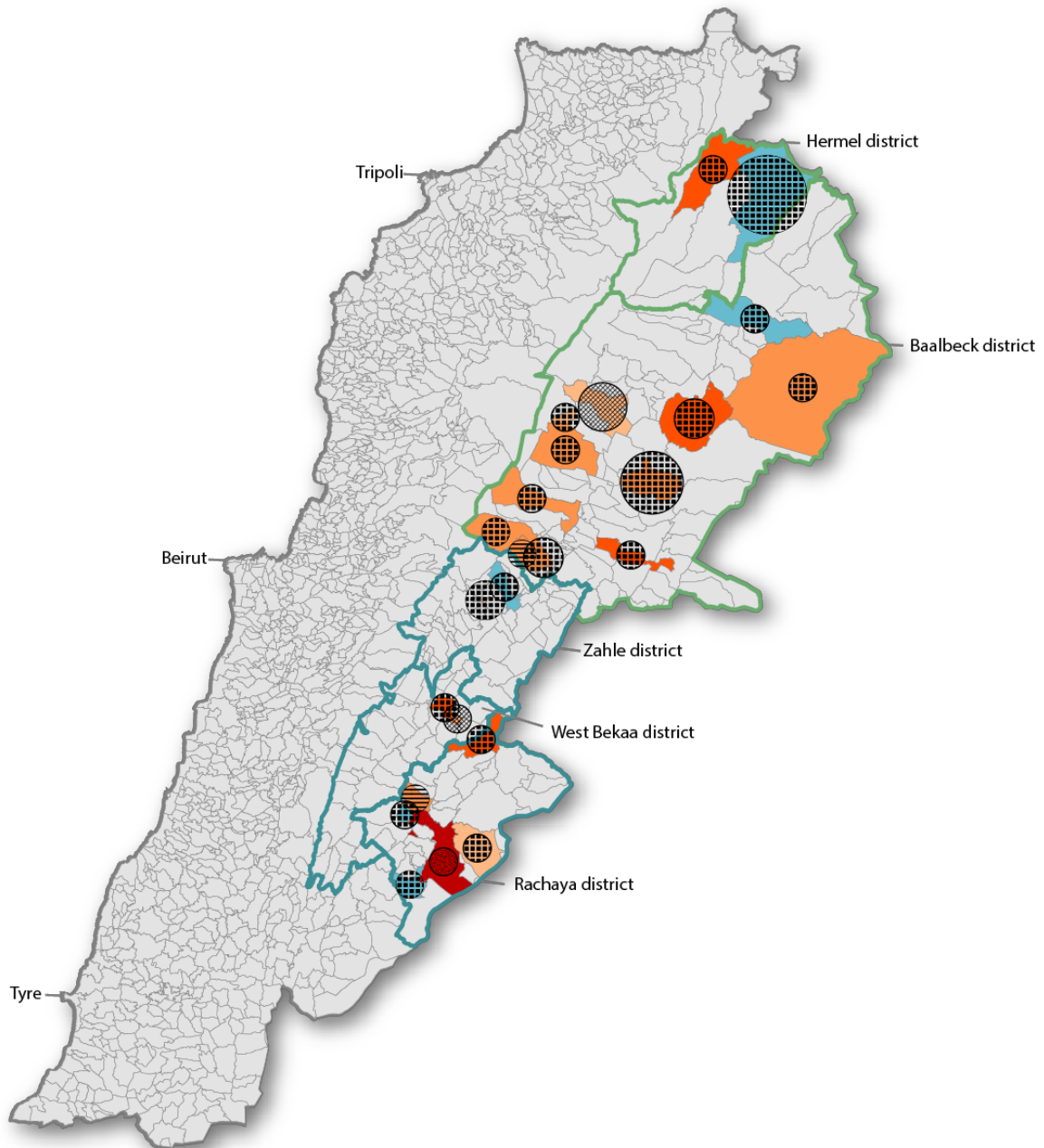
chambers, etc.) and extend to extra-territorial lengths. The focus of the cooperatives' connections however always prioritized their collaborations with donors and development agencies. In fact, many cooperatives in the country, and especially women food processing, **established by external sources** such as either encouraged by the Ministry of Agriculture or more importantly through donor-led development projects. This thus have created the reputation for sources of external support involvement from establishment and the first equipping of cooperatives. The role of development donors has been even said to have increased with time. The cooperatives justify these interventions by their benefiting from equipment and capacity building at the three levels 1) personnel and management, 2) product characteristics, 3) conformity and understanding the important of compliance and use of quality control tools.

The **sustainability of a cooperative business** in the Lebanese context has been debatable and several conflicting opinions were registered. Some cooperatives considered that their business operations can be sustained independently without any external sources of aid if they mobilize personal and social connections. It is however unclear what is meant by personal and social connections or their role whether it be in the form of sales or rather attraction of donors. This latter notice was in fact mentioned by other cooperatives which explained that their survival would be almost impossible if no source of funds was available to them. Even if that statement was mentioned by some of the liquidated cooperatives, the true reasons behind their failure will require a much deeper investigation on a case by case basis. Yet, one should account for extreme risks posed by the post-2019 economic crisis for which without any solid forms of aid, the survival for many businesses and not only cooperatives would be highly jeopardized. External aid is therefore needed today more than ever but should enter into a coordinated and strategized approach to avoid any duplications or dispersed interventions.

Although food cooperatives in the *Beqā'* valley and Lebanon are dwarfed when compared to private industries and are labeled as donor-dependent, their **possible contribution to local development remains viable**. In fact, the cooperative movement at a global scale is reported to similarly face increasing competition from larger food industries (Nilsson & Dijk, 1997). Conversely, this same author notes that cooperatives could generally benefit from a “market power” being the “*satisfaction of consumer preferences for domestic, locally produced food, and here the cooperatives are most often strong*”, with a similar statement resonated by (Ponte, 2016). These observations fit the Lebanese context especially since (Tueni et al., 2015) prove how Lebanese citizens retain high importance for traditional foods, consuming on average 2 traditional dishes per day. Since *mūne* products are well integrated in the Lebanese cuisine, it could be therefore assumed that rural and urban populations alike have a high affinity towards traditional preserved foods. Both rural and urban consumers are concerned because Lebanon

witnessed significant internal migration during and after its years of conflict. A large population concentrated in the capital Beirut (Esim & Omeira, 2009) with smaller and intermediary cities' populations more than quadrupling between 1980 and 2016 (Lerner et al., 2013; Thapa & Murayama, 2008). Despite limited research on consumer behavior, it can be therefore suspected that this migration made Beirut and its suburbs a breeding ground for traditional consumption habits. With Lebanon's small surface area of 10,452km², it is also likely that citizens retain a link to their proximal villages of origin and thus hold a potential customer loyalty. An additional opportunity also brews with the massive Lebanese diaspora which is estimated at more than double the number of national residents, even though export of food products remains low at less than 4% of total export value as per McKinsey & Company. The popular report even positions diaspora inflows as a key driver for the economy. As it mentions that 25% of all banking deposits originate from that inflow, the diaspora however becomes even more significant than the country's productive sectors themselves.

Today, with Lebanon's quick changing context and concoction of economic, social and health crises, cooperatives generally and food cooperatives specifically have the potential to fill different gaps in the country. These could most notably include poverty, gender and food security. This is why a call to increase local production and return to the traditional stocking of pantry foods can be even noticed in media outlets and journals. Food cooperatives can therefore enter the development cycle as typical territorial actors being operational within local municipal borders. Their principles relevantly call for a collective benefit of members by sharing risks and resources, generating income, enhancing livelihoods and maintaining democratic governance. Being located in a distinctively agricultural setting, a suitable entryway could entail valorizing their artisanal practices in producing traditional *mūne* foods using local sources of fresh produce. This could reflect benefit on the upstream and downstream of value chains given the restrictions in importation as a result of the economic contraction and disruption of global food supply from COVID-19. When considering food as a carrier of culture (Jones, 2017), the additional role of food cooperatives as protectors of heritage becomes even more apparent. Although the culture of *mūne* is common across Lebanon and presents similarities with neighboring countries of the Levant, the *Beqā'* valley appears to present its own set of characteristics which resonate on agricultural produce and their final processed products. "*Almost every resident is a farmer*" (Bou-Antoun, 2014) is an observation that also adds to the *Beqā'* valley a social factor to its existing agriculture atmosphere. Nonetheless, it remains imperative to introduce a differentiation scheme of such a cultural resource from commercial analogues; a necessity already voiced by other researchers as Abou-Habib et al., (2013b). That could be embodied by national standards built to orchestrate concerned players across value chains in meeting specific norms and its communication to end consumers via certification and strategic branding. This differentiation approach may yet play a significant role in the urban capital where a large portion of *mūne* foods are already traded.



Map 34: Spatial distribution of food cooperatives in the *Beqā'* valley, Lebanon coupled with the percentage of raw material originating from surrounding farmers at the district level, and the and the percentage turnover originating from the urban market of the capital Beirut. Source: Produced by author, *Jalkh R., 2020, ART-DEV, UM3*

5.4. CONCLUSION OF CHAPTER FIVE

From this chapter, we see the different approaches in which the network of food processing cooperatives operate in the *Beqā'* valley in four main aspects of structure, spatiality, external support and conformity and label. From the different forms and compilations of the categorizations, we see that as a synthesis of these together groups the 40 food cooperatives in the *Beqā'* valley in four main classes: 1) mostly large, non-funded and basic cooperatives with mixed spatiality of operations, 2) either small or large cooperatives that rarely receive funding and which are mostly basic with mixed spatiality that tends to be more urban, 3) mostly small cooperatives that receive frequent funding and are linked to both rural and urban spaces but with varying conformity, and 4) medium to large-scale cooperatives with strong urban linkages and higher rate of funding and varying conformity. We also see that there is no specific spatial distribution of the identified typologies of cooperatives around the *Beqā'* valley but instead, several types exist simultaneously and are distributed similarly without any specific correlations. We also see that the size of cooperatives does not particularly affect their spatiality or reach or level of advancement. Cooperatives that are relatively small in size could have more advanced access to extra-territorial spaces or be more advanced in their conformity when compared to their larger counterparts. We also see that the advancement level or conformity of cooperatives is not relative to the spatiality of operations and that even rural and semi-rural cooperatives are inclusive of what is considered as advanced cooperatives. We also notice the extensive degree to which cooperatives receive support from donors (over half of the network) and these take shape in various types such as capacity building and training, equipment, and / or marketing, outreach and market access. Results also show that the more advanced cooperatives are in their conformity, the more external support they receive. This could support the theory that donor interventions could possibly be the reason behind that advancement in the conformity of cooperatives. This is also observed in line to a suspected benefit that external support has on expanding the reach of cooperatives to other spaces outside their territory. Overall, we see strong evidence of food cooperatives that produce *mūne* being on one hand dependent on their territories and especially in the procurement of their raw agricultural produce from local farmers (80% of cooperatives depend on local farmers at district level). On another hand, we also see strong evidence of the reliance of cooperatives on sales and the generation of economic return from urban spaces (60% produce more than half of their return from the urban capital Beirut). One of the main preferred channels which the cooperatives reported are the seasonal exhibitions and food fairs. Such collective spaces raise an interest in their consideration as spaces where food cooperatives would assemble and where they would engage directly with end consumers. Ultimately, food cooperatives exhibit clear spatial (and possibly bridging) between inter-territorial and extra-territorial and specifically urban-rural linkages. Such observations therefore could position food cooperatives as strategic territorial actors engaging with typical cultural products and which already affiliate both internally and externally to their environment.

PART THREE

***MŪNE* - FOOD PROCESSING COOPERATIVES NEXUS, A LIVELY SOCIO-SPATIAL, EMBEDDED AND NETWORKED SYSTEM**

The world around us today is densely connected. We are all somehow tied together. In this age of technology and globalization, our world has grown greatly small. The internet, social media, communication, and transportation have approached us together, facilitated international trade and dominated global relations. These are all based on networks, and networks surround us more than we imagine. Any two connected entities can be considered a network. This extends from for example biological networks in our body, to infrastructural networks in cities, political networks in campaigns, transportation networks, and so on. Even the novel world of cryptocurrency can be looked at as a global network of digitally connected users. The method in which we analyze the connections across a network is called Social Network Analysis (SNA). This method has grown very popular recently and has been applied to numerous disciplines. Analyzing a network is able to reveal interesting characteristics related to its connectivity, flow of information or resources, and particularly in discovering specific players that have strategic roles in its mediation. These are referred to as brokerage roles that aid in the connectivity of a network and in the bridging of its different nodes.

In this section, we will be analyzing the network of food processing cooperatives in the *Beqā'* valley from a social network approach. Just like we all have our own circle of acquaintances to whom we are connected to, the study cooperatives are expected to have the same. They are situated in the same territory, they are subjected to comparable socio-cultural conditions, they apply the same processing practices, they have similar marketing channels, and they deal with the same external players. It is therefore expected that the cooperatives are linked together, directly or indirectly, socially or non-socially. This section will begin by introducing social network analysis, its background, different applications and importance. Next, a quick explanation will be provided on the different notions and basic definitions we will need to accompany the analytical methods and analysis. After that, the applied methodology in this study and results attained during the collection, entry and treatment of data will be presented. These will include the structuring of the survey questionnaire, the data entry form and methods applied during data treatment to construct results and visualizations called sociograms. Results and observations will be progressively described in parallel with each relevant section. The results and visualizations will demonstrate the characteristics of relations

governing the network of cooperatives and their different types. Information in sociograms will pertain to the strategic positioning and spatial behaviors of cooperatives. These features shall highlight intensity and reciprocity of relations, evaluate characteristics of important actors, profile their relations, describe main roles, and identify communities. During the analysis, the concept of proximity and the concept of embeddedness are mobilized to aid in explaining the dynamics of relations and operations.

CHAPTER SIX. FRAMING SOCIAL NETWORKS AND THEIR MEANS OF ANALYSIS

This chapter will serve to explain the theory behind Social Network Analysis and the main terminology mobilized for the understanding and analysis of this chapter. The importance of social network analysis will be introduced as well as their application in numerous sectors and disciplines. We will see how social networks exist around us and have been used to study any group of connected components and the characteristics of these components with examples ranging from school students to transmission of disease epidemics and aviation routes. The second section of this chapter will introduce the keywords of the main terms used, their definitions and significance.

6.1. SOCIAL NETWORKS – IMPORTANCE AND APPLICATIONS

If one is to take a walk in the outdoors, there is a good chance she or he will stumble on a colony of ants at some point. Chances are that person will not be surprised by the fact that ants walk in an almost perfect formation, a straight line. Some may ask themselves why, but the majority might not. The ants are communicating, interacting, and collectively behaving as one group. They are connected, interlinked, networked. Certainly, the biological explanation for this behavior is pheromones, but the fact is that a ‘network’ is not a new phenomenon at all. Any two entities that are connected by any type of relation can be looked at from a network perspective. Networks are as old as time. They exist naturally around us or are constructed by us. Ancient humans lived and hunted in small coordinated groups to ensure their survival. Civilizations were built and governed in networked relations. The trade routes of the silk road connected East to West. Cities are made accessible by intricate road networks. We are practically connected to the globe today with a push of a button. The examples are endless.

The study of social networks originally emerged in the sociology discipline around the 1930s although it is hard to determine the exact date of the explicit adoption of the notion (Scott & Carrington, 2011). What differentiates social from non-social network analysis is that the studied entities of the latter are physical in nature and the relations linking them together could be in the form of transmissions or delivery lines (Knoke & Yang, 2019). In the social realm, classical sociologists debated whether social structures can be reduced to their minimum components, social actions of separate actors and their linked relations. Yet, they agreed that the social structures do display distinct properties and provide basis for the discipline of sociology (Scott, 1988). According to Zaidi et al. (2014), one of the first applications of social network analysis was performed by Jacob Moreno in 1934. In his study, Moreno assessed the inter-personal structure of a group of school students to analyze runaways. He consequently discovered that it was their social position in the network which caused students to run away. Social network analysis has also been described by Knoke and Yang (2019) as ‘vitaly important for the inception of economic sociology, a major specialty in sociology’. In the mid

1980s, Granovetter (1985) analyzed how economic institutions are affected by social relations. He criticized the under-socialized approach of economists in relation to what drives human decisions but also disapproved the over-socialized opinions of sociologists. He concluded that the sophisticated comprehension of economic actions should account for social structures. This is when social network analysis became a logical framework to better understand how decisions and actions are made. One prominent application of social networks was also performed by Stanley Milgram in the late 1960s in the now popular ‘6 degrees of separation’ or ‘small-world problem’ study (Milgram, 1967). In his experiment, Milgram concluded that any two individuals in the world are on average separated by 5 connections. He reached that conclusion by sampling 160 individuals from the United States and asking them to dispatch a package to a specific person in Boston and to do so using only their personal connections. Out of the initial sample, 64 packets eventually arrived at their destination in an average of 5.5 or 6 steps. In some cases, as little as one or two steps were needed and in no more than 12. These findings showed that people generally have adequate connections to access relevant individuals. In the beginning of his article, Milgram wittily began with the below line to link his theory with a common saying that we frequently use.

“Almost all of us have had the experience of encountering someone far from home, who, to our surprise, turns out to share a mutual acquaintance with us. This kind of experience occurs with sufficient frequency so that our language even provides a cliché to be uttered at the appropriate moment of recognizing mutual acquaintances. We say, “My it’s a small world”. ”
(Milgram, 1967, p. 61)

All constructs of social network analysis are based on a branch of mathematics called graph theory (Scott & Carrington, 2011). Simply put, graph theory is the study of points and lines between them. At the origin is a historical puzzle-like problem from the 18th century called the *Seven Bridges of Königsberg*. In that problem, the question was whether it was possible to achieve a closed walk along the city of Königsberg while crossing each of its seven bridges of the river Pregel only once. The problem was solved by the mathematician Leonhard Euler (1741) who proved that no solution existed. His findings were later translated to English and published by Scientific American (Euler, 1953). To arrive at that conclusion, Euler based his analysis on the drawing of an undirected graph with four vertices representing four geographical zones and seven connections between those vertices representing the bridges (Figure 100). Euler proved that for the solution to be possible, an undirected graph must be connected and each of its vertices must have an even number of degrees (connections) (Gribkovskaia et al., 2007). This was not the case in Königsberg and its seven bridges; the solution was therefore impossible. Euler’s findings in the Seven Bridges of Königsberg are said to have laid the foundations for graph theory and the ideas behind topology, which is another branch of mathematics studying conserved properties after the deformation of objects. His article was described as having had considerable importance not only on graph theory but on the development of mathematics as a whole (Biggs et al., 1986).

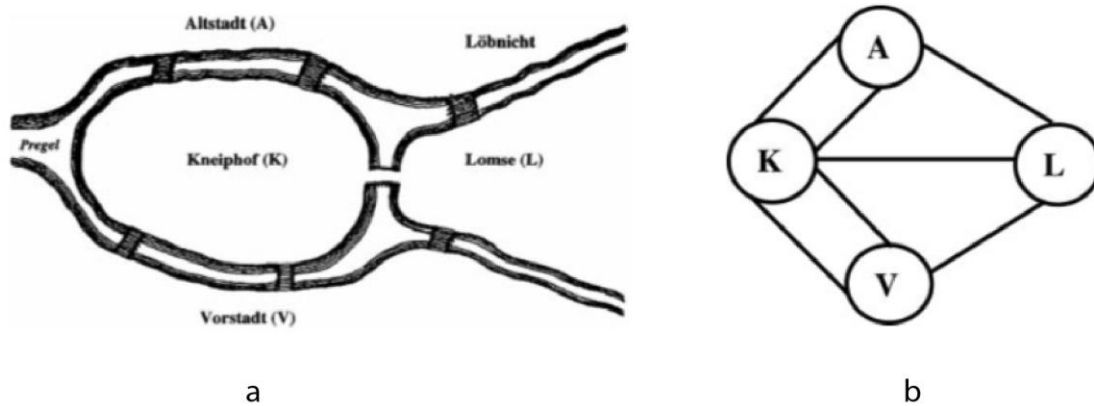


Figure 100: (a) Euler's drawing in 1736 and (b) undirected graph representation of the Seven Bridges of Königsberg. Illustrations extracted from (Gribkovskaia et al., 2007)

In its simplest form, a social network consists of two main elements, *nodes* (also called vertices) and *links* (also called edges). Nodes represent entities of interest (as individuals or institutions) and links represent the connections between them. A social network analysis therefore reveals some form of connection between the nodes being assessed. A simple representation of these two elements can be found in Figure 101. In order to be constructed, a network can be revealed by the user or simply projected from a preset. For example, if a researcher conducts a study on a known set of nodes such as a list of individuals, then these nodes would simply represent each of these individuals identified from the entries in that list. Nevertheless, a researcher can also discover and build a hidden network if its nodes are not known. This could be achieved by asking the first interviewed member within the network to cite other members they know and construct the network accordingly from these types of referrals. This can be described as a *snowball* method. These considerations are what arrive to form the boundaries of a network. However, it is important to consider that set networks with rigid boundaries rarely exist. Even though researchers must define boundaries in their analytical analysis of networks, they must not treat networks as absolute, and an evolving dynamic membership is usually the case in reality (Marin & Wellman, 2011).

Networks can be homogeneous or heterogeneous in nature. Homogeneous networks are when nodes are of the same type, for example a set of trade offices, or as in our case a network of food-processing cooperatives in the *Beqā'* valley. A network can also be heterogeneous in nature and include different types of nodes, such as for example a network of teachers and their students, or an internal network of a company's different departments and staff. In that case, the network would be referred to as '*multi-modal*'. The different characteristics can be reflected on what is referred to as the '*attributes*' of nodes. They may be incorporated for instance in the nodes' shape or color. For example, Figure 102 shows a network of school students where girls are represented in white nodes and boys in black nodes. In an online course offered by the University of California Davis on social network analysis that I attended (Hilbert, n.d.), the instructor explained how the attributes of nodes could be important factors in assessing a multi-modal network by referring to the idea of '*Homophily*'. '*Birds of a feather flock together*' is an English proverb he used to describe homophily, in the meaning that people have a tendency to connect, or flock, with others who are similar to them. A high school cafeteria is a good example that demonstrates that idea. Students tend to split in different groups to whom they

associate with and prefer to sit with at lunch. They could relate to a specific group possibly driven by race, or religion, or gender. It could be that it is simply easier, with less transactional costs of communication, have factors in common, or are maybe affected by social pressures. Kinship is a form of homophily. Families take care of each other for protection, getting stronger with the direct family members and less so with extended members. These kinds of dynamics are what probably contribute to setting an individual on a certain social network path.

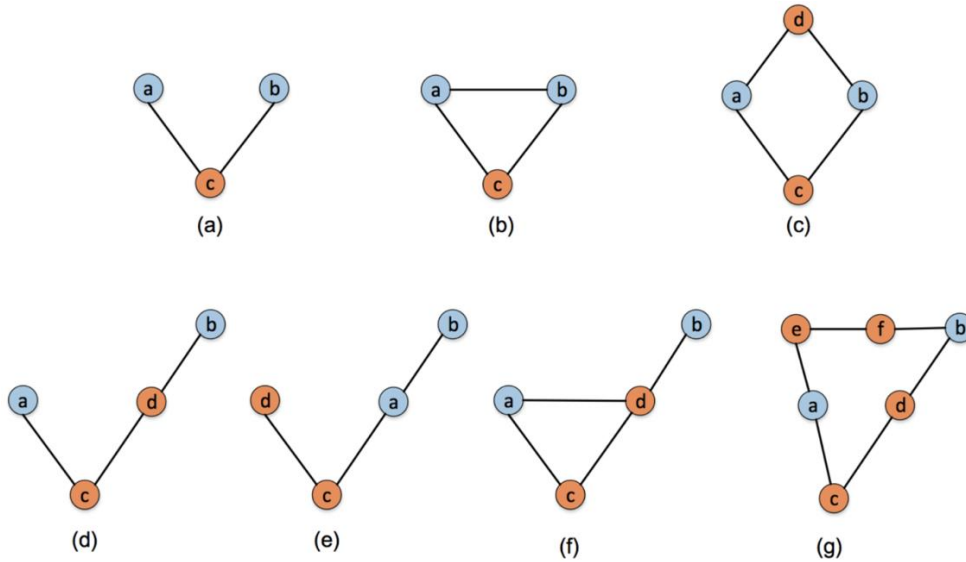


Figure 101: Representations of simple networks consisting of three to six nodes and their connecting links showing different ways in which nodes a and b can be directly or indirectly connected. Source of illustration: (Jiang et al., 2018)

As for links, they could also house several characteristics. First, links should represent a type of relation that connects the nodes together. An advice network is an example where the links represent which nodes prefer to approach each other for information or advice. This specific type of network has been used for example in assessing the organizational efficiency and management of knowledge in organizations (Cross et al., 2001). These are performed by asking employees to name who they would approach for work-related advice, which could next be compared to the original intended organizational chart. Advice networks are recognized as important channels for the flow of information in organizations therefore making players that occupy a central position in this type of network highly important in terms of work-related knowledge (Cangialosi et al., 2021). A trust network is another example where links indicate the preference of nodes connecting based on their trust levels. These for example could manifest in the relations within members of organizations and ultimately affect the efficiency of their management and resulting operations. Imagine having a senior authority in an organization whose subordinates tend to trust less than other members. By having a skewed trust, their subordinates in this case could possibly have a reduced tendency to interact with their senior. Hence when visualizing the trust network, this senior authority would appear at the periphery whereas they are in fact situated at a central position and elevated hierarchy in the organizational chart. This type of investigation could therefore expose certain inconsistencies in organizations that might be at the source of inefficiencies. Chow and Chan (2008) were one of the first to provide evidence on that matter. They concluded that although

social trust did not have a direct effect on the sharing of knowledge in organizations, it did in fact influence the attitude towards- and the intention of sharing knowledge. They also showed that having shared goals is one of the reasons that contribute to the willingness of sharing knowledge between members of an organization.

Links can also be symmetric or asymmetric. Symmetric links indicate a one-way direction from one node to another and can be either returned, or not, by that neighboring node. Networks having these types of links are called '*directed*', whereas those with symmetric links that simply represent the existence of a relation without its specific direction are called '*undirected*' (Figure 105). Assume asking the students depicted in Figure 102 to cite their fellow classmates whom they are friends with. If a student A indicated they are friends with a student B, the reciprocal is not necessarily true. This direction would be made visible in a network, unlike that in the figure, by adding arrows at the end of the links for example or any other form of indication to assign direction. Moreover, just as different types of nodes can be represented in the same network, different categories of links can be represented simultaneously too. This is demonstrated by going back to Figure 102, where links can be seen to have one of two different thicknesses; thick representing friendly ties and thin representing enemy ties. Hence, different attributes can be similarly integrated to links just as nodes in order to best visualize the characteristics of interest. For links, they can be reflected for example in the thickness of the line, number of lines, or other features as being solid or dotted or colored, and so on.

In that same approach, another form of representation is possible and can be achieved by the layering of various links. This means that different types of connections are projected onto the same static set of nodes as separate layers. This type of network is referred to as '*multi-plex*'. Although the multi-plex network approach is not mobilized in the scope of this study, it would still be interesting to realize how important it can be. This type of network has been a particularly useful tool in visualizing layers of different transportation routes, evolution of disease pathways, and much more. Examples of a multi-plex network are found in the representations of Figure 103 and Figure 104. In Figure 103, a multi-plex network with two layers A and B represent two possible routes for an epidemic to spread, both containing the same nodes. This type of representation and its consequent arithmetic analysis allowed the author (Zhao et al., 2014) to conclude that epidemics can indeed cross layers and spread across the multi-plex network, and that the degree-degree (number of connections) correlation of nodes could lead to smaller outbreaks. In Figure 104, the aerial routes of three European airlines are projected in a multi-plex network consisting of three separate layers that contain the same set of nodes, meaning airports. Despite being a demonstrative example of multi-plex networks used by the author (Wu et al., 2019), one can see how transportation analysts and airlines can use this type of networks to assess cost-benefit ratios and decide on the most efficient routes for them. Haven't many of us ended up somehow in a layover in Paris at some point in time? This makes sense if one considers that logistical chains become more efficient and less expensive if routes are to be concentrated in specific central points, airports in this case, then re-dispatched to their corresponding destinations.

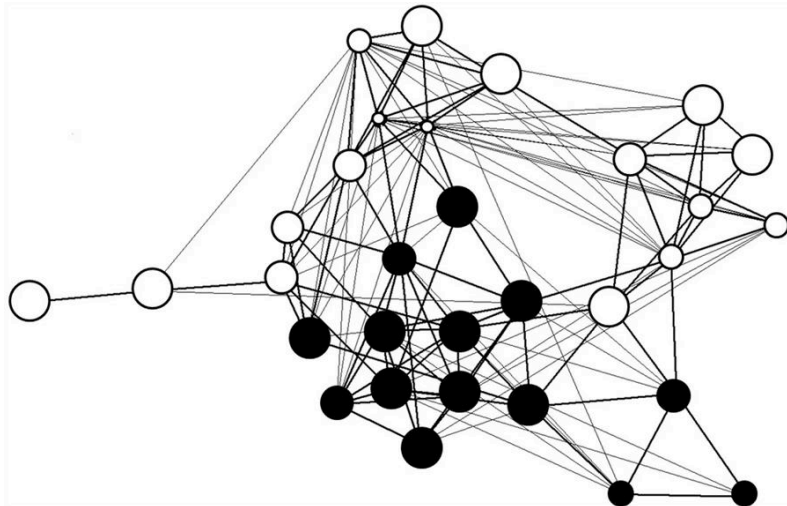


Figure 102: A classroom social network of students from a high school in Hungary depicting girls in white nodes, boys in black nodes, and their relations being either as friendly ties shown in thick lines or enemy ties shown in thin lines, with the size of nodes correlated with a factor of a feeling score. Source of illustration: (Liu et al., 2020)

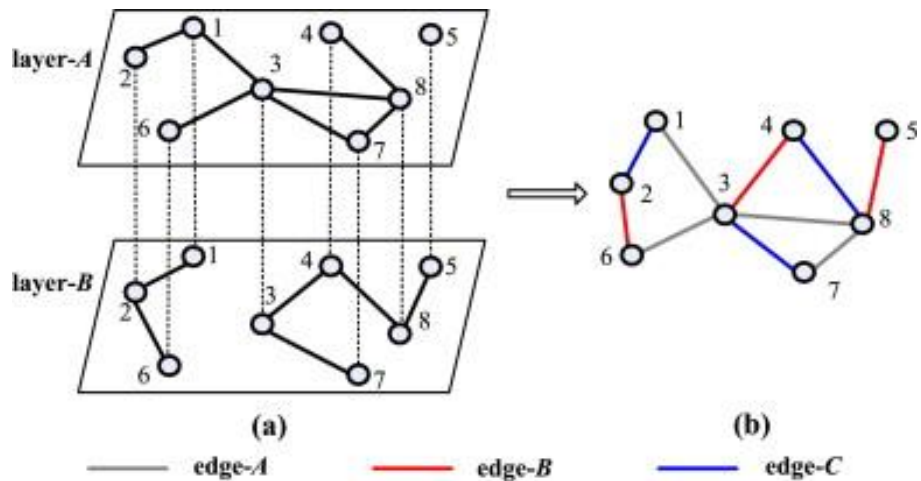


Figure 103: Example of a multiplex network in a study on epidemic transmission routes, representing (a) two network layers A and B, and (b) the superposition of the two multiplex layers in one aggregate. Source of illustration: (Zhao et al., 2014).

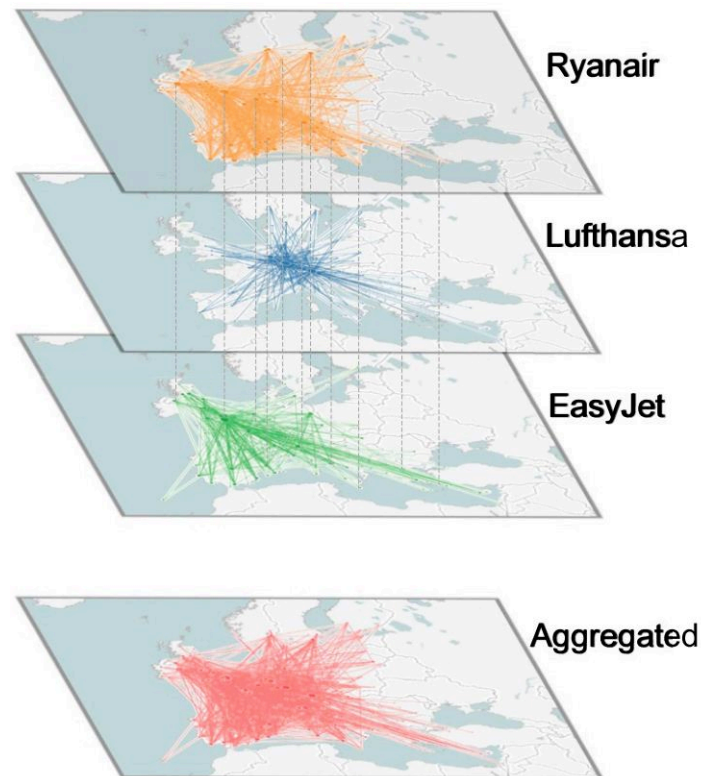


Figure 104: A multi-plex network representing aerial routes of three European airlines containing the same set of nodes, i.e. airports, across the different layers. Illustration extracted from (Wu et al., 2019)

The presence or absence of a link is not a stagnant determinant. Links can in fact have intensities or weights, and these variations of strengths can also be projected onto a network. The network in this case would be referred to as ‘*weighted*’ (Figure 105). Imagine interviewing subjects with scaled questions such as the age of their relation to a friend, or the frequency of communication with colleagues, or the strength of collaboration with coworkers. Any relation can be weighted onto a defined scale of intensities. These strengths can later be reflected visually with corresponding to the thickness of the link lines for example. Agarwal and Bharadwaj (2013) utilized the intensities of digital relations of users on social media sites in order to develop a more efficient filtering technique that would recommend new friends to the users more effectively. The intensity in that study was based on the number of interactions between one user and their friends and weighted with respect to their recency. Another study (Christidis, 2020) investigated networks of emails being exchanged and linked individuals based on that exchange. The intensity in that study was determined by the number, frequency and time differences between these exchanges and was labeled as the strength of bilateral relationships. Granovetter (1973) was the first to mention the *strength of weak ties*. In his article that holds the same name, Granovetter explored the cohesive power of weak links between individuals and showed how they can play a major role in the bridging of relations between groups. Weak ties can be understood as the individuals we are acquainted with but with whom we do not invest expensive cost and effort to maintain, communicate or nurture frequently. He selectively chose to study weak ties given that the most focus was usually invested on studying strong ties in networks. The theory of weak ties is derived from Granovetter’s 1973 article and is based on the proposition that acquaintances that are usually loosely linked to an individual

could be more influential than strong ties, such as close friends, in social networks. Imagine a person looking for a job. She or he could mobilize their strong ties, such as their close friends or family, or could do so with their weak ties, their acquaintances that they communicate less with. Granovetter showed that people searching for a job had a better chance at getting successfully recruited if they mobilized their weak ties. This means that the loosely tied acquaintances they approached were able to bridge them to other groups in which new job opportunities came to light, unlike those limited within their group of strong ties. The works of Granovetter on weak ties are widely recognized and have been generally accepted (Brown & Konrad, 2001; Levin & Cross, 2004; Montgomery, 1992) but also sometimes debated. One study in particular reexamined his findings on an expanded scale covering 55 different counties and almost 17 million ties using the social media platform, Facebook. In that study, Gee et al. (2017) corroborated Granovetter's statement that more people successfully find jobs when more weak ties are mobilized. Yet, the authors explained that this type of observation is being caused by the higher number of weak ties, that everyone has, compared to strong ties. In their perspective, the ensemble of weak ties collectively is able to achieve these successes and not because they are more helpful. The authors stressed that it is important not to confuse the large number of successful transactions achieved by weak ties collectively with a higher effectiveness of individual ties. They also stated that one strong tie would remain more valuable in that case.

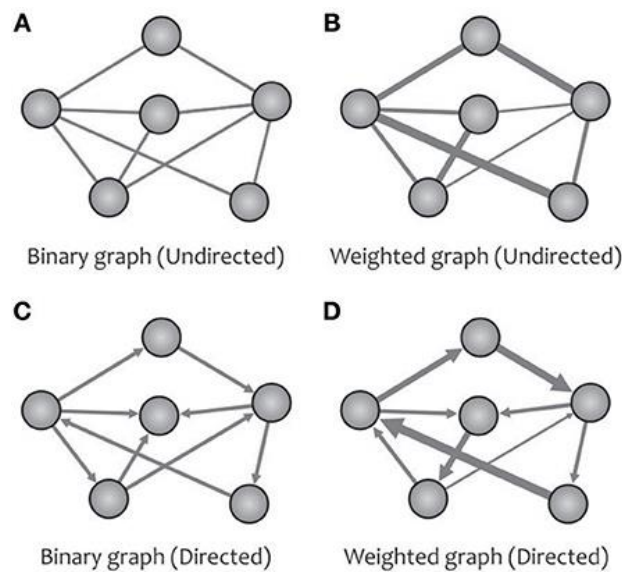


Figure 105: Visual difference between (A) undirected unweighted, (B) undirected weighted, (C) directed unweighted, and (D) weighted directed networks. Source of illustration: (Farahani et al., 2019)

Today, social networks have become much more relevant and valuable especially with the mainstreaming of social media platforms at a global scale. The study of social networks has evolved greatly, and many software and tools have now been developed to visualize networks and to perform detailed quantitative analysis of its characteristics. Gephi, Cytoscape, and NodeXL are only a few examples and many others could expectedly get released in the foreseeable future. Each one of us nowadays can download their own social media network, visualize and inspect it. An example in Figure 106 shows a social network of one user's

contacts from the professional social platform, LinkedIn. This visualization for example demonstrates the different clusters of connections in different colored nodes and links with each cluster corresponding to a different group of contacts. Visualizing social network indeed surfaces valuable information that would not be otherwise understood expect when inspected visually. Yet, it is extremely important to understand that social networks can be visualized in many different ways and can highlight varying, maybe even deceiving, aspects on its forefront. This is why one should rely first and foremost on arithmetic metrics. These metrics measure the networks and provide a constructed numerical understanding on a networks backend. These for example could entail measures of size, density, diameter, centrality, community detection, and much more. These notions will be elaborated in more details in the next section. Many of the software that construct the network visualizations are also capable of performing these types of calculations. Probably one of the most valuable information offered by social network analysis would pertain to the identification of brokerage roles. These roles are extremely important to the connectivity of a network and nodes holding these types of roles are strategically positioned to control, facilitate or hinder the flow on information of resources within a network. A very simplified example would be imagining how a rumor spreads. Going back to the strength of weak ties, Granovetter mentioned that a rumor can be diffused to a larger number of people and could traverse a much longer social distance if it goes through weak ties rather than stay limited and get repeated within one group of close friends for example (M. S. Granovetter, 1973). In today's world, social media takes the lead in the spread of news instead of mouth-to-ear channels. New roles of ordinary people have emerged, notably social media influencers, because of their position and popularity within social media mediums. Individuals previously located at the periphery of social networks could today suddenly find themselves at the center of social media trends or viral posts, and practically any person now has access to mainstream social media. Imagine the broadcasting effect achieved in today's world when a celebrity or a social media influencer spreads news or promotes a particular product using these social media platforms. In the same sense, certain nodes occupy a stronger and more influential position that would allow them to achieve similar roles in their respective networks. This is one example of how destination social media marketing is being utilized today by many organizations (Bokunewicz & Shulman, 2017). The power and influence of social networks is not expected to diminish anytime soon, and on the contrary is to be seen on a growing and pivotal global trajectory. Social network analysis has been mobilized not only in the realm of marketing and social media, transportation and communication, but is seen growingly useful in many other areas. Social network analysis for example is being used an investigative tool in analyzing crime networks (Van der Hulst, 2009), converting narrative into numerically connected data (McKether et al., 2009), influencing political mobilization (Bond et al., 2012), and much more. The next section will introduce the main notions in social network analysis that will be utilized within the scope of this study before moving on to the method of analysis applied and results attained.

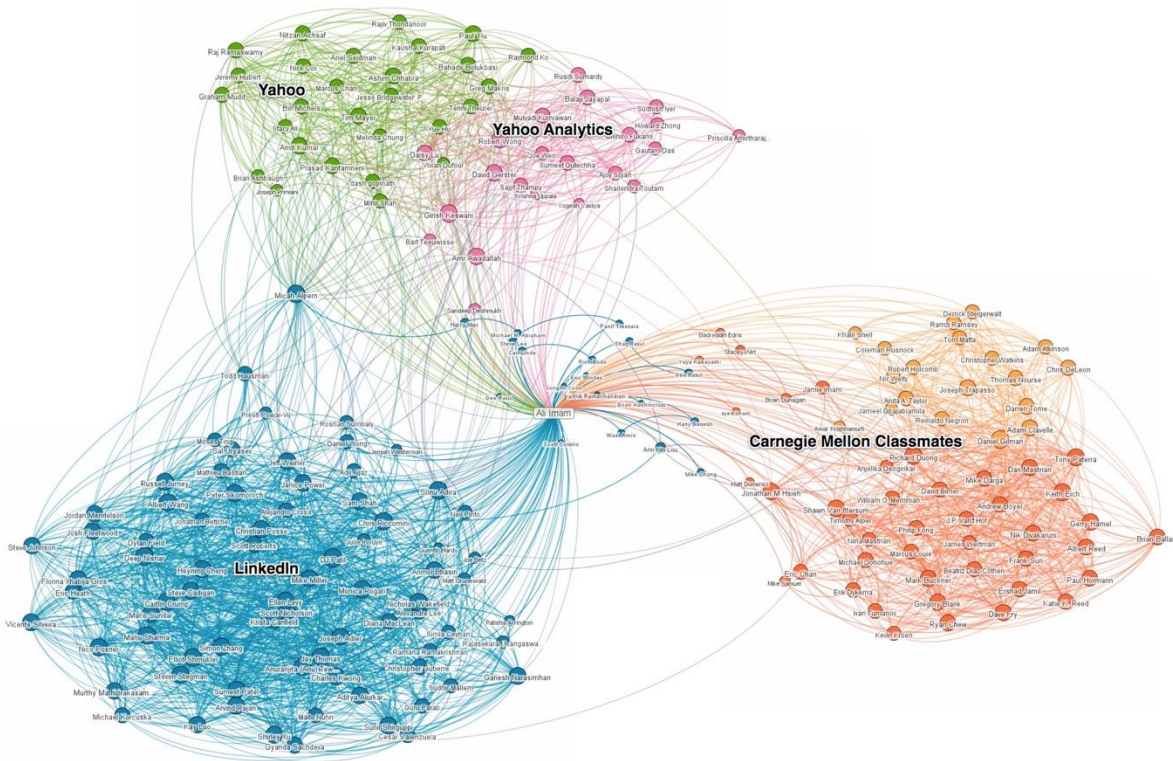


Figure 106: A professional network constructed by the now discontinued LinkedIn InMaps using data from a user’s LinkedIn account, with different colors referring to separate clusters. Source of the illustration: (Imam, 2011)

6.2. STARTING NOTIONS AND DEFINITIONS IN SOCIAL NETWORK ANALYSIS

The following section presents a brief overview of definitions to help build a basic understanding around the logic followed to construct the social network analysis and its visualization. The form in which we will be visualizing the network of food cooperatives in the *Beqā’* is referred to as sociograms. These graphics represent the network of cooperatives subject in this study along with different forms of representations that would allow to extract observations and conclusions related to the governing relations, their characteristics, specific roles played and overall importance of players. The list of definitions and elaboration below is far from exhaustive since SNA is extensively studied in literature, but rather introduces the main notions and their reasoning that are mobilized under the scope of this study. It should be noted that concepts and notions in this section are described concisely without entering too deep in their theoretical underpinnings behind many of the algorithms associated with SNA. Instead, this study looks to provide an all-encompassing approach directed at scientists and non-scientists from various backgrounds with focus on geography, economics, social and development sciences as well as readers active in civil society or policymaking.

6.2.1. Network structure and main characteristics

In the Sage Handbook of Social Network Analysis (Scott & Carrington, 2011), a social network is defined as “*a set of socially relevant nodes connected by one or more relations. Nodes, or network members, are the units that are connected by the relations whose patterns*

we study. These units are most commonly persons or organizations, but in principle any units that can be connected to other units can be studied as nodes.” A network is usually composed of two main components, nodes that represent actors and edges that represent the relations between those actors. A main characteristic of networks is whether having the direction of their relations reflected or not, therefore they can be described as either directed or undirected.

- **Nodes:** is a vertex represented by a node or a dot. Nodes represent specific actors, food processing cooperatives, in this study. The use of the words “node” and “vertex” are interchangeable.
- **Edges:** are links drawn as a line connecting two nodes, representing a relationship in this case. The use of the words “edge” and “link” are interchangeable.
- **Directed networks:** are asymmetric networks and represent one-way direction of a relationship from Actor A to Actor B (indicated by an arrow), which could be reciprocated. This type of network is utilized in the scope of this study.
- **Undirected networks:** are symmetric networks that do not represent any form of direction in the indicated relationship. This type of network is not utilized in the scope of this study but is mentioned only for reference.

6.2.2. Roaming a network

Two nodes can be linked indirectly. There are therefore several routes of going from one node to another in a network. This can be thought of as roaming a network and that can be used to calculate specific characteristics such as connectivity of a network and distances between pairs. These figures are also important constituents of further analysis such as centrality measures, defined in the next section.

- **Walk:** represents the passing among nodes through edges.
- **Path:** is a specific type of walk that only passes through different nodes.
- **Cycle:** is a walk that ends where it began.
- **Geodesic:** is the shortest path between two nodes.
- **Diameter:** is the largest geodesic.
- **Average path length:** average geodesic.

6.2.3. Network measures

Different types of measurements can be applied to a network and its components. These vary from measurements specific to nodes and links such as degree centrality, and which in turn can be used to further measure a network’s connectivity such as with the different other centrality values as closeness, betweenness and Eigenvector which are defined below. These measurements are conducted automatically by software and their algorithms for every node.

Nodal measures

- **Degree:** is the total number of links/edges of each node.
- **In-Degree:** is the total number of incoming links/edges of a node in a directed network, representing the citation of a node by others and therefore could be described as the popularity of an actor. In-degree is represented by an arrow incoming towards the node in question.

- **Out-Degree:** is the number of outgoing links of a node in a directed network, representing the citation that a node made of others and therefore could be described as the integration of an actor in a network. Out-degree is represented by an arrow outgoing from the node in question.
- **Closeness Centrality:** is measured by the sum of all the geodesic paths that connect a node to all others in the network. This measure relates to the social distance of actors and therefore is related to proximity and degrees of separation. A higher closeness centrality reflects a better ability of an actor to act as a “broadcaster” and better disseminate information to the entire network.
- **Betweenness Centrality:** is measured by the number of times a node lies on the geodesic paths connecting other nodes in a network. This measure reveals nodes that are considered as “bridges” between nodes and therefore reflect the importance of an actor in the connectivity of the network. Nodes with higher betweenness centrality have important mediary positions and could play various roles as gatekeepers, brokers, intermediaries, etc., elaborated in the roles section, who could control the flow of information in a network.
- **Eigenvector Centrality:** also called Eigencentrality is a measure of centrality that is not only based on a node’s links, but also computes the links of its links. Eigenvector centrality therefore accounts how well a node is connected to well-connected nodes by assigning relative scores to each node in the network and having that score increase whenever a node is connected to high-scoring nodes itself. This reflects a node’s influence on the network and not only on its links.
- **Clustering Coefficient:** is measured by the number of links between nodes adjacent to the specific node in question (its direct links) compared to the maximum number of possible links between them. This measure of centrality translates, with an increasing density of links, a higher clustering coefficient and therefore a higher probability of that actor to form a clique or cluster with its neighbors (defined below).

Network metric measures

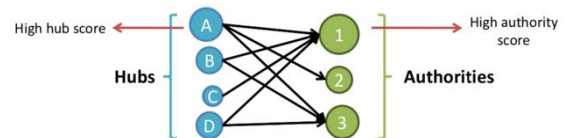
- **Reciprocated Vertex Pair Ratio:** represents the ratio of vertices (nodes) that are implicated in links that are “returned”, therefore in two-way relations that are reciprocated.
- **Reciprocated Edge Ratio:** represents the ratio of edges (links) that are “returned”, therefore are two-way and reciprocated.
- **Maximum Geodesic Distance (Diameter):** indicates the maximal shortest path (geodesic distance) linking two nodes, therefore the diameter of the network.
- **Average Geodesic Distance:** indicates the average geodesic distance linking two nodes.
- **Graph Density:** is the ratio of the number of links existing in a network compared to the maximum possible links, and therefore reflects the overall density of a network. This measure is usually used to compare the density of two networks with different types of links.

6.2.4. Communities

- **Cluster:** is a partition of a network in the form of a separate groups that are characterized by dense links between the nodes within each group (highest possible number) with respect to the density of links with other groups / clusters (lowest possible number). This division of a network into clusters is controlled by the Modularity index which is defined as “a property of a network and a specific proposed division of that network into communities. It measures when the division is a good one, in the sense that there are many edges within communities and only a few between them.” (Clauset et al., 2004). A further elaboration on the different algorithms used to partition a network into cluster communities is found below in section 7.1.2.2.
- **Clique:** is the maximum number of nodes between which all possible links are present. A clique represent the strongest subgroup that could exist since all nodes are connected together but is a fragile form of a community which would destabilize if only one link is compromised.

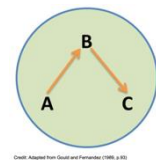
6.2.5. Roles

- **Hubs and Authorities:** The popularity of an actor increases whenever they are cited by actors who themselves cite other popular actors. The more popular these trends, the more of an authority this actor, or node, is. The relevance of an authority therefore depends on the in-degree. Vice versa, a hub can be understood as a node that cites or points to other popular nodes. The more authorities a node cites, the more of a hub this node is. Hubs therefore depend on the out-degree. The links between authorities and hubs "are mutually reinforcing": an actor is a good authority if they are cited by several good hubs, and an actor is a good hub if they cite several good authorities.

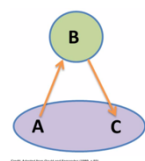


- **Broker:** is a node that connects other nodes which are otherwise not connected, and therefore fills gaps in a network. 5 brokerage roles can be identified, and represented below by node B:

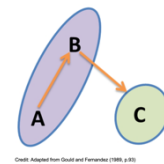
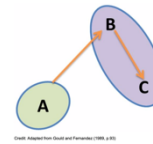
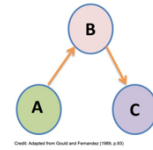
- **Coordinator** (*Coordinateur in French*): in the case where three nodes belong to the same group (or cluster), a coordinator links two nodes that are otherwise not linked. A coordinator is therefore an important actor for the flow of information inside a group when communication within his group is blocked and requires the intervention of an inside third party.



- **Itinerant broker** (*Médiateur in French*): links two nodes found in the same group but is itself member of a different group than the nodes it linked. An itinerant broker therefore plays an important role in indirectly connecting or mediating communication between unconnected actors of a same group via an outside third party.



- **Liaison** (*Intermédiaire in French*): links two nodes found in two different groups and is itself member of a third different group than the nodes it linked. A liaison is therefore an intermediary with the power to bridge two other groups together.
- **Gatekeeper** (*Gardien in French*): links an outside actor from a different group with an unconnected actor within its own group, therefore connecting two groups and controlling the flow of incoming information or resources within its own group.
- **Representative** (*Représentant in French*): links an inside actor from its own group with an unconnected external actor outside its own group, therefore connecting two groups and controlling the flow of outgoing information or resources leaving its own group. A representative is similar to a gatekeeper but with a different direction of flow and therefore “represents” its group and could negotiate with outside groups.



CHAPTER SEVEN. ANALYZING THE STUDY NETWORK AND ITS CHARACTERISTICS AND KEY PLAYERS

This final chapter serves to shed light on the relations that exist internally within the network of food cooperatives in the *Beqā'* valley. As we saw earlier, cooperatives operate as typical territorial actors but also engage in spaces outside the territory especially when accessing urban markets. They also receive extensive support from donor agencies which include a dimension of market access which commonly manifests in the form of food exhibitions. These dependencies are evident on many levels in the cooperatives' life whether from the time of their initiation, to their growth phase, and especially at their production operations, and marketing. These types of relationships are also ongoing, repetitive and are actually frequent. For these reasons, it is suspected that common spaces exist where these food cooperatives are assembled together in initiatives or in accessing the market consumers for sales. Given those observations which have been corroborated by other activists and scholars and given that the non-governmental community and development agencies in Lebanon are very highly concentrated around Lebanon, including its rural spaces, and in its many sectors, then it was decided to use the concept of proximity. It is believed that proximity could explain the dynamics of the relations that exist among the network of *mūne* cooperatives in the *Beqā'* valley and elaborate on whether the mobilization of these cooperatives is in any way related or stimulated by the activities of the non-profit sector. The tool used to test that question is the Social Network Analysis which is based on the second section of questionnaires filled with the cooperatives under this study. The concept of proximity was chosen as the main concept in the analysis as it could possibly be used to explain how and in what way the cooperatives in *Beqā'* valley are close or far from each other. This translates in both physical distance and relational. In brief, the concept of proximity refers to how 'close' or 'far' any two units are from each other whether being in physical (geographic) distance or in other forms as organizational, institutional, and social. The concept will be introduced and elaborated later in this Chapter in section 7.3 and the observations of relations in this Part will be positioned accordingly.

7.1. METHODOLOGY, DATA CONSTRUCTION AND COMPOSITIONAL ANALYSIS

The methods used to attain an analysis of inter-relations amongst the network of cooperatives in the *Beqā'* valley was constructed using the concept of Social Network Analysis which is widely studied and applied in literature. The methodology commenced by formulating the second type of questionnaire used in this study that framed to capture the different types and intensities of relations existing between the different cooperatives. After its filling and entering of data in raw databases, the analysis was conducted in several steps and components using two software (NodeXL v. 1.0.1.418 and Pajek v.64-XXL 5.10). This effort generated an array of distinct yet complementary results that alone would provide a deep understanding of network characteristics and its players. These include information on the intensities and profiles

of the different relations, concentration of links, popularity and roles of actors, and the different communities that exist in the network in communities. These different results were finally assembled into a comprehensive visualization in the form of a sociogram. Different variations of sociograms were also developed according to the different information to be highlighted. This section elaborates on each of those steps with the parallel representation of their results and generated sociograms. Ultimately, these results were also crossed with those attained in component 1 of the study, i.e. categorization.

7.1.1. Structuring inter-relations data collection

7.1.1.1. Formulation of data collection tool, questionnaire type 2 – inter-relations

The analysis of inter-relations is based on the second questionnaire mobilized in this study. This questionnaire was constructed in the form of a series of 12 questions divided into 5 sections including I) Familiarity (Intensity of the relation), II) Exchange of technical support, III) Frequency of groupings, IV) Exchange of personal social favors, and V) Joint promotion, marketing or sales. Each of the 5 sections was provided with a set of questions and a 4-level scale of multiple choice from which one was selected by the interviewed cooperatives. The questionnaire reflect the inter-relations of the interviewed cooperative against one of its counterparts. Therefore, each interviewed cooperative repeated the same input of questions against the list of identified cooperatives which ultimately constructed its profile of inter-relations with the entire network. At this stage, it should be noted that the number of cooperatives that partook in the filling of inter-relations interviews differed than those in component one of the study, the categorization. The reason behind that is was that 7 additional cooperatives to the 40 interviewed in the categorization component were originally listed in the official list of cooperatives. These 7 were later excluded from the categorization analysis due to the irrelevant nature of their productions which did not entail processing of traditional *mūne* foods but instead consisted of for example dairy farms. Since these cooperatives have been shown to have existing integration in the network, although marginal, it was decided to retain their representation in the social network analysis component as non-interviewed actors. Yet, the responses of these cooperatives was not taken in consideration and therefore, their out-degrees were excluded as null so that not to exert any influence on the network. On another hand, only their in-degrees were registered which reflected their interesting positioning in terms of relations cited by the 40 relevant cooperatives. The total number of interviews therefore considered in the inter-relations component is with 47 cooperatives. The specific division of the inter-relations questionnaire was based on the following reasoning:

I. Familiarity (Intensity of the relation) – Survey questions 1, 2 and 3

There are several mentions that many cooperatives in Lebanon are dormant or inactive and provide no support for their members being, and having their initial establishment as a reason to obtain development aid (E. Y. Ghaban, 2013; McKinsey & Company, 2018). Yet, cooperatives remain attractive entities in Lebanon for state and donor support as tools for rural development initiatives mainly due to their potential role of “fostering democratic and equitable economic share of resources and benefits” (FAO, 1998). For this reason, the identified food processing cooperatives of the network were asked to express their general

familiarity, age and depth of the latter relation against the pre-defined list of their counterpart cooperatives. This is thought to help shed light on the overall popular cooperatives in the network as a result of their reputation in the sector. Therefore, questions 1, 2 and 3 of the inter-relations questionnaire were selected to serve as source for that type of information:

- *Existence and depth of familiarity*: whether interviewed cooperatives are familiar or not of a specific cooperative, hence reflecting the reputation and general activity of the cooperatives in the sector of *mūne* production; expressed as (1) high familiarity, (2) moderate familiarity, (3) low familiarity or (4) no familiarity.
- *Age of familiarity*: whether interviewed cooperatives have been familiar with a specific cooperative for short, medium or long-term basis; expressed as (1) very recently since less than 1 year ago, (2) recently since 1 to 4 years ago, (3) intermediary since 5 to 10 years ago or (4) old familiarity since more than 10 years ago.
- *Existence and frequency of trade or transactions*: whether interviewed cooperatives have had business-related activities with a specific cooperative and subsequently the frequency of the latter; expressed as (1) frequently, (2) occasionally, (3) rarely or (4) never.

II. Exchange of technical support - Survey questions 4, 5 and 6

For a better identification and understanding of the different forms of relations existing between cooperatives in the network, it was found interesting to analyze the dynamics of possible technical, social, and professional relations. These were divided between the remaining sections II, III, IV, and V of the questionnaire. It is hoped that this kind of information will highlight the existence of relations that could be possibly explained using the concept of proximity.

Generally, besides the *geographic* proximity characterized by the lengths and distances approaching actors together, there may also exist the concepts of *organized* proximity. *Belonging* and *similarity* proximities are two types of organized proximity that exist whereby actors are considered in proximity due to (1) belonging within the same organization hence having interactions facilitated by rules or routines (concept of belonging) or (2) having a shared system of representations, or set of beliefs, and the same knowledge (concept of similarity) (Torre & Rallet, 2004). Organized proximity may be suspected to exist within the network of cooperatives possibly in the form of economic, technical, business or even social forms of linkages that could touch activities relating to production processes, promotional activities and marketing approaches. These can be better highlighted by questioning the grouping of cooperatives in collective knowhow, common participation in market, and exchange of support being technical or social. This becomes especially true since cooperatives are commonly grouped together in common venues in events organized usually by official actors, (i)NGOs and development agencies such as seasonal exhibitions, food fairs, and capacity building sessions. These types of groupings could be therefore described as a form of organizational proximity that present additional settings where cooperatives would have the opportunity to build or develop their relations.

Starting with the description of the extent of exchange in technical support, questions 4, 5 and 6 of the inter-relations questionnaire were selected to serve as source for that type of information:

- *Existence and frequency of knowhow support - extended*: whether interviewed cooperatives have ever extended direct technical support to a specific cooperative in terms of for example knowhow at the level of technical operations, administration, preparation of official documentations, referrals...etc.; expressed as (1) sometimes, (2) seldom, (3) rare or (4) never.
- *Existence and frequency of knowhow support - received*: whether interviewed cooperatives have ever received direct technical support from a specific cooperative in terms of for example knowhow at the level of technical operations, administration, preparation of official documentations, referrals...etc.; expressed as (1) sometimes, (2) seldom, (3) rare or (4) never.
- *Willingness and likelihood of establishing a knowhow support*: whether interviewed cooperatives are willing to initiate or reciprocate any technical support such as for example production-related knowhow or technical advice; expressed as (1) to a great extent, (2) somewhat, (3) very little or (4) not at all.

III. Frequency of groupings - Survey question 7

Following the same reasoning, it was interesting to investigate the intensity at which cooperatives are grouped together in common events which commonly occurs as part of actions organized by development agencies. Question 7 was selected to serve as source for information relating to that type of information:

- *Participation and frequency of collective meeting-points*: whether interviewed cooperatives have participated in collective training sessions together with other cooperatives; expressed as (1) frequently, (2) occasionally, (3) rarely or (4) never.

IV. Exchange of personal social support or favors - Survey questions 8, 9 and 10

The rural setting in Lebanon has retained a sense of community and collective living. This “village life” and the pattern of living has been described as a characteristic of Lebanon as a whole (A. I. Tannous, 1949). Distinct features are described to have originated from the ancient settlements and their evolved patterns that have created spaces and allowed for close social interactions. Such spaces for example entailed open spaces, called *saha*, around points of assembly such as around churches or mosques, or other centers of conglomeration of rural dwellers around for example water springs. One of those distinct features is referred to as *jirah* or the feeling of *neighborliness* is described as “[...] with a situation that is highly socializing. People know one another intimately. In many important situations they act as a group yet leave room for individual initiative. A genuine feeling of neighborliness, or *jirah*, prevails.” (A. I. Tannous, 1949). This is why it is highly suspected that social aspects of everyday life would easily be transferred to professional or technical settings especially in common activities as agriculture and women-centric venues such as in the food processing cooperatives that produce traditional preserved *mūne* foods. For this reason, questions 8, 9 and 10 of the inter-relations

questionnaire were selected to serve as source for information relating to the extent of exchange in social support or favors:

- *Extent of social support - extended*: whether interviewed cooperatives have provided any form of social-business support to members of a specific cooperative such as for example personal favors or aid in personal/product transportation to common events; expressed as (1) several, (2) some, (3) rare or (4) none.
- *Extent of social support - received*: whether interviewed cooperatives have received any form of social-business support to members of a specific cooperative such as for example personal favors or aid in personal/product transportation to common events; expressed as (1) several, (2) some, (3) rare or (4) none.
- *Willingness and likelihood of providing social support*: whether interviewed cooperatives are willing to initiate or reciprocate any social-business support to a specific cooperative; expressed as (1) to a great extent, (2) somewhat, (3) very little or (4) not at all.

V. Joint promotion, marketing or sales - Survey questions 11 and 12

Finally, questions 11 and 12 of the inter-relations questionnaire were selected to serve as source for information relating to the existence and intensity at which the cooperatives are grouped in a sales or marketing setting where they would be in direct contact with the market and consumers. The reason behind that would also be tribute to the seasonal events being common outlets followed by the cooperatives for their marketing and sales, as is evident in Theme 2.2 of the categorization component.

- *Existence and frequency of a collective identity representation*: whether interviewed cooperatives have ever promoted or marketed one or several of their *mūne* products together and simultaneously with another cooperative; expressed as (1) frequently, (2) occasionally, (3) rarely or (4) never.
- *Trust in a collective identity representation*: whether interviewed cooperatives would trust a specific cooperative in promoting or marketing their products amongst a range of other *mūne* products; expressed as (1) to a great extent, (2) somewhat, (3) very little or (4) not at all.

A copy of the inter-relations questionnaire can be found in Appendix 3.

7.1.1.2. Data collection and formatting

Collection of data for the inter-relations questionnaire was performed simultaneously in the same meeting with those of the categorization in the first component of the study, between August and December 2019. The same method in contacting, scheduling and interviewing of cooperatives as that described in the categorization component therefore stands (see section 5.1.1.3). Cooperatives were interviewed in person preferably with the president in order to achieve the highest possible details in responses. Questions were also formulated in Arabic to facilitate communication and understanding with the interviewees in the local language. The first half of the meeting was dedicated for the filling of the paper-based categorization step, while the second half was dedicated for the digital online filling of the inter-relations survey.

That step was conducted using Kobo Toolbox v. 2.8.1. which is an online open source surveying tool capable of collecting data using mobile devices. A digital form of data collection was decided for the inter-relations component rather than the categorization for several reasons. Firstly, the type of questionnaire for the inter-relations section consisted of a cycled repetition of the same 12 questions against each of the cooperatives found in the list. This therefore makes the number of repetitions extremely high for paper-based surveys, and its structure and repetition made it suitable for digital formats. Conversely, the categorization questionnaire required the filling of tables which is not easily performed by digital surveys nor their database format and having only 40 cooperatives would have been easier done by paper-based forms. The digital online survey for the inter-relations component hence facilitated the conducting of paper-free interviews, enhanced efficiency and greatly cut down on interview times. It was also decided to ask one question at a time and register the responses of the interviewed cooperative with respect to its counterpart cooperatives. Therefore, question number one for example was repeated 46 times to register the interviewed cooperative's responses for the entire network before moving on to question number two and repeating the same process for the entire questionnaire. Figure 107 represents a screenshot of what the user would have seen while filling the online form by Kobo Toolbox. On average, the entire duration of the surveys for both components, categorization and inter-relations, lasted around one hour per cooperative. Extraction of the raw database was also made easier when downloaded directly from the server rather than having to go through a separate step for data entry. Following the downloading of the raw database, data was finally organized in a list form that was in a readable format for the software. The database was formatted with rows including the input per cooperative that were replicated over the number of separate input of that said cooperative with every other cooperative remaining within the network. Therefore, each cooperative was replicated over 46 rows to reflect their inputs for the remaining cooperatives. Columns included the registered input per question, therefore numbered 12. Table 35 represents a copy of the database format used for the inter-relations questionnaire.

The screenshot displays a mobile application interface for data collection. At the top, the Kobo Toolbox logo and a notification icon are visible. The main content is a questionnaire form with the following sections:

- Questionnaire title:** A box containing the text "Inter-relations Questionnaire - Rita Jalkh PhD Data collection".
- Name and family name of interviewee:** A text input field with the label "الإسم والشهرة" (Name and reputation).
- Identification number of interviewed coop:** A text input field with the label "كود تعريف التعاونية ID Coop" (Cooperative identification code ID Coop).
- Name of interviewed cooperative:** A text input field with the label "إسم التعاونية" (Cooperative name).
- Interview date:** A date picker field with the label "تاريخ تعبئة الإستمارة" (Form completion date).
- First subject cooperative:** A dropdown menu showing "جمعية تعاونية حليب البقاع" (Baqaa Dairy Cooperative).
- First survey question:** A question "هل تعرف هذه التعاونية؟" (Do you know this cooperative?) with four radio button options: "نعم، جيد جدا" (Yes, very good), "نعم، بطريقة ما" (Yes, somehow), "ليس جيدا جدا" (Not very good), and "كلا" (Neither).
- Second subject cooperative:** A dropdown menu showing "الجمعية التعاونية الانتاجية في مزرعة بيت الطشم - خيرات العاصي م.م." (The productive cooperative in the farm of Beit al-Tashm - Al-Ahadi Al-Ahadi).
- First survey question:** A question "هل تعرف هذه التعاونية؟" (Do you know this cooperative?) with the same four radio button options as above.

Figure 107: Screenshot representing the digital format of the inter-relations questionnaire as shown by Kobo Toolbox on mobile screen during data collection

Table 35: Extract of data entry format organized for the inter-relations database

From_Coop_ID	To_Coop_ID	Familiarity (Intensity of the relation)			Exchange of technical support			Frequency of groupings	Exchange of personal social support or favors			Joint promotion, marketing or sales	
		Q1. Do you know this cooperative?	Q2. Since how long have you known this cooperative?	Q3. How often do you conduct business trade activities with this cooperative?	Q4. Have you provided direct support to this cooperative, as technical knowhow, production, administration, documentations, referrals...?	Q5. Have you received direct support from this cooperative, as technical knowhow, production, administration, documentations, referrals...?	Q6. Are you willing to provide or receive any knowhow support as sharing of technical advice by this cooperative?	Q7. How often are you grouped with these cooperatives in trainings or events?	Q8. Have you provided any form of personal social favors to members of this cooperative independently from business activities, as accessibility, facilitations, transportation...?	Q9. Have you received any form of personal social favors from members of this cooperative independently from business activities, as accessibility, facilitations, transportation...?	Q10. Are you willing to provide or receive any form of personal social favors from members by this cooperative independently from business activities, as accessibility, facilitations, transportation...?	Q11. How often do you promote, market or sell your <i>müne</i> products and the products of this cooperative simultaneously at the same event?	Q12. Do you trust this cooperative to promote, market or sell your <i>müne</i> products and the products of other cooperative simultaneously at the same event?
BHH1	BZ1	No											
BHH1	BR1	No											
BHH1	BHB1	No											
BHH1	BHB2	No											
BHH1	BHB3	No											
BHH1	BHH2	No											
BHH1	BHH3	Yes, very well	5 to 10 years	Occasionally	Never	Never	Yes, somewhat	Occasionally	Yes, several	Yes, several	Yes, to a great extent	Rarely	I don't know
BHH1	BR2	No											
BHH1	BR3	No											
BHH1	BHB4	No											
BHH1	BHB5	No											
BHH1	BHH4	No											
BHH1	BHB6	No											
BHH1	BHB7	Yes, very well	More than 10 years	Frequently	Never	Yes, sometimes	Yes, to a great extent	Frequently	None	Yes, several	Yes, to a great extent	Never	Yes, to a great extent
BHH1	BHB8	No											
BHH1	BHB9	Not very well	1 to 4 years	Never	Never	Never	Yes, somewhat	Occasionally	None	None	Yes, somewhat	Never	Yes, somewhat
BHH1	BHB10	No											
BHH1	BHB11	No											
BHH1	BHH5	Yes, very well	More than 10 years	Frequently	Seldom	Seldom	Yes, to a great extent	Frequently	Yes, several	Some	Yes, to a great extent	Occasionally	Yes, somewhat
BHH1	BZ2	No											
BHH1	BHB12	No											
BHH1	BHB13	No											
BHH1	BHH6	Yes, very well	More than 10 years	Frequently	Seldom	Yes, sometimes	Yes, to a great extent	Frequently	Yes, several	Yes, several	Yes, to a great extent	Frequently	Yes, to a great extent
BHH1	BWB1	No											
BHH1	BHB14	No											

7.1.2. Data treatment methods and overview of compositional results

This section elaborates the different methods applied and software used for the treatment of data collected from the inter-relations survey. These commence by a general typology conducted to holistically describe the entire scope of links registered in the network. This type of typology provides a broad overview but is not directly reflected in the visualizations at a later stage, i.e. sociogram. After that, further data treatment methods used to construct specific aspects of the social network analysis will be dissected and explained. These components were constructed by three software. The first set included the bulk of social network analysis including overall metrics that describe the network's general characteristics, the applied method for clustering (community detection), and the drawing of the visualization sociograms (shown in section 0). These were performed using NodeXL v.1.0.1.418. The second set included the extraction of core levels, identification of brokerage roles and the hubs and authorities. These were performed by Pajek v.64-XXL 5.10. The third type were the different typologies performed (typology of links, relational profiles based on centrality values, and typology of brokerage roles) and which were executed in the same method applied for the categorization using SPAD v.8 - Coheris Analytics. Results generated from each of these components will be represented separately coinciding with each section and will be finally assembled together in a holistic analysis in the next section. This section contains 7 subsections: 1) Characterizing types and intensities of relations existing, 2) Community detection – Identification of cooperative clusters, 3) Overall metrics, 4) Core levels, 5) Profiling and characterizing the existing relation, 6) Identifying and assigning, and 7) Ranking of cooperative hubs and authorities.

7.1.2.1. Characterizing types and intensities of relations existing between food processing cooperatives in the *Beqā'* valley

The first step in data treatment was to provide a general overview of the different types and intensities of relation existing in the network. In order to achieve that, a first typology was performed on the assembly of links. As a prerequisite step, intensities of links were identified along the database. Knowing that the 12 survey questions are divided over 5 themes, a weighted value was assigned to each response with respect to the range of registered responses; thus, could be described as the intensity of that said relationship. Scale of weights for each question ranged between 0,1,2 for questions 1, 6, 10 and 12 and 0,1,2,3 for the remaining questions. These weights were next summed per theme, and finally summed together for the ensemble themes per cooperative representing the overall intensity of that specific relation. In reference to Table 35 for a concrete example, the relation outgoing from Coop BHH1 towards Coop BHH3 would have the following intensities divided over the 5 themes: I) 2,2,2 = 6; II) 0,0,1 = 1; III) 2; IV) 3,3,2 = 8; and V) 1,0 = 1; with their sum reflecting the intensity of the ensemble of relations being 18. With respect to the final range of weights registered in the network, this value of intensity was reflected visually in the thickness of the link in the sociogram.

A total of 537 links were identified in the network. A typology of these links was next performed using SPAD with the 12 survey questions as variables of the analysis. As previously noted, these 537 links originated from 47 instead of 40 cooperatives since 7 additional

cooperatives that were initially excluded from the categorization component but revealed the existence of interesting relations in the network and were retained in the SNA component. The typology of links is not reflected in the sociograms but provides a good general overview of the characteristics of links found in the network amongst the cooperatives. The resulting typology resulted in **4 classes** and is summarized in the graphs compiled in Figure 108.

This typology of links therefore describes the different types, intensities and trends of relationships existing in the network, i.e. a total of 537 links originating from the 47 network cooperatives. This typology classified the total number of existing links into 4 main classes according to 12 variables sourced from the survey questions. These classes include: **Class 1** (No interaction, moderate will to collaborate), **Class 2** (No interaction, strong will for collaboration), **Class 3** (Occasional interaction, strong will for collaboration), and **Class 4** (Intense interaction); each comprising of 217, 104, 113 and 103 links; respectively. The main characteristics of these classes are summarized as:

Class 1 consists of 217 out of the total 537 links, i.e. 40.41%

- Summarized description: No interaction, moderate will to collaborate
- Is the most common class of links that exhibits little to moderate acquaintance with other cooperatives with those that they know being relatively new, with the age of acquaintance ranging mostly between 1 to 4 years for 50% of links and on a lesser extent between 5 to 10 years for 29% of the links.
- These links have practically never conducted any trade or business transactions with other cooperatives, have never or only rarely provided and received technical support relating to their production operations or even social favors from members of other cooperatives, and have a moderate willingness to do so.
- These links have mostly never or rarely been grouped with other cooperatives in collective spaces. These include their attending of training sessions or events such as exhibitions or food shows. This is also reflected for their participation in common promotion activities which is a common practice in Lebanon where a member of a cooperative is recruited as a common promotor for products displayed from a variety of different cooperatives.

Class 2 consists of 104 out of the total 537 links, i.e. 19.37%

- Summarized description: No interaction, strong will for collaboration
- These links have a slightly stronger built acquaintances with other cooperatives with the age of acquaintance being a little older, ranging between 5 to 10 years for over half of those links.
- The remaining characteristics of this class are similar to the former Class 1 in having no to rare trade or business transactions with other cooperatives, no to rare sharing or receiving any form of technical support relating to the production operations or even social favors from members of other cooperatives, and even no to rare common grouping in collective spaces as training, exhibitions or shared promotion activities in exhibitions and food fairs.

- However, the difference between Class 2 and the former is that these links have a strong willingness to build such relationships.

Class 3 consists of 113 out of the total 537 links, i.e. 21.04%

- Summarized description: Occasional interaction, strong will for collaboration
- Class 3 exhibited higher interactions than the previous 2 classes. These included the extent of acquaintance of other cooperatives and the age of these acquaintances as well, which is reported at over 10 years for more than half of links.
- A higher level of business transactions and trade is also registered with 41% of links mentioning such business activities at an occasional frequency.
- A higher level of interaction in the form of providing or receiving technical and social favors is also demonstrated although not at maximal values, along with a strong willingness to develop such types of relationships.
- Links in Class 3 also exhibited higher extent of contact in collective grouping spaces as collective promotion activities (almost 19%) and especially at trainings and events (almost 40% of links). This latter fact could suggest the interaction of the cooperative sources of these links with common external actors who intervene and organize such trainings and events.

Class 4 consists of 103 out of the total 537 links, i.e. 19.18%

- Summarized description: Intense interaction
- This Class is characterized by the highest registered values of analyzed variables. These include firstly the highest extent and oldest age of acquaintances, over 10 years for almost 50% of links, and highest frequency of trade and business transactions reported on a “frequent” basis for 70% of links.
- The majority of links also exhibited high reciprocity in the provision and receiving of both technical and social favors with members of other cooperatives as well as the vast willingness to develop and maintain such relationships.
- Almost the entire number of links (96%) also acknowledged their contact with these other cooperatives in collective meeting spaces such as trainings and events, as well as having a more solid and frequent joint promotional representation for almost 60% of links.

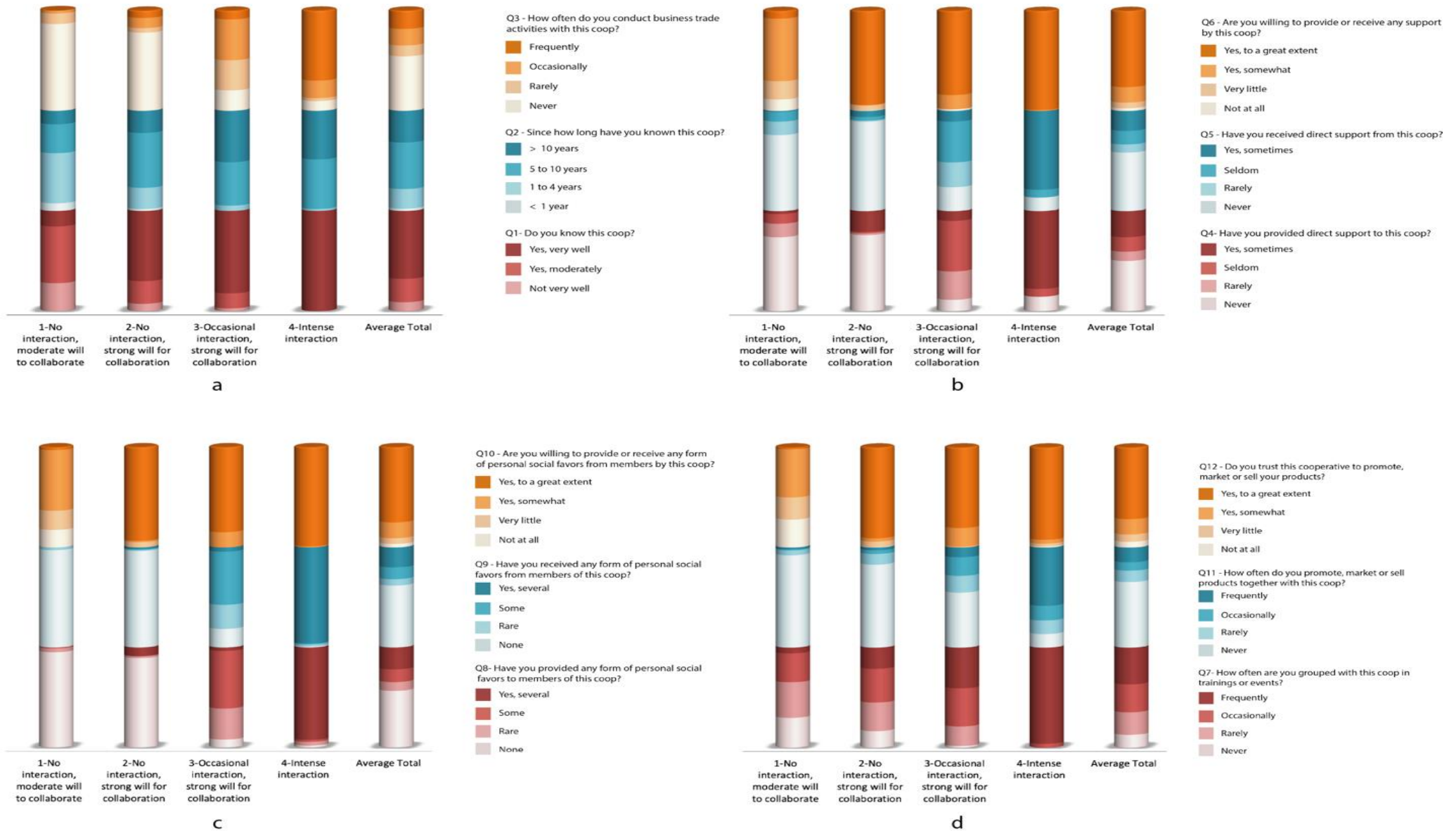


Figure 108: Typology of links and extracted classes divided per grouped questions of the inter-relations questionnaire as a) Qs 1, 2, and 3; b) Qs 4, 5, and 6; c) Qs 8, 9, and 10; and d) Qs 7, 11, and 12.

7.1.2.2. Community detection – Identification of cooperative clusters

One of the main components of a social network is to identify whether clusters can be clearly distinguished. The reason why community detection is elaborated at this stage prior to the overall metrics of the network is since the software performs specific calculations according to the type of clustering algorithm applied, which ultimately enters into the representation of the final metrics table and especially at the level of the Modularity. Once the database was properly inserted, it was next cleaned whereby only responses registering active relations were retained while those that did not were dismissed. Next, NodeXL was used to automatically detect and suggest the division of the network into clusters by applying one of its three algorithms that the software integrates from the Stanford Network Analysis Platform (SNAP)⁸⁸ library and are used for calculating network metrics from graphs. These are the Clauset-Newman-Moore (CNM)⁸⁹, the Wakita Tsurumi (W.T)⁹⁰, and the Girvan-Newman (G.N)⁹¹ community detection methods. Based on the summaries mentioned in SNAP, the CNM algorithm return the modularity and detects communities by merging the two communities that contribute the highest positive value of modularity, while the G.N algorithm is based on betweenness centrality to detect communities and return the network modularity. As for the W.T, the algorithm was described as a modification to the CNM method in a way to accelerate performance and investigate larger networks (Vieira et al., 2014). Yet, the general idea behind community detection methods is based on the grouping of nodes into groups known as clusters having the maximum possible inter-links with members of the same group and minimum possible intra-links between groups. For more information on NodeXL clustering and grouping, refer to (D. L. Hansen et al., 2011).

The first two algorithms (CNM and W.T) were tested to investigate the output on the network of cooperatives and decide on the best suitable algorithm to use. The G.N method was however not recommended for the study since it is relatively slower and used for small groups only. The testing of the first two methods was performed since the NodeXL community detection algorithms assign each node to a specific cluster once they determine the best number of clusters based on the network. Clusters therefore do not overlap but some imbalances may be witnessed in the number of nodes allocated per cluster. Some clusters may include the significant number of nodes where others may include minimal number of nodes, sometimes even just one. Indeed, the W.T method suggested the division of the network into 4 cluster groups each containing respectively 19, 18, 9, and 1 cooperatives. This algorithm identified one cooperative (BHH7) alone as a separate cluster and this was a main reason why this method was not found interesting. Another reason was related to the value of modularity which was registered at 0.18226 with the W.T but 0.18727 with the CNM method. Although the difference is small, the higher value of modularity with the CNM algorithm indicated, even if slightly, a better division of the network. The CNM algorithm proposed the division of the network in 3 clusters each including 19, 16, and 12 cooperatives respectively. This division was found more

⁸⁸ <http://snap.stanford.edu>

⁸⁹ (Clauset et al., 2004)

⁹⁰ (Wakita & Tsurumi, 2007)

⁹¹ (Girvan & Newman, 2002)

balanced and when compared with the modularity value became more encouraging and the CNM algorithm was thus selected as the algorithm for use in the detection of communities in the study network. Table 36 represents the distribution of links per cluster and those linking clusters together while taking in consideration the direction of links. This distribution is also illustrated in Figure 109. It can be seen that clusters 1 (G1) and 2 (G2) are composed of 103 and 115 links internally while cluster 3 (G3) registered the lowest number of internal links at 56. External links (intra-links) also show that G1 and G2 are more connected together than with G3, while G1 and G3 appear to be the least familiar with each other. This is exhibited in the proportion of links exchanged between these two equaling 98%, versus 82% between G2 and G3, and 68% between G1 and G3. G3 therefore seems to extend 31% and 18% less links than it is receiving from G1 and G2 respectively.

Table 36: Distribution of clusters and the corresponding number of inter- and intra-links using the Clauset-Newman-Moore community detection algorithm.

Group 1	Group 2	Edges
G1 (n=19)	G1	103
G1	G2	62
G1	G3	29
G2 (n=16)	G1	61
G2	G2	115
G2	G3	50
G3 (n=12)	G1	20
G3	G2	41
G3	G3	56

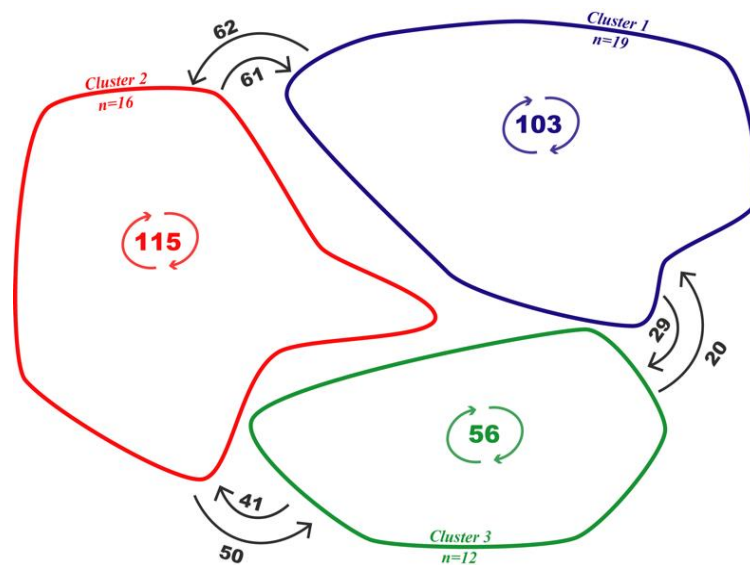


Figure 109: Illustration of the distribution of clusters and the corresponding number of inter- and intra-links.

7.1.2.3. Overall metrics and measures of the network

Another important component to analyze social networks is to inspect the overall metrics which are calculated in the same software NodeXL after the division of clusters. This step results in figures that describe the general characteristics of the network. By order of appearance, these include values for the graph type, directed in this case, number of vertices (nodes, $n=47$) and unique edges (links, $n=537$). Next, the Edges With Duplicates indicates whether the datasheet includes any entries that duplicate the same link, which was not the case in the entries of the study data. Similarly, the Self Loops indicate whether a specific node (cooperative) cited itself; also not the case in the data entries. After that, the Reciprocated Vertex Pair Ratio (0.349) and the Reciprocated Edge Ratio (0.518) represent, respectively, the ratio of vertices' returned edges and the overall returned edges that are therefore reciprocated. The Reciprocated Vertex Pair Ratio represents the proportion of ingoing and outgoing links per node, hence the higher the value then the more the vertex has edges that are returned. The values for these metrics show that an average of around 35% of the vertices' links are usually returned and that over 50% of the entire edges in the network are involved in bilateral relations. When examining the values of these two parameters for individual nodes, it was seen that 27 of the 47 cooperatives in the network (57%) are actually involved in reciprocated links. The highest value for the Reciprocated Vertex Pair Ratio was registered with cooperatives BHB7 (0.765) and BHB14 (0.667) showing that almost 77% and 67% of their links respectively are returned. This impressive level of reciprocity demonstrated in the network is a first indication of a suspected high concentration of relations and density of the network.

When inspecting these values per cluster, it was interestingly noticed that Cluster 2 (G2) registered the highest values for both Reciprocated Vertex Pair Ratio and Reciprocated Edge Ratio at 0.494 and 0.661 respectively. Cluster 3 (G3) registered the second highest at 0.302 and 0.464, and Cluster 1 (G1) had the lowest values at 0.256 and 0.408; respectively. Therefore, despite grouping the second highest number of nodes (16) and the highest number of links (115) which theoretically would reduce the chances of reciprocity, almost half of nodes and 66% of links in Cluster 2 (G2) were bilateral and being returned. The overall metric next describe whether the network is entirely linked together, referred to as a connected components, which is the case in the studied network, or whether certain nodes are in separate groups from the network as a whole, which is not the case. After that, the over metrics continue to describe the Single-Vertex Connected Components which indicate that there are no isolated nodes in the network that have no connections. The Maximum Geodesic Distance next represents the maximal shortest path (geodesic distance) that links two nodes together. Also known as the diameter, it is noticed that the value for the study network is 3. This means that a maximum of 3 separate steps, or 3 degrees of separation, are required to go from one node to another. This also means that there are a maximum of two intermediaries that join any two nodes in the network, even the two furthest extremities. Such an observation provides additional evidence of a highly dense network in which its vertices are relatively concentrated and highly linked together. The same suspicion is further emphasized by the Average Geodesic Distance of the network which registered a value of 1.63, which means that less than two social connections are needed on average to link any two nodes in the network. This result can be thought of as many nodes being directly connected and are in no need for intermediaries to link them

together. Finally, the overall density of network was calculated at 0.248, a figure which would normally be relevant when comparing two networks together, which is not the case in the study, but remains an interesting figure to compare clusters. This value indicates that almost one quarter of all links that could possibly be formed already exist in the network. Finally, and as mentioned in section 6.2.4, the modularity was calculated following the selected algorithm (CNM) at 0.18727 which compared slightly higher than the former W.T algorithm and therefore reflected a slightly better division of the network. Table 37 compiles the overall metrics of the network of cooperatives under the scope of the study when communities were detected and divided using the CNM method.

When the same comparison is inspected per clusters (Table 38), it can be seen that Cluster 3 (G3) has the lowest diameter amongst the three groups. This indicates that a maximum of only two steps, meaning two social connections and only one intermediary, are needed to link any two nodes in that cluster. This characteristic could be linked to the fact that G3 has the lowest number of edges (56) compared to its counterparts (103 for G1 and 115 for G2). G3 also registered the lowest average geodesic distance while having all three clusters in resonance with the entire network average less than 2. As for the density, cluster 2 (G2) normally had the highest density (0.479) since it housed the highest number of links of the three clusters although having the second highest number of nodes (16). This value shows that almost half of the entire links that could possibly exist are already formed in the network, a value almost double than the network average of 0.248. All three clusters also normally recorded a density higher than that of the network, reflecting how the community detection algorithm maximized inter-cluster links with respect to those intra-cluster.

Table 37: Overall metrics generated by NodeXL for the network of cooperatives under the study when using the CNM community detection method.

Graph Metrics	Value
Graph Type	Directed
Vertices	47
Unique Edges	537
Edges With Duplicates	0
Total Edges	537
Self-Loops	0
Reciprocated Vertex Pair Ratio	0.349
Reciprocated Edge Ratio	0.518
Connected Components	1
Single-Vertex Connected Components	0
Maximum Vertices in a Connected Component	47
Maximum Edges in a Connected Component	537
Maximum Geodesic Distance (Diameter)	3
Average Geodesic Distance	1.63
Graph Density	0.248
Modularity	0.18727

Table 38: Cluster metrics generated by NodeXL for each of the 3 separate clusters when using the CNM community detection method.

Graph Metrics	G1	G2	G3
Vertices	19	16	12
Unique Edges	103	115	56
Edges With Duplicates	0	0	0
Total Edges	103	115	56
Self-Loops	0	0	0
Reciprocated Vertex Pair Ratio	0.256	0.494	0.302
Reciprocated Edge Ratio	0.408	0.661	0.464
Connected Components	1	1	1
Single-Vertex Connected Components	0	0	0
Maximum Vertices in a Connected Component	19	16	12
Maximum Edges in a Connected Component	103	115	56
Maximum Geodesic Distance (Diameter)	3	3	2
Average Geodesic Distance	1.468	1.305	1.236
Graph Density	0.301	0.479	0.424

7.1.2.4. Core levels and zones of concentrated linkages

Core levels are zones within a network, also called subnetworks, where each node has at least a specific number of neighbors, i.e. its directly connected nodes. Core levels can be understood as a surface inspection and direct counting of nodes that have a minimum number of linked neighbors rather than entering into any algorithmic modeling. This step was performed using Pajek v.64-XXL 5.10 which is a program used for the analysis and visualization of large networks. In addition to the core levels, this software was also used to identify brokerage roles as well as hubs and authorities. Prior to the initiation of analysis, the inter-relations database was entered and formatted in a form compatible with the software using text files instead of tables.

For the core levels of the study network, the software registered the existence of a maximum core level of 19, meaning the cooperatives in this core level are directly connected to a minimum of 19 others in the network. On the other end of the scale, a minimum core level of 1 was registered, meaning that the cooperatives in this core are connected to only one other cooperative. Astonishingly, almost 45% of the cooperatives in the network belong to core level 19. This exhibits another clear demonstration of the high density and strong connectivity of the network altogether. A total of 13 core levels were identified (Table 39). In order to avoid overwhelming the sociogram with one color for each of the 13 core levels, it was decided to facilitate visualization by grouping the cores into ranges. A sextile division into 6 equal subsets was found to be the most interesting as it displayed enough level of detail without saturating the graph. In fact, the sextile revealed 4 core levels as represented in Table 40 which include, 1) a minimum of 1 to 7 links with n=8 nodes, 2) 8 to 13 links with n=9 nodes, 3) 14 to 16 links with n=9 nodes, and 4) 19 links with n=21 nodes. The fifth and sixth sextiles in fact comprise

the same number of cooperatives as the fourth sextile, 21 cooperatives in core level 19, therefore indicating that the division could be represented in the 4 above ranges.

Table 39: Individual core levels identified for the study network along with the corresponding number, percentage (%) and cumulative percentage of nodes.

Cores	Number of vertices	Percentage (%) of vertices	Cumulative %
1	1	2.13%	2.13%
2	2	4.26%	6.38%
3	1	2.13%	8.51%
6	2	4.26%	12.77%
7	2	4.26%	17.02%
8	3	6.38%	23.40%
11	2	4.26%	27.66%
12	2	4.26%	31.91%
13	2	4.26%	36.17%
14	1	2.13%	38.30%
15	2	4.26%	42.55%
16	6	12.77%	55.32%
19	21	44.68%	100.00%
Total	47	100.00%	

Table 40: Grouped ranges of core levels for the study network along with the corresponding number and percentage (%) of nodes.

Cores	Number of vertices	Percentage (%) of vertices
1) 1-7	8	17.02%
2) 8-13	9	19.15%
3) 14-16	9	19.15%
4) 19	21	44.68%
Total	47	100.00%

7.1.2.5. Profiling and characterizing the existing relations

The relational profiles are the classification of cooperatives on the basis of the 6 centrality values that were equated for every cooperative (node) by NodeXL. As defined in section 6.2.3, these centrality values are: In-degree, out-degree, betweenness centrality, closeness centrality, Eigenvector centrality, and clustering coefficient. The objective behind that step is to extract profiles of relations that characterize different classes of cooperatives in a way that would allow to describe and distinguish actors that are popular, important and central in the network. Prior to the analysis of the classification, a first observation of the centrality values show that only one cooperative (BR7) registered a zero in-degree, indicating that no other cooperatives in the network are familiar with that specific cooperative. The most popular cooperatives with the highest in-degrees (incoming citations) were BHB7 (n=26), BHB 9 (n=24), and BHB5 (n=21).

9 cooperatives also registered a zero out-degree, 7 of which are the non-interviewed cooperatives which their out-degrees (outgoing citations) were purposely emitted since their operations are not related to *mūne* production. Cooperatives with the highest out-degrees were BHB22 (n=43), BHB3 (n=37), and BHB7 (n=34). Interestingly, substantial disparities between the in-degrees and out-degrees are apparent in cooperatives BHB22 and BHB3. Despite expressing their familiarity with the highest number of cooperatives in the network (registered the highest scores of out-degrees), these 2 cooperatives were conversely themselves minimally cited by the network (registered low scores of in-degree, n=8 and 9 respectively). Only BHB7 recorded some of the highest values of in-degrees and out-degrees simultaneously, showing that this specific cooperative knows many others in the network and is at the same time known itself. Such observations show that only very few cooperatives are exceptionally unaware of others around the *Beqā'* valley and that some would undertake to know many cooperatives in the network while being themselves not well known. On another hand, betweenness centrality ranged between a minimum of zero for 5 cooperatives (BR4, BHB21, BHB10, BR6, and BR7) and a maximum of 395 for one cooperative (BHB22). Cooperatives with null values did not on lie at any occasion on the geodesic paths between any two nodes in the network. They therefore have not “bridges” or “connected” any two nodes together. This observation is mirrored in the following next section 7.1.2.6 where the roles of each node is characterized, thus these actors have no roles. These cooperatives were also characterized as much less central and isolated according to the typology that is elaborated next in this section. Conversely, the node registering the highest value of betweenness centrality (395 for coop BHB22) demonstrates how it is located the most frequently on the geodesic paths that connect any two nodes in the network, knowing it is 2.5 fold higher than the second frequent value recorded which was 156 (coop BHB3). This cooperative therefore has the highest potential to play important mediary roles that contribute highly to the connectivity of actors together around the network. Interestingly, this cooperative alone equally registered the highest values for other centrality measures including Closeness (0.02) and Eigenvector (0.043) centrality despite having one of the lowest in-degrees recorded in the network. The Closeness and Eigenvector centralities show how this cooperative is the closest socially (least degrees of separation) to its counterparts in the network compared to all others and is the most connected to nodes that are themselves well-connected. This demonstrates that even if an actor is not popular, they could still play a pivotal part in connecting other actors together, which otherwise would not have been the case, and in influencing the network at large.

Same as with all classifications conducted in this study, the division of typological classes from the centrality values was performed using SPAD. 5 classes were accordingly identified: **Class 1** (Most intermediary and integrator actor), **Class 2** (Important actors with many contacts), **Class 3** (Popular actors linked with important actors), **Class 4** (Clique trends, less central actors), and **Class 5** (Isolated actors); each comprising of 1, 7, 14, 22 and 3 cooperatives; respectively. The main characteristics of these classes are summarized as:

Class 1 - Most intermediary and integrated actor (n=1)

This main factor that separates this cooperative (BHB22) in class 1 from class 2 is having the highest registered values of out-degree and betweenness centrality, therefore reflecting the

importance of this specific cooperative as a bridge for the connectivity within the network. The remaining characteristics are similar to and are elaborated in class 2.

Class 2 - Important actors with many contacts (n=7)

Class 2 (and class 1) reflects the highest registered centrality values of cooperatives although totaling 8 cooperatives out of 40 when coupled with class 1. This class exhibits the highest number of contacts in terms of level of degrees (are well cited and are well knowledgeable of others, i.e. are good authorities and hubs) as well as Eigenvector centrality values. This signifies that these cooperatives are themselves well connected to other important cooperatives and therefore have a higher ability to influence the network and not solely their linked neighbors only. A high value of betweenness centrality is also registered in this class and reflects the important role of these cooperatives as bridges, i.e. connectivity, and therefore influence the flow of information and resources within the network. The highest values of closeness centrality registered by this class also reflect these actors' strategic position in relation to their closest proximity to other cooperatives in the network compared to other classes. This class when coupled with class 1 recorded the lowest values for clustering coefficient. This is a logical result which can be interpreted as: a growing number of contacts decreases the probability of these contacts knowing each other and therefore forming links amongst each other, and hence a lower probability of forming cliques.

Class 3 - Popular actors linked with important nodes (n=14)

This class includes cooperatives that are have registered high values of in-degrees and Eigenvector Centrality. The class average was therefore significantly higher than the general average of the network although less than those seen in classes 1 and 2. Starting class 3 onwards, a decreasing trend in centrality values can be seen, coupled with an increasing trend in clustering coefficient. This reflects a gradual decrease in the popularity of nodes, their acquaintance of others, influence and being connecting bridges. Yet, the increase in the clustering coefficient shows that there is a growing probability of forming clusters or cliques. This also a logical observation being the inverse interpretation witnessed in classes 1 and 2: having a smaller number of contacts increases the probability of these contacts knowing each other and therefore forming links amongst each other, and therefore a higher probability of clusters.

Class 4 - Clique trends, less central actors (n=22)

Almost half of the cooperatives analyzed in the SNA component belong to this class 4. This group exhibits centrality values that are significantly less than the general average of the network, except for the value of the clustering coefficient. This is why these cooperatives are considered much less central than those in the preceding classes, and since they have much less directly connected neighbors, then their clustering probability becomes higher as reflected by an increasing clustering coefficient. 5 of the 7 non-interviewed cooperatives, i.e. cooperatives that were excluded from the categorization component, belong to this group whereas the remaining 2 belong to the final class 5. It is normal to have these non-interviewed cooperatives located at the extremities of the network since their out-degrees (citations) were not considered in the analysis. Yet, their in-degrees show the fact they are cited by relevant cooperatives from the network. That observation in parallel with other centrality values indicate that, despite having an irrelevant nature of production as being husbandry-milk farms, these cooperatives still demonstrate a level of integration in the network. Therefore, a standing and clear cross-

cutting relations of different sectors of cooperatives seems to exist. Interestingly, these relations exist without any apparent business purpose whereby cooperatives mostly citing these non-interviewed cooperatives do not appear to necessitate the products they manufacture for their own operations.

Class 5 - Isolated actors (n=3)

The 3 cooperatives that belong to this group appear to be the most isolated. Centrality values for this class are lower or significantly lower than the mean average of the network except for the clustering coefficient which is significantly higher. These cooperatives are thus considered the least central. The significant value of the clustering coefficient is explained by the same reasoning mentioned above in terms of having a higher probability of forming clusters or cliques with a diminishing number of linked neighbors and contacts. 2 of the 3 cooperatives in this class are non-interviewed cooperatives that do not produce *mūne* whereas only 1 cooperative (BR7) is a relevant interviewed cooperative. The resulting values from the classification of centrality and the extracted relational profiles are visualized in Figure 110. Since the centrality values are not normalized with respect to each other, a logarithmic scale on the y-axis is used to facilitate representation and comparison between the classes.

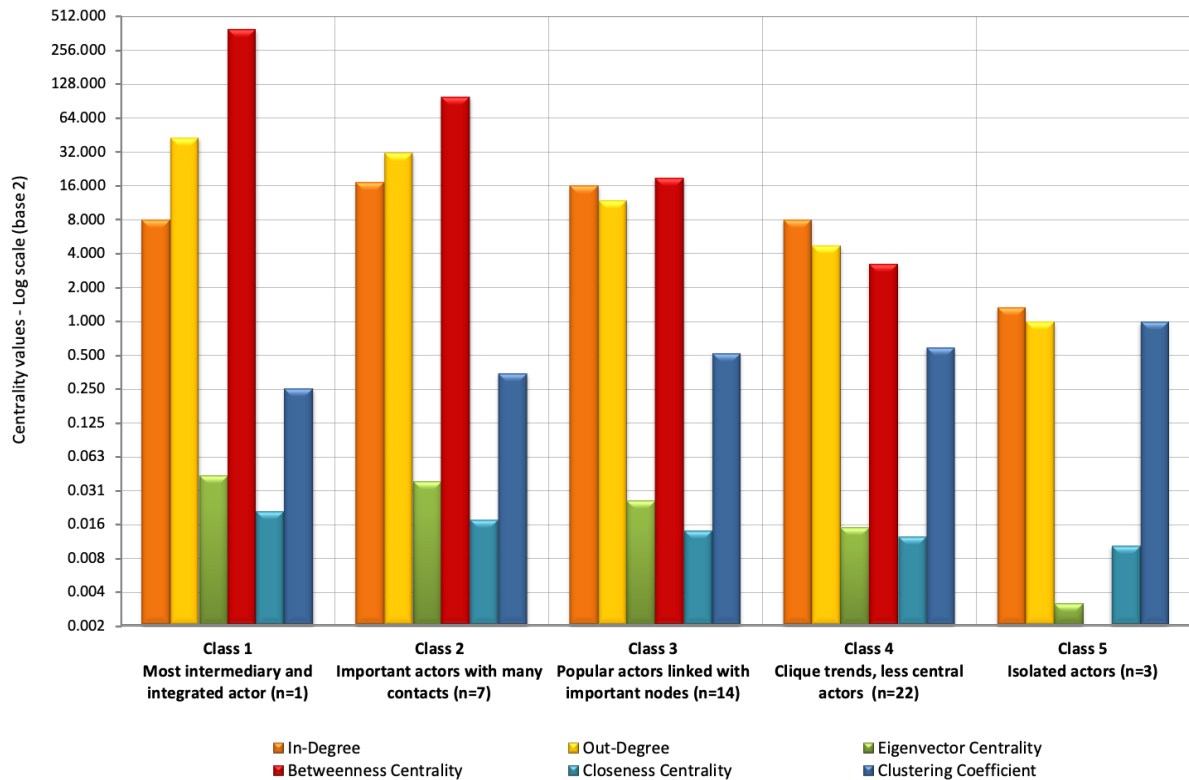


Figure 110: Relational profile classes identified by the typology of centrality with the mean values of the 6 centrality measures per class.

7.1.2.6. Identifying and assigning cooperatives with key brokerage roles

As defined in section 6.2.5, brokerage roles are played by nodes that connect other nodes around the network together which are otherwise not connected. Five brokerage roles exist and are 1) coordinator, 2) itinerant broker, 3) liaison, 4) gatekeeper, and 5) representative. The brokerage roles played by each of the nodes in the network was identified by Pajek v.64-XXL 5.10 according to the clusters identified in section 7.1.2.2. The output result from the software

was a counting of the frequency that each node played per role. These were input in the database in the form of 5 separate columns next to each node. Next, the percentage of roles was calculated per row and per column. The row percentages indicated the proportion of roles played per each cooperative's ensemble of roles, and the column percentages indicated the percentage of every role played by each specific cooperative compared to the total of the network and therefore reflects the influence exerted on the network.

A first observation of these results show that only 11 cooperatives played no brokerage roles, with 6, 3, and 2 being located in clusters 1, 2 and 3 respectively. 7 of these 11 cooperatives with no brokerage roles were normally the non-interviewed cooperatives mentioned in section 7.1.1.1 since their out-degrees (citations) were not considered in the analysis of responses not to exert any influence on the network due to the irrelevant nature of their production activities. This can be therefore described as technically having only 4 of the 40 cooperatives with no active brokerage roles, reflecting another impressive extent of connectivity. This leaves the remaining majority, 36 cooperatives, playing one or several brokerage roles simultaneously. Only two cooperatives played one role solely, with coop BR3 only playing the role of a coordinator 13 times inside its cluster (G1) and coop BR5 playing the role of a gatekeeper only once also in G1. All other cooperatives with active brokerage roles are seen to play more than one role at the same time. Interestingly, 14 of the 47 cooperatives in the network play all 5 brokerage roles simultaneously; 5 in G1, 6 in G2 and 3 in G3. Overall, thirteen different combinations of roles was identified in the database. The most common type of brokerage role played was gatekeepers registering the highest frequency amongst all roles (n=837). This type of brokerage role was played at least once by 34 separate cooperatives with coop BHB5 alone playing that role 134 times and followed by coop BHB9 playing that role 104 times. The second most frequent role was representatives (n=629 by 29 coops) played mostly by coop BHB7 (n=124) and BHB9 (n=100), followed by liaisons (n=393 by 25 coops) played mostly by the same former cooperatives BHB7 (n=94) and BHB9 (n=83), and coordinators (n=311 by 30 coops) also played mostly by coops BHB7 and BHB5 (n=30) and followed closely by coop BHB9 (n=28). The least frequently played role was itinerant broker (n=137) that was played by only 16 cooperatives. The same trend with the top three cooperatives is witnessed, with the top frequencies in that role being for coop BHB9 (n=26), followed by BHB5 (n=20) and BHB7 (n=19).

As seen above, the first look on the top ranked frequencies reveals that certain cooperatives hold a higher number of roles more frequently and could therefore be considered important. In order to better identify the trends and classes from the 13 different role combinations identified in the network, a typology of these roles was also performed. Same as the other classifications, this step was performed using SPAD. Five classes grouping the 36 out of the 47 cooperative with active brokerage roles were identified, **Class 1** (Overall brokers), **Class 2** (Overall itinerant brokers and gatekeepers), **Class 3** (Distinct coordinators and/or representatives), **Class 4** (Distinct gatekeepers), and **Class 5** (Distinct liaisons); each comprising of 2, 7, 13, 9 and 5 cooperatives; respectively. Classes 1 and 2 includes cooperatives with strong roles that have an important influence at the scale of the network as a whole, thus labeled with the word "overall". This is due to their significant effect with respect to the total roles played in the network (column percentage). On another hand, Classes 3, 4 and 5 include cooperatives that have much less influence at that larger scale of the network but that demonstrate a specificity

at the level of their own specific roles they play (row percentage), thus depicted with the word “distinct”. The characteristics of each class are summarized below as:

Class 1- Overall brokers (n=2)

These 2 cooperatives (BHB7 and BHB9) demonstrate a significant importance as they play strong positions in all different brokerage roles at the level of the network. Both cooperatives belong to cluster 2 (G2) and they alone play over 30% of the entire frequency of roles registered in the network with an average of 353 roles. These two cooperatives are therefore the strongest coordinators, itinerant brokers, liaisons, gatekeepers and representatives. They mediate unconnected cooperatives together inside their cluster and outside for cooperatives belonging to the same or different groups. These cooperatives bridge and liaise connections and they equally stand at the entrance and exist of their cluster, therefore controlling inflow and outflow of information or resources.

Class 2- Overall itinerant brokers and gatekeepers (n=7)

These cooperatives play a significant role as important itinerant brokers and gatekeepers generally at the level of the entire network and especially at the level of cluster 1 (G1) in which 5 of these 7 cooperatives (71%) belong. These cooperatives play an average of 128 roles and therefore strongly mediate communication between two unconnected external actors belonging to a different cluster and they also stand at the gates of their own cluster for outsiders with possible control of incoming information or resources.

Class 3- Distinct coordinators and/or representatives (n=13)

This class includes cooperatives that, despite not being influential in the larger network, display an apparent specificity at the level of their own individual roles as coordinators and/or representatives. These 13 cooperatives play an average of 34 roles and demonstrate a high significance especially at the inside of their cluster specifically cluster 2 (G2) which includes 62% of cooperatives in this class. Cooperatives in this class therefore show a tendency to mediate connections between members of their own group and/or together with representing their own group to outsiders.

Class 4- Distinct gatekeepers (n=9)

These 9 cooperatives have been characterized as distinct gatekeepers since they display a strong specificity of that role at their individual scale. 5 out of the 9 cooperatives in this class (56%) belong to cluster 1 (G1). These cooperatives play an average of 24 roles and have a tendency to link outside actors from different groups with unconnected actors within their own group, and thus control the incoming flow of information or resources.

Class 5- Distinct liaisons (n=5)

This class includes cooperatives play an average of only 9 roles but are characterized to play mostly the role of liaisons, and gatekeepers at a lesser extent. These cooperatives therefore exhibit a specificity in their individual roles rather than exerting any strong influence on the network itself. 4 out of the 5 cooperatives belong to cluster 3 (G3). In this case, G3 can therefore

be considered as the group which main role is to link cooperatives from clusters 1 and 2 together.

The above classes and distribution of their roles is represented in the two below figures (Figure 111 and Figure 112). Figure 111 represents the class average of each role calculated from the proportion of roles per node with respect to its own total number of roles (row percentage), which reflects individual specificity of roles played. This representation can therefore be in the form of a stacked and normalized bar graph. On another hand, Figure 112 represents the class average of each role calculated from the proportion of roles per node with respect to the total number of each role counted in the entire network (column percentage). This reflects the overall influence of each class on the network. This type of representation is in the form of a bar graph to demonstrate the visual difference in the impact that each class has on the network. Further observations from brokerage roles will be extracted, analyzed and cross-referenced once inspected visually in the sociograms and coupled with the other variables.

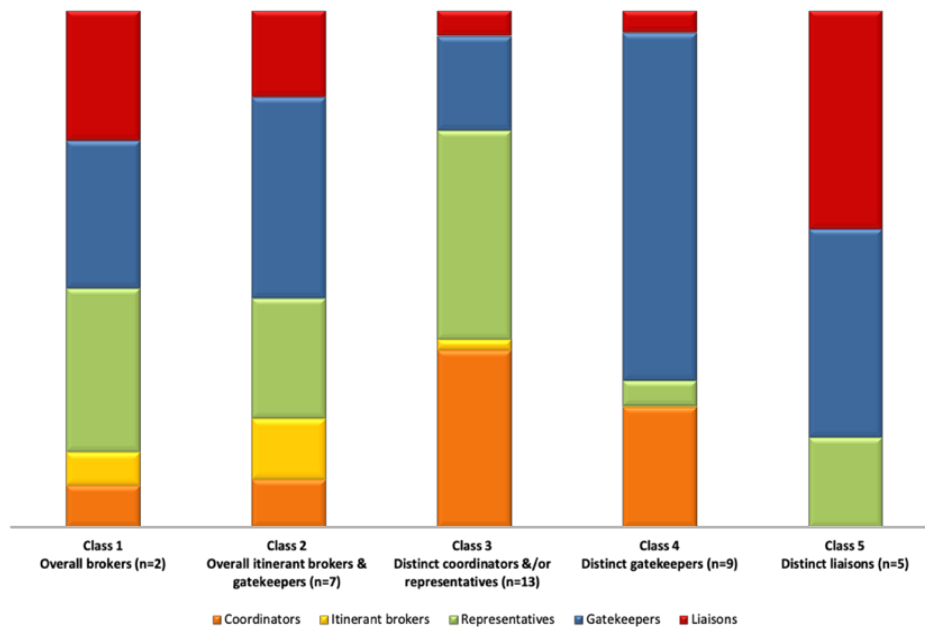


Figure 111: Typological classification and the repartition of roles played per class, calculated from the proportion of roles per node with respect to its own total number of roles (row percentage).

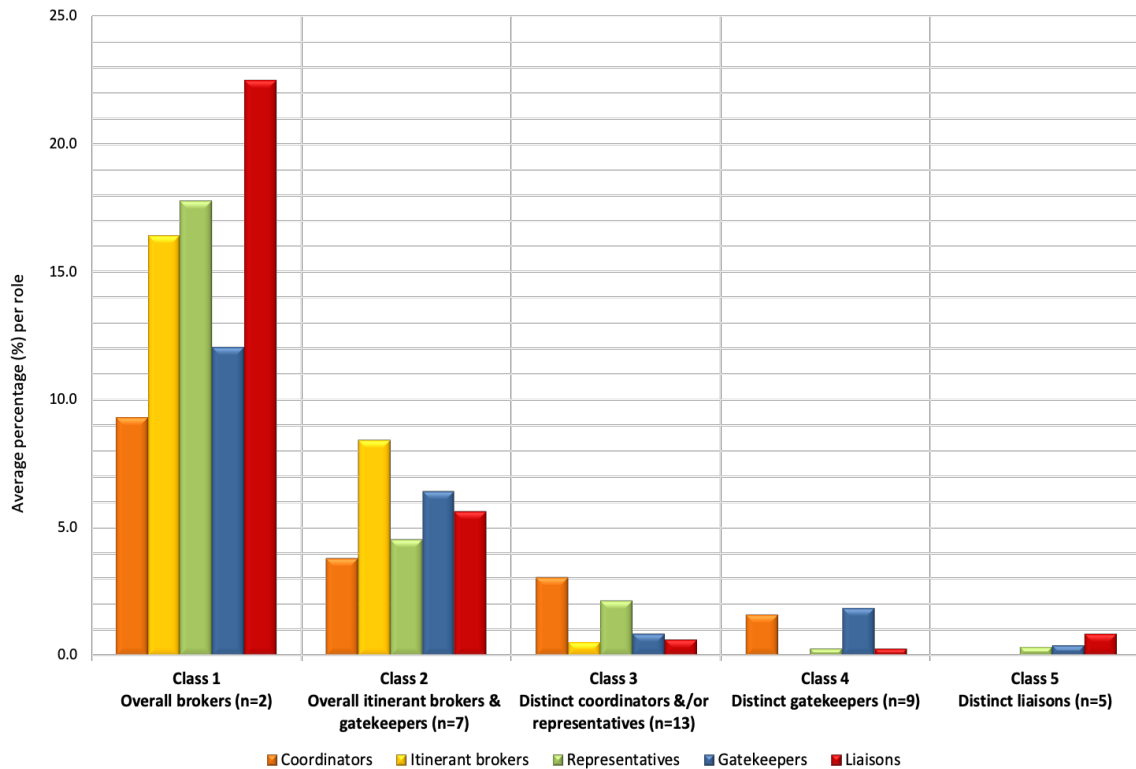


Figure 112: Typological classification and the repartition of roles played per class, calculated from the proportion of roles per node with respect to the total number per role in the entire network (column percentage).

7.1.2.7. Ranking of cooperative hubs and authorities

Hubs and authorities, defined in section 6.2.5, were identified in the network by the same software used to extract core levels, Pajek v.64-XXL 5.10. The software begins by requesting the user to define the number of hubs and authorities desired for extraction. The most suitable approach to define a suitable number of hubs and authorities was decided based on dividing the vertices into factions according to the minimum and maximum registered values of the Reciprocated Vertex Pair Ratio, 0 and 0.765, and inspecting the divisions. As explained in section 7.1.2.4, this variable represents the proportion of a vertex's links that are reciprocated. This variable is therefore in direct link with the definition of hubs and authorities since it relates to the degree level (in- and out-degrees). The more an actor is cited by others (in-degree), the stronger its position becomes as an authority and vice versa, the more an actor cites others (out-degree), the stronger its position becomes as a hub. The tested divisions of vertices were in the form of terciles, quartiles, quintiles, and deciles which arranged the vertices into 3, 4, 5, and 10 equal groups respectively. The third tercile and fourth quartile groups included 16 and 12 vertices which were decided to be too numerous to use as hubs and authorities. The fifth quintile group included 10 vertices same as the ninth and tenth deciles together, equivalent to one quarter the number of interviewed cooperatives. A subjective decision was then taken to adopt this value (10) as the number of hubs and authorities to be extracted from the network. This number was also found acceptable when compared to the overall number of vertices. The software, Pajek, then used the input from the dataset to assign two weights for each vertex, one hub weight and one authority weight. The software bases its scoring on the importance of an

actor as a good sender (hub) when being well-connected to important authorities, and its importance as a good receiver (authority) when being well-connected to important hubs (Nooy et al., 2011). Thus, a vertex is a good hub if it points to many good authorities, and it is a good authority if it is pointed to by many good hubs. The software next partitioned and sorted the weights according the user defined number of hubs and authorities (10). The top 5 authorities and top 5 hubs were identified, and a third category also containing 5 cooperatives was also adopted (called hubs and authorities) since some vertices acted as both hub and authority at the same time.

The top 3 authorities were coops BHB7, BHB9 and BHB5, the same three cooperatives with the highest values of in-degree and also ranking on top in other measures and characteristics as their relational profile and brokerage roles. These cooperatives also play the role hubs along with authorities at the same time, in addition to coops BHB8 and BHB14. This shows that they exhibit both a strong reputation by being well cited and a strong knowledge of the network's actors through their own elaborate citations. The assembly of the unique characteristics of these three actors prove how these cooperatives are some of the most important actors, are highly recognized, and contribute greatly to the network's connectivity. The top 3 hubs are coops BHB22, BHB3, and BHB7; the same cooperatives with the highest values for out-degree. Yet, the fact that they know other cooperatives in the network did not always translate in their own popularity. The out-degree of coops BHB22 and BHB3 was not matched by a high in-degree and thus had the solo role of hubs. This was not the case with coop BHB7 which played the dual role of hubs and authorities reflecting its popularity and knowledge of other cooperatives in the network. This is further emphasized by this cooperative's highest value of the Reciprocated Vertex Pair Ratio which shows that almost 77% of its links are being reciprocated. The list of hubs and authorities identified in the network with their corresponding hub and authority weight scores are presented in Table 41.

Table 41: Hubs and authorities identified in the network with each corresponding hub weight, authority weight and Reciprocated Vertex Pair Ratio.

Vertex ID	Reciprocated Vertex Pair Ratio	Category	Hub Weights	Authority Weights
BHB7	0.765	1- Authority and Hub	0.302	0.242
BHB9	0.629	1- Authority and Hub	0.298	0.220
BHB5	0.516	1- Authority and Hub	0.222	0.216
BHB8	0.565	1- Authority and Hub	0.201	0.203
BHB14	0.667	1- Authority and Hub	0.196	0.192
BHH4	0.350	2- Authority	0.092	0.207
BHB6	0.619	2- Authority	0.170	0.205
BHH1	0.250	2- Authority	0.059	0.205
BHH6	0.500	2- Authority	0.140	0.204
BHH3	0.409	2- Authority	0.123	0.201
BHB22	0.186	3- Hub	0.346	0.117
BHB3	0.243	3- Hub	0.322	0.107

Vertex ID	Reciprocated Vertex Pair Ratio	Category	Hub Weights	Authority Weights
BHB19	0.343	3- Hub	0.287	0.185
BHB12	0.406	3- Hub	0.272	0.182
BZ2	0.290	3- Hub	0.256	0.134

7.2. VISUALIZING THE NETWORK OF FOOD PROCESSING COOPERATIVES IN THE FORM OF SOCIOGRAMS

The graphic representation of social networks in the form of nodes and links is called a sociogram. The drawing of sociograms is an important step in visualizing networks, analyzing configurations and investigating relevant characteristics. The method in which sociograms are drawn should therefore provide a clear visual arrangement of nodes, balance the least possible overlap of edges, and represent elements of interest. This section begins by introducing the method used to draw and construct the sociogram, explains the different legends used, and finally represents the network in its final visual form which consolidates the variables explained earlier throughout section 7.1.2.

7.2.1. Method of graph drawing

NodeXL v.1.0.1.418 was the main software used to draw the network's sociogram. The software integrates several visualization layouts for the drawing of sociograms. The two most popular layouts usually used follow a "force-directed" algorithm and are called the Fruchterman-Reingold layout and the Harel-Koren Fast Multiscale layout. The force-directed type of algorithm generally focuses on placing strongly connected nodes at proximity to each other and the less connected nodes further away, guided by the "forces" of their connections (Hansen et al., 2010). The Fruchterman-Reingold is the default layout used by NodeXL that *"treats edges like springs that move vertices closer or further from each other in an attempt to find an equilibrium that minimizes the "energy" of the system"* (Semprebon et al., 2018, p. 8). The Harel-Koren Fast Multiscale layout on another hand prioritizes the configuration around clusters described as the "natural groupings". This layout is usually recommended for highlighting the key individuals in a network (Hansen et al., 2010). Other geometric layouts are also available in NodeXL including the Circle, Spiral, Horizontal and Vertical Sine Wave, Grid, Polar, Polar Absolute, Sugiyama (leveled), and Random. In any of the selected layouts, it could be necessary the run the algorithm several times before settling on an appropriate layout depending on what the user desires and considers a stable position. Additionally, nodes can be moved manually to avoid occlusions, and further visual edits may be incorporated in the network in the form of for example node and edge colors, shapes, sizes, opacity, and others. It is ultimately the subjective vision of the user that determines which configuration and visual characteristics are desired for display.

In the case of the study, the Fruchterman-Reingold and the Harel-Koren Fast Multiscale layout were the two algorithms that were relevant for drawing the network because of their

force-directed nature. A draft of each layout was conducted simply to examine the first visualization of the network. That was conducted without any deep consideration of formal representation and therefore without any fine-tuning of labels or legends. The first trial using the Fruchterman-Reingold layout configured node sizes based on in-degree, node shape and color based on the type of cluster (G1 in dark blue spheres, G2 in orange circles, and G3 in green triangles), and edge color based on being reciprocated (dark blue) and non-reciprocated (light blue) (Figure 113). This layout resulted in a configuration that concentrated important nodes at the center of the network and less important nodes progressively towards the periphery. Because of the high density, the multiplicity of links towards the center of the network between the more important nodes were significantly overlapping and obstructed. It was therefore decided to also test the Harel-Koren Fast Multiscale layout to inspect whether the arrangement prioritizing clusters would be more interesting (Figure 114). The same style of nodes and edges used in the first layout was maintained. Indeed, this second type of layout revealed an arrangement with a clear distinguishing between the network's clusters, which when coupled with other features at a later stage, was found to reveal much more attractive observations. It was therefore decided to retain the Harel-Koren Fast Multiscale layout. Other examples of the network's arrangement in different geometric layouts available in NodeXL can be seen in Figure 115.

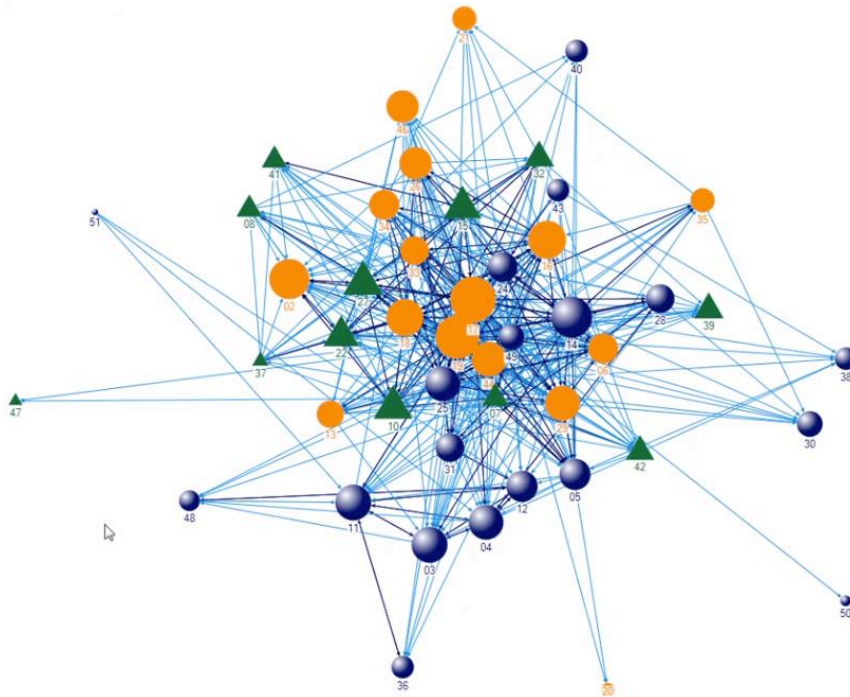


Figure 113: Draft arrangement of the network using the Fruchterman-Reingold algorithm layout in NodeXL.

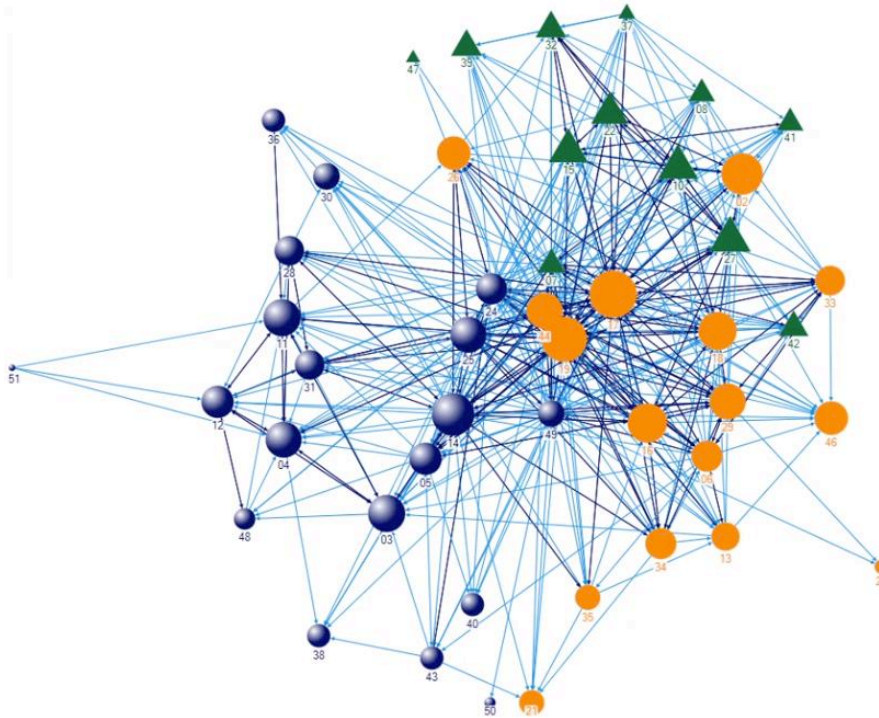


Figure 114: Draft arrangement of the network using the Harel-Koren Fast Multiscale layout algorithm in NodeXL.

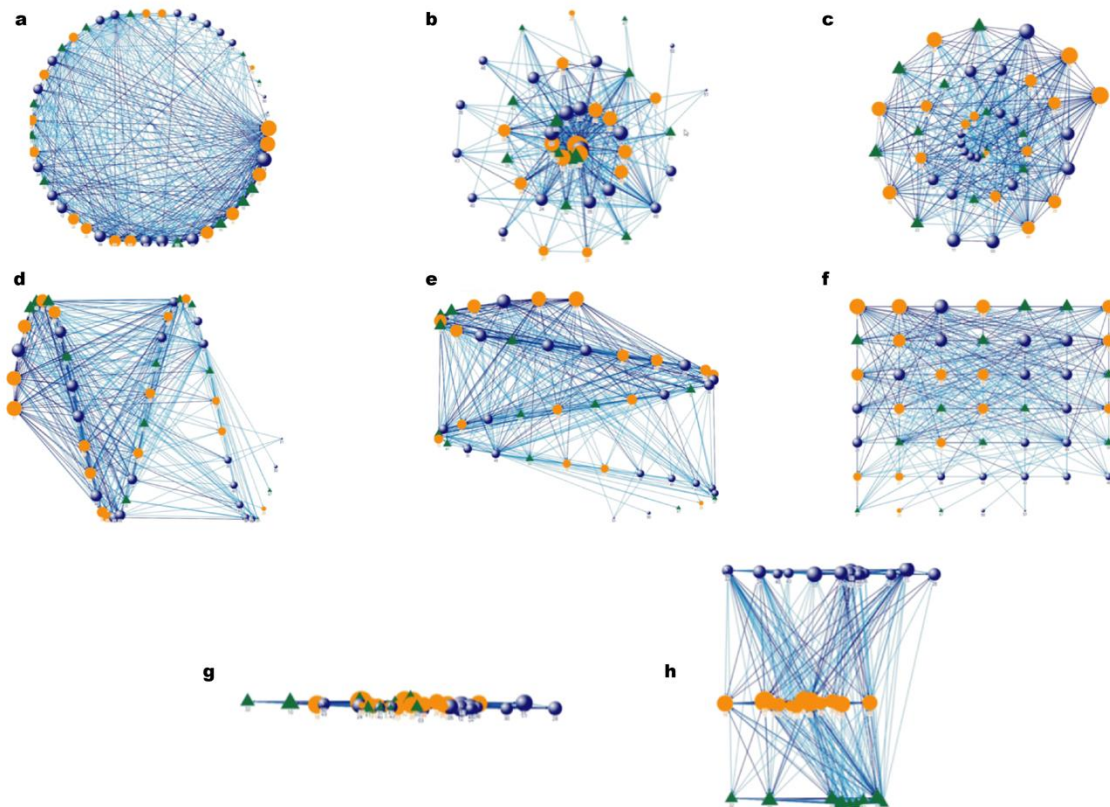


Figure 115: Other draft arrangements of the network using geometric layouts in NodeXL in the form of a) circle, b) spiral (increasing), c) spiral (decreasing), d) horizontal sine wave, e) vertical sine wave, f) grid, g) Sugiyama (mono-leveled), and h) Sugiyama (multi-leveled).

7.2.2. Consolidating compositional results in a sociogram

In order to achieve a global analysis in parallel with triangulated observations, it was preferred to begin by visualizing the entire network holistically. This is why the first sociogram presented combine the different variables and results realized in section 7.1.2. After that, the main observations noted in this global sociogram would be supported by different variations that will highlight specific information. Still, the combining of the different variables in one sociogram meant utilizing different forms of representation. This section therefore introduces the different approaches used to represent each variable on the global sociogram.

Starting with **Nodes** (i.e. vertices), each represent one cooperative and are visualized in the form of a sphere, for cooperatives interviewed in the categorization component, or circle for non-interviewed cooperatives whose line of work was found to be not related to food processing or *mūne* production. The size of nodes is proportional to the in-degree and is accordingly a reflection of the popularity. Hence, the larger the node, the more frequent that node was cited by other cooperatives. The color of nodes represents one of the five classes identified in section 7.1.2.5, i.e. the **Relational profile**, that each cooperative belongs to. Nodes can therefore have one of the following five colors, 1) Class 1 (Most intermediary and integrator actor) in Red, Class 2 (Important actors with many contacts) in Orange, Class 3 (Popular actors linked with important actors) in Yellow, Class 4 (Clique trends, less central actors) in Light Blue, and Class 5 (Isolated actors) in Dark Blue. Next, the label of each node first denotes the identification code of each cooperative. These codes were constructed on the basis of geographic location in the form of [Governorate] [District *caza*] [numerical order]. The governorate codes include either BH for Baalbeck-Hermel or B for *Beqā'*, while district *caza* codes include one of the following five options; B for Baalbeck, H for Hermel, Z for *Zaḥle*, R for Rachaya, or WB for West *Beqā'*. BHH1 for example signifies that this specific cooperative is the first in the list from the Baalbeck-Hermel governorate (BH) and is located in the *caza* of Hermel (H). Another feature of the label is the font and color that signify the class of **Brokerage roles** that each node belongs to. Node labels can therefore have one of the following 6 font colors, 1) Class 1 (Overall brokers) in Red, Class 2 (Overall itinerant brokers and gatekeepers) in Dark Pink, Class 3 (Distinct coordinators and/or representatives) in Orange, Class 4 (Distinct gatekeepers) in Yellow, Class 5 (Distinct liaisons) in Green, and the remaining in Grey have no brokerage role. Additionally, certain cooperatives are provided with a ring that surrounds their nodes. This feature represents the nodes that are **Hubs and/or Authorities**. These rings can have one of the following three colors, Hubs and Authorities in Red, Hubs only in Orange, and Authorities only in Yellow.

Clusters are delimited within borders that group the belonging nodes. These borders are colored in Purple for Cluster 1, Orange for Cluster 2, and Green for Cluster 3. Being a directed network, **Edges** are represented by arrows in the direction of the link between two connected nodes. Unilateral edges have one arrow pointing towards the recipient node and have a dotted line, while bilateral edges have arrows on both ends indicating the returned links and have a solid line. The color of edges depends on whether the links are internal to clusters (colored in Black) or external between clusters (colored in light Grey). The width of edges is proportional to the intensity of the relation which was determined by the sum of the five weights in the inter-relations questionnaire (refer to section 7.1.2.1). Finally, **Core levels** are represented by

translucently colored zones in the background of the sociogram. The zone in Red represents core level 4 followed by core level 3 in the Orange zone, core level 2 in the Yellow zone and the remaining of core level 1 in the White zone. The Red zone (core level 4) has the most concentrated links in which each of the 21 cooperatives belonging to that zone are directly connected to a minimum of 19 others. The Orange zone (core level 3) is inclusive of those in the red zone (21) with 9 additional cooperatives, meaning a total of 30 cooperatives are directly connected to 14 to 16 others in that zone. The same applies for the remaining core levels. The above features are consolidated in the global sociogram represented in Figure 116 (page 412). It should be noted that all values found in parentheses in the legends indicate the number of cooperatives or links that belong to the corresponding feature.

7.2.3. Sociogram analysis and observations

7.2.3.1. Global understanding of the network

When first observing the consolidated network (Figure 116, page 412), one of the first main remarks that can be made relates to the **apparent density and concentration of links** between the nodes over the entire network. A significant number of links exists (537) with respect to the number of nodes (47). The density of links is visually clear as seen by the heavy number of links that join nodes belonging to the same cluster and those that are in the background linking clusters together. This density is already calculated at 0.248 (existing links over the maximum possible links) indicating that almost one quarter of all links that could possibly exist are already formed in the network. Additional evidence of the high concentration of links have already been showcased in the overall metrics (section 7.1.2.3) and core levels of the network (section 7.1.2.4). Furthermore, the network in the *Beqā'* valley is so dense that the relations extend further than food processing cooperatives and reach other types of cooperatives that engage in other activities than preservation of *mūne* foods, such as dairy milk farms. These can be seen located normally at the periphery of the sociogram but nevertheless, they remain very aware and familiar with the food processing cooperatives. This shows how relations in food production across the *Beqā'* valley, at least in the cooperative sector, are very well dispersed along the valley actors. Other than that, the configuration of the network following the Harel-Koren Fast Multiscale layout that was adopted highlight the **important actors at a relevant central location**. Conversely, less central and isolated actors are seen to be located on the periphery of the network. Nodes that belong to the top performing classes in the relational profile and brokerage roles, specifically classes 1 and 2 of each, are seen located in the most concentrated core level relatively centrally at the heart of the network. Many of these nodes also registered upper values for in-degree, are therefore considered as popular, and are additionally hubs and/or authorities. Such cooperatives play strategic and key roles in mediating nodes internally in their clusters or in linking different actors together from the same or different clusters. These cooperatives also have a level of control from the incoming or outgoing flow of information and have the opportunity of negotiating and representing their cluster. Interestingly, these key nodes can be seen conveniently placed by the algorithm at the entrance of their corresponding clusters where their roles would best manifest. Examples would be in cooperatives BHB5, BHB12, BHB22, and BZ2 which are important gatekeepers. These actors specifically play a role at the entrance of their respective clusters by having whoever

external entity interesting at entering the cluster having to pass through them for further linkages to other cooperatives within their cluster. Yet, some paradoxes exist. As noted in section 7.1.2.6, coop BHB22 registered some of the lowest values for in-degree ($n=8$) despite being classed solely as the most intermediary and integrated actor in the network. This shows that factors other than the popularity (in-degree) of an actor have an impact on its consideration as important and therefore its placement in the network. The disparity between the in- and out-degrees of this specific actor are also reflected in its allocation as a hub only rather than both a hub and authority. Another example would be coop BHB13. The graph drawing algorithm found the most stable placement of that cooperative to be at the center despite it having no important relational profile nor brokerage role. In fact, this cooperative scored average values for the majority of its centralities and in- and out-degrees (13 and 8 respectively). This cooperative is also seen to have its major role as a distinct liaison, meaning it tends to play that role itself, individually, rather than having any impact at the large scale of the network. Interestingly, this is the only cooperative with that specific brokerage role (class 5- distinct liaisons) to belong to class 3 of the relational profile (class 3- popular actors links with important nodes) and to be located in cluster 2. The remainder of the 5 distinct liaisons all belong to class 4 of the relational profile (class 4- clique trends, less central actors), and are located in cluster 3. Other than that, coop BHB14 belongs to the relatively average class 3 of the relational profile (popular actors linked with important nodes) while being both a hub and authority. Such an observation provides a visual demonstration that the same actor can have a somewhat less central relational profile and brokerage roles yet still be a hub and authority. The visual inspection of the network therefore provides the opportunity to identify such crosscutting reflections despite having the conceptual theory clearly distinguishing between the different variables.

Other observations at the level of clusters show that cluster 2 hosts the two cooperatives with the most important brokerage roles that impact the connectivity of the entire network (class 1- overall brokers). This cluster also includes 4 out of the 5 cooperatives that are simultaneously hubs and authorities. Cluster 1 however hosts the most intermediary and integrated actor in the relational profile (BHB22) and the one remaining concurrent hub and authority. In that sense, it appears that cluster 1 is the cluster that gets cited, cluster 3 is the one that cites, and cluster 2 is the one that does both at the same time. Five out of the seven cooperatives with the second most important brokerage roles (class 2- overall itinerant brokers and gatekeepers) are found in cluster 1 whereas the remaining two are distributed, one in cluster 2 and one in cluster 3. Similar to class 1, these cooperatives are able to impact the network itself. This leaves cluster 3 with only one influential cooperative (BHB3) that plays a role impacting the overall network. That same cooperative also belongs to the second most important relational profile (class 2). All remaining cooperatives in this cluster have secondary individual role tendencies (known as distinct) and belong to either the average class 3 or less central classes 4 and 5 of the relational profile. This cluster actually houses 4 of the 5 distinct liaisons in the entire network. The latter could be viewed as a relative specialization in the individual role tendencies of its cooperatives although they have no influence at the larger network. BHB3 is also the only hub to exist in cluster 3 while 3 other authorities exist. These observations start to highlight certain **differences that distinguish cluster 3** from the remaining clusters 1 and 2. This statement resonates with the remarks made at different stages

of the results composing the sociogram in section 7.1.2. Cluster 3 is the smallest group in the community detection, showing the lowest number of inter-cluster links, and exhibits the lowest exchange rate in intra-cluster links. Together with the above reflections, it seems that cluster 3 tends to be less connected and its actors less influential than the other two clusters. At this point, it would be interesting to investigate whether the characteristics of the network analyzed above can be tied to any geographic logic. This step is performed in the next section using another version of the sociogram.

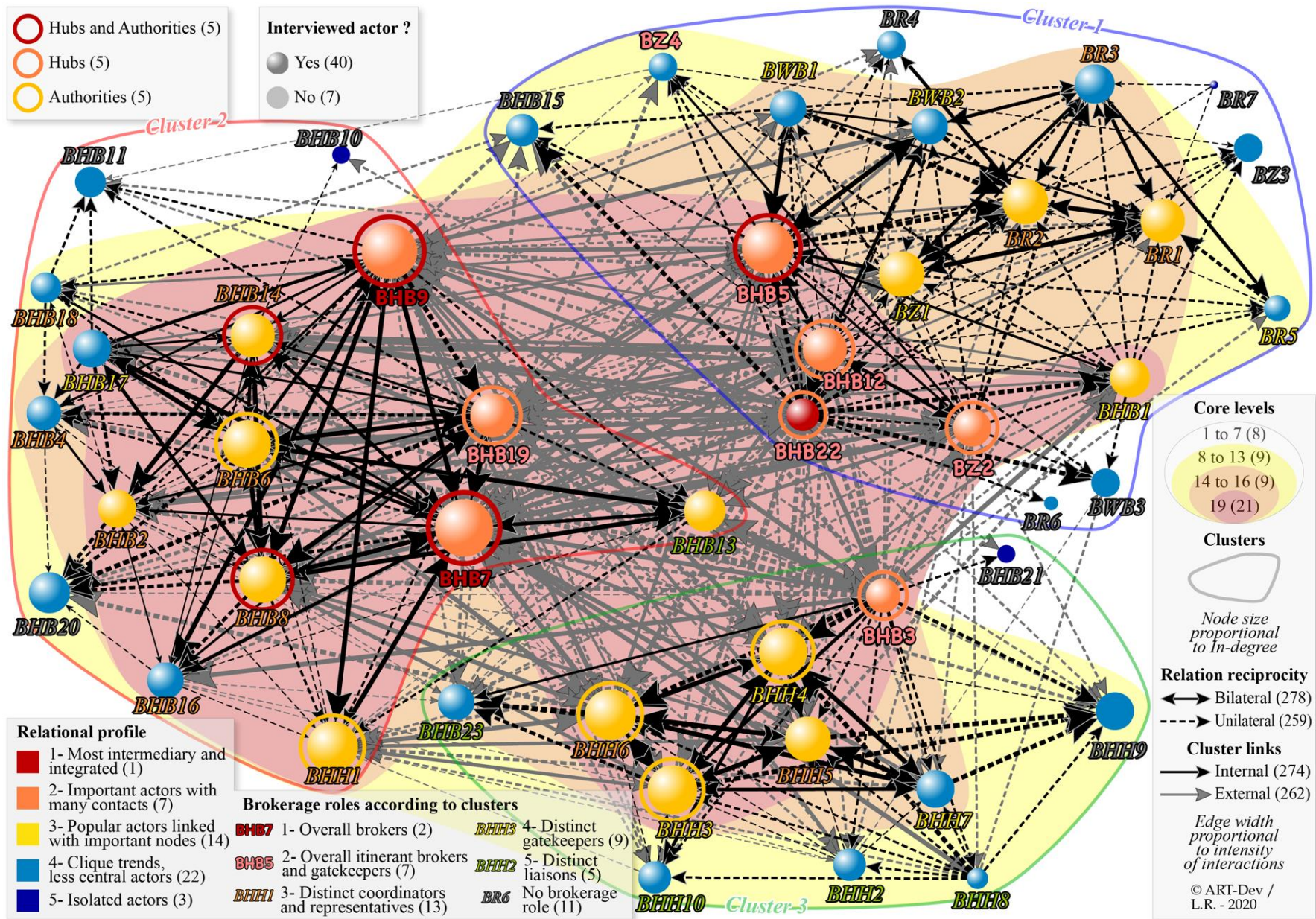


Figure 116: Global representation of the network of food processing (*mūne*) cooperatives in the *Beqā'* valley including the consolidated data treatment features as relational profiles, brokerage roles, core levels, clusters, and hubs and authorities. Source: Produced in collaboration with *Razafimahefa L., Jalkh R., 2020, ART-Dev, UM3.*

7.2.3.2. Geographic and spatial evidence

Since certain characteristics start to emerge from the first reading of the consolidated sociogram, then a new representation is mobilized in this section to attempt and investigate whether they could be linked to a territorial and spatial reasoning. Accordingly, Figure 117 (page 416) was developed to represent the distribution of the network per district *caza* where each cooperative is located. This was performed by integrating different colored background zones that delimited the nodes belonging to the same *caza*. It should be noted that non-interviewed cooperatives were not included in the zoning in order to restrict the spatial analysis only to relevant cooperatives working in the *mūne* production. The first look at this version of the sociogram indeed reveals an **apparent spatial disposition**. Clusters can be seen for the most part divided per geographic basis. Firstly, cluster 1 appears to group all nodes from the governorate of *Beqā'* (inclusive of the *Zaħle*, *West Beqā'* and *Rachaya caza*) as well as a few other actors from the *Baalbeck caza*. Cluster 2 is almost entirely comprising of cooperatives from the *Baalbeck caza* with the exception of one node from *Hermel* (BHH1). Similarly, cluster 3 appears to be formed of cooperatives from the *Hermel caza* but also with the exception of one node from *Baalbeck* (BHB3).

This composition equally reveals certain relational dynamics. Starting with the intra-cluster links previously demonstrated in Figure 109 (page 392), it is now clear that the *Hermel caza* depicted in cluster 3 is the least connected with the *Beqā' caza* depicted in cluster 1. In fact, these two are geographically the furthest in terms of distance from each other with the *Baalbeck caza* is located in between. Indeed, the *Baalbeck caza* depicted by cluster 2 demonstrated stronger connections to the other two areas (in terms of geographic proximity, *Baalbeck* is in fact located in between the further northern section of the *Beqā'* and the central and southern sections; refer to proximity analysis in the next section 7.3). Other relevant observations include Coop BHB3 for example which is one of the two cooperatives from *Baalbeck* to belong to cluster 3. This cluster inclusive of the nodes from *Hermel* yet coop BHB3 holds the most strategic characteristics of the entire cluster, knowing that its counterpart from *Baalbeck* coop BHB23 does not. Coop BHB3 is considered an important actor with many contacts, belongs to class 2 of the relational profile, and is an overall important itinerant broker and gatekeeper (class 2 brokerage roles). This outsider node therefore is the only cooperative from cluster 3 to have an influential role that is able to impact the network and equally demonstrates stronger connection and integration than its fellow nodes. Being an important gatekeeper, this cooperative therefore stands at the entrance of this cluster despite it belonging to a different geographic scale. Being an itinerant broker, this cooperative also links nodes together at the inside of clusters 1 and/or 2 while itself being in the third different cluster. Another example would be coop BHH1 which is the only outsider node originating from *Hermel* to belong in cluster 2 which is otherwise completely comprised of nodes from *Baalbeck*. Unlike the first example, this cooperative does not seem to play the highest of strategic roles in this cluster. This cooperative belongs to the average class 3 of the relational profile (popular actors linked with important nodes) and only plays a distinct role at its individual scale (distinct coordinator and representative). Yet, it is categorized as an authority which is therefore being cited by important hubs in the network. Moreover, cluster 1 which is associated with the governorate

of *Beqā'* has its strategic positions mostly dedicated to nodes actually located in another area specifically from Baalbeck. Three cooperatives are involved in that sense. These are coops BHB22, BHB12 and BHB5. Coop BHB22 is considered one of the most central and important nodes in the network, is actually from Baalbeck and belongs to that cluster number 3. Together with coops BHB12 and BHB5, they consist 3 of the 4 nodes that have high ranking relational profiles and therefore considered important, central and connected. The only cooperative belonging to the *Beqā'* governorate that has such a role in cluster 1 is coop BZ2 which belongs to class 2 of the relational profile. Other than that, only BZ2 and BZ4 from the *Beqā'* governorate have overall roles that are able to impact the entire network (class 2 brokerage roles). Interestingly, coop BZ4 is characterized a much less central actor (class 4 relational profile) despite playing such important brokerage roles. The remaining three of such important brokerage roles in that cluster are held by the above cooperatives from Baalbeck (BHB22, BHB12, BHB5). These cooperatives that are physically located in the upper northern section of the *Beqā'* valley but actively stand at the entrance of the cluster for central and southern *Beqā'* which actors tend to be less central to the network. They 'guard the gate' towards outsiders and have the ability to control the flow of incoming information or resources. Such observations begin to show how **strategic corridors of excelling cooperatives** exist in the *Beqā'* valley. Despite being in a different geographic space, such cooperatives are still able to hold key brokerage roles that seem vital for the connectivity of other spaces in the territory. In order to provide a spatial viewpoint of these results, a redistribution of the network is presented in Map 35 (page 417) on the map of Lebanon. This version of the sociogram delimits the *Beqā'* valley and its five district *caza* and indicates clusters in translucently colored background zones.

This global spatial view of the network also indicates the existence of different **territorial performances**. The sociogram first shows that the majority of authorities, 4 of 5, originate from the Hermel *caza*. Other than that, the major actors in the Hermel *caza* appear to have average relational profiles characterized as popular and linked with important nodes. Although these actors are popular, they remain somewhat less central than the excelling actors in classes 1 and 2 of the relational profile. The Hermel *caza* can be therefore understood as the **space that tends to be cited** by other hubs in the network. Conversely, the *Zahlé caza* in the *Beqā'* governorate **appears to be marginal**. As mentioned earlier, it has no authorities and includes only one hub (BZ2), which cites other authorities in the network and coincidentally is the only central cooperative in the network (class 2 of relational profile). The largest administrative division, the Baalbeck *caza*, groups the highest number of such relevant nodes. It holds all 5 nodes that have the superior dual functions of hubs and authorities simultaneously as well as 4 of the 5 sole hubs. The Baalbeck *caza* is therefore the space which is most efficient and familiar with the network actors. This sub-territory demonstrates an ability to cite (draw attention to) and be cited by (be the attention of) other hubs and authorities at the same time, in its own space and in others around the territory. Furthermore, the Baalbeck *caza* clearly includes the majority of the top-performing cooperatives. 6 of the 7 central cooperatives categorized as important actors with many contacts (class 2 of relational profile) along with 7 of the 9 cooperatives that have an 'overall' ability to impact the connectivity of the entire network (classes 1 and 2 of brokerage roles) are located in the Baalbeck *caza*. These results clearly validate that the **Baalbeck caza is by far the superior space** that can by itself be considered

as the heart of the network in terms of the number and performance of its cooperatives. The characteristics of cooperatives in the Baalbeck *caza* demonstrate their elevated ability to control the network's connectivity at its different spatial levels, the recognition and perception of its top actors, and their strong central positioning with important relational profiles. This performance is probably further strengthened by Baalbeck's central location in the valley situated between the northern Hermel *caza* and the mid-southern *Beqā'* governorate. The permeation of Baalbeck' cooperatives in the other two clusters is evidence of this observation and the strength of its relations with its neighbors. Yet, all observations noted in the social network analysis should ultimately consider that the majority of the cooperatives in the *Beqā'* valley are located in the Baalbeck-Hermel governorate (n=33) and specifically in the Baalbeck *caza* (n=23) which could lead to a higher probability of concentrated characteristics. However, the given observations indicate that the Baalbeck *caza* demonstrates by far its ability to control the network and could be considered as the heart of the network in terms of number of coops and in terms of performance and roles.

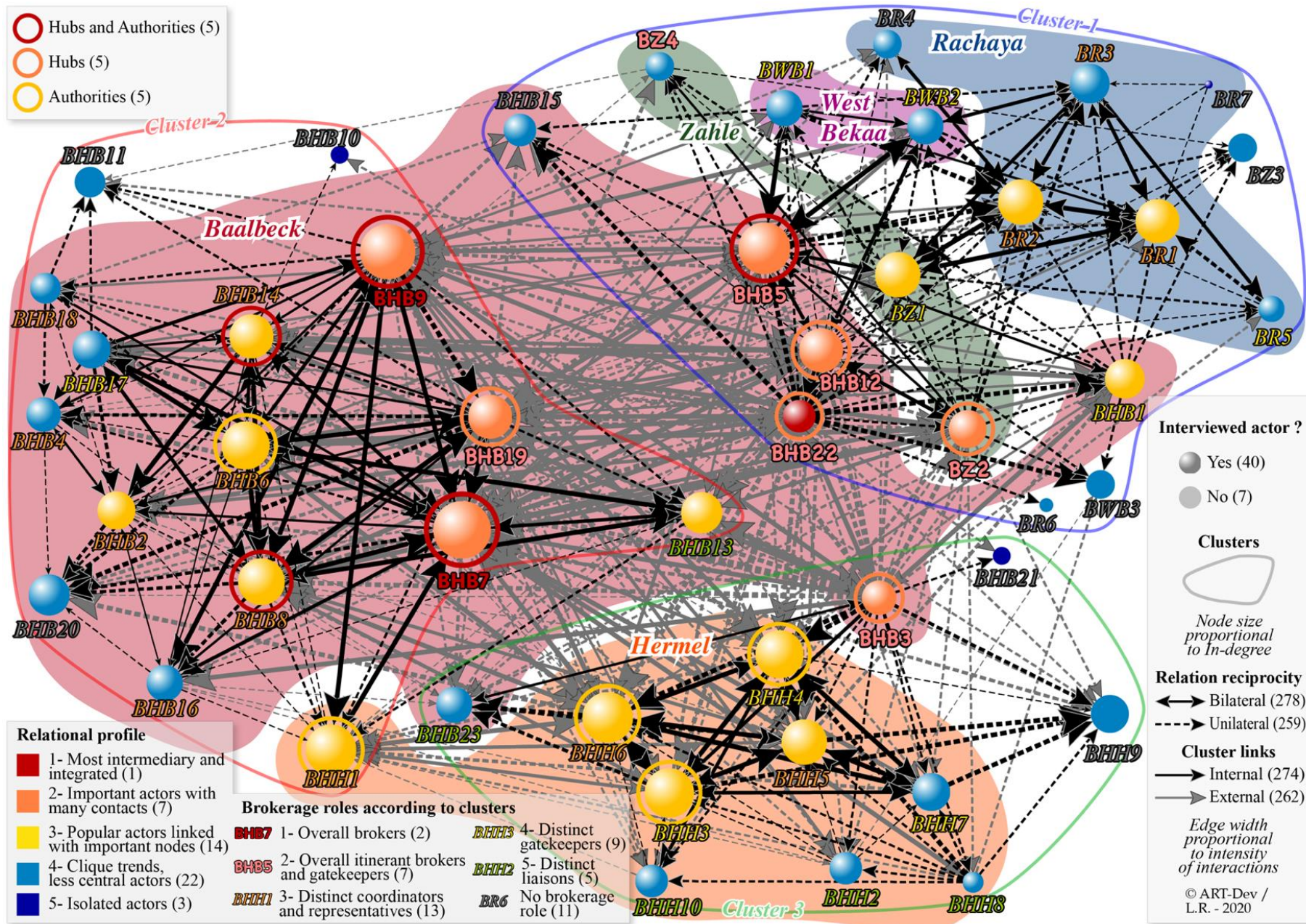
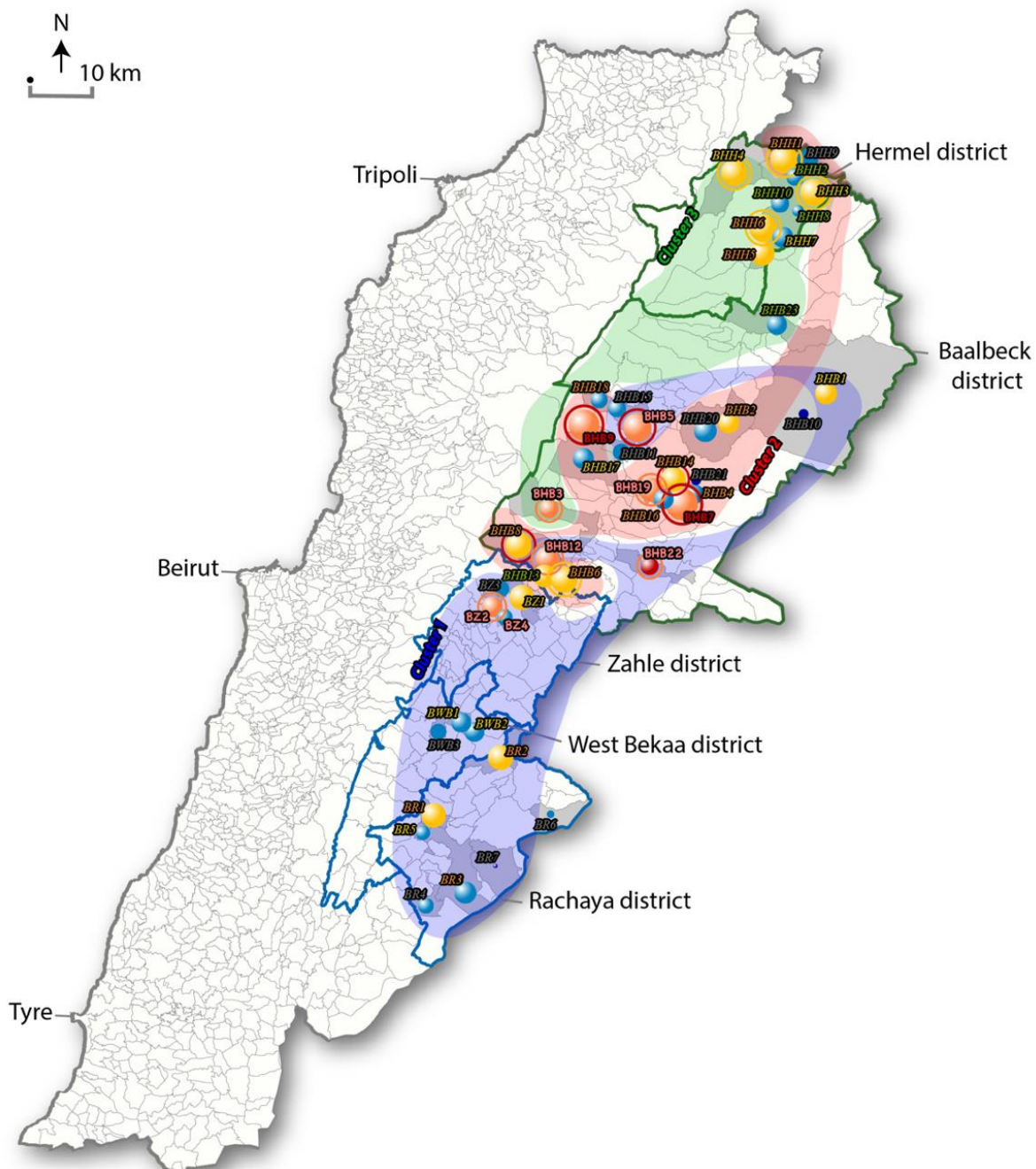


Figure 117: Global representation of the network of food processing (*mūne*) cooperatives in the Beqā' valley modified to showcase their spatial distribution at district *caza* level. Source: Produced in collaboration with Razafimahefa L., Jalkh R., 2020, ART-Dev, UM3.



Relational profile		Brokerage roles according to clusters		<ul style="list-style-type: none"> ○ Hubs and Authorities (5) ○ Hubs (5) ○ Authorities (5)
■ 1- Most intermediary and integrated (1)	■ 2- Important actors with many contacts (7)	■ BH17 1- Overall brokers (2)	■ BHH3 4- Distinct gatekeepers (9)	
■ 3- Popular actors linked with important nodes (14)	■ 4- Clique trends, less central actors (22)	■ BH35 2- Overall itinerant brokers and gatekeepers (7)	■ BHH2 5- Distinct liaisons (5)	
■ 5- Isolated actors (3)		■ BHH1 3- Distinct coordinators and representatives (13)	■ BR6 No brokerage role (11)	

Map 35: Global representation of the network of food processing (*müne*) cooperatives in the *Beqā'* valley repartitioned on the national map according to the spatial distribution at district *caza* level with the green borders belonging to the Baalbeck-Hermel governorate, the blue borders to the *Beqā'* governorate and the background colored zones affiliated to corresponding clusters. Source: Produced by author, *Jalkh R., 2021, LAGAM, UM3.*

7.3. CONCEPTUAL FRAMING OF RELATIONAL DYNAMICS IN THE SOCIAL NETWORK OBSERVED WITH FOOD PROCESSING COOPERATIVES

This section commences by introducing the concept of proximity and its different dimensions. This elaboration is formulated in an approach that highlights why the concept of proximity connects with the observations witnessed at the level of network of food processing cooperatives in the *Beqā'* valley. This section then moves on to dissect the possible dynamics that are at play in the different main dimensions of proximity in the local context. An extension is further provided on the changes facing that context especially following the post-2019 meltdown and their links to the status of proximity between the cooperatives and their environment. Finally, a conclusion is provided as a recap for the noteworthy information from the social network analysis component.

7.3.1. The concept and dimensions of proximity

In an attempt to explain the observations witnessed in the social network analysis of the cooperatives, a conceptual framework is mobilized at this stage. More specifically, the concept of Proximity is expected to help rationalize the trends in the relations observed within the network of cooperatives in the study territory. The concept of proximity is divergent and intertwines with many disciplines as geography, economics, sociology and mathematics. One literature review described the concept as ambiguous and as being defined in different sometimes contradicting approaches (Knoben & Oerlemans, 2006). The same literature review identified the dimensions of proximity that are mostly used, and these were listed as organization and innovation, regional development, and collaboration. Other areas of application of proximity can be commonly found in analyzing territorial clusters, innovation, and transfer of knowledge or technology (Boschma & Frenken, 2010; Martinus & Sigler, 2018; Moodysson & Jonsson, 2007). Despite that, it was opted interesting to apply the concept of proximity in Lebanon given its volatile and developing context, the specificity of the territory and especially with the results attained earlier. This section builds on the works of two main authors from two different schools of proximity. The first is based on the French school of proximity mainly through the works of Andre Torre and the second on the Dutch school of proximity through the works of Ron Boschma. The reason behind using the valuable work of these two front-runners is their integration of two approaches to proximity that are found to be relevant to the scope of the study. These are specifically the temporary geographical proximity (Torre, 2008) and social proximity (Boschma, 2005). Many other authors have also addressed the concept of proximity in its various forms, from whom we cite Bradshaw (2001), Burmeister & Colletis-Wahl (1997), and Coenen et al. (2004).

As its name indicates, proximity refers to how 'close' or 'far' any two units are from each other. Yet the understanding of closeness extends much further than physical distance. Several authors have identified different types of proximity. Naturally, spatial distance known as **geographical proximity** is one of the main types originally adopted. This basis concept of proximity is defined by Torre and Rallet (2005) as the "*kilometric distance that separates two units (e.g. individuals, organizations, towns) in geographical space*". In fact, the role of physical distance has been an underlying focus in classical economic and geographical

concepts for the study of economic localization and the existence or absence or interaction between objects (Zamyatina & Pilyasov, 2017). For the most part, geographic proximity is consistently defined and used by authors although it could be labeled as territorial, spatial, or physical proximity (Knoben & Oerlemans, 2006). Torre and Rallet (2005) further describe another type of proximity based on relations rather than geography and is labeled as ‘**organized proximity**’. Organized proximity is described by the authors as an organization’s ability to facilitate interaction between its members. The understanding of the term ‘organization’ is also described as any ‘structured unit of relations’ which could entail firms, administrations, social networks, communities, and others. This type of proximity therefore approaches members belonging to the same organization together due to the relations they share in their common membership compared to others outside the organization. As it focuses on man-made relations, this type of proximity is of a non-spatial nature and can be therefore mirrored in long-distance interactions. In the words of the authors, “*because organization is not geographic in essence, it has the ability to cross territories and frontiers*”. Torre and Rallet (2005) attribute two reasons behind organized proximity which are partly complementary and partly substitutable. They entitle them the *logic of belonging* (sometimes referred to as *adherence*) and the *logic of similarity*. The first is attributed to rules and routines created by an organization’s framework that ultimately directs its member’s interactions and behavior. These take form for example in a group of researchers or engineers in the same firm subjected to the same internal regulations. The second is described as a tacit form of proximity when members tend to be ‘alike’ in sharing a “*same system of representations, or set of beliefs, and the same knowledge*” when affiliated to the same collective entity. An example of that would be the easier cooperation between two researchers in the same scientific community that share possibly the same language, but more importantly the same “system of interpretation of texts, results, etc.” (Torre & Rallet, 2005). On another hand, Ron Boschma (2005) based his work on that of A. Torre, but depicted five instead of three dimensions of proximity. These are, in addition to geographical proximity, the **cognitive, organizational, social, and institutional proximity**. In an article by Nadezhda Zamyatina and Alexander Pilyasov (2017), the Boschma model was explained in simplified parameters that clarify each of the five dimensions of proximity. These are presented as follows. Cognitive proximity was described as “a common system of notions shared by potential actors of interaction, which is typically associated with common educational background, conceptual base, and specialized industry”. An example of cognitive proximity would be having two units belonging to the same subsector, such as two companies producing the same kind of computer games. Organizational proximity was described as “belonging to the same company” such as when having the two companies belonging to a same parent holding company. Social proximity was described as social relations and social capital “viewed through the lens of past joint projects” as an example of the two companies mentioned prior. Institutional proximity was described as “the degree of common norms and rules guiding the actors” such as when two companies belong to the same country therefore subjected to the same legal environment. Finally, the geographical proximity was denoted as spatial proximity and was defined in similarity to Torre and Rallet (2005), meaning it is “measured in kilometers in view of the distance between the companies’ headquarters”. The plurality of the concept of proximity was eloquently captured in the following statement by Zamyatina and Pilyasov (2017):

“In essence, the concept of proximity broadens the field of geographic research, shifting from a flat, one-dimensional world measured exclusively by spatial parameters to a multidimensional world that integrates different social, political, cultural, informational, and other spaces”.

(p. 198)

According to Boschma (2005), the underlining commonality between the different dimensions of proximity is that they reduce uncertainty and could provide solutions to coordination and the facilitation of learning and innovation. Yet, it is important to mention that the author himself acknowledges that there is little understanding of the combinations of these forms of proximity together, and this is what is attempted by this study. First of all, it has been repeatedly stated that geographic proximity alone is not sufficient in stimulating relations and synergies neither at the local level and especially not at large distances that require other forms of proximity to become effective (Boschma, 2005; Torre & Rallet, 2005). This can be understood by the fact that even if two individuals are found near each other, that does not necessarily translate in a relation between them. Yet, geographical proximity is mentioned to facilitate social proximity since being located in smaller areas increase the chance of random meetings favoring social interaction and trust building. Geographical proximity is therefore said to stimulate, complement and strengthen other forms of proximity (Boschma, 2005). In reference to social proximity, Boschma and Frenken (2010) indicated that this form of proximity is rooted in the literature of embeddedness, in which they cite Granovetter (1985) and Uzzi (1996). Economic relations are described by this literature to be embedded in social relations (this will be mobilized further in section 7.4.2). This is how Boschma linked the definition of social proximity to “in terms of socially embedded relations between agents at the micro-level” (Boschma, 2005). In that sense, the author framed social proximity as being a result of trust based on friendship, kinship and experience, and attributed it to repeated interactions. However, the issue of shared values as religion and ethnicity do not enter in the scope of social proximity. These are rather considered as a cultural form of proximity to which the author associated it to an ‘informal’ type of institutional proximity. This association was based on Edquist and Johnson’s (1996) definition of institutions as ‘sets of common habits, routines, established practices, rules, or laws that regulate the relations and interactions between individuals and groups’. Boschma (2005) indicated that institutions are able to aid or obstruct the transfer of knowledge as he described their function as a ‘glue’ for collective action that helps reduce uncertainty and lower transaction costs. He further distinguished between *formal* institutions that include laws and rules and *informal* institutions that include cultural norms and habits. The next section will mobilize the different forms of proximity mentioned above in attempting to describe the dynamics witnessed at the level of cooperatives in this study.

7.3.2. How proximity manifests in the territory and throughout the network of food processing cooperatives

In applying the above concepts on the territory in the *Beqā*’ valley with the network of cooperatives, one should recap that a strong geographical evidence was shown to exist as elaborated earlier in section 7.2.3.2 despite having a strong concentration of links generally.

This is especially true at the level of the spatial division of clusters with a higher concentration of internal links with respect to amongst each other (Figure 109, page 392). Cluster 1 is mainly affiliated to the cooperatives from the *Beqā'* governorate, cluster 2 inclusive to those mainly from the Baalbeck *caza*, and cluster 3 to those from the Hermel *caza*. Some intersections are highlighted in having certain cooperatives belong physically to one space but at the same time belong to the cluster of another space, indicating a stronger closeness in their relations with that other space. Some of these cooperatives are described as *strategic corridors of excelling cooperatives* as they play key brokerage roles and have central and premium relational profiles. Additionally, by analyzing the external intra-links between the clusters themselves (Figure 109), we can see that those of Cluster 1 (*Beqā'* governorate) and Cluster 2 (Baalbeck *caza*) have a higher concentration of exchanged links between them (61 and 62 links) than when compared with Cluster 3 (Hermel *caza*). Meanwhile, Cluster 1 and Cluster 3 appear to be the least familiar with each other as reflected by the lowest concentration of exchanged links (20 and 29 links). These two clusters also are the farthest from each other distance-wise and it therefore could be a geographic (im)proximity in this case which distances these two groups in both terms of distance and relations between them. In that sense, **geographical proximity** is evident at the heart and at the basis of the network structure, especially amongst the three major spaces commonly known to the *Beqā'* valley; the northern, central, and southern (referred to as *west*) sections (Figure 117 and Map 35). Ultimately, the *Beqā'* valley is altogether a territory that covers 4,000 km² equivalent to 38% of the country (Bou-Antoun, 2014) and Lebanon is generally one of the smallest countries in the world at 10,452 km². Not to label the territory as small or large, the topography of the landscape instead is what directs the description behind distances. The *Beqā'* valley itself, meaning the plane that includes the majority of the towns excluding the rugged outskirts or distant mountainous areas that are included in the administrative division, has a length of 120km and a width of 16km. The valley is therefore more lengthy than wide, is for the most part relatively flat and is surrounded by mountain chains on its east (Anti-Lebanon) and west (Mount Lebanon). The road network in the *Beqā'* valley mainly consists of a highway/primary road that basically extends along the length of the valley linking the main towns and converging next to the town of *Zahle* (specifically at Chtaura), the capital of the *Beqā'* governorate and the largest, administrative and central towns in the entire valley (Map 21 and Map 22). *Zahle* is then connected to the capital Beirut by highway which crosses the Mount Lebanon chain. This can be seen in the road network map of Lebanon (Map 18). Accordingly, the cooperatives situated on the distant extremities of the *Beqā'* valley would have to traverse in opposite directions on this primary road to ultimately meet at *Zahle*. This normally means traversing roughly only half the distance of the valley before continuing down to the capital and main market arena. Hence, this makes the valley more or less in an acceptable geographical proximity that is able to link between any two cooperatives fairly reasonably.

Yet, as Boschma (2005) states, geographical proximity alone does not mean that a relation will necessarily develop. Indeed, the strength and dynamics witnessed amongst the network's relations strongly suggest that other forms of proximity are at play. When basing assumptions on the conceptual framework that was elaborated earlier in section 7.3.1, **various dimensions of proximity** become suspected. The typology of relations represented in Figure 108 (section 7.1.2.1 page 390) demonstrates an interesting evidence in that regards. First, the typology clearly shows an overwhelming extent of familiarity existing between the cooperatives. 78%

of active relations are at least 5 years old, out of which 32% are over 10 years old (survey question number 2). Despite this intense familiarity between the cooperatives, it is normal not to attain the same intensity in technical exchange. The highest relatively intensities in the exchange of technical support were recorded in 26% (provided, question 4) and 20% (received, question 5) of links. An even higher level was recorded in social and trust relations. The exchange of social support and favors was recorded in 35% (provided, question 8) and 32% (received, question 9) of links. The willingness to get involved in these types of technical and social exchanges was much higher as cooperatives expressed these dispositions at 92% and 91% respectively. Trusting other cooperatives in joint marketing and sales ventures was registered in 87% of links. Even if the expression of willingness and trust does not translate into actual action, the results still demonstrate an impressive degree of openness of the cooperatives. Accordingly, it appears that it is not the fact that cooperatives *know each other* what stimulates a relation between them. Upon further inspection, it becomes apparent that cooperatives have common arenas where they assemble regularly. The typology of links provides such evidence in questions 7 and 11. Responses to these questions show that around 65% of links acknowledged the frequent grouping of cooperatives together in trainings and events, and over 23% taking part in joint promotion, marketing and sales ventures. Therefore, it appears that **external outside forces** are at play in repeatedly grouping the cooperatives through organized collective activities. The origin of these external forces are most probably led by development agencies and possibly private sector stakeholders mainly for food fairs. Seasonal exhibitions/farmers market are also commonly organized in Lebanon by local authorities and municipalities especially during the summer season, annual festivals and popular holidays. Addressing the involvement of development agencies has already begun with the results attained in component 1. Characterization results have shown that a significant number of cooperatives (almost 58%) receive frequent external aid on an annual basis from developmental sources in the form of equipment, capacity building and/or access to market (refer to section 5.2.1.3). It is through these initiatives where development agencies would regularly organize training sessions and occasional sales markets. Results of that first component also showed that as many as 65% cooperatives identified exhibitions as one of the main marketing channels they rely on for sales. Almost 43% also indicated them as their largest sources of turnover. These factors were even a strong determinant in the division of cooperatives into rural, semi-rural, and urban classes in theme 2 (spatiality). Therefore, it appears that many, if not the majority, of the network's cooperatives have a steady access to joint arenas and collective sales directed by what is being referred to as 'external forces'. Hearing these statements would not come as a surprise for local players, sector stakeholders or even the general public from Lebanon. The involvement of international aid has always been a clear element in the Lebanese arena and is sought after by national and local politics. This subject will be further elaborated later in another section.

7.3.3. Temporary joint venues – A melting pot for proximity relations

The repetitive meeting of actors in common settings has been addressed by A. Torre (2008), calling it *Temporary Geographical Proximity*. Given the development in transportation and information communication technologies (ICT) in an ever more globalized world, the building

of linkages and relations at a local and global scales have become facilitated. This has made geographical proximity progressively less important and only one of that ways in which transfer of knowledge can be achieved. It is not necessary today to have two partners located in the same space for them to collaborate, coordinate and innovate. Yet, A. Torre (2008) considers that the need of geographical proximity today is still essential and has not become negligible. However, it does not solely rely on the permanent co-location of units but has rather taken a different form. Instead of traditional approaches, short- or medium-term meetings are now considered sufficient to exchange information needed for cooperation. This statement has been compared to having two individuals meeting over lunch which consists a strong opportunity to strengthen social ties in this temporary encounter (Torre, 2008). Torre hypothesizes that people compensate the intermittence of their meetings and use their temporary co-location to maximize interaction and exchange. In the same sense, temporary geographical proximity plays similar dynamics in professional settings. Some of the venues for this type of exchange specifically was listed as trade shows, conferences, and conventions while the first was termed 'ordinary' venues such as head offices. The two venues differ according to the type of meeting and actors (Torre, 2008). Rychen and Zimmermann (2008) describe two similar parallel categories of temporary proximity in which the first '*temporary clusters*' consists of an organized temporary meeting point that allows contact, and the second is having one firm move from its location to that of another. They further describe that temporary clusters could help in the building of trust between potential partners given repeated encounters and consecutive professional gatherings. These have also been mentioned as sites for vertical and bilateral horizontal interactions (Rychen & Zimmermann, 2008).

Although not commonly organized at the same magnitude as conventions or trade shows, exhibitions and food fairs in Lebanon can in this case be aligned with the temporary clusters type of venue. The same could be said to grouped training sessions organized for collective capacity building efforts although it is not uncommon to have them under the other type of venue (traversing to the cooperative's location). That means being a space where exchange between actors is facilitated and actually integrated into the design of the event as an objective. Such events also serve connecting producers with their end-consumers directly which is hoped and said to help increase sales. In fact, such an observation has already been made by Delfosse and Bernard (2007) in affirming a relationship of foods with their origin of production. The authors clearly state that the different forms of direct sales aid in strengthening and promoting of the link of food products to their *terroir* of origin (3.1.1.1) therefore further asserting identity and especially if that was supported by the tasting of the foods (Delfosse & Bernard, 2007), which is the case in Lebanon's exhibitions. Being a collective space aiming to link producers together and with consumers, it appears that the **organized factor of proximity** does not emerge from inside the network itself but rather from a different player altogether. It seems that this outside directive force acts as the motor that is able to organize the cooperatives, share knowledge, facilitate interaction and stimulate the building of relations. Indeed, a correlation appears to exist between the increased intensity of joint ventures (Figure 108 questions 7 and 11) with an increased intensity in the remaining types of relations. The opposite wouldn't necessarily be true because it is the initial joint meeting that is expected to stimulate relations and collaborations and not the converse. Cooperative characterized as isolated tend to have much less intensity in that scope although their level of familiarity seems comparable but

somewhat less intense. Being a more or less homogeneous group of producers with comparable scientific knowledge and common sectoral activities that join them, then the **logic of similarity** becomes more prevalent in this case. It would logically even constitute a motive for external aid initiatives that would, on one hand, maximize collective impact and, on the other, reduce costs and effort associated to these projects. Vice versa, the same reasons constitute attractive benefit that prompt the cooperatives to repeatedly participate. Apparent fidelity and reliance on these form of collective venues is evident in the cooperatives' mobility since these events are most commonly organized in urban or peri-urban settings. Capacity building efforts could in fact be organized in both fashions, either collectively or solely and either in urban (organizer) or rural (attendee) environments since mobility is possible and reciprocal in that case. The connection between the building of strong relations and market share was noted in one of the interviews with rural women cooperatives conducted by Abou-Habib *et al.* (2013b), from which I quote: "*Company 4 has also emphasized the importance of personal relationships in order to increase market share. Strong relationships are due to an effective customer service or to building friendship that boosts trust especially in Arab countries where such relationships might be considered important*". Some testimonies registered by the same study shows success stories in some of these rural women cooperatives in their ability to develop their scope of work as a result of their participation in joint sales exhibitions.

Cognitive proximity is also certainly expected to link the cooperatives together naturally since all the network's actors have a long-held experience in the same specialized knowledge. They share essentially the same practices, the preservation of traditional local produce, and share similar working atmospheres. Temporary geographical proximity manifested in the form of temporary clusters organized by external stakeholders could ultimately be the source from which the building and strengthening of other dimensions of proximity is made possible. This could be especially true at the level of **social proximity** which, if stimulated by repetitive encounters and nourished by the logic of similarity, could feed into a solid form of social relations which are confirmed in the network. The same possibly applies to scales even larger than that of the network of food processing cooperatives from the *Beqā'*. The grouping of actors together would most probably mean extending the reach of these temporary clusters to other cooperatives from around the country. These types of arenas therefore present the same opportunity to build and strengthen relations and probably territorial bridges between cooperatives. In the same essence, these dynamic spaces would approach the producers to consumers directly without the interference of middlemen. In fact, Bathelt and Schuldt (2008) acknowledge in their popular journal article that temporary clusters in the form of food fairs are 'important events' in which face-to-face contact (geographical proximity) enables the exchange of information between different actors especially in relation to markets, products and innovation. These spaces recognized as being capable of supporting economic processes, interactive learning, and knowledge creation. Torre (2008) supports these views and used them to build what he considers are the three functions of trade shows today. These are first in terms of providing access to insider detailed information about the technologies developed and used by competitors or suppliers. The latter would not be possible to achieve in other means except with in-person (*in vivo*) examination. Second, is to enable face-to-face contact between the producers on one hand and with their consumers and suppliers on the other hand. Third, these spaces would allow existing partners to meet without the need to travel.

The influence of **informal institutional proximity** also cannot be forgotten especially with the presence of a shared social and specifically food culture amongst the players. The shared production of traditional preserved *mūne* foods would normally contribute to a common language and similar practices. Coupled with having similar objectives and being directed by common stakeholders, that would naturally create an opportunity for communication and approach the cooperatives together even further. The presence of different religious beliefs and sects amongst the cooperatives, which could constitute grounds for division and diverging political views, is a fact true not only to the *Beqā'* valley but to the entire country. Optimally, these would be desirably overcome by the shared socio-economic benefit resulting from the temporary clusters. However, more investigation would be needed on that part. Lebanon remains a country facing chronic uncertainties and political unrest and the repercussions of the post-2019 meltdown era are only starting to unveil. Torre and Rallet (2005) also acknowledge the issue of conflict, rivalry and negative externalities that could arise from geographical proximity despite having literature focus mostly on its positives.

In recap, it seems that cooperatives tend to have both territorial and a-territorial types of relations, and it is the a-territorial links that constitute a major fuel for their territorial relations. It was Torre and Rallet (2005) who stressed on the importance of distinguishing between these two types since organizations have a territorial origin, but their nature remains a-territorial in relations and interactions. Cooperatives in the study network appear to retain a territorial approach to operation in which they demonstrate strong ties to their surroundings. Their territorial relations seems to be based more on social and informal institutional proximity held together by the organized proximity managed by external forces. That same territorial dynamics are expected to mirror in their relations and interactions with players across the supply chain and market as well. Cooperatives however do not show any signs of benefiting from their geographic proximity to reduce production or transactional costs; a noted benefit from geographic agglomeration (Zamyatina & Pilyasov, 2017). Their relations seem to take hold in social rather than professional aspects which could also turn beneficial. Their a-territorial relations are suspected to be led by external forces as development agencies stimulated by their cognitive proximity and logic of similarity rather than being initiated proactively by the cooperatives themselves. Their temporary geographical proximity emerging from their assembly in temporary clusters such as food fairs and farmers market may in fact be needed for their survival and sustainability. Temporary clusters have been noted for their benefit and as being sites of vertical and horizontal interactions (Rychen & Zimmermann, 2008). Such arenas, especially in specialty food fairs could constitute an efficient means of communication with the general public. Such venues open the floor to highlight traditional local producers and encourage direct contact amongst producers together, with attending stakeholders and with consumers. One would expect these venues of in-person encounters to become more appreciated and sought after today especially following the onset of the COVID-19 pandemic and the extended periods of lockdown. Moreover, the themes of these events can be built to showcase the specificity and traditionality of the local preservation of foods which would feed into reviving and sustaining the collective culinary memory of the different territories and not only that of the *Beqā'* valley. The vibrancy that emerges from these types of direct contact therefore makes temporary geographic proximity, in addition to a source of economic return, a valuable opportunity and even tool that could be used to optimize potential

learning and transfer of knowledge. This is especially important for food processing cooperatives specifically because, unlike their common agricultural counterparts, follow different market channels, produce lower quantities, and most importantly create a direct manifestation of the local food heritage. Yet, being directed by external forces and international aid is probably reinforcing their territoriality. Not only do cooperatives appear attracted to participate in such temporary clusters and welcome the benefit of external aid, they in fact seem to **expect their arrival**. Such observations reinforce the statements made by Ghadban (2013) with regards to the reasons of why most cooperatives in Lebanon do not seem to abide by the seven principles of cooperation including the principle of autonomy and independence. These include a variety of contextual and individual reasons but are tied by the desire to channel international aid which is even sometimes coupled with the influence and interference of political parties. In that way, cooperatives would be adapting their strategies to receive such aid rather than responding to the needs of their members. However, the parallel point of view must also be considered. Since cooperatives lack funds and are subjected to weak centralized and institutional support, then cooperatives would probably not survive without any sources of aid, especially in hard currency. This becomes particularly true in today's context following the post-COVID-19 and post-2019 meltdown in which frozen bank accounts, severe inflation, extreme devaluation, lifting of subsidies, degrading infrastructure, import restrictions, rationed resources and regional geo-politics are gravely destabilizing operations. The question here could become whether the cooperative sector in Lebanon can be considered as one of the mitigation measures that could be mobilized and optimized. Ultimately, it would be interesting to recreate the analysis of social networks at an expanded scale that incorporates the cooperatives from other regions and their external network with other players in the agri-food value chain. Further areas of investigation would be recommended on the external forces that are able to steer the internal dynamics of food processing cooperatives. This could help in determining the specific sources of these external sources and how they overlap. An external social network analysis would also allow to understand whether the cooperatives have the potential capabilities for collective action alone as a closed group or decisively show if cooperatives are completely dependent on external support which extent impedes this action. For now, strong evidence exist on food processing cooperatives being typically territorial units that depend on external forces for increasing their chances of success. A clear demonstration of that correlation with active, isolated and dormant food processing cooperatives and their corresponding relations to agents of success would be appreciated.

7.3.4. Exemplary cases of collective joint venues and initiatives in Lebanon

It has become increasingly evident that venues that group cooperatives together in various extra-territorial activities, developmental initiatives or periodic events seem as dynamic temporary spaces to initiate interactions. These kinds of venues especially those for collective sales are actually common in Lebanon. It is not unfamiliar for one to encounter numerous events that resemble a merge between farmers markets and artisanal fairs especially in peak seasons as the Christmas holiday and summer festivals. It is also not uncommon to encounter the same women food processing cooperatives in several of these events. Many of the times,

the participating food cooperatives would be assisted by certain third parties or development agencies. This section presents specific examples of how these take shape.

Rural Delights Cooperative is one of these exemplary organizations. It is itself registered as a cooperative and it serves as a hub that pools a network of over 40 rural agri-food processing cooperatives from around Lebanon. I decided to start with this example because I have witnessed their work first-hand since 2013 by working with the cooperative on the formulation and execution of their projects. Rural Delights translates to ‘Atayeb Al Rif’ in Arabic and will therefore refer to it as “AAR”. AAR is the first marketing cooperative that received authorization to work across the entire Lebanese territory without being subjected to any geographic restriction. It was established in 2002 following a USAID fund implemented by the YMCA of Lebanon⁹² at the time under the SMART program (Stimulating Markets and Rural Transformation). Through that program, 42 cooperatives mostly comprising of food processing cooperatives were created. The main aims of the program was to provide rural women with income generating opportunities and enhanced livelihoods through the added-value preservation of fresh produce into traditional pantry foods. AAR was created specifically to serve as a marketing hub for this network of cooperatives in the capital Beirut and to maintain the sustainability of support after the conclusion of the fund. Hence the rural-urban linkages was purposely considered for AAR to bridge the rural food cooperatives with the main urban market in addition to other services. Without any exclusivity, cooperatives partnering with AAR are able to sell their products under a common brand-name owned by the cooperative. AAR controls product quality, safety, and labeling prior to market dispatch. AAR considers its brand-name as a collective basket which brings the urban consumer specialty products from different territories in Lebanon. This service reduces distances and the need for long commute to access these products thereby directly linking traditional rural producers with consumers without the influence of middlemen. Different types of services are provided by AAR to the cooperatives and includes technical uplifting and standardization of operations, cooperative management, capacity building, equipping, labeling and market access. Since its establishment, AAR evolved its operations and scope of beneficiaries and it started acquiring donor funds itself. It has worked so far with over 45 donor organizations, local and international development agencies and has been able to implement multi-million-dollar projects for the benefit of rural women processing cooperatives. The AAR model is usually attractive to stakeholders since funds would be directed from a centralized cooperative to dispatch support to a collective network rather than having agencies target cooperatives separately. In fact, **27 of the study’s cooperatives** from the *Beqā’* valley have been associated with AAR support either at the time of their creation or throughout their operations; a strong indication of the extent of networking attained. In addition, AAR invests major effort in partnering with other entities for the organization and participation in exhibitions. These take part regularly at high-traffic urban locations and cooperatives are usually invited to display and sell their products. The display and sales could be conducted under the collective brand of AAR or in certain cases under the cooperatives’ own brand depending on the organizers. In one rare initiative, AAR even partnered with the Directorate General of Cooperatives in 2016 where a large-scale farmers market called ‘Souk El Mawasem’ was organized and dedicated specifically for

⁹² <http://www.ymca-leb.org.lb/node/53>

cooperatives. The event grouped 40 cooperatives over 3 days in a prime location in the capital Beirut. The event proved as a successful yet rare intervention by an official public body but was a one-time event that was not replicated. Other marketing channels adopted by AAR include direct sales to consumers and access to sales outlets or retails such as specialty shops and restaurants. The cooperative also operates its own boutique in the Gemmayze street at Downtown Beirut but was unfortunately damaged during the Beirut port explosion on August 4, 2020 and has been closed since. The different axes of support injected by AAR and its reach to many agri-food cooperatives around Lebanon bring into light the various forms of activities in which cooperatives are joined together. This is one example by which cooperatives are approached together by an external source of organizational proximity, in this case by a cooperative. The chairperson of AAR even declares that a desired objective since the initiation of the SMART program was to pool the production capacities of the cooperatives together to achieve an economy of scale. Although that aspiration would have achieved a stronger market infiltration in face of private food industries, the disparities in the advancement and evolution trajectories of the individual cooperatives with time made that plan unattainable so far. Yet, different forms of dynamic relations can be seen in this case. It actively reduces distances between rural producers and the main urban market, prioritizes the optimization of production processes, and is in close relational proximity with major players in the public institutional and non-governmental arenas. AAR even actively engages women cooperatives in its governance by associating heads of its member cooperatives in its board. AAR is one of the rare examples that meet the criteria being assessed by this study. It focuses on a specific type of cooperatives, those that produce traditional preserved foods led by women. It recognizes the specific resource, its regional specificity, the required skills, women as main players, and their official organization under a legal entity.



Photo 18: Cooperative women from the *Beqā'* valley selling their products collectively at a local event organized by AAR in an urban city in Lebanon during the Christmas season 2021. Photo courtesy of Atayeb Al Rif (Rural Delights) Cooperative Instagram page (@ruraldelightscooperative)

Souk El Tayeb is another example where temporary geographic clusters are organized but by a private sector stakeholder. Souk el Tayeb is the first farmers market created in Lebanon in 2004 by the food pioneer Kamal Mouzawak and as an organization is registered as a social enterprise. The market is organized twice a week in the capital Beirut and joins a large variety of different small-scale individual or organized producers. The main products sold are usually organic and conventional foods, preserved *mūne*, fresh fruits and vegetables, ready-to-eat food, crafts and others. The market, which is the first of its kind in the country, is described by the organization's website⁹³ as “*more than just giving farmers and producers a place to sell their products - the market encouraged cultural exchange, serving as a platform through which people and local communities were able to share food, traditions, and conversation*”. The website lists 23 producers hosted in the farmers market and over 55 local suppliers for its shop. That number is not entirely comprehensive since some producers are permanent while others have the option of participating regularly or infrequently as they desire. The market has gained pertinent popularity amongst urban dwellers in Lebanon, becoming a reputable and repetitive destination for a significant niche market consumers. Being producer-centric, the novelty of this farmers market is based on the presence of producers themselves and their direct contact with their consumer⁹⁴ which, on a weekly basis, would evolve into relationships and recognition. The impressive popularity of the market and the acceptance of consumers for the traditional Lebanese experience allowed the organization to build on its success and evolve further initiatives. These include a series of restaurants called Tawlet (translating into ‘table’) employing rural women in weekly rotation for specialty cooking from various regions, traditionally themed guest houses called Beit (translating into ‘house’), catering services and online sales. Following the onset of the COVID-19 pandemic and economic crisis in Lebanon, a farmers shop called ‘Dekenet’ was launched by the organization in a prominent street in Downtown Beirut called Mar Mikhael. The shop is said to allow easy daily access for people looking to purchase traditional pantry (*mūne*) foods from the producers to whom they have grown to recognize. Similar to AAR, Souk el Tayeb applies strict safety regulations and quality control measures for all producers taking part in the farmers market. The applied measures include site visits, inspections and hosting of relevant training. The organization conducts these actions following its own internal quality assurance system that it developed, and producers must comply with a rules and regulations guide that they sign. These forms of control compensate for the absence of regular official supervision by public governing bodies which have been reported to be weak in their structure, application and differentiation for small producers and especially for these types of traditional ‘baladi’ products (Pugliese et al., 2013). Such systemic control is probably a main reason behind the wide recognition of the market since, in addition to traditions, it serves as a means of insurance for quality and safety. The importance of this component heightens when over half of the population in Lebanon are reported unable to trace the source of their food (Gholam, 2022). The distinction of its activities and different mélange of complementary initiatives hosted by Souk el Tayeb has been widely praised in Lebanon and internationally. Many acclaimed international journals have featured

⁹³ <https://www.soukeltayeb.com/story>

⁹⁴ <https://web.archive.org/web/20070609094437/http://www.soukeltayeb.com/soukeltayeb.htm#FIRST%20FARMERS%20MARKET%20IN%20LEBANON>

Souk el Tayeb in their publications such as *The Los Angeles Times*⁹⁵, *The Wall Street Journal*⁹⁶, *Gastronomica*⁹⁷, *50 best*⁹⁸, and others. The Souk has also been mentioned in some scientific publications as well (Gholam, 2022; Pugliese et al., 2013; Taher, 2018; Tleis et al., 2017). Souk el Tayeb mainly focuses on organic products which is normally certified by one independent body in Lebanon following EU standards. This is one of the differences that exist between this type of collective sales venues and others that promote natural authentic rather than strictly organic certified products. Souk el Tayeb also hosts for the most part individual small producers or groups of producers but not strictly cooperatives. Although some cooperatives, or their members, participate with the farmers market, Souk el Tayeb refers to them as ‘producers’ and does not signify their cooperative status. Being a private social enterprise, the participation of the producers is usually not free of charge like those organized with the support of donors and development agencies. Other than that, Souk el Tayeb is a market with fixed weekly dates unlike many other events which are usually organized and announced more sporadically in certain high seasons. It remains a leader in highlighting Lebanese culinary traditions and specificities, but other similar initiatives led by private stakeholders, local authorities or heritage organizations are also rising. These are for example the Badaro Urban farmers market, Souk Aal Souk, and the most recent La Campagne En Ville by Nature.



Photo 19: A picture taken at Souk el Tayeb's farmers market in June 2021. Photo credit: Souk el Tayeb's Facebook page (@soukeltayeb).

The *Food Heritage Foundation* (FHF) is another example where temporary geographic proximity and external sources of organizational proximity materialize with rural producers in general and with women food cooperatives in specific. FHF is a Lebanese non-profit organization that aims to preserve, document, promote, and revive the fading local food culture and its traditions. The organization is supported by a research and academic institution, the

⁹⁵ (Roug, 2007)

⁹⁶ (Morrell, 2015)

⁹⁷ (Rogov, 2012)

⁹⁸ (Sgarbi, 2022)

Environmental and Sustainable Development Unit (ESDU) of the American University of Beirut. Other than documenting traditional recipes which FHF considers are vanishing, the organization implements several developmental and awareness initiatives. Through these initiatives, many local producers are usually mobilized. They include small producers and mainly women groups in rural areas out of which are cooperatives amongst others. The main axis of projects include for example FHF's mobile farmers market 'Souk Aal Souk', rural community kitchens in its 'Akleh Kitchen' initiative, rural food trails in higher Shouf and West *Beqā'* areas in its 'Darb el Karam', and their newly launched line of preserved *mūne* foods called 'Food and Roots'. In these diverse activities, FHF is able to organize women cooperatives such as those relevant to this study, provide them with capacity building, implementation of development initiatives, and finally link them with its farmers market and sales efforts in the capital Beirut. FHF is another example of how cooperatives in Lebanon that preserve traditional foods are able to join and benefit from sources of external support. In this case, the source of support is from a non-profit organization that specifically focuses on culinary heritage and its traditions. In its views towards *mūne*, the organization published an article⁹⁹ on its website specific to that topic in which it states: "Getting good quality fresh food is essential in the process of *Mūne* production, but what is less valued and often overlooked in social sciences is the fact that foraging the right food requires time and knowledge". In that statement, the organization acknowledges not only the technical specificity of local food preservation but also the specific talent and knowhow in the acquisition of raw material and processing. In relation to its activities and focus on preserving local food heritage, FHF was also recognized in several publications (Kilchling, 2018; Lauridsen, 2020; Moumani & Momani, 2021).



Photo 20: A picture taken during Souk Aal Souk farmers market at the American University of Beirut in December 2019. Photo credit: Food Heritage Foundation Facebook page (@foodheritage)

⁹⁹ <https://food-heritage.org/the-importance-of-mūne-provisioning-in-lebanon/>

7.4. HOW FOOD PROCESSING COOPERATIVES IN THE *BEQĀ'* VALLEY ARE EMBEDDED LOCAL ACTORS IN THEIR TERRITORY AND THROUGH THEIR SOCIAL RELATIONS AS A RESULT OF PROXIMITY FACTORS

This section will put in focus how the food-processing cooperatives in the *Beqā'* valley exhibit evidence of being embedded in their territories and on their surrounding environment as well as together and with end consumers. This section will briefly introduce the concept of embeddedness along with the evidence that can be used to indicate how cooperative are locally embedded organizations naturally and socially within their respective territories in the *Beqā'* valley.

7.4.1. The theory behind embeddedness

The understanding behind the concept of embeddedness is variable and wide. When looking at the definition of the word, embeddedness means having the quality of being embedded in the meaning of being “*firmly and deeply ingrained or fixed in place*”¹⁰⁰. When inspecting the Britannica dictionary of social sciences, the meaning of the word embeddedness expands to include “*the dependence of a phenomenon—be it a sphere of activity such as the economy or the market, a set of relationships, an organization, or an individual—on its environment, which may be defined alternatively in institutional, social, cognitive, or cultural terms*”¹⁰¹. This definition takes the word from being directly linked to a place and adds other dimensions of social relations, the environment, the market and others. Going back to literature, the French school usually uses two notions for the same concept; either ‘*embeddedness*’ or ‘*anchoring*’ in reference to the concept of ‘*ancrage territorial*’ in French which refers to the **link between the terroir and a particular location** (Dedeire & Tozanli, 2019). When moving in line with that understanding, then components of *natural*, *social* and *heritage* are normally inclusive in the notion of *terroir* (refer to Box note 12 section 3.1.1.1). Another approach is that which was presented by Moity Maïzi and Bouche (2011). The authors approach embeddedness (anchoring) of products in their locality of production through the transfer of knowhow over generations and thus having a cultural and heritage component. They apply it to the case of Corsican cheese and describe a cultural embeddedness in a territory which can be identified by practices and socio-technical networks and is preserved by memory. The authors further use the reasoning of Bérard and Marchenay (2007) in their argument that food carries an identity through its physical and organoleptic characteristics and the raw material they come from and which rise from their place of origin (and therefore the one to which they are embedded to). Added to that are the aspects that historical and cognitive characteristics that are incorporated in the evolution of production systems in the creation of end products and this aspect is mainly communicated by methods such as certifications.

On another hand, when inspecting publications from English-speaking scholars, it becomes quickly evident how embeddedness tends to be mobilized more within the frame of **social**

¹⁰⁰ Definition by the Oxford language dictionary for the word ‘embeddedness’.

¹⁰¹ Definition of ‘embeddedness’ in social sciences by the Britannica dictionary
<https://www.britannica.com/topic/embeddedness>

connection and relations (Hinrichs, 2000; Winter, 2003). This is said to have commenced by the early works of Polanyi (1944) and later developed by Granovetter (1985). What is certain is that social relations were core to the development of the thinking behind embeddedness in that line of work. Surely enough, when applied to food systems and networks, a relevant component of explaining embeddedness was directly linked to the relations and behaviors that are held at the level of consumers with food, and especially with the ‘quality’ parameters of that food. As we have seen earlier in Part 1 section 1.1.3 (page 40), consumers today are much more conscious to the food they ingest and in terms of the implications that food has on health, the environment, and the ethics behind its production. This was matched by a progressive opposition to the industrialization of food commodities and with a growing preference return for foods that are considered as *natural*, *traditional*, and *healthy*. This is where the significance of ‘local’ foods and ‘quality’ (refer to Box note 1 section 1.1.3) is raised and becomes a pillar in understanding this social embeddedness when it comes to food. As we have also seen earlier, quality is a socially constructed concept which links to various components of the food as organoleptic characteristics, packaging, convenience, origin and link to the locality, health and safety. The way quality is perceived and measured is in itself apt to change and adaptation with time and evolution of societal norms in terms of its constituents which can entail tradition, authenticity and others as mentioned by Winter (2003). In his study conducted in several regions in rural England and Wales, the author was surprised to find that customers are much more likely to purchase locally produced foods than organic foods. He interestingly recorded that three quarters of his interviewed sample mentioned their preference to purchase food that is produced from the surrounding farms and out of which 41% were actually returning regularly on a weekly basis (Winter, 2003). The author corresponded these findings to the embeddedness of the social relations of consumers being grounded on the basis of trust between these consumers and the local producers and constituted what is referred to as the function of this consumption behavior and its capacity to ‘make sense’ (.ibid). Finally, one of the major comments shared by the author is that the evidence that was observed in his study reveals the possibly hidden potential for conventionally produced foods. He considers that farmers do not have to be pressured to convert to organic production in order to capture new or niche markets but instead the potential could be in their responding to the demand for locally produced foods (Winter, 2003); and it is this point that stands very interesting to the context of the *Beqā'* valley specifically and Lebanon generally. In line with Winter’s views and published even prior, Hinrichs (2000) also assessed the embeddedness of local food systems with the focus on social relations and especially those that took place during the close contact between producer and consumers such as in during farmer’s markets. The author explained how in such a setting, two aspects are at play. On one hand, there is the innate non-economic spirit which is found in markets generally. This is because markets themselves are institutions that are structured socially and incorporate cultural norms. Embeddedness in such cases revolve around social connection such as trust, and this is an even more profound characteristic when it comes to farmer’s markets. On another hand, the economic aspect is at play and is never completely absent even in the cases when local producers are in direct contact with their consumer. The author explicitly says that “*social ties and personal connections in no way preclude instrumental behaviors or the relevance of price*” (Hinrichs, 2000, p. 296) and this is what is referred to as the marketness and instrumentalism. The complete scenario in areas of direct

contact such as in farmer's markets becomes the incorporation of tension between these two aspects; the embeddedness of social relations and the instrumentalism of its economic objective. This also becomes an interesting approach to the Lebanese context in one of the more popular platforms for selling rural preserved *mūne* foods; food exhibitions.

One group of scholars from the English-speaking world share similar views on embeddedness to the French school. They are Jonathan Murdoch, Terry Marsden, and Jo Banks. In their article, the authors analyzed these approaches in the context of the food sector. They clearly conveyed how the change in consumer behavior is feeding on the what they consider is the link with nature. In turn, this raises a dual characteristic of food; one which is natural and one which is social. Murdoch *et al.*, (2016) first acknowledge the social component as analyzed by Hinrichs (2000) and Winter (2003) in terms of the socio-economic relations that exist. The authors describe that as an '*interplay between the economic and the social*' and is one which could raise challenges at the level of stability for such commodified relations. At the same time, the authors explain how the conditions of the local space have an effect on the sector of agriculture, the quality of products and thus this impedes their industrial transformation, which constitutes one of the components of the appreciated quality coming from the nature of the locality. They describe that connection of the product to the nature as "[...] *this product is deeply embedded in a local ecology of production and, when sold, carries many traces of this locale along with it*" (Murdoch et al., 2016, p. 117). In that component, the authors' analysis move in line with that of Dedeire and Tozanli (2019) and that of Moity Maïzi and Bouche (2011) and come to the conclusion that embeddedness in fact can have an extended understanding that is not only relevant to social ties but is one which is also inclusive of both natural and social relations (Murdoch et al., 2016).

7.4.2. How embeddedness becomes the outcome of proximity with the network of food processing cooperatives in the *Beqā'* valley and mobility of *mūne* foods

When applied to the context of traditional preserved *mūne* foods, food-processing cooperatives and the *Beqā'* valley, the above understanding of **embeddedness can be analyzed on several levels**. These include both the natural (territorial) embeddedness in their locality as product and as producer, and the social (relations) embeddedness at two levels (***which I will arrive to show that they are fueled by the different forms of proximity***); those internal to the network of cooperatives between each other and those external that connect the cooperatives of the network to other actors which are mainly consumers and development agencies mostly in the urban environment. First, the preservation of *mūne* foods is an activity which is **directly linked to the surrounding locality** as it is normally based on preserving what seasonal produce from plant and animal origin that are cultivated per each area. Therefore, it depends first and foremost on the types of raw produce of the *Beqā'* valley. And as we have seen in Chapter two, the *Beqā'* valley is characterizable and can be considered as a territory that can be constructed, is predominantly agricultural (a backbone to the agricultural sector of the country and which enters in the livelihood of a significant portion of the population), and has a strong societal relationship rooted in the production and consumption of traditional foods. It has typical geo-climatic conditions which distinguish it from the remainder of the country. These conditions (whether by soil, climate, temperature, precipitation, water, irradiation, and

others) impose themselves on not only the type of productions that could be cultivated but rather have an effect on the quality of the harvested raw material used to create the wide range of preserved foods. These therefore create a unique connection between product and its locality *terroir* and thus fall in line with the understanding of Dedeire and Tozanli (2019) and Murdoch *et al.*, (2016). Additionally, we see that *mūne* has a strong connection to heritage and culture and include various aspects to its specificity. As explained in Box note 6, these could be the 1) types and quality of primary agricultural produce, 2) skills and knowhow applied in traditional preservation practices, 3) specific generation-old recipes with regional variations, 4) effect of local geo-climatic conditions and 6) social settings and ways of consumptions. Together, these feed into the local identity and relationship that has evolved between the local space, humans, and their manipulation and transformation into unique end products over time. This cultural heritage component and transfer of knowhow over generations is in parallel to the understanding of Moity Maīzi and Bouche (2011). We also see that the cooperatives engaged in the preservation of *mūne* foods today are highly dependent on their space of production for the conducting of their activities (refer to chapter 5). Over 80% of food cooperatives purchase their raw material directly from local farmers within the district level in the *Beqā'* valley (Map 34). These dynamics therefore present strong evidence of the embeddedness of not only the *mūne* as product but the action of its production to their natural locality of origin. We add to that the fact that **cooperatives are inherently locally embedded actors** as reflected in the structure of their model and principles (section 4.1.2) (Levi & Pellegrin-Rescia, 1997). They are also mandated as such by the Lebanese national cooperative law and especially through their principle of number seven; concern for community, which is a principle which should be reflected in their financial contribution of community-based projects as well.

Secondly, the analysis of embeddedness for food processing cooperatives equally entails a **strong dimension based on social relations**. These were seen at the inter-territorial and extra-territorial levels which are fed by the various forms of proximity as we saw earlier in section 7.3. At the **inter-territorial level of social embeddedness**, we see that food processing cooperatives all belong to a tightly-knit network which is characterized with a very high concentration of connections, meaning that cooperatives not only know each other but have various forms of relations that join them. As dissected in section 7.2.3, these could range from a simple familiarity (cooperatives simply know each other) to cooperation at a business or personal level whether through the exchange of information or other services on a business or personal level. The high extent to which the **cooperative network is highly connected** was reflected by the density of the links as we have seen that almost one quarter of all links that could possibly exist are already formed in the network. We have also seen how it takes less than two social connections to link any two nodes in the network as reflected by the Average Geodesic Distance of the network (1.63). The density of the network and its connectivity are so immense that even cooperatives engaging in other activities in the *Beqā'* valley which are not relevant to the network, such as milk collection cooperatives, have detectable and quantifiable links also. All these indicate how the network of food preservation cooperatives are densely connected and in fact the cooperatives **depend on each other whether in the dissemination of information or others**. This has been clearly reflected by the roles in which the SNA step has revealed earlier. For example, we see that the two cooperatives BHB7 and BHB9 in cluster 2 (both belonging to the *caza* of Baalbeck) have an exceptionally high and

potent level of all brokerage roles (refer to chapter 6 section 6.2.5) and this means that they are able to engage as coordinators (linking two nodes together within their own cluster), itinerant brokers (indirectly connecting two nodes of the same cluster while itself belonging to a different cluster), liaisons (connecting two nodes in different clusters while itself belonging to a third different cluster), gatekeepers (linking an incoming outside node to a node belonging internally to its cluster), and representatives (linking an internal node belonging to its cluster to an outside node from another cluster). At the same time, these two nodes specifically were hubs and authorities meaning they registered the highest levels of in-degrees and out-degrees which means they are popular and significantly known by other cooperatives in the network and they themselves know a significant portion of other cooperatives in the network. Given their central position, they are also important actors with many contacts as they recorded high levels on their betweenness centrality, in-degree, out-degree, closeness centrality, and Eigenvector centrality. What this means is that the position of these two cooperatives is important not only for the members of their own cluster but also to the position and benefit of members of the other two clusters. Similarly to these two overall brokers, there are seven other cooperatives categorized at overall itinerant brokers and gatekeepers which signify the dominance of these two roles in their characteristics and impact they are able to achieve at the level of the entire network. Cooperatives having these roles are found in all three clusters although their distribution is not equal nor homogeneous. In fact, cluster-wise, 5 out of the 7 are found in cluster 1 (associated with the central and south *Beqā'* region), whereas the remainder 2 are found one in each of clusters 2 (associated with the Baalbeck *caza*) and 3 (associated with the northern *Beqā'* Hermel *caza*). This shows that in terms of their links (thus relations), cluster 1 includes the highest number of this class of roles. However, and in terms of geographic distribution, 5 out of the 7 cooperatives are in fact located in Baalbeck (northern *Beqā'*) whereas the two remaining are found in *Zaḥle* (central *Beqā'*). This is an interesting depiction that shows how even though a group of cooperatives has a geographic proximity component which from one hand feeds their relational links, they in fact **could be closer in their links to cooperatives located at a further distance** although there is a dominant geographic distribution to the clusters generally. These are what were referred to as the strategic corridors of cooperatives that bridge geographically and have more expanded links within the network (Map 35). We could then start to see how the embeddedness of the cooperatives could be driven by the various forms of geographic and organized proximity.

We have equally seen that the organized proximity factor that drives the network does not originate from within the network itself but is originated from external outside forces. This was apparent by the common responses of food cooperatives assembling together in grouped activities in joint arenas. The activities that assemble the cooperatives together were found to range from trainings and events to joint promotion, marketing and sales ventures. These spaces were depicted as temporary joint venues. The organization of such collective activities therefor was mostly being performed by development agencies and possibly private sector stakeholders mainly for food fairs. In that sense, two types of **extra-territorial motives for embeddedness emerge**. The first are the *social relations that link the food cooperatives with direct consumers*, and these are mainly in urban markets and poles of population concentration (and migration) in or around the capital Beirut mostly. These regions as we have seen, given the internal movement of people, have become spaces where a significant portion of residents

originate from rural villages and therefore retain a strong link to the land and tradition and thus tend to have a strong loyalty to the consumption of traditional Lebanese foods. The second extra-territorial motive for embeddedness are those that *link the food cooperatives with the source of organized proximity and specifically those of the temporary joint venues* thus the agencies that engage in the development of the agri-food sector in the country. Together, these two create a space of direct interaction through which the identity of the products and producers are communicated and through which the trust factor is built. Here, I recap the interesting notice of Winter (2003) when mentioning that, given the trust factor of consumers to their local producers, it is not particularly necessary for farmers (and by extension *mūne* producers) nowadays to convert to organic production for them to capture market share but could in fact respond to the unprioritized demand for locally produced foods. When we recapitulate the forces at play, we see that *the different forms of (inter-territorial) geographic and (extra-territorial) organized proximity, including temporary joint venues, are the factors and logic of interaction which result in embeddedness as an output whereby food cooperatives are embedded both in their territory (natural) and in their relations (socially inter-territorial and extra-territorial) with the driving force being the cultural significance of traditional preserved mūne foods.*

Finally, the last interesting point to be raised is one which is related to the **mobility of *mūne* foods**. Murdoch *et al.*, (2016) mentions that local food chains would be impacted if food is to be transported further than its immediate location of production. The author referred to the complicated embeddedness and disembeddedness in such cases. He says that if food products were to become highly domestic then they would probably not be able to travel far and would thus have a dominant character of embeddedness. However, if food products were to be taken far from their context of production, the longer distances would entail having an industrial characteristic that could disfavor the consumers aware of local qualities and thus the products would in this case have a dominant character of disembeddedness (Murdoch *et al.*, 2016). Interestingly, Dedeire and Tozanli (2019) address the paradoxes that arise from the mobility of food and the construction of identity amidst local embeddedness. The authors first define mobility as “*the movement of human beings in space, taking into consideration neither the scale (local, regional or international) nor the temporal feature of the displacement (day, week, month, year)*” (Dedeire & Tozanli, 2019, p. 1). The anchor of the understanding is on the fact that a person holds onto their memories during their life and during their movement, and these memories are inclusive of food. These in fact are considered as factors of identity to which are equally linked to food and technical and social knowledge as much as to customs and habits, culture, beliefs and social values. Therefore, when an individual moves, the embeddedness becomes an ‘organic link’ between that individual and their place of origin. This is where food products and consumption become a strong connection that links to the place of origin, but which manifests in the hosting place. This what is raised here is the mobility of the social and heritage (patrimonial) terroirs compared to the immobility of the natural terroir. A similar approach was also presented earlier by Timothy (2008) in which the author expands on the several scales of what he refers to as heritage tourism. The author explains that these scales are a factor of the visiting or host site and extend from the tourist scale down to the lowest scale of personal lives and identities, norms and habits. The author equally draws on his understanding of the term diaspora by describing the term as “*groups of people scattered across the world but*

drawn together as a community by their actual (and in some cases perceived or imagined) common bonds of ethnicity, culture, religion, national identity and, sometimes, race” (Coles & Timothy, 2004, p. 3). Timothy (2008) then directly associates the consumption of local foods whether in restaurants or brought back from their home country also as a ‘*literal consumption of the place*’ (Timothy, 2008, p. 123) along with similarly preserving other activities from the place of origin. When reflecting on these analyses, it becomes very clear and direct how *mūne* foods fit perfectly and their mobility enters in the physical as well as the moral. First, we have already seen that the size of the Lebanese diaspora is immense and scattered in the majority of countries around the world (Figure 27). We have also seen that people of Lebanese origins actually maintain a very strong bond with their home-country and are actually the largest force for the incoming of hard currency through the funds sent by expats back to their families. Even after several generations are born in foreign countries, people tend to retain their sense of sense of “*Lebaneseness*” and especially when it comes to their attachment to their homeland culture and consumption of traditional foods (Abdallah et al., 2019; Rowe, 2012). *Mūne* here is normally at the core of Lebanese cuisine and the mobility of *mūne* foods is firstly literal in the physical product itself. *Mūne* foods, being preserved, are shelf stable and do not require any special storage conditions. They can therefore be simply placed in a dry storage (traditionally or domestically) or on the shelf (contemporary market), and they have been historically mobile within the country throughout history from their rural place of origin to the place of residence thus moving along with the movement of people. This makes them suitable products for general mobility and including that of export to foreign countries. Preserved *mūne* foods are also carriers of heritage and culture and this components makes an important characteristic of their moral mobility and connection of people’s memories to their home-country when consuming it. With its mobility, *mūne* is not only reviving these memories but are in fact preserving it. This is a major point that requires more attention and which could be further capitalized in reference to the strategies that could be put in place for the preservation and potentially certification of the products in their material and immaterial components (section 3.1.1).

7.5. CONCLUSION OF CHAPTER SEVEN

What we see from this chapter is that the food cooperatives in the *Beqā’* valley together consist a tight network which is characterized by a high number of links and their reciprocity between nodes. This reflects an extensive level of connectivity amongst the cooperatives together and their close familiarity to each other. In addition to familiarity, certain cooperatives reported their collaboration together in business-related or personal connections. These were for example their exchange of technical knowhow, advice or personal favors. The network is thus described as very dense whereby almost one quarter of all links that could possibly exist are already formed in the network. Three clusters also exist and can be affiliated to a large extent to three distinct geographic spaces; that of the northern Hermel, that of Baalbeck, and that of the central and south (known as west) *Beqā’*. However, observations at the level of clusters show that despite certain cooperatives are geographically close to one group, they are in fact closer in their relations to another group. These were depicted as strategic corridors of excelling cooperatives. Additionally, centrality observations and the distribution of brokerage

roles show how some cooperatives are more central, more popular, or knew more members of the cooperatives in the network and thus largely aid in the connectivity of the network. Such cooperatives are strategically positioned in a way that they are capable of holding one or more brokerage roles that would impact the connectivity at the level of the entire network. Brokerage roles are those which broker or create a connection between two other cooperatives together that would otherwise not exist. They facilitate the dissemination of information or resources either within their cluster or even with those able to do that at the level of the entire network. Ultimately, it seems that it is not only the fact that the cooperatives know each other what stimulates the relation, but it is the fact that they appear to be repetitively meeting and interacting in common arenas outside their territories. These, such as seasonal exhibitions for example, are normally those which are organized and led by external forces, most expectedly being local and international development agencies. Therefore, several forms of proximity appear to be evident within the network of food cooperatives. First is the geographic proximity in which distance is what approaches the cooperatives together and enhances their familiarity and cooperation. This geographic proximity and the dependence of the cooperatives on their local spaces translate into a territorial embeddedness. But this is in fact surpassed by the organizational form of proximity in which these external forces organize and mobilize the cooperatives and includes their common presence and interaction in temporary joined venues which are also known as temporary geographic proximity. These were concluded when around 65% of links acknowledged the frequent grouping of cooperatives together in trainings and events, and over 23% collaborating together in joint promotion, marketing and sales ventures. Food fairs and exhibitions are typical examples of temporary joined venues that are capable of approaching producers and consumers together. These social relations stimulated by the organized proximity are what portray the cooperatives as having a factor of social embeddedness as well. This social embeddedness is also evident on two axes with one hand being internally to the network between the cooperatives themselves (thus territorial), and on another hand with consumers and external stakeholders outside their territories. The holistic explanation can be finally formulated as having different forms of (inter-territorial) geographic and (extra-territorial) organized proximity, including temporary joint venues as constituting the logic of interaction. This in turn results in cooperatives' embeddedness as an output. This embeddedness is reflected at the level of the territory (natural) and at the level of relations (socially inter-territorial and extra-territorial) with the driving force being the cultural significance of traditional preserved *mūne* foods.

GENERAL CONCLUSION

This study is based on three pillars that together constitute a strong interplay in social, economic and spatial engagement of Lebanon's rural spaces while also extending linkages to urban regions. The first pillar is a traditional preservation of seasonal agricultural harvest into shelf-stable pantry foods called the *mūne*. It is a tradition that has long mobilized and empowered women and is one which has become a link to tradition and culinary heritage. This tradition was historically performed domestically at the household level to secure nutrition during times of food shortages but has today evolved into the market with women food cooperatives as one of the major producers. But today, the preservation of *mūne* foods is not recognized nor regulated and is left open to appropriation and capitalization by businesses without any protective strategies. Given the uniqueness of the *mūne* at the territorial and national level and its strong link to the culinary heritage of the country, then it was decided to construct the characteristics of this tradition on its historical, technical, and social dimensions of its production and as a collectivity of products. The objective of that investigation was to build the understanding behind the specificity of *mūne*, its social-spatial and territorial logics, and what makes it a suitable anchor to build upon a developmental strategy based on its local space and local actors. The main local actors engaged in the production of traditional preserved *mūne* foods are women food processing cooperatives and constitute the second pillar of this study. Cooperatives are innately local by social business model and by law in Lebanon. They are entities that follow a global cooperative movement and comply with the seven principles of cooperation which are based on solidarity, collective benefit, participation and democracy. Despite their challenges at the internal, external and institutional scale along with their marginalization as competitive production entities, cooperatives in Lebanon are regarded as strategic local actors operating in a typically traditional practice and preserving the vanishing and unprotected culinary heritage of *mūne*. Together, the *mūne* as a resource and cooperatives as a strategic producer, these two pillars become the basis for local micro-economies of their territories. In fact, local, and more specifically territorial, levels of space and their place-based actors are progressively being recognized as economic grounds capable of reaching their own development routes. They enter in the bottom-up approaches initiated by local players using local resources. The process for such is usually based on the identification, capitalization and sustainable management of differentiation factors – endogenous resources – within the local context, by the local players. The resources are described to serve as “markers” whose factors could include the primary agricultural and food sector, but could also be inclusive of languages and dialects, folklore, arts and drama, archeological sites and landscape components. These enter under an overall cultural approach to what is referred to as neo-endogenous or territorial development and are equivalent to a territorial identity. By potentially valorizing the mobilization of localized actors and their characterizable resource and identity, then

developmental approaches based on neo-endogenous or territorial development could be thought of as a manifestation of both the “from above” and “from within”. Normally when discussing typically local actors such as cooperatives, then the territory becomes essential as it constitutes the basis of their output *mūne* products. In this study, the major agricultural production region in Lebanon was selected; the *Beqā’* valley, as the third pillar to the study. The *Beqā’* valley is a natural relatively flat plain covering 38% of the country’s surface area that is located in between Lebanon’s two mountain ranges; the Mount Lebanon facing the Mediterranean sea to its west, and the Anti-Lebanon range bordering Syria to the east. The *Beqā’* valley has a long history and relationship with *mūne* production and consumption of traditional foods. The *Beqā’* valley was chosen not only because of its importance as an agri-food producing region or due to its link to traditional *mūne* foods, but also due various other reasons that make it a logical first choice of territory to conduct this study. This is true especially since the culture of *mūne* actually transcends local specificities, which are still possible, but it actually exhibits extra-territorial similarities and dynamics across the entire country and extends even to neighboring countries of the Levant region on the Eastern Mediterranean. Yet, the *Beqā’* valley holds several characterizable features which together construct the territory and its specificity as well. These include its geo-climatic conditions given its natural geographic delimitation, existence of micro-climates, its temperature, precipitation, soil, water, humidity and solar irradiation factors that are different than the remainder of the country. In addition, other factors come to play including its general local at the border, its connectivity to transportation and trade routes, and its vulnerable socio-economic context.

In order to arrive at describing the extent of specificity of *mūne* foods and the socio-territorial dynamics of their production by food processing cooperatives in the *Beqā’* valley, this study based on a descriptive and systematic methodology. Besides the in-depth literary investigation of the three pillars of the study, the methodology consisted of identifying and mapping the entire network of food processing cooperatives that engage in the preservation of *mūne* foods in the *Beqā’* valley. The completion of that step held several challenges by itself but finally the network was identified to include 40 cooperatives, mostly women, that are actively engaged in the production of *mūne*. The identified network was subject to two types of questionnaires that were prepared for two types of data treatment and analysis plan. Both types of questionnaires were filled with the cooperatives in the same interview meeting that were scheduled with each. These took place between August and December 2019. The first was a categorization step which aimed to reveal the different typologies of food cooperatives in the *Beqā’* valley and understand in what way they are similar and what differentiates them from each other. This categorization was performed on the basis of four main themes following the dynamics of the cooperative’s operation. These four theme were their structure, spatiality of activities, extent of external support, and label and conformity. The second was an understanding of the nature of relationships that exist between the food cooperatives themselves using Social Network Analysis (SNA). This step was based on the second type of questionnaire filled in this study and which framed to capture the different types and intensities of relations existing between the different cooperatives and their visualization through sociograms. The execution of the different steps in mapping, data treatment, analysis and visualization required the use of multiple software. These included SPAD v.8 - Coheris

Analytics, Pajek v.64-XXL 5.10, NodeXL v.1.0.1.418, PhilCarto V.6.07–2018 and Adobe Illustrator CC 19.0.0–2015. Additional supportive observations were provided by a set of data collected through a Master end-of-study internship conducted by a student at the Mediterranean Agronomic Institute of Montpellier. These helped in adding evidence to the observations formulated by the findings of the above methodology.

As we saw in Part 1, the consideration of the entirety of information constructed around the understanding of *mūne* put into evidence its multiple purposes, strong links to history and culture, and reliance on the surrounding local space in which gender roles manifest along with deep social ties and various forms of geographic dynamics. These show that the culture of *mūne* is much larger than the simple activity of food preservation and entails both tangible (material) and intangible (immaterial) dimensions. We saw that the first original function of the preservation of *mūne* foods was for survival and food security purposes when excess harvest was transformed into shelf-stable preserved foods during times of food shortages. These were mainly in the wintertime when villages became isolated or in times of crisis resulting from economic, war, or disease factors. This was necessary for households especially in rural villages located in Lebanon's mountain ranges or inland because transportation in older times was challenging given the rugged nature of the terrain that made rural regions much less accessible to sources of food and the trade market. During these older times, men were mostly farmers who cultivate their lands and women had the main contributors to their household's regular maintenance and managed the daily upkeep of their homes, food, storage and preparation. Yet, the role of women was elevated as a result of food management and related decision making and that specifically peaked during harvest seasons when the excess was to be preserved. Highly technical knowhow and skills were applied by women and these were inherited through generational transfer from mother to daughter. Women followed the recipes and techniques they learned to create an elaborate array of preserved foods which was normally available to them in their vicinity, each according to the harvest season around the year. Since many tasks are labor-intensive and lengthy, people also got together to cooperate and assist each other. A typical example of such community-based cooperation was in the technical task of rubbing of a product called *kīshk*; a food fermented, dried and ground mix of cracked wheat *burḡol* and milk or yogurt. It was when a group of six to seven women referred to as *farrākāt* (translating to 'those who rub') would get together at the rooftop of their neighbor and use a specific technique to rub the dried *kīshk* in between their palms to reduce its size into a flour. Occasions when people would meet to cooperate in tasks as this were also normally engaging and filled with social interaction. The importance of food preservation and storage was so essential that its central position was reflected in the architecture and so in the relationship between humans, their land, and food. At these older times, houses were built with various storage spaces of food incorporated inside and/or around such as the separate rooms called the *ḥzēne* or *beit el mūne* or the basement-like space called *kaboo* which was used for storage and sometimes to raise a few heads of animals. *Mūne* therefore became an activity that organized, mobilized and linked communities together and dictated year-round planning.

What makes *mūne* so special is not limited to one characteristics, but rather the specificity is constructed by a combination of factors as the types and quality of primary agricultural produce, skills and knowhow, specific recipes, effect of local geo-climatic conditions, social settings and ways of consumptions. Lebanon has a largely diverse geography given its varying

topography that includes the flat narrow strip of the coastline, highly rugged mountain chains of Mount Lebanon facing the Mediterranean sea and Anti-Lebanon bordering the neighboring Syria which are divided with the plain of the *Beqā'* valley in between. This quick-changing topography over the relatively small surface area of 10,452 km² of the country gives rise to highly diverse local conditions and thus to equally diverse agricultural productions that could be preserved into *mūne*. Since *mūne* is normally dependent on the surrounding environment, then these variations also reflected on the *mūne* itself along with the changing social dimensions in Lebanon's highly diverse population. We therefore see commonalities to *mūne* along with the possible regional specialties. This is rather an atypical characteristic of food products in which *mūne* has the ability to exhibit both inter-territorial and extra-territorial characteristics at different geographic scales. On one hand, the different regional variations exist and have been known for long periods of time that certain villages and areas have become reputable for their productions. Examples would be the distilled orange blossom water (*mazaher*) of Maḡdūšeh, the *kīshk* and *makdūs* of Baalbeck, the *šanklīš* of north Lebanon, and many more. On another hand, more generic products that are commonly produced and consumed around the country and even in neighboring countries can also be found, normally given the relatively recent contemporary establishment of borders in the Levant countries in the first half of the 1900s. Preserved foods have also long been transported from their rural origin to the urban environment as part of habitual movement of people established since the past. Therefore, one of the exhibited dynamic of *mūne*, besides being localized, also entails a factor of mobility as part of its history and which still exists to this day which makes today's *mūne* integrated in most Lebanese households. In that way, and since food is a carrier of heritage and identity, *mūne* becomes such a direct link with Lebanon's culinary heritage and is one which is reflective of several geographic scales; those territorial and local, and equally those at the national scale.

Given the innate link of *mūne* that relate to the natural environment and human factor, then it is important to consider *mūne* as a holistic system with the entirety of its components which can now be understood to hold both tangible (material) value and intangible (immaterial) cultural composition. However, the culture remains without any official recognition and there is no specific strategy for its differentiation, protection, nor valorization with the exception of minor effort by the Lebanese Standards Institution on standardizing certain products such as the *za'atar*. This serious gap poses threats to the culture and the many value chains that enter into it and leave them unprotected, unregulated and open for capitalization by businesses in ways that do not respect traditional practices, and these already exist today. These are the dominant commercialized food industry which does not necessarily invest direct attention to or prioritize the retaining of traditional approaches. Such industries engage in the production of certain *mūne* foods which are feasible to them but do not apply the habitual techniques, do not rely on specialized skills, are highly automated, do not necessarily procure raw produce locally, and use atypical artificial ingredients and packaging. This fact is suspected to strongly affect consumer perception, and consequently sustainable consumption, due to an inability in clearly identifying origin and quality. There are several quality labels and certification systems that exist around the world many of which are based on food products in their place of origin. These include for example indication of sources, appellations of origin, and geographic indications that have been applied successfully on products such as the Indian Darjeeling tea,

Columbian coffee, numerous French cheeses and wines, and many others. The Intangible Cultural Heritage (ICH) is another system that exists by the UNESCO and is one which focuses on the protection of culture and heritage emerging from its immaterial specificity. Despite the great need for differentiation, the challenge with food products generally and that of *mūne* in specific is finding a system of protection which balances both these tangible (that could be normalized and standardized) and intangible characteristics and one which equates for several products together rather than individually standardized ones. It becomes even more difficult with *mūne* since the collectivity of various different foods that can be considered as *mūne* and the fluidity of the culture on a geographic and social levels makes it very difficult to develop a specific list of products and this raises more challenges. Then if territorial approaches to development are to be constructed, certain questions arise with regards to the mechanisms of framing the production sector of *mūne* foods. What would be the best approach in identifying specific territorial spaces and their specificities within a system that includes dynamics that cross borders regularly and is based on common customs, habits and foods?

The context for *mūne* production today has changed. We have seen that due to several reasons, the practice of preserving foods at the household level has greatly decreased and has become a rare activity in Lebanese homes today. Changing lifestyles, economic constraints, technology, rural exodus and inclusion of women in the job market are some of these reasons. The process of preservation itself has however evolved and incorporates today the use of modernized approaches such as for example machine grinding, market supply of raw material, use of glass jars instead the traditional terracotta jars, and others. As we have seen in the earlier sections in this dissertation, rural food processing cooperatives that are mostly owned and managed by women have been progressively participating in the production chains of *mūne* in Lebanon and in ways that conform to those applied traditionally but modernized in terms of food safety and standardization of quality. These types of cooperatives rely on women as skilled workforce and remain to this day respectful of traditional techniques and recipes. But we have seen that cooperatives in Lebanon are still rather marginalized actors that face many challenges. After being neglected during the 1975 - 1990 civil war and re-emerging after the year 2000 in the following the end of the occupation in South Lebanon, cooperatives are described as dependent on external funds by international donors and NGOs. They are attractive actors seen as a means to help meet development objectives of international donors and their bridging to the local context around the country. This dependency undermines their principle of autonomy, opens the opportunity for corruption and deviation from meeting common needs of members, and risks their sustainability as viable businesses. In fact, despite being a strategic actor that is innately local by principle and law, two-thirds of cooperatives in Lebanon are estimated to be inactive (dormant or virtual) and many have been revealed to have engaged in financial and political aspirations. The reasons behind their marginalization are many. These extend from the very structure of the economy which does not prioritize productive sectors, to the limited institutional capacity of official bodies and lacking regulatory policies in their design and implementation, legislative ambiguity, unclear geographic divisions and borders nationally and locally, political instability, underdeveloped foundation of data in transparency and accuracy, and many others.

In attempting to characterize the cooperatives that produce *mūne* in the *Beqā'* valley and in understanding the relations that join them, various common characteristics were first observed.

The study shows that food cooperatives in the *Beqā'* valley are mostly owned and managed by women and remain small-scale with less than 20 members on average; a fact which could presumably be echoed to food cooperatives in Lebanon generally. Production size varies mostly between 1 and 7 tons and rarely surpasses 15 tons, but those figures do not represent the full capacity of food cooperatives. These types of cooperatives also exhibited territorial and a-territorial dynamics in their operations with strong rural-urban linkages. On one hand, they are highly linked to their surrounding local space especially for the procurement of the raw agricultural produce from local farmers. On another hand, food processing cooperatives seem to be greatly dependent on the capital's urban market for sales and generation of economic return although this certainly does not stop them from selling locally in their respective villages and regions. In fact, over 80% of cooperatives are directly dependent on local farmers within the district level, and almost 60% stated that more than half of their turnover originates from the urban capital Beirut; of those, half reach up to three-quarters of urban turnover. Yet, cooperatives are not very well integrated vertically in the value chain which is reflected by a low level of collaboration with other cooperatives, such as agricultural which could help build a parallel supply chain down to the consumers. Yet, some cooperatives are found to be lacking in meeting certain requirements of the market. These include the need for improved compliance to food safety, achieving consistent production recipes in organoleptic qualities, and improving transparent communication with consumers through labeling. Three quarters of the 40 food cooperatives in the *Beqā'* valley still have basic labels placed on their *mūne* products which fail to properly convey basic information to the aware consumers of today such as nutritional facts, ingredients, barcodes for traceability, contact information, and others. The issue of external aid was also very evident in the findings of this study. This was found not only in the receiving of support from developmental organizations in the form of capacity building, equipment or marketing, but rather in having that aid extended very frequently up to two times annually in most common cases but with some reporting three to five times a year. The food cooperatives themselves commented on how they consider the cooperative model in Lebanon especially in its engagement with the production of *mūne* to be a useful source of employment for rural women given the innate relationship with food preservation and their mastery of the required skills. As for the marketing approaches, the majority of cooperatives were found to have a preference for direct contact sales with consumers and especially in spaces such as exhibitions and food fairs that allow access to urban consumers and are usually facilitated by development agencies. In fact, these spaces of assembly played a main position in describing the logic of interaction between the food cooperatives. Proximity was used to perform that since it was highly suspected that cooperatives, being active at the local space, are not only in proximity at the geographic scale, but rather engage in collective extra-territorial activities stimulated by stakeholders external to the territories, such as the private sector or aid agencies through their development projects. In fact, the SNA step provided valuable input in understanding the complex relationships and their intensities that exist within the network itself, and this is how that link with extra-territorial assembly was further strengthened. First, geographical proximity in terms of distance was a normal component of operations of cooperatives as, besides being dependent on surrounding farmers, this component also manifests in the engagement of cooperatives together, whether in terms of familiarity (knowing each other) or in more advanced cases where cooperatives collaborate together in business-

related or personal connections. These were for example their exchange of technical knowhow, advice or personal favors. This geographic proximity was evident by the three clusters that were predominantly divided geographically (Baalbeck, Hermel, and central-south *Beqā'*) but which also included strategic corridors. These consisted of cooperatives that were geographically closer to a certain cluster but in terms of their relations were closer to another cluster. Accordingly, certain cooperatives were also strategically positioned with respect to their brokerage roles, which normally broker or create a connection between two other cooperatives together that would otherwise not exist. Some were more central, more popular, or knew more members of the cooperatives in the network with such actors having the capability to facilitate the dissemination of information or resources either within their cluster or even with those able to do that at the level of the entire network. Some cooperatives had one or more of these functions together. Such characteristics reflected in the specific brokerage roles and centrality that would describe the position of certain cooperatives in accordance to the dynamics that their relations had. Overall, the network of *mūne*-producing food cooperatives in the *Beqā'* valley is highly dense with the cooperatives being strongly linked together. Besides the geographic proximity, what emerged was a strong influence carried out by organized proximity originating from sources external to the network. More interestingly was the explanation of the relational dynamics through the proximity of temporary joint venues which is also known as temporary geographic proximity. These were concluded when around 65% of links acknowledged the frequent grouping of cooperatives together in trainings and events, and over 23% collaborating together in joint promotion, marketing and sales ventures. This is how it seems that logic of organized proximity is an external engine that stimulates the cooperatives to organize in certain collective events. It is these events that constitute a temporary geographic proximity which has been described to greatly aid in the conveying of specific themes (such as that of food preservation, production and consumption of traditional *mūne* foods for Lebanon) and to help approach producers and consumers together. In fact, it is the different forms of proximity that finally come to play in the overall embeddedness of the food cooperatives both at the level of their territorial embeddedness as well as their social embeddedness. Once again, territorial embeddedness is evident by the dependency on the cooperatives on the natural resources, raw material, and overall conditions of their territory required for the production of their *mūne* foods which are explained by the geographic proximity. Cooperatives are also innately locally embedded actors as dictated by the principles of cooperation and as mandated by the national cooperative law in Lebanon. Additionally, that territorial embeddedness is further emphasized by the strength of relations as the cooperatives seem to depend on each other somehow as shown by the centrality and specific roles that exist between the cooperatives themselves as a social network. That is the first axis of their social embeddedness; the one which exists internally to the network and within their territory. When it comes to the remainder, the social embeddedness emerges even more at the level of relations that link cooperatives directly to extra-territorial actors, whether with external stakeholders responsible of the organized proximity component or directly with end consumers as a result of the temporary joint venues. To reiterate the forces at play, it seems that the different forms of (inter-territorial) geographic and (extra-territorial) organized proximity, including temporary joint venues, are the factors and logic of interaction which result in embeddedness as an output whereby food cooperatives are embedded both in their territory (natural) and in

their relations (socially inter-territorial and extra-territorial) with the driving force being the cultural significance of traditional preserved *mūne* foods.

With these observations, we see the peculiarity that the *mūne*-food cooperatives-*Beqā'* valley nexus reveals. We first see that the *mūne* culture is not a simple activity of food preservation with the objective of food security or culinary heritage, but it transcends to a larger understanding and dynamics that make into a unique tool that could form the basis for potential territorial development routes. It acts as an engine behind the mobilization of communities and producers and the relationship they carry at different levels; internally in their territory and together, and externally with urban consumers, collective events and activities, and with relevant stakeholders. *Mūne* reveals an organized territorial system which exists and extends to regions beyond the territory. *Mūne* is therefore a collectivity of heritage products that could constitute a core upon which an entire socio-economic cycle can be built with *mūne* as the resource, women cooperatives as the productive actor, and the *Beqā'* valley as the commencing territory. The advantages that this system hold could be used today to elevate its status today given the needs and recent developments. It could serve as a strategic route to enhance the position of women socio-economically and their inclusion in the economic life and improvement of livelihoods. It could improve the vivacity of organizations, economic cycles and bottom-up mobilization of local actors while improving the rooting of communities in their rural localities. It could contribute to the incoming of the valuable hard currency if promoted and exported properly especially since *mūne* is well positioned in its mobility and if directed to the significant Lebanese diaspora which number vastly surpasses the national population by many folds and is distributed around the majority of countries abroad. This could serve to mitigate the impact of the recent post-2019 economic crisis which has left over half of the population below the poverty line. It could also serve its original function of food security at the local and national levels since fears of food insecurity have greatly increased given the crisis and its complications of the social, economic, health, and many other levels. However, the *mūne* as a culture and as a system still needs official recognition and differentiation in order to achieve efficient valorization and protection, but the challenge remains in finding ways to balance and normalize its tangible and intangible characteristics. Finally, when looking at the original territorial functioning of *mūne*, it is also well positioned as a climate-smart activity which is based on the optimized use of available natural resources and functions in line with practices that are considerate to the ecology and the environment.

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APPENDICES

Appendix 1. List of food processing cooperatives that were identified and interviewed under this study

Row Nb.	New Coop ID	Location – (town / village)	Caza
1	BHB1	Arsal	Baalbeck
2	BHB2	Yunin	Baalbeck
3	BHB3	Taraya	Baalbeck
4	BHB4	Baalbeck	Baalbeck
5	BHB5	Deir Al Ahmar	Baalbeck
6	BHB6	Ksarnaba	Baalbeck
7	BHB7	Baalbeck	Baalbeck
8	BHB8	Bednayel	Baalbeck
9	BHB9	Dar Al Wesaa	Baalbeck
10	BHB10	Arsal	Baalbeck
11	BHB11	Chlifa	Baalbeck
12	BHB12	Ksarnaba	Baalbeck
13	BHB13	Tamnin Fawqa	Baalbeck
14	BHB14	Baalbeck	Baalbeck
15	BHB15	Deir Al Ahmar	Baalbeck
16	BHB16	Baalbeck	Baalbeck
17	BHB17	Baalbeck	Baalbeck
18	BHB18	Deir Al Ahmar	Baalbeck
19	BHB19	Baalbeck	Baalbeck
20	BHB20	Baalbeck	Baalbeck
21	BHB21	Baalbeck	Baalbeck
22	BHB22	Hawr Taala	Baalbeck
23	BHB23	Jabboule	Baalbeck
24	BHH1	Hermel	Hermel

Row Nb.	New Coop ID	Location – (town / village)	Caza
25	BHH2	Mansoura	Hermel
26	BHH3	Hermel	Hermel
27	BHH4	Kwakh	Hermel
28	BHH5	Hermel	Hermel
29	BHH6	Bouayda	Hermel
30	BHH7	Hermel	Hermel
31	BHH8	Tal Masoud	Hermel
32	BHH9	Hermel	Hermel
33	BHH10	Nasiyreh	Hermel
34	BR1	Mhaydthe	Rachaya
35	BR2	Aita Al Fekhar	Rachaya
36	BR3	Al Wadi	Rachaya
37	BR4	Ain Ata	Rachaya
38	BR5	Kawkaba	Rachaya
39	BR6	Deir Achayer	Rachaya
40	BR7	Aiha	Rachaya
41	BWB1	Al Khiyara	West Beqā'
42	BWB2	Sultan Yaacoub	West Beqā'
43	BWB3	Mansoura	West Beqā'
44	BZ1	Furzol	Zahle
45	BZ2	Al K'arak	Zahle
46	BZ3	Wadi Arayesh	Zahle
47	BZ4	Maalaka	Zahle

Caza/district by color division

Baalbeck	Hermel	Rachaya	'West Beqā'	Zahle
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Non-interviewed Coop ID

Zahle	BZ3
'Beqā West	BWB3
Hermel	BHH9
Baalbeck	BHB21
Baalbeck	BHB10
Baalbeck	BHB11
Rachaya	BR6

Appendix 2. Copy of the categorization (typology) questionnaire utilized during the study

Survey of *MOUNEH* Producers in the Bekaa Valley, Lebanon for the analysis of interrelations and socio-spatial dynamics between actors

Thank you for taking the time to participate in this survey. Your insight and information will greatly aid in the understanding of categories and relations between producers of traditional *Mouneh* in the Bekaa Valley and the overall potential of the sector to reach territorial development in rural Lebanon.

Your responses will be used as part of a doctoral study conducted by Eng. Rita Jalkh at the Universite De Montpellier III – Paul Valery.

Kindly answer the inquiries to the best of your knowledge. All answers will be treated with full anonymity.

For more information, please contact Rita Jalkh at +961 3 659693 or at rita.jalkh@etu.univ-montp3.fr

GENERAL INFORMATION

1. Name of Establishment: _____
2. Brand-name, if available: _____
3. Attached photo of a template label: <input type="checkbox"/> Yes <input type="checkbox"/> No
4. Address: _____
5. Date of Establishment: _____
6. Contact Name: _____
7. Position of respondent: _____
8. Telephone Number: _____

SECTION 1: MEMBER INFORMATION

1. Please fill the below information about your members at its establishment:

Number	Number of women	Number of men	Age under 30	Age between 30 - 40	Age over 40

2. Please fill the below information about your current members:

Number	Number of women	Number of men	Age under 30	Age between 30 - 40	Age over 40

3. How many of the above members are active in the production process? _____

4. Do you employ any additional staff?

- a) Yes, seasonal workers Number: _____ Nationality: _____ Average age: _____
- b) Yes, full-time staff Number: _____ Nationality: _____ Average age: _____
- c) Yes, part-time staff Number: _____ Nationality: _____ Average age: _____
- d) No, I do not

SECTION 2: SIZE AND VOLUME OF PRODUCTION

5. What are the top 3 *Mouneh* products manufactured by your establishment? Please fill the below table per product:

Product	Estimated annual production (in tons)	Duration of production season	Unique characteristics of raw material
1.			
2.			
3.			

6. Average estimated annual turnover in the past 2 years:
 Year1: _____
 Year 2: _____

SECTION 3: RAW MATERIAL AND MARKETING

7. Where does your largest turnover originate from? **(Select one answer)**
- a) Same village
- b) Other surrounding villages (caza)
- c) Urban consumers
- d) Export*
- e) Other, please specify: _____

8. Do you have an industrial License (رخصة صناعية)?

Yes No

9. Under what type of ownership is the cooperative building? (*land and center owned by the cooperative, granted by the municipality for a certain duration? ... etc.*)

10. Which of the following marketing channels are mostly used? (***More than one answer may apply***)

- a) Direct marketing to consumers
- b) Intermediaries (Traders, middlemen, other cooperatives, projects...etc.)
- c) Retailers and specialty shops
- d) Events and exhibitions
- e) Other: _____

11. Please describe the percentage distribution of your turnover originating from:

Surrounding rural market	Urban market*
Turnover: _____%	Turnover: _____%
	Name of main urban market:

12. Do you sell your products under private labeling schemes for other sellers?

- a) Yes, _____%
- b) No

13. Which of the below answers best applies in case of an emergency where you are obliged to find alternative sources of raw material? (*Select one answer*)

- a) My cooperative can easily and quickly acquire alternative raw material of the same quality originally used in cases of emergency
- b) My cooperative needs some time to ensure alternative raw material of the same quality originally used in cases of emergency
- c) My cooperative can easily and quickly acquire alternative raw material in cases of emergency but not with the same original quality
- d) It would be difficult for my cooperative to ensure alternative raw material in cases of emergency
- e) It would be impossible for my cooperative to ensure alternative raw material in cases of emergency

14. Have you ever received support from the following within the past 5 years?

- a) State
- b) NGOs/CSOs
- c) No support received

15. If you answered yes to the previous question, then what kind of support?

- a) Equipment
- b) Training and capacity building

<input type="checkbox"/> Food safety	<input type="checkbox"/> Food processing	<input type="checkbox"/> Quality control	<input type="checkbox"/> Administrative & management	<input type="checkbox"/> Financial	<input type="checkbox"/> Marketing	<input type="checkbox"/> Others:
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- c) Market access
- d) Other, please specify: _____

16. How frequently do you receive external support from either NGOs/CSOs, the State of other donors?

- a) Once or twice a year
- b) 3 to 5 times a year
- c) 6 to 10 times a year
- d) More than 10 times a year
- e) No support received (*verify if complemented by Question # 14*)

17. What is the main source of raw material you use for processing?

- a) Produced by the cooperative itself
- b) From the surrounding farmers (caza)
- c) From other areas in the Bekaa valley
- d) Exterior of the Bekaa valley

18. What would you say is the proportion of raw material you purchase from:

a) Suppliers located within the municipality borders (or same town)	_____ %
b) Supplier located in other nearby towns	_____ %
c) Suppliers located in further towns in the caza	_____ %
d) Suppliers located in areas outside the caza	_____ %
e) Exterior of the Bekaa valley	_____ %
TOTAL:	100% (verify)

SECTION 4: CONFORMITY

Because this research aims to categorize *mouneh* producers, we would require conducting an inspection of the (1) production center premises and (2) utilized label according to the below forms:

A| Production center assessment¹:

1. General and Environmental

Factor	Norms & Standards	Compliance & comments	Recommendations
Overall condition of the establishment	Adequate and effective standards for the protection of products and personnel from internal and external pollution and accidents.		
Surrounding Environment	Must not lead in any way to the contamination of food products.		

2. Food Safety Management System

Factor	Norms & Standards	Compliance & comments	Recommendations
Food Safety Team	Assigned members familiar with the concepts and applications of food safety must be provided.		
Implemented System	Is a must. The minimum application of Good Hygienic Practices (GHP) and Good Manufacturing Practices (GMP) must be found.		

3. Sanitary Design of Equipment

Factor	Norms & Standards	Compliance & comments	Recommendations
Aptness to Safety	Stainless steel, especially that in direct contact with food products.		
Aptness to Installation	Assembled in a manner that avoids product contamination and facilitates cleansing.		
Maintenance	Procedures and schedules		

¹ developed from a pre-set but customized form

4. Establishment Status (Internal and External)

Factor	Compliance & comments	Recommendations
External General Condition		
Interior Walls and Surfaces		
Ceilings		
Lighting		
Ventilation		
Drainage System		
Windows		

5. Production Flow Chart

Factor	Compliance & comments	Recommendations
Product Flow Chart		
Critical Control points		
Control Measures		

6. Storage areas

Factor	Norms & Standards	Compliance & comments	Recommendations
Raw Material	Avoid exposure to contaminants and spoilage.		
Dry Storage	Temperature and relative humidity not to exceed 60%		
Cooling	At maximum 5°C		
Freezing	At maximum -18°C		
Chemicals & detergents	Properly labeled and stored in a separate closet		
Packaging material	Proper storage		
Other storage			

7. Supportive Utilities

Factor	Compliance & comments	Recommendations
Generator		
Water		
Different gases		
Other		

8. Sanitary Facilities and Services

Factor	Compliance & comments	Recommendations
Bathroom or toilets		
Sinks		
Disinfectants		

9. Hygienic Requirements and Personal Hygiene

Factor	Compliance & comments	Recommendations
Location Hygiene		

Equipment Hygiene		
Personal Hygiene		
Protective clothing		
Hygienic Program		
Training Program		

10. *Transport and Product Distribution, if available*

Factor	Compliance & comments	Recommendations
Means of transportation		
Method of transportation		
Control Measures		

11. *Recall System, if available*

Factor	Compliance & comments	Recommendations
Recall System		
Treatment of Recalls		

12. *Waste Disposal*

Factor	Compliance & comments	Recommendations
Type of Waste		
Waste Disposal System		

13. *Health Status*

Factor	Compliance & comments	Recommendations
Monitoring Personnel Health		
Control Measures		

14. *Evaluating the safety of the end product*

Factor	Compliance & comments	Recommendations
Chemical Composition		
Acidity		
Salinity		
Water Activity		
Susceptibility to Spoilage		
Common Spoilage		

Other comments and notes of attention:

B| Label assessment²:

labelling information	Availability and compliance			Recommendations
	Yes	No	Comments	
1. Brand-name				
2. List of ingredients:				
3. Ingredients listed in descending order of weight preceded by a suitable heading which includes the word 'ingredients'				
4. Net quantity in metric units (litre, centiliter, milliliter) for liquids and (kilogram, gram) for non-liquids				
5. Date of minimum durability consisting of day, month and year in that order and preceded by the words 'best before' or 'best before end'				
6. Special storage conditions or conditions of use				
7. Business name, address and contact information of the manufacturer, packer or seller				
8. Usage instructions				
9. Bar code				
10. Nutrition facts				
SCORE /10				

End of survey

Thank you

² adopted but customized, from the pre-set list identified by QUALEB Quality Programme: An ABC Guide on EU Food Packaging and Labelling Requirements, 2008.

Appendix 3. Copy of the interrelations questionnaire utilized during the study

Survey of *MOUNEH* Producers in the Bekaa Valley, Lebanon for the analysis of interrelations and socio-spatial dynamics between actors

NOTE: The below list of questions will be formulated in an Excel sheet with respect to the list of cooperatives crossed per question:

Dimension 1: Extent of Familiarity

1. Do you know this cooperative?
 - a) Yes, very well
 - b) Yes, moderately
 - c) Not very well
 - d) No, I do not

2. Since how long have you known this cooperative?
 - a) Less than 1 year
 - b) 1 to 4 years
 - c) 5 to 10 years
 - d) More than 10 years

Dimension 2: Level of relations and proximity

Inter-cooperative relations – Production processes:

3. How often do you conduct business trade activities with this cooperative?
 - a) Frequently
 - b) Occasionally
 - c) Rarely
 - d) Never

4. Have you provided direct support to this cooperative, as technical knowhow, production, administration, documentations, referrals...?
 - a) Yes, sometimes
 - b) Seldom
 - c) Rarely
 - d) No, never

5. Have you received direct support from this cooperative, as technical knowhow, production, administration, documentations, referrals...?
 - a) Yes, sometimes
 - b) Seldom
 - c) Rarely
 - d) No, never

6. Are you willing to provide or receive any knowhow support as sharing of technical advice by this cooperative?
 - a) Yes, to a great extent
 - b) Yes, somewhat
 - c) Very little
 - d) Not at all

7. How often are you grouped with these cooperatives in trainings or events?
 - a) Frequently
 - b) Occasionally
 - c) Rarely
 - d) Never

Inter-cooperative relations - Marketing approaches:

8. Have you provided any form of personal social favors to members of this cooperative independently from business activities, as accessibility, facilitations, transportation...?
 - a) Yes, several
 - b) Some
 - c) Rare
 - d) None
9. Have you received any form of personal social favors from members of this cooperative independently from business activities, as accessibility, facilitations, transportation...?
 - a) Yes, several
 - b) Some
 - c) Rare
 - d) None
10. Are you willing to provide or receive any form of personal social favors from members by this cooperative independently from business activities, as accessibility, facilitations, transportation...?
 - a) Yes, to a great extent
 - b) Yes, somewhat
 - c) Very little
 - d) Not at all

Inter-cooperative relations - Promotional activities:

11. How often do you promote, market or sell your *mouneh* products and the products of this cooperative simultaneously at the same event?
 - a) Frequently
 - b) Occasionally
 - c) Rarely
 - d) Never
12. Do you trust this cooperative to promote, market or sell your *mouneh* products and the products of other cooperative simultaneously at the same event?
 - a) Yes, to a great extent
 - b) Yes, somewhat
 - c) Very little
 - d) Not at all

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THÈSE

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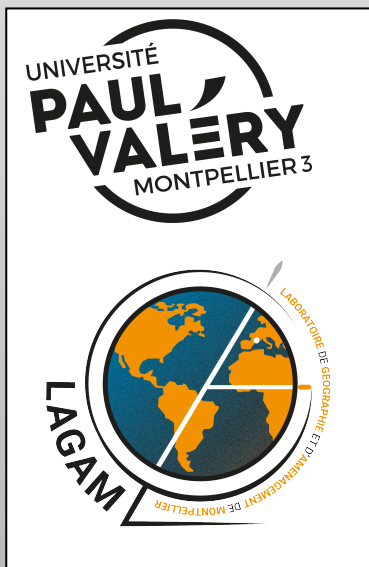
Titre :

**Le Mûne comme patrimoine culinaire et
vecteur de développement territorial au
LIBAN :**

**Les dynamiques socio-spatiales de la
conservation des aliments traditionnels « mûne »
par les coopératives de femmes, une application
au cas de la vallée de la *Beqā'***

Soutenue le 2 décembre 2022 devant le jury composé de

M. Marc DEDEIRE, Professeur, Université Paul-Valéry Montpellier 3	Directeur de thèse
Mme Mélanie REQUIER-DESJARDINS, Administratrice Scientifique Principale, CIHEAMM-IAMM	Co-directrice de thèse
Valérie ANGEON, Directrice de Recherches, INRAE Avignon	Rapporteure
Claire DELFOSSE Professeure, Université Lumière Lyon 2	Rapporteure
Patricia PUGLIESE, Chercheuse, CIHEAM Bari, Italie	Examinatrice
Stéphane GHIOTTI, Directeur de Recherches, CNRS	Examineur
Salem DARWICH, Professeur, Faculté d'Agronomie, Université Libanaise	Examineur



Résumé long de thèse en Français

Abstract

Le Liban est un pays confronté à de fréquentes incertitudes avec des difficultés économiques et sociales récentes. Sa cuisine populaire peut jouer un rôle clé dans son développement et celui de son espace rural. En effet, cette cuisine intègre une pratique culturelle traditionnelle appelée "*Mūne*" qui consiste en la conservation des aliments en garde-manger, des aliments historiquement utilisés pour assurer l'alimentation des ménages. Aujourd'hui, des coopératives alimentaires féminines et rurales s'adonnent à cette activité en mobilisant les produits agricoles des agriculteurs locaux qui sont ensuite transformés par les femmes. Malgré de forts défis internes et externes, elles restent des acteurs attractifs car leurs principes de bénéfice collectif, de participation et de démocratie sont en lien fort avec les objectifs internationaux de développement durable. Cette étude analyse le statut des coopératives alimentaires dans une région agricole majeure du Liban, la vallée de la *Beqā'*, qui produit des aliments traditionnels *mūne*.

Les résultats montrent d'abord que le *mūne* est plus qu'une simple activité de conservation des aliments, car il renvoie à des dynamiques plus larges à l'intérieur et à l'extérieur du territoire qui en font un atout unique, une ressource du patrimoine culinaire pouvant servir de base à des cycles socio-économiques. Les résultats de l'étude classent également ces coopératives en quatre catégories présentant des caractéristiques différentes en termes de structure, de spatialité, d'étendue du soutien extérieur reçu et de conformité. Ils montrent que les coopératives de *mūne*, présentent de forts liens ruraux-urbains avec des dépendances spatiales vis-à-vis des agriculteurs locaux et des marchés urbains pour le commerce. Les forces en jeu comprennent différentes formes de proximité géographique (interterritoriale) et organisée (extraterritoriale) qui proviennent de sources extérieures au territoire et qui stimulent la mobilisation de ces coopératives. Ces deux formes de proximité, en plus des lieux communs temporaires, expliquent la logique de l'interaction et aboutissent à l'ancrage des coopératives. Les coopératives alimentaires peuvent donc être considérées comme ancrées à la fois dans leur territoire (naturel) et dans leurs relations (sociale interterritoriales et extraterritoriales), la force motrice étant la signification culturelle des aliments traditionnels conservés de type *mūne*. Par conséquent, on peut conclure qu'une protection du patrimoine culinaire est nécessaire, avec une contribution évolutive à la sécurité alimentaire et au développement local nécessaire, compte tenu des récents revers majeurs du Liban.

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Introduction

Cette étude doctorale est basée sur l'investigation de la culture de la conservation traditionnelle des aliments au Liban, connue sous le nom de *mūne*. L'étude vise spécifiquement les aliments *mūne* qui sont produits par des coopératives de transformation alimentaire rurales et majoritairement détenues par des femmes vivant dans la principale région agricole du Liban, la vallée de la *Beqā'*. Le *mūne* est un concept culturel familier dans le contexte libanais (et arabe), bien qu'il n'entre dans aucune définition officielle ou stratégie étatique apparente. Il s'agit de la conservation des produits agricoles saisonniers en aliments de garde-manger (Abu Ghyda, 2007) en utilisant des techniques comme le séchage, le marinage, la fermentation, la concentration et la distillation. Ces techniques étaient historiquement pratiquées au niveau des ménages et des communautés pour conserver les différentes cultures disponibles en saison, comme les fruits, les légumes, les herbes, les céréales et les produits laitiers, selon des recettes locales, en différents aliments sucrés et salés comme les confitures, les cornichons, les mélanges d'herbes, les poudres de lait et autres. Ces méthodes ont permis aux communautés d'assurer leur alimentation quotidienne en prolongeant la durée de conservation des produits autrement périssables dans leur voisinage (Massaad, 2017). Ces pratiques ont donc aidé les ménages à atteindre de meilleurs niveaux de sécurité alimentaire et à avoir également la possibilité de stocker et de consommer des produits hors saison. En servant avant tout un objectif de sécurité alimentaire, la conservation habituelle et annuelle des aliments a progressivement façonné les habitudes de consommation et construit la norme culinaire pour finalement " constituer un aspect fondamental de l'alimentation rurale " (Kanafani-Zahar, 1994, p. 1). En raison de son importance capitale, le *mūne* est devenu une pierre angulaire du foyer libanais, avec des preuves évidentes d'un savoir-faire construit, d'un transfert générationnel, d'une incorporation dans la vie quotidienne et même d'une influence architecturale. La conservation des aliments dans le *mūne* a également été longtemps associée à un effort collectif autour des femmes, qui sont reconnues pour avoir joué le rôle de transmission du savoir à travers les générations et donc considérées comme les protectrices de cette culture (Al-Ghazzi, 2001). Aujourd'hui, la production de *mūne* s'est transformée, professionnalisée, voire industrialisée. Les pratiques de conservation à domicile ont fortement diminué et sont de plus en plus remplacées par des producteurs plus commerciaux et industriels. Ces producteurs n'ont aucune obligation de conserver les pratiques ou les ingrédients traditionnels et, du fait qu'ils ne sont pas réglementés, ils peuvent facilement incorporer des méthodes de production de masse, des matériaux inhabituels et des ingrédients artificiels qui s'éloignent de la tradition et de l'authenticité. Pourtant, un segment de producteurs attire de plus en plus l'attention pour son respect des pratiques et recettes traditionnelles. Il s'agit des coopératives dont le mouvement est connu et apprécié depuis longtemps à l'échelle mondiale et dont l'entrée dans le système libanais a commencé au milieu des années 1960.

Les coopératives sont un modèle social d'entreprise qui diffère des entreprises à but lucratif en se concentrant sur le bénéfice collectif, la participation, la solidarité et la démocratie. Les coopératives s'articulent essentiellement autour de 7 principes de coopération, notamment (1) l'adhésion volontaire et ouverte, (2) le contrôle démocratique des membres, (3) la participation économique des membres, (4) l'autonomie et l'indépendance, (5) l'éducation, la formation et l'information, (6) la coopération entre les coopératives et (7) une dimension communautaire. Elles sont généralement reconnues par l'Organisation internationale du travail (OIT) pour "non seulement créer et maintenir des emplois et donc fournir des revenus, mais aussi ouvrir la voie à un progrès social et économique plus large." (Henry, 2012). Le rôle des coopératives a également été souligné en tant que contributrices à l'agenda 2030 des Nations Unies pour les objectifs de développement durable. Plusieurs exemples de réussite (Wanyama, 2016) de coopératives dans le monde ont été célébrés pour leur impact bénéfique, en particulier dans les pays en développement. Parmi les exemples pertinents, citons les initiatives réussies de Tanzanie, d'Égypte et d'Éthiopie, où les coopératives agricoles ont amélioré la commercialisation, les ventes, la génération de revenus et les moyens de subsistance de millions d'agriculteurs, contribuant ainsi à la réduction de la pauvreté. D'autres exemples provenant de pays d'Afrique de l'Est et d'États arabes montrent comment les coopératives ont contribué à améliorer l'égalité des sexes, principalement en renforçant la participation économique et l'inclusion sociale des femmes. Parmi les impacts recensés des coopératives, on peut citer leur contribution en matière de sécurité alimentaire et de bonne nutrition, ainsi qu'en termes de croissance équitable par la création d'emplois. La ; enfin, les coopératives soutiennent la préservation de cultures alimentaires indigènes en valorisant les savoirs locaux et leur transmission. De nombreux autres cas existent autour concernant leurs contributions dans les secteurs de l'eau et de l'énergie, de la gestion des ressources naturelles, de l'assainissement de la gestion des déchets et des microcrédits.

Au Liban, le décret de loi portant sur les associations coopératives n° 17199 a été introduit en 1964. Depuis cette époque, le mouvement coopératif au Liban a connu un parcours instable et son développement a été contrarié, dès le début de la guerre civile en 1975 et jusqu'en 1990. Après cette période, un "boom" de croissance du nombre de coopératives a été observé dans les années 2000, et suite à la fin de l'occupation au Sud Liban (ILO, 2018). Bien que ce secteur des coopératives ne soit en général pas bien étudié au Liban, les acteurs institutionnels et politiques en reconnaissent à la fois les faiblesses et les atouts. Le ministère libanais de l'Agriculture (MoA, 2020) lui-même et des agences de conseil comme McKinsey and Company (2018) par exemple signalent que les coopératives ont généralement un rôle faible au Liban. Sur les 1 238 coopératives totales existantes dans le pays, avec 300 liquidées en 2020 par la Direction générale des coopératives en raison de leur inactivité, seule 1 sur 3 est active. Près de la moitié de ces dernières sont des coopératives agricoles dont seulement 4,5% des agriculteurs libanais sont membres (MoA, 2014). Les coopératives au Liban sont également décrites comme ayant une population agricole vieillissante, à l'instar de l'ensemble du secteur agricole, et seraient fortement concentrées et dépendantes de l'obtention de fonds et de ventes locales facilitées par le soutien des donateurs internationaux. Nombreuses sont celles qui n'ont pas encore réussi à réellement faciliter et élargir l'accès des agriculteurs aux

marchés, notamment parce qu'elles font face à un cadre institutionnel, réglementaire et politique inefficace (ILO, 2018). D'un autre côté, les coopératives ont été - et sont toujours - un point acteurs privilégié du développement rural libanais en raison de leur capacité à faire le lien entre un contexte local de production et de consommation, et celui des agences de développement et des donateurs, et à montrer leur soutien à la réalisation des objectifs de développement durable. En guise d'affirmation de leur potentiel, dans sa stratégie 2020-2025, le ministère libanais de l'agriculture a reconnu l'importance du secteur coopératif au Liban et son fort potentiel de développement et d'organisation (MoA, 2020). Dans le cadre de cette stratégie, le ministère de l'Agriculture a même consacré un programme unique (programme 3.5 au sein du pilier 3) uniquement à la promotion et à l'organisation du travail coopératif et des associations d'agriculteurs au sein des chaînes de valeur.

Lorsque l'on considère le potentiel caché et inexploité des actifs ayant un élément culturel constructible, dans ce cas la préservation des aliments *mūne*, et lorsqu'il est associé à des entités commerciales stratégiques telles que les coopératives, on peut commencer à apprécier comment ces deux composantes peuvent se compléter et se mettre en synergie. Pour cette raison, l'étude a été basée sur ces deux piliers considérables. Le troisième et dernier pilier était le territoire ; la vallée de la *Beqā'*. La vallée a été choisie pour diverses raisons, notamment en raison de sa concentration des principales activités agricoles du pays, qui constituent la base de la production saisonnière et de l'approvisionnement de toute activité de conservation des aliments. La *Beqā'* représente 57% de la surface totale utilisée pour la production de céréales au Liban, 36% de la surface totale utilisée pour la production d'arbres fruitiers, et 57% de la surface totale utilisée pour la production de légumes (MoE, 2000). Ensemble, les districts (caza) de Baalbek-Hermel et de la *Beqā'* représentent 43% des terres cultivées au Liban. Outre la culture des plantes et des arbres, la vallée de la *Beqā'* est également une importante zone de production de bétail, principalement des moutons (38%), des chèvres (29%) et des bovins (26%). En ayant cette production majeure dans le pays, la vallée abrite également une concentration de diverses industries. Celles-ci sont principalement engagées dans la production de denrées alimentaires et le secteur des services, avec les principales installations de production laitière et leur main-d'œuvre qualifiée, ainsi que la présence étendue de fermes laitières couvrant 44% des terres agricoles (IDAL, 2018). Le contexte agricole et la présence de la main-d'œuvre font que " presque chaque résident est un agriculteur " (Bou-Antoun, 2014, p. 15).

En conséquence, l'étude se concentre sur les caractéristiques et les spécificités possibles du *mūne* en tant que forme de ressource territoriale dans la région agricole de la vallée de la *Beqā'* au Liban. En tant que tel, **les principaux objectifs sont de démontrer comment une préservation historique de la nourriture et de sa consommation obéit à des logiques spatiales et territoriales. On cherche à montrer comment les activités économiques, malgré l'absence de régulation et différenciation officielle, se construisent autour de ces activités.** Le cadre s'inscrit donc dans le concept de développement néo-endogène et territorial avec l'explication des opérations et des relations spatiales à travers les logiques de proximité. Ce concept se concentre sur les micro-économies locales qui font de plus en plus l'objet d'analyses scientifiques (Petrick, 2011; Quan & Nelson, 2005; Stöhr, 1980). Il

concerne les échelles locales, et plus spécifiquement territoriales de l'espace. et des acteurs. Il existe une forte croyance basée sur l'activation du développement ascendant provenant des forces internes de territoires spécifiques (Lamine et al., 2012). Cette approche considère les zones géographiquement distinctes à plus petite échelle comme des espaces fertiles pour la construction d'activités économiques. Cette dernière est généralement privilégiée lorsqu'elle repose sur l'identification, la capitalisation et la gestion durable de facteurs de différenciation - ressources endogènes - dans le contexte local, par les acteurs locaux. Les "marqueurs" comprennent des facteurs qui ne sont pas seulement pertinents pour le secteur primaire de l'agriculture et de l'agro-alimentaire, mais il a été noté qu'ils incorporent les langues et les dialectes, le folklore, les arts et le théâtre, les sites archéologiques et les composantes du paysage (Swyngedouw, 2004) dans une approche culturelle globale équivalente à une identité territoriale. D'où l'origine de " l'approche du développement par l'économie de la culture " (Ray, 2001) qui est pensée comme la localisation du contrôle économique au sein d'un certain territoire, valorisant ses ressources culturelles au sein de son réseau local d'acteurs. C'est ainsi qu'une approche néo-endogène du développement peut être considérée comme la création de conditions appropriées qui stimulent les initiatives locales dans le cadre de directives générales ; une manifestation à la fois "d'en haut" et "de l'intérieur" (Ray, 2001). Pecqueur (2013), par exemple, reconnaît que l'émergence du développement territorial comme solution potentielle aux changements de l'économie mondiale s'applique aussi bien aux économies industrialisées qu'aux pays en développement. Cependant, il indique clairement que chaque contexte local requiert une approche holistique de l'action publique, qui va au-delà de la simple, mais nécessaire, capacité de l'État et des politiques de régulation, mais qui nécessite une mobilisation, une structure et une coordination entre les acteurs.

En conséquence, cette étude s'appuie sur des approches qui permettraient de décrire les spécificités du *mūne* typiquement culturel, ses dynamiques socio-spatiales et celles liées à ses producteurs et à ses transformatrices, dont les coopératives agroalimentaires au sein de leurs territoires, ainsi que leurs relations et interdépendances, y compris avec d'autres échelles d'analyse. Les deux principales questions de recherche mobilisées dans cette étude sont :

- Dans quelle mesure la culture de la production de *mūne* serait-elle considérée comme une ressource territoriale spécifique à l'échelle de la vallée de la *Beqā'* ?
- La production de *mūne* à travers ses principaux producteurs territoriaux se traduit-elle par un système spatial et territorial et si oui, de quelle manière cela prend-il forme ?

Afin de répondre au mieux à ces questions, l'étude a mis en place une méthodologie qui comprend une analyse descriptive et empirique. D'une part, une revue approfondie de la littérature a été menée pour définir le *mūne* comme une culture et en construire une compréhension basée sur ses spécificités. D'autre part, la méthodologie visait à identifier l'ensemble d'un réseau de coopératives de transformation alimentaire engagées dans la production de *mūne* dans la vallée de la *Beqā'* au Liban. La construction de l'échantillon de coopératives a été réalisée à partir de la liste officielle des coopératives sur laquelle un tri préliminaire a permis de ne garder que celles réellement actives. 40 coopératives ont été ainsi identifiées et cartographiées à partir de cette étape. Deux questionnaires ont également été formulés. Le premier consistait en une série de 18 questions visant à comprendre les

différents aspects du fonctionnement de chaque coopérative sur quatre thèmes principaux qui sont 1) la structure, 2) la spatialité, 3) le soutien externe, et 4) le label et la conformité. Ces questions ont servi de base au premier traitement et à l'analyse des données qui est une étape de catégorisation visant à identifier les typologies des coopératives alimentaires dans la vallée de la *Beqā'* et à comprendre en quoi elles sont similaires et ce qui les différencie les unes des autres. Le second questionnaire était composé de 12 questions visant à comprendre la nature des relations qui existent entre les coopératives alimentaires en utilisant l'analyse des réseaux sociaux (SNA). Le traitement et l'analyse des données ont permis de caractériser les différents types et de relations qui existent au sein du réseau entre les différentes coopératives, ainsi que leur intensité. La dynamique de ces relations a été visualisée à l'aide de sociogrammes, des graphiques complexes basés sur des nœuds représentant les acteurs et des liens représentant les connexions entre eux.

De plus, j'ai utilisé ma propre expérience sur le terrain pour aider à structurer les observations présentées dans ce travail. Je travaille avec des coopératives de femmes qui produisent des aliments *mūne* depuis 2013 par le biais de la coopérative Atayeb Al Rif (AAR) qui est elle-même une coopérative de marketing et un centre de plus de 40 coopératives appartenant à des femmes, dont beaucoup sont situées dans la vallée de la *Beqā'*. Mon engagement porte principalement sur les projets de développement que l'AAR acquiert auprès de donateurs internationaux et d'autres agences de développement du Liban et qui servent à optimiser les processus de production des coopératives de femmes rurales tout au long de la chaîne d'approvisionnement et à leur fournir les services dont elles ont besoin pour atteindre le marché. Au cours de ces presque 10 dernières années de travail avec les coopératives de femmes productrices de *mūne*, j'ai pu constater à quel point la conservation des aliments est un lien précieux avec le patrimoine et l'identité, mais aussi un élément qui recèle un immense potentiel pour le développement socio-économique des territoires ruraux du pays. J'ai vu aussi comment, malgré les précieuses caractéristiques du *mūne*, il n'est toujours pas officiellement reconnu et ne bénéficie d'aucun moyen de différenciation, ce qui met en péril sa protection et sa durabilité. C'est une des raisons principales pour lesquelles j'ai choisi de m'engager dans ce parcours doctoral en espérant que le cadrage fourni dans ce travail permettrait de révéler les avantages comparatifs du *mūne*. Pourtant, je dois mentionner que de nombreux défis ont été rencontrés lors de la réalisation de ce travail. Tout d'abord, les informations spécifiques sur les coopératives alimentaires dans la vallée de la *Beqā'* sont limitées et les rapports disponibles sont principalement axés sur le secteur agricole et ses coopératives à travers le pays avec une extension mentionnant les coopératives alimentaires des femmes. Cependant, nous verrons que le *mūne* n'y est pas référencé, de sorte qu'il n'y a pas de lien clairement établi entre des niveaux de spécificité, des localisations géographiques ou la nature de leurs activités de production. En fait, de nombreuses frontières géographiques au Liban restent floues, tant au niveau des frontières internationales du pays qu'au niveau de la division interne des espaces. Il y a encore des espaces qui sont disputés entre les municipalités. Il n'existe pas non plus d'identification officielle unifiée ou d'affectation des espaces en zones urbaines, périurbaines ou rurales au Liban. Ces lacunes pourraient être la raison pour laquelle la législation nationale libanaise sur les coopératives n'a pas pu

promulguer correctement ou complètement la délimitation géographique des coopératives au niveau des villages comme elle le stipule. En fait, une lecture et une critique approfondies de la loi ont également été ajoutées dans ce travail pour mettre en évidence ces problèmes législatifs. Ces questions ont nous ont posé des limites lors de la tentative de comprendre comment le secteur coopératif est construit au Liban. Bien que la liste officielle obtenue auprès de la Direction Générale des Coopératives contienne des divisions, celles-ci n'étaient pas claires au niveau des activités sectorielles, spécifiquement pour la transformation alimentaire. En dehors du nom de la coopérative, il n'y avait pas d'autre moyen d'identifier les coopératives de transformation alimentaire car cette liste les présentait au milieu d'autres coopératives comme les coopératives artisanales, de services, de marketing, ou encore celles culturelles. Il semble d'ailleurs que le texte législatif soit formulé surtout pour les coopératives agricoles. C'est pourquoi, pour tenter de surmonter les difficultés liées à l'identification des coopératives de l'échantillon, la liste a été affinée par un contact téléphonique avec chacune des coopératives enregistrées figurant dans la catégorie de transformation alimentaire souhaitée (mais mixte). Ce contact a été effectué pour réduire les erreurs liées à la liste officielle et était donc nécessaire pour vérifier la fabrication par les coopératives des produits alimentaires traditionnels visés, pour s'assurer de leur statut actif au moment de l'étude et enfin pour compiler le nombre total des dites coopératives alimentaires opérationnelles sur le territoire. L'étude a également coïncidé avec deux événements malheureux : le début de la pandémie mondiale de COVID-19 et la crise économique qui a débuté au Liban fin 2019. Tous deux ont eu de graves répercussions sur l'économie et la vie quotidienne de l'ensemble de la population et ont créé des difficultés pour atteindre et accéder au terrain. Le contexte post-2019 au Liban a également beaucoup changé et est sujet à des développements en cours qui ont également entraîné des inexacitudes notamment dans le statut financier des coopératives (ces écarts financiers sont mentionnés dans l'analyse détaillée des coopératives). Les 40 coopératives alimentaires ont été contactées pour fixer des dates convenables pour des entretiens qui ont eu lieu entre août et décembre 2019. Il est également important de mentionner la difficulté d'accès à des données fiables de terrain, particulièrement dans cette période troublée du Liban.

D'autres limites sont enfin liées aux capacités des coopératives en matière de tenue de registres et de documentation.

Cette thèse est structurée en trois parties principales. **La première partie** consiste à présenter et à encadrer la culture de la conservation traditionnelle des aliments au Liban, le *mūne*, et son positionnement en tant que bien stratégique pour la sécurité alimentaire et le monde rural, mais non réglementé. Elle commence dans **le chapitre 1** par une introduction sur la conservation des aliments en général et passe à la manière dont la conservation des aliments a pris forme au Liban. Il décrit ensuite la signification historique et l'évolution de cette pratique à une époque plus contemporaine. **Dans le chapitre 2**, le territoire de la vallée de la *Beqā'* est présenté d'abord en ce qui concerne sa production et sa consommation d'aliments traditionnels et son importance en tant que producteur agricole et transformateur, étant donné que les aliments *mūne* sont essentiellement une pratique de transformation agricole. Plus important encore, ce chapitre vise à décrire les conditions du territoire de la

Beqā' sur les plans géographique, naturel et productif. **Le chapitre 3** s'attache ensuite à définir les aliments *mūne* comme porteurs de culture et d'identité et mobilise le cadre théorique de la spécificité des ressources et de la différenciation des produits pour caractériser les multiples fonctions et dynamiques associées au *mūne* et à sa culture.

La deuxième partie est consacrée aux coopératives de manière générale et aborde des éléments théoriques sur leur rôle dans le développement rural, leur évolution et importance à l'échelle planétaire, ainsi que leur situation au Liban. Cette deuxième partie aura pour objectif de révéler les typologies des coopératives alimentaires opérant sur le territoire selon quatre thématiques. Dans cette partie, le **chapitre 4** présente le modèle et le mouvement coopératif dans le monde et au Liban. Il dissèque également le texte législatif qui dirige le mouvement national ainsi que le contexte dans lequel les coopératives se positionnent avant et après la crise économique de 2019 au Liban. Le **chapitre 5** explique ensuite la méthodologie d'extraction des typologies de coopératives alimentaires dans la vallée de la *Beqā'* à partir de l'étape de catégorisation et fournit une division structurelle pour leur caractérisation. Cette caractérisation est basée sur quatre thèmes (structure, spatialité, soutien externe, et conformité du centre et des étiquettes) et permettra d'explorer les caractéristiques de chaque classe. Enfin, **la troisième partie** présente l'approche et l'analyse des réseaux sociaux qui a été utilisée pour décrire les relations au sein du réseau des coopératives alimentaires de la *Beqā'*. **Le chapitre 6** fournit une explication sur la théorie derrière l'analyse des réseaux sociaux ainsi que les terminologies nécessaires à cette compréhension. **Le dernier chapitre 7** aborde l'application de la SNA à notre réseau de coopératives, elle présente une cartographie de ses résultats et une analyse des relations socio-territoriales autour de la production du *mūne* et du point de vue des aspects de proximité. .

Ce texte, en particulier, est un long résumé en français du travail complet qui a été réalisé en anglais. Il présente un résumé du travail et le lecteur est invité à consulter la thèse complète pour plus d'informations.

Partie 1 La conservation des aliments au Liban : un atout culturel et territorial inexploité ?

La conservation des aliments est une activité ancienne pratiquée dans d'innombrables civilisations et sociétés. Elle a pris différentes formes à travers le monde, et pendant des centaines, voire des milliers d'années, les êtres humains ont développé des moyens de conserver leurs aliments plus longtemps. Il en est ainsi dans la région du Proche-Orient en général qui est à l'origine de la révolution agricole et au Liban en particulier. La forme typique de conservation des aliments au Liban est connue sous l'appellation de *mūne*. Il s'agit d'une pratique ancienne et traditionnelle d'abord repérée dans les régions montagneuses du Mont Liban et analysée comme une forme d'assurance alimentaire permettant de survivre aux périodes hivernales lorsque les villages étaient isolés et coupés des sources de nourriture. L'agriculture était la source principale de subsistance pour la majorité des habitants des zones rurales : les familles d'agriculteurs consommaient normalement ce qui était de saison, mais surtout, elles conservaient leurs produits, qu'ils soient d'origine végétale ou animale, dans des conserves. Les hommes cultivaient les terres tandis que les femmes préparaient et conservaient la récolte. Elles utilisaient ce qui était à leur disposition et ce qui était cultivé autour d'elles. Par conséquent, la conservation de la nourriture dans le *mūne* est une activité typique des femmes au Liban, et c'est également une activité qui était réalisée au niveau communautaire.

1.1. La conservation des aliments et sa matérialisation au Liban

Depuis la préhistoire, les humains ont compris l'importance de conserver la nourriture. Les premiers humains ont rapidement appris que tout surplus de nourriture se détériorait s'il n'était pas conservé et qu'il y avait des périodes importantes où la nourriture n'était pas disponible. Conserver et stocker les aliments signifiait de meilleures chances de survie, une réduction des efforts consacrés à la collecte constante de nourriture et à la chasse, et la mise à disposition de stocks d'urgence de nourriture en cas de pénurie ou de besoin (Joardder & Masud, 2019). Les aliments conservés sont stockables et transportables. Avec l'introduction des sociétés agricoles il y a environ 10 000 ans au Levant (aujourd'hui Méditerranée Orientale- Liban, Syrie, Palestine), les établissements permanents, l'agriculture et la domestication sont devenus des pratiques courantes. Les chasseurs-cueilleurs cherchaient leur nourriture, mais les colons la cultivaient. C'est dans ces régions du Levant que les premières plantes ont été domestiquées et sont encore aujourd'hui des consommations de base pour ses populations ; le blé, l'orge et les lentilles (Bopp, 2019). Cette région du monde est désignée comme le centre d'expansion du Proche-Orient, l'un des quatre principaux centres d'origine de la révolution agricole néolithique durant l'ère du nouvel âge de pierre, il y a environ 9 000 et 10 000 ans (Mazoyer & Roudart, 2006). Notre région d'étude constitue le centre d'une

région encore plus large et connue sous le nom de Croissant fertile à partir duquel la propagation de l'agriculture a pris naissance et s'est étendue en Europe, en Afrique et en Asie occidentale et centrale. Le centre du Proche-Orient est reconnu comme un noyau principal où des groupes humains préhistoriques de chasseurs-cueilleurs se sont organisés en sociétés agricoles qui ont domestiqué des espèces végétales et animales. Avec l'augmentation du nombre de populations sédentaires, les surplus de récoltes sont devenus une nécessité pour la subsistance et la survie. Le stockage des aliments, leur protection contre la détérioration et les insectes et la compréhension des facteurs de leur détérioration sont devenus nécessaires. Les civilisations avancées ont connu des périodes de famine et des périodes d'abondance. De légères fluctuations dans les conditions météorologiques, les précipitations, la température ou une tempête de grêle soudaine sur les bourgeons en fleur au printemps pouvaient faire basculer l'équilibre délicat et avoir des résultats dévastateurs, ou heureux, sur la récolte. La conservation des excédents de récolte est donc une réaction naturelle aux aspects saisonniers et aléatoires de la disponibilité alimentaire.

Le facteur sous-jacent commun de la conservation des aliments est toujours resté le même : le contrôle et le ralentissement de la détérioration. S'ils sont ingérés, les aliments altérés par des agents pathogènes peuvent entraîner une intoxication et de graves conséquences pour la santé, voire la mort. Même dans le monde complexe et développé d'aujourd'hui, l'Organisation mondiale de la santé (OMS) estime qu'environ 600 millions de cas d'intoxication alimentaire, soit 1 personne sur 10, se produisent chaque année dans le monde, avec pas moins de 420 000 décès¹. Cette leçon a sûrement été apprise très tôt par les humains qui, depuis les sociétés les plus anciennes, ont clairement appliqué des mesures pour prolonger la durée de conservation des aliments. Les aliments sont, tout comme nous, une matière biologique organique. La détérioration est inévitable. Pourtant, la détérioration n'est pas nécessairement synonyme de maladie. Selon Singh et Anderson (2004), la détérioration des aliments peut être définie de plusieurs façons. Elle signifie généralement qu'un aliment devient indésirable pour la consommation humaine. Il peut s'agir du développement de caractéristiques inacceptables telles que des changements de couleur, de texture, d'arôme ou de saveur. Il peut également s'agir de la perte de valeur nutritionnelle, par exemple en termes de teneur en vitamines, ou du fait que le produit n'est plus conforme à l'étiquette déclarée. La détérioration la plus grave concernerait certainement la sécurité de l'aliment et lorsque la détérioration peut provoquer une intoxication alimentaire chez le consommateur. C'est pourquoi des indicateurs de qualité et de sécurité ont été mis au point et désignés sous le nom de durée de conservation du produit alimentaire. Historiquement, les gens étaient obligés de conserver leurs aliments par nécessité. Aujourd'hui, la conservation des aliments est devenue un enjeu économique, et un aspect de la marchandisation des produits. Comme toute marchandise en général, la transformation des aliments et leur conservation entrent dans la dynamique du marché de chaque pays. Les gens consomment aujourd'hui certains produits alimentaires parce qu'ils en ont envie. Bien que la production de quantités suffisantes de nourriture pour subvenir aux besoins de la population croissante de la planète reste un sérieux défi aujourd'hui, les gens ont développé un sens du goût. Ils consomment des produits qu'ils aiment et apprécient, et non pas parce qu'ils en ont particulièrement besoin. C'est le résultat

¹ <https://www.who.int/activities/estimating-the-burden-of-foodborne-diseases>

d'un monde en développement dans lequel le consumérisme a évolué à partir du désir d'adopter des niveaux de vie plus élevés.

On ne peut commencer à expliquer l'importance de la conservation des aliments au Liban avant de décrire la diversité et les habitudes de la cuisine libanaise. L'intérêt de commencer par une présentation de la cuisine libanaise pour aborder le *mūne* tient au fait que la littérature disponible ne se contente pas de prendre en compte la diversité des recettes et des plats locaux, mais elles les présentent simultanément en lien avec l'identité culturelle, l'hospitalité et la mobilité caractéristiques de la société libanaise. En effet, nourriture et culture vont de pair dans un pays comme le Liban. Lorsque les Libanais veulent exprimer leur hospitalité, ils le font avec de la nourriture. Les gens s'identifient à la nourriture, se sentent à l'aise pour socialiser autour de la nourriture, et ont même conservé cette nourriture au cours des différentes vagues d'immigration. La cuisine libanaise est devenue aujourd'hui un menu populaire qui jouit d'une réputation aussi forte à l'échelle internationale que dans son pays d'origine. Elle est devenue si populaire que certains auteurs ont déclaré que même lorsque d'autres restaurants arabes ouvrent à l'étranger, ils s'appellent libanais, et que lorsqu'un buffet du Moyen-Orient est préparé, les plats sont généralement libanais (Roden, 2008). La cuisine libanaise a même été comparée à d'autres catégories de cuisines locales qui ont acquis une popularité mondiale comme les cuisines chinoise et japonaise (Gheorghe & Bulin, 2014). Une diversité d'auteurs a publié de nombreux livres et contenus autour de la cuisine libanaise, des livres de cuisine aux guides de voyage en passant par des recherches développées par des chefs, des écrivains gastronomiques, des sociologues, des anthropologues et par d'autres disciplines scientifiques. Tous associent la cuisine libanaise à une vie sociale riche et à l'esprit d'entreprise du peuple libanais. Ils l'associent également à la résilience des gens face aux difficultés actuelles et à la ténacité manifeste de leur attachement à leur nourriture. Il y a même un vieil adage qui dit : " Jetez un Libanais à la mer et il en ressortira avec un poisson " (Abdallah & Hannam, 2016, p. 133).

Le *mūne* (qui peut s'écrire de différentes manières comme *mūne* ou *mouni* et se prononcer comme *mouné*) est un terme collectif désignant un groupe d'aliments traditionnellement conservés, produits de façon saisonnière et stockés comme réserves dans le garde-manger. On pourrait dire que ces aliments sont un facteur majeur de la popularité de la cuisine libanaise, car ils constituent des ingrédients de base utilisés dans de nombreux plats populaires, ce qui ajoute à leur caractère distinctif. La célèbre salade de *taboulé* contient du boulgour (blé concassé), de l'huile d'olive et parfois de la mélasse de grenade (*debs rumman*). Le principal ingrédient de la célèbre *mano'uche* est le mélange d'herbes séchées *za'atar*. Une table de *mezze* comporte généralement une assiette de *makdous* (aubergines marinées à l'huile, farcies de piment, de noix et d'ail). Un petit-déjeuner hivernal typique est la soupe de *kishk* (*burghul* séché fermenté avec un ou plusieurs dérivés laitiers). Le *mūne* n'est pas seulement un groupe d'aliments conservés, ni un groupe de techniques ou de recettes. Décrire le *mūne* comme le simple fait de conserver des aliments serait une atteinte à l'essence de ce qu'est réellement le *mūne*. Comme cette partie le montrera, le *mūne* est une culture ou pourrait même constituer un concept à part entière dont les manifestations se trouvent à la fois dans le comportement social, la langue et même l'architecture au Liban. Le *mūne* est le reflet de tout un mode de vie, d'habitudes et de normes d'hospitalité domestique rurale. Cette culture incarne une géographie de la diversité avec des spécialités

régionales. Elle s'inscrit dans le tissu social des familles des villages libanais et dépeint une image vivante de l'effort communautaire, de la femme en tant qu'acteur clé et élément constitutif de la société domestique, de la planification vigilante et minutieuse, et en tant que moyen de survie, de difficultés, d'histoire et d'abondance.

Bien qu'il s'agisse d'une notion familière et couramment utilisée dans le contexte libanais (et du Levant), il n'existe pas de moyen direct de définir ou d'expliquer ce qu'est le *mūne*. C'est un terme qui est largement utilisé dans tous les foyers libanais, et pourtant chaque personne peut l'articuler de la manière dont elle le perçoit. Certains peuvent se référer aux produits conservés eux-mêmes, comme un nom collectif ou une étiquette pour la catégorie de ces aliments sans en nommer un en particulier. D'autres peuvent faire référence à l'action de les préparer, ou à la pièce dans laquelle ils sont conservés, ou encore évoquer leur passé historique, la façon dont ils étaient préparés et la manière et le moment appropriés de les manger. Il n'est pas rare d'entendre encore aujourd'hui des villageoises dire au début du printemps : *"Je vais bientôt commencer à préparer le mūne de cette année"*. Bien que le terme soit familier au public, il n'existe pas de définition étatique apparente ou de stratégie claire qui tire parti du *mūne*. Quelques ouvrages disponibles mentionnent cependant la notion et tentent de la définir, toujours en ce qui concerne sa corrélation avec le patrimoine. Un rapport du ministère libanais de l'économie et du commerce (MoET), par exemple, décrit de façon marginale le *mūne* comme *"... selon les consommateurs, un produit lié à la région de production, au terroir où le produit est fabriqué et au paysage qui entoure le lieu..."*. Le concept de *"Mūne"* est apparu il y a plusieurs siècles, lorsque les producteurs travaillaient à la conservation de leurs produits d'origine afin de les consommer pendant l'hiver" (Abu Ghyda, 2007, p. 3). Aïda Kanafani-Zahar définit le *mūne* à partir de son sens linguistique comme suit : *" Le mūne - du verbe māna : stocker - désigne l'ensemble des provisions obtenues par les techniques traditionnelles de conservation "* (Kanafani-Zahar, 1994, p. 1). Les quelques autres sources décrivent le *mūne* comme la transformation des produits alimentaires saisonniers du printemps-été en provisions d'hiver (Feghali et al., 2022; Massaad, 2017; Pugliese et al., 2013; Roden, 2008; Zurayk & Rahman, 2008).

Dans les temps anciens, les habitants des villages libanais avaient une forte raison de conserver et de stocker la nourriture ; pour survivre, par peur. Dans le deuxième ouvrage de la série, Nadyah Al-Ghazzi (2001) énumère sept facteurs qui expliquent la crainte constante des gens de voir leur alimentation se dégrader et qui les ont poussés à rechercher de manière obsessionnelle des centaines de méthodes de conservation des aliments à leur disposition. Il s'agit de 1) **facteurs environnementaux** tels que les périodes de sécheresse imprévues ou les pénuries d'eau susceptibles de provoquer la famine, 2) **facteurs géographiques** qui éloignent les villes et les villages des sources d'eau (rivières), de l'approvisionnement agricole et de l'urbanisation de l'époque, 3) changements soudains des **régimes climatiques** comme les vagues de chaleur ou les tempêtes de neige qui entravent le transport et isolent complètement les villages, en particulier les villages montagneux, 4) **facteurs économiques** qui accompagnent l'insécurité économique ou l'instabilité du commerce et de l'agriculture, 5) les **risques de guerre**, compte tenu de la position géopolitique stratégique et instable de la région, 6) **les sièges** de grandes villes et de petits villages qui ont été menés à plusieurs reprises au cours des millénaires par des forces étrangères, ce qui a amené les gens à rester sur le qui-vive et à se tenir prêts à toute éventualité, et 7) **les épidémies**, qui ont appris aux

gens qu'avoir des réserves de nourriture prêtes à être stockées pour les nourrir pendant plusieurs mois est une option sûre en cas d'incertitude soudaine, ce qui permet d'éviter la famine et la malnutrition. L'auteur ajoute une huitième raison, plus moderne, pour le stockage des aliments *mūne*, qui est pertinente pour les conditions actuelles, et qui est 8) **l'entrée des femmes sur le marché du travail**. Elle pense que la préparation laborieuse des repas diminue aujourd'hui étant donné que les femmes cherchent de plus en plus à travailler. Comme il s'agit d'une compétence primordiale pour les femmes, les femmes qui travaillent ont eu recours à la préparation des aliments *mūne* pendant leur temps libre afin de faciliter la préparation des repas en cas de besoin.

C'est finalement la saison de production et de récolte qui dicte ce qui peut être conservé et quand. Avec l'arrivée de chaque saison, les villages, les cuisines, les toits et les caves deviennent soudainement beaucoup plus animés. Là encore, Nadyah Al-Ghazzi (2001) l'exprime de manière presque poétique :

[Traduit de l'arabe]

"En été, les légumes et les fruits mûrissent, pour être soumis à des processus très complexes, avec des rituels et des secrets très précis. Si ces rituels subissent le moindre changement, cela signifierait la détérioration des aliments conservés à l'avenir."

(p. 144)

Elle poursuit :

"Au début de l'automne, l'aubergine serait devenue blanche et très sucrée. Les raisins auraient atteint leur plus haut niveau de sucre. Les figes auraient mûri, de petites figes de pluie pleines de douceur. Le piment rouge aurait mûri.

Les villages bourdonnent de travail, le temps passe vite et le temps s'en va vite, les cuisines des villages battent leur plein.

Dans les villages, on fabrique de la mélasse, on sèche les raisins pour en faire des raisins secs, et on transforme les raisins en vinaigre.

Et les méthodes de fabrication de la mélasse (dibs), du vinaigre (ḥal), des raisins secs (zbīb), de la mélasse de grenade (dibs rummān), et d'autres encore, seront mentionnées (remémorées) comme "Les produits levantins fabriqués dans les cuisines du Levant".

(p. 147-8)

Il est vrai que la tradition de produire des aliments *mūne* est une pratique non seulement commune aux villages du Liban mais a également été enregistrée dans d'autres pays du Levant comme la Syrie, la Palestine et la Jordanie. Il ne s'agit en aucun cas d'une affirmation qui catégorise le *mūne* uniquement pour le Liban, mais **le village de montagne libanais est connu depuis longtemps et largement reconnu comme un espace typique pour la conservation des aliments** (Aubaile-Sallenave, 2000; Roden, 2008). Non seulement cela, mais il s'agissait également d'une division du travail domestique où les femmes étaient les principales responsables de la préparation des aliments conservés sous forme de *mūne*

(Aubaile-Sallenave, 2000; Kanafani-Zahar, 1994). Il s'agit d'une habitude dominante dans ces régions qui a probablement évolué à partir de la trajectoire historique et des conditions auxquelles elles ont été confrontées, notamment au Mont Liban. Le Mont Liban est la chaîne de montagnes occidentales du Liban qui fait face à la côte et à la mer Méditerranée, à laquelle fait face à l'est une autre chaîne de montagnes appelée la chaîne de montagnes de l'Anti-Liban et divisée entre les deux par la vallée de la *Beqā'*, le territoire sur lequel porte cette étude. Le Mont Liban est connu pour son terrain accidenté avec de nombreux hauts sommets et vallées qui varient fortement et rapidement en altitude. Cela signifie qu'à l'époque, les habitants de ces montagnes étaient relativement isolés les uns des autres, d'autant plus que les réseaux routiers n'étaient pas bien développés et qu'ils étaient bloqués en période d'hiver et de neige. Les villageois devaient terrasser les terrains en pente autour de leurs maisons pour les cultiver et construire des caves pour leur stockage. Ils affectaient des coins spécifiques de leurs maisons au stockage du *mūne*, généralement appelé " la pièce du *mūne* " (*oudit al mūne*) ou *namlīyeh* (armoire à *mūne*). La pratique de la conservation des aliments était donc une activité rurale typique. Elle existait dans les villages ruraux relativement éloignés des villes urbanisées, comme la capitale actuelle Beyrouth ou la Tripoli du nord, qui constituaient la source d'importation, de commerce et de produits alimentaires. Étant donné que le *mūne* consistait à conserver des aliments, les gens utilisaient ce qui était à leur disposition, donc les cultures autour d'eux, et c'est ce qui donnait au *mūne* sa diversité, que ce soit dans les villages du Mont Liban ou ceux de la *Beqā'* rurale.



Figure 1: Un assortiment de conserves de *mūne* dans des bocaux et des bouteilles en verre. Crédit photo : article du journal An-Nahar (Ajjan, 2021)

La conservation des aliments au Liban est une pratique qui a été adoptée par de nombreuses générations et les familles comptaient sur cette source de nourriture en cas de besoin. La préparation et le stockage de ces aliments étaient étroitement liés et un espace était réservé à ces fins dans chaque foyer. La conservation des aliments jouait un rôle si central dans la vie quotidienne des familles et des communautés que des sections entières des

maisons étaient consacrées à leur préparation et à leur stockage. **Cette section mettra en avant l'effet que les aliments *mūne* ont eu sur l'architecture et la construction des maisons traditionnelles, les pratiques de stockage communes qui ont été suivies**, et sur d'autres éléments de la vie quotidienne des familles rurales. Les habitations rurales traditionnelles au Liban étaient construites de manière à rapprocher l'homme de sa terre et de sa nourriture, la maison devenant un espace intégral qui se rapproche d'une interaction étroite entre l'homme et sa terre, sa nourriture et ses animaux. Étant donné la longue histoire qu'a connue le pays, de nombreuses époques ont laissé leur empreinte sur l'architecture de la maison libanaise. Des variations existaient également à l'époque en fonction de l'emplacement et du statut social. Ce qui est important, c'est de mettre en évidence comment l'espace dans les habitations rurales était construit et utilisé de manière stratégique pour soutenir la préparation, la conservation et le stockage des aliments domestiques. L'espace de vie (*dār*) était par exemple utilisé pour la préparation initiale des aliments avant les étapes de conservation proprement dites. La terrasse extérieure (*stayḥa* ou *maṣṭabe*) était utilisée pour l'étalement et le séchage de nombreux aliments comme les grains, les pommes de pin, les noix, le kishk, et autres. Le toit (*sath*) était de même un espace très utilisé pour des tâches comme le décorticage, le nettoyage et le tri des légumineuses, le tamisage du *burghul*, la séparation et le tamisage des feuilles de *za'atar* et du sumac, le frottement et le tamisage du *kīshk*, etc..., ce qui signifierait régulièrement un effort collectif des femmes en groupe et ou individuellement (Kanafani-Zahar, 1994). Quant au *ḥzēne* ou *beit el mūne* (chambre de stockage du *mūne*), il s'agissait normalement d'un espace divisé qui se juxtaposait à l'espace de vie général et était de taille plus réduite, normalement plus long (3,5 à 4m) que large (environ 1,5m sans compter la profondeur des silos) et environ 2,5 à 3m de hauteur. Le livre d'Aïda Kanafani-Zahar (1994) fournit une description détaillée de cet espace (Figure 2). Elle décrit comment il comprenait des types de silos plus grands et plus petits appelés *tawābīt* (pluriel pour *tābūt*) qui étaient des structures rectangulaires fixes utilisées pour le stockage en vrac des céréales, du blé, de l'orge et du maïs (éventuellement jusqu'à 500 kg à 1 tonne s'ils sont grands), et *kwēyir* (pluriel pour *kwāra*) qui étaient la version mobile plus petite incorporée dans les *tawābīt* fixes et utilisée pour le stockage des légumineuses, du *burghul*, du sel, de la farine, du *kīshk*, etc.

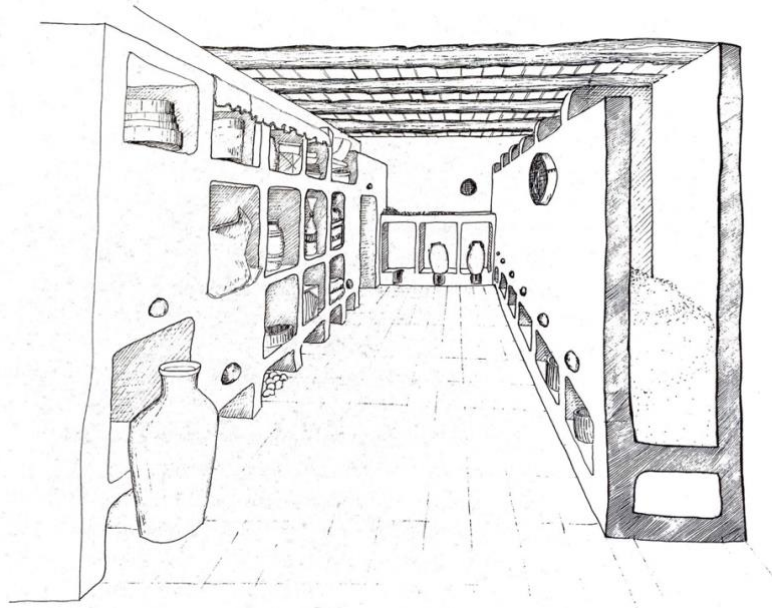


Figure 2: Illustration d'une salle de *mūne* (*h̄zēne* ou *beit el mūne*) représentée par Aïda Kanafani-Zahar montrant les silos à *tawābīt* à droite, les ouvertures à gauche où étaient placés les *kwēyir* plus petits, et à l'extrémité intérieure où étaient stockées les jarres. Source de l'illustration : (Kanafani-Zahar, 1994)

Le processus de conservation des aliments en *mūne* engage un cycle complet qui part de la production agricole primaire et passe par une série d'étapes complexes de préparation et de traitement basées sur des recettes et des pratiques héréditaires qui mobilisent elles-mêmes des individus ou des communautés entières. Par-dessus tout, la préparation des aliments *mūne* est connue depuis longtemps pour être une activité centrée sur les femmes et le rôle des femmes en général au sein des ménages au Liban a toujours été impératif. La division conventionnelle du travail au sein des familles libanaises a toujours été la suivante : les hommes, en tant qu'agriculteurs, cultivent la terre et les femmes assument les obligations familiales générales, la garde des enfants, les tâches ménagères quotidiennes et l'aide à l'entretien saisonnier. Le plus important dans ce cas est que la conservation des aliments était effectuée uniquement par les femmes (Al-Ghazzi, 2001; Kanafani-Zahar, 1994). Il ne s'agit pas seulement de la conservation des aliments saisonniers cultivés par l'homme, mais aussi de la responsabilité de la gestion générale de l'alimentation de son foyer, de l'aide apportée à l'homme dans l'agriculture primaire (principalement lors des semailles et des récoltes) et de l'achat des produits alimentaires nécessaires. Les femmes contrôlaient et décidaient des types et des quantités d'aliments à acheter, ainsi que du rythme de consommation. Les compétences des femmes en matière de production de *mūne* étaient transmises de génération en génération. Les femmes apprenaient de leurs mères et leurs mères apprenaient de leurs grands-mères, et ainsi de suite. Comme le décrit Aïda Kanafani-Zahar (1994, p. 213) : "*Les implications du stockage intérieur sur le rôle et le pouvoir des femmes au sein de la cellule familiale sont importantes, car elles ont libre accès aux ressources du foyer et les gèrent selon les besoins de la famille sans le contrôle des hommes*". En ce qui concerne la production de *mūne*, étant donné que cette production augmente rapidement pendant la saison de récolte, il a également été documenté que les femmes coopèrent ensemble en groupes et consolident leurs efforts en s'aidant mutuellement, un terme généralement appelé *ōne*. Cela alimente une plus grande

coopération au sein de communautés et de villages entiers qui se rassemblent pour demander de l'aide. Ce rassemblement des communautés par l'entraide et l'organisation collective, conduit notamment des femmes constituait une composante économique importante de la vie rurale. Elles se réunissaient par exemple sur le toit de la maison d'un des voisins : là, les femmes préparaient les ustensiles et les plans de travail nécessaires, et effectuaient des tâches collectives comme le *kishk*. Ces occasions ouvraient également la voie à de riches interactions sociales et à l'expression de l'hospitalité. Les femmes hôtes apportaient à leurs voisines aidantes de la nourriture et des boissons, et leur rencontre était ponctuée de discussions et d'échanges de conseils sur les techniques qu'elles utilisaient pour préparer des *mūne* complexes comme le *kishk*. En retour de cette aide, les femmes aidées participaient à la prochaine série de regroupements pour l'aide mutuelle d'un autre voisin ; aucune dette n'est laissée sans retour.

Aujourd'hui, la culture du *mūne* est toujours très présente, mais sous une forme différente, et probablement en réémergence. La production domestique de *mūne* dans les ménages a aujourd'hui fortement diminué en raison de plusieurs facteurs. Ces facteurs comprennent normalement l'exode interne vers les villes à la recherche d'un emploi et d'une éducation, la migration, les avancées technologiques, l'augmentation des importations de nourriture, l'urbanisation et le changement de mode de vie. Ces facteurs ont, d'une part, réduit la proximité et affaibli le lien des individus avec leur terre et, d'autre part, rendu la nourriture facilement disponible. Les femmes n'ont plus besoin de préparer elles-mêmes le stock de nourriture du ménage, la nourriture étant disponible et accessible avec l'émergence des marchés. Les femmes participent également de plus en plus au marché du travail, ce qui a contribué à affaiblir la dimension collective des temps de préparation du *mūne*. Les salles de *mūne* et le *namlīeh* ont aujourd'hui disparu des foyers quotidiens. Certaines étapes de la préparation du *mūne* ont également évolué et changé pour intégrer des broyeurs électriques, des matières premières achetées au marché (par exemple broyage du *kishk* à la machine au lieu d'être fait à la main par le *farrākāt*), pour remplacer des jarres en terre cuite par du verre et des sacs plastiques commerciaux au lieu de silos. Ces éléments facilitent les tâches et diminuent considérablement le temps de préparation, bien que certaines femmes considèrent toujours le produit final comme de qualité inférieure à ce à quoi elles sont habituées (Kanafani-Zahar, 1994). La valeur des aliments *mūne* d'aujourd'hui est devenue largement patrimoniale, culturelle et nostalgique. Aujourd'hui, nous pouvons voir que les aliments *mūne* sont produits par des institutions formelles comprenant des producteurs industriels privés, des petites et moyennes entreprises artisanales et surtout par des coopératives. Il est difficile de décrire l'implication et la domination de producteurs commerciaux industrialisés (ou grand public) dans une pratique culturelle aussi traditionnelle et spécifique. Ce que l'on peut dire avec certitude, c'est qu'il y a **deux types de producteurs à considérer**. Les premiers semblent se conformer au cadre culturel du *mūne* en conservant un lien fort avec la terre, en utilisant des techniques de production traditionnelles mais modernisées, en utilisant des ingrédients naturels locaux avec des emballages écologiques sans additifs artificiels, et en s'appuyant principalement sur les femmes et leur savoir-faire. C'est le cas des coopératives et de certaines petites et moyennes entreprises artisanales qui ont tendance à être plus familiales. L'autre type de producteur comprend les producteurs alimentaires privés qui, pouvant également être familiaux, fabriquent des produits en réponse aux demandes du marché afin de

maximiser les profits tout en réduisant les coûts. Ce type de producteurs n'accorde pas nécessairement une attention directe ou une priorité au maintien des techniques de fabrication traditionnelles, ne s'appuie pas sur une main-d'œuvre qualifiée, peut intégrer des machines industrielles hautement technologiques et automatisées, est enclin à produire hors saison et ne dépend donc pas essentiellement des produits locaux, utilise des additifs artificiels ou d'autres ingrédients atypiques pour augmenter la stabilité et la durée de conservation du produit et peut utiliser des emballages non conventionnels comme des boîtes de conserve. Certains des principaux facteurs à comprendre en ce qui concerne la différence entre les positions des producteurs privés et des coopératives (artisanales) et leurs intersections dans ce cas sont :

- 1) L'enregistrement légal et l'attachement institutionnel sont différents (les coopératives sont liées à la DGoC et au MoA),
- 2) Les producteurs privés dominent le marché libanais,
- 3) Ils ont la liberté de produire des aliments, que ce soit dans le sens traditionnel des pratiques ou non, étant donné qu'il n'existe aucune réglementation ou normalisation spécifique qui différencie les aliments *mūne* des autres aliments. Ils peuvent donc utiliser des matières premières agricoles importées qui ne sont pas liées au terroir ou des additifs artificiels, etc.,
- 4) Ils disposent d'un fonds de roulement plus important et d'une capacité de production générée par les bénéfices de leur structure d'entreprise à but lucratif,
- 5) Ils bénéficient de plus d'exposition, d'accès et de portée vis-à-vis du grand public puisque leurs produits sont disponibles toute l'année et sont distribués dans des points de vente commerciaux. Ce n'est pas le cas pour les produits *mūne* des coopératives. L'étude de l'annuaire des exportations et des entreprises industrielles au Liban (IDICO) montre que seules quelques coopératives y sont répertoriées et que beaucoup de celles ciblées par cette étude n'y figurent pas. Même s'il existe quelques rares descriptions de ce type de coopératives alimentaires féminines, des informations plus systématiques sont nécessaires et constituent donc l'un des objectifs principaux de cette étude.

1.2. La position et le contexte du territoire par rapport aux pratiques actuelles du *mūne* - cas de la vallée de la *Beqā'*

Les aliments *mūne* traditionnels sont des vecteurs de patrimoine et entretiennent jusqu'à aujourd'hui un lien direct avec le terroir et les petits producteurs locaux. C'est un reflet de ce que le *terroir* a à offrir, un panier assemblé de produits de saison qui incarnent le savoir-faire et la maîtrise des femmes. De ce fait, les produits *mūne* sont le résultat direct du territoire environnant et de ses cultures agricoles locales. Le *mūne* est donc à considérer dans la plupart des cas, comme un (sous)produit agricole issu directement de la production locale. Avant de décrire les conditions de la vallée de la *Beqā'*, il est important de commencer par un aperçu des divisions administratives et de la gouvernance au niveau national.

Le Liban est divisé en trois niveaux administratifs principaux. Il s'agit des (1) Gouvernorats ou *Muhafazats* : 8 au total, (2) Districts ou *Cazas* : 26 au total et (3) les municipalités en tant qu'autorités locales. Les *Muhafazats* et les *Cazas* sont représentés dans la Figure 3. La vallée de la *Beqā'* elle-même comprend deux *Muhafazats* (gouvernorats de

Baalbeck-Hermel et de *Beqā'*) et 5 cazas (Hermel et Baalbeck dans le gouvernorat de Baalbeck-Hermel et Zahle, *Beqā'* Ouest et Rachaya dans le gouvernorat de *Beqā'*). Il faut veiller à ne pas confondre la vallée de la *Beqā'* dans son paysage naturel (intérieur des terres entouré de deux chaînes de montagnes) avec les noms attribués aux divisions administratives incluses aux niveaux *Muhafazat* et *Caza*. Il en va de même pour les noms des *Caza* qui sont basés sur certaines grandes villes/villages comme Zahle, Baalbeck, Rachaya et Hermel. La gestion territoriale du pays est donc fortement compliquée par le système de 'consociation' à base religieuse censé garantir la représentation. Le découpage territorial actuel au niveau des municipalités n'est pas non plus encore achevé. Pendant le mandat français du Liban, des registres fonciers ont été établis sur la base de zones cadastrales qui représentent les villes et les villages du pays. Cependant, à ce jour, l'État libanais n'a pas encore achevé ces zones cadastrales. Même les frontières nationales du pays restent officielles et contestées, tant au niveau du territoire que des fronts maritimes avec la Syrie au nord et à l'est, et avec Israël (conflit territorial palestinien) au sud. Depuis le mandat français du Liban et de la Syrie, environ 80% de la frontière a été délimitée entre le Liban et la Syrie et 71 points terrestres ont été positionnés entre le Liban et la Palestine (Abdel-Kader, 2012). Après l'indépendance, l'achèvement de la démarcation n'a jamais été réalisé. Les négociations (et les différends) les plus récents ont porté sur les tentatives de délimitation des frontières maritimes à la suite de la découverte de réserves de gaz naturel au large de la Méditerranée orientale. Ces ambiguïtés n'affectent pas seulement la souveraineté du Liban dans ses frontières internationales, mais elles ont été des zones de conflits et de violences fréquents qui ont largement contribué à l'instabilité au fil des ans. D'autres complications dans la gestion des territoires au Liban sont soulevées par le fait que certaines administrations sont gérées sous l'autorité du *Muhafazat* (avec le *Muhafez* comme chef d'autorité) tandis que d'autres sont gérées sous l'autorité du *Caza* (avec le *Kaymakam* comme chef d'autorité). Ces imprécisions peuvent affecter le principal acteur de notre étude, les coopératives dont une partie de l'activité semble ancrée dans les territoires agricoles, culturels et ruraux libanais.

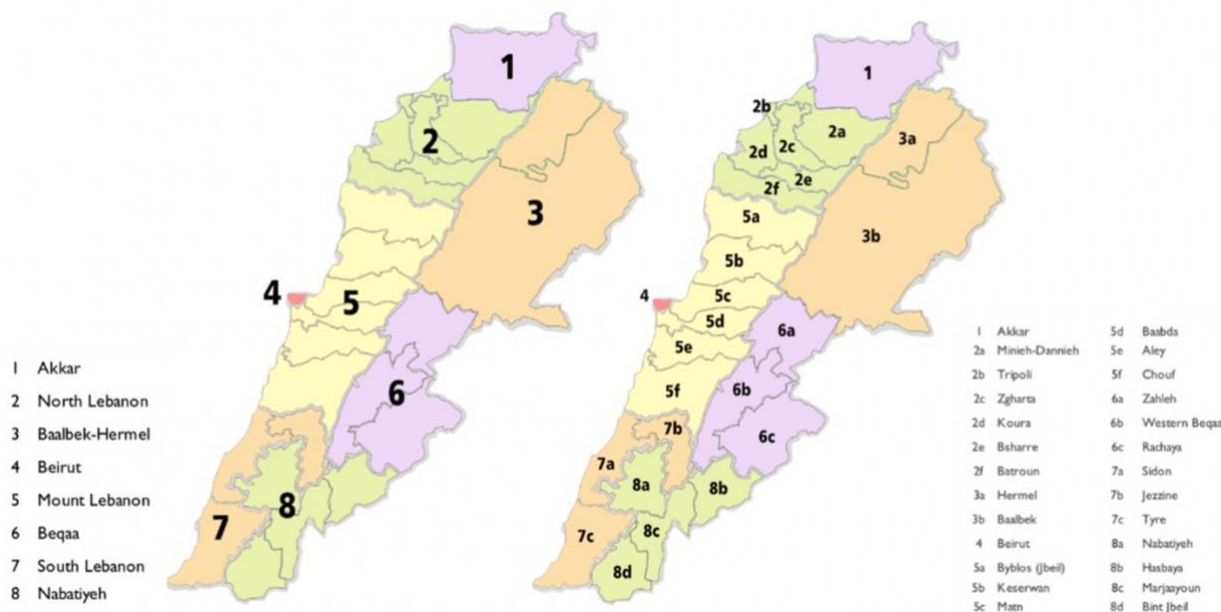


Figure 3: Divisions administratives contemporaines du Liban avec (à gauche) les gouvernorats ou *Muhafazats* et (à droite) les districts ou *Cazas*. Source : compilé par l'auteur à partir de (Lebanese Arabic Institute, 2017)

La vallée de la *Beqā'* est un plateau naturel fertile situé entre deux chaînes de montagnes (la chaîne du Mont Liban à l'ouest et la chaîne de l'Anti-Liban à l'est) dans l'intérieur du Liban actuel. Géologiquement, c'est la section la plus élevée de la vallée du Grand Rift (Cobban, 2019), qui est une étendue de 7 000 km de tranchées et de rifts qui se sont formés il y a environ 35 millions d'années, commençant au nord de la vallée de la *Beqā'* et s'étendant jusqu'au Mozambique en Afrique. La courbure de retenue entre les plaques tectoniques a géologiquement abouti à la formation des montagnes du Mont Liban et de l'Anti-Liban et de la vallée de la *Beqā'* comme plateau intermédiaire (Hancock & Atiya, 1979).

La vallée de la *Beqā'* est l'une des quatre principales unités topographiques du Liban, un petit pays de 10 452 km² situé sur la Méditerranée orientale, et celles-ci comprennent (Figure 4) **1) une plaine côtière** constituée d'une longue bande littorale étroite et plate faisant face à la mer Méditerranée, d'une largeur moyenne de 3 km et atteignant 6 km à son point maximal au nord. La capitale Beyrouth est située au milieu de la côte et c'est sur le littoral que l'on trouve la majorité des villes et des zones urbanisées, **2) une chaîne de montagnes accidentées** à l'ouest, appelée chaîne du Mont Liban, qui s'étend parallèlement à la côte et culmine à Qurnat Al Sawda, à 3 000 m d'altitude, **3) la vallée de la *Beqā'*, plateau fertile** situé à 30 km à l'est de la capitale Beyrouth et principal producteur agricole du pays, et **4) la deuxième chaîne de montagnes à l'est**, appelée l'Anti-Liban, qui constitue la frontière orientale naturelle avec la Syrie. Ces différentes unités donnent au pays une immense diversité qui, dans sa généralité, se caractérise par son caractère accidenté et donc son "relief". Le mot "relief", dans ce contexte géographique, désigne la différence entre l'altitude la plus basse et la plus haute d'un lieu.

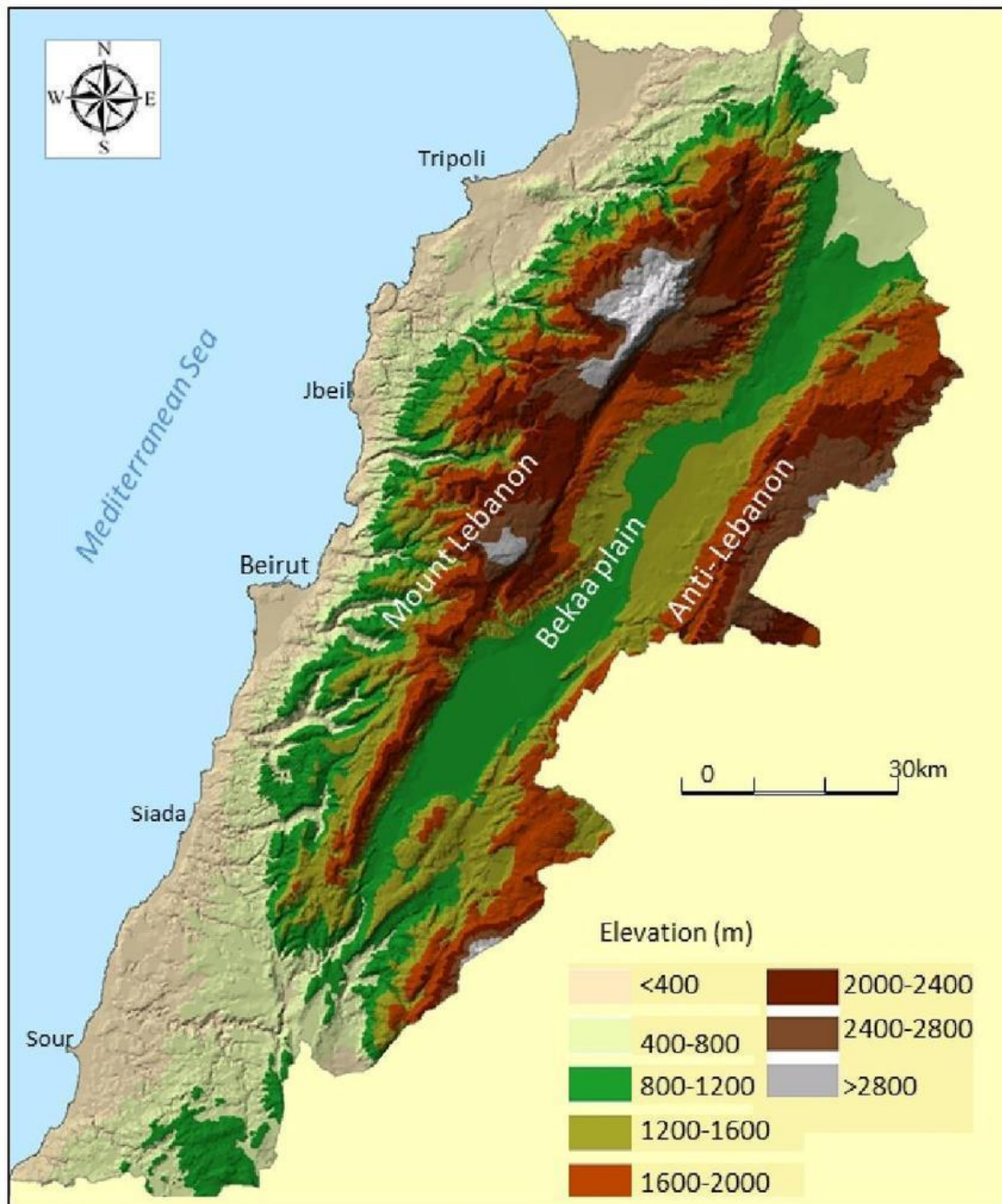


Figure 4: Principales unités topographiques du Liban. Source : (Shaban, 2020)

Cette géographie complexe du Liban est directement liée à l'effet sur les zones climatiques du pays (qui peuvent changer assez rapidement sur de courtes distances), sur la création de cultures agricoles, d'espèces forestières, sur le cloisonnement des terres, sur l'imposition de contraintes physiques dans la construction et sur un paysage général " grandiose " (CDR, 2004).

La vallée de la *Beqā'* est la principale zone agricole du Liban, ce qui s'explique par plusieurs de ses caractéristiques naturelles qui la différencient du reste du pays. Celles-ci concernent par exemple sa topographie, son type de et la fertilité de ses sols, ses précipitations, ses microclimats, son irradiation solaire et ses réserves d'eau. La vallée a une

longueur de 120 km et une largeur moyenne d'environ 16 km, mais elle est plus large à son extrémité nord (environ 20 km) et devient plus étroite vers son extrémité sud (environ 7 km) jusqu'à ce qu'elle atteigne le Mont Hermon, l'endroit où la frontière entre le Liban, la Syrie et la Palestine se rencontre. La vallée de la *Beqā'*, en tant que bassin naturel, a une superficie d'environ 900 km² (A. S. A. Lateef, 2006) alors que sa superficie administrative, qui englobe les gouvernorats de la *Beqā'* et de Baalbeck-Hermel, couvre 38% de la superficie du pays, soit environ 4 000 km² (Bou-Antoun, 2014) (Figure 5). L'altitude moyenne de la vallée est d'environ 850 m au-dessus du niveau de la mer et, bien qu'elle soit décrite comme un plateau par rapport aux deux chaînes de montagnes qui l'entourent, la vallée de la *Beqā'* présente en réalité un microrelief (A. S. A. Lateef, 2006). La situation géographique du Liban et la topographie de son terrain lui confèrent un climat modéré avec des étés chauds et humides et des hivers humides et froids. Cependant, la vallée de la *Beqā'* n'a pas particulièrement le même climat général. Les étés de la vallée de la *Beqā'* sont plus chauds et plus secs que ceux des montagnes et ses hivers sont humides et frais. Le Liban peut en fait être classé dans une variété de sous-climats, dont un climat côtier, un climat montagneux et un climat de haute montagne. La majorité de la vallée de la *Beqā'* est classée dans la catégorie des climats subcontinentaux, mais sa partie nord est semi-aride.

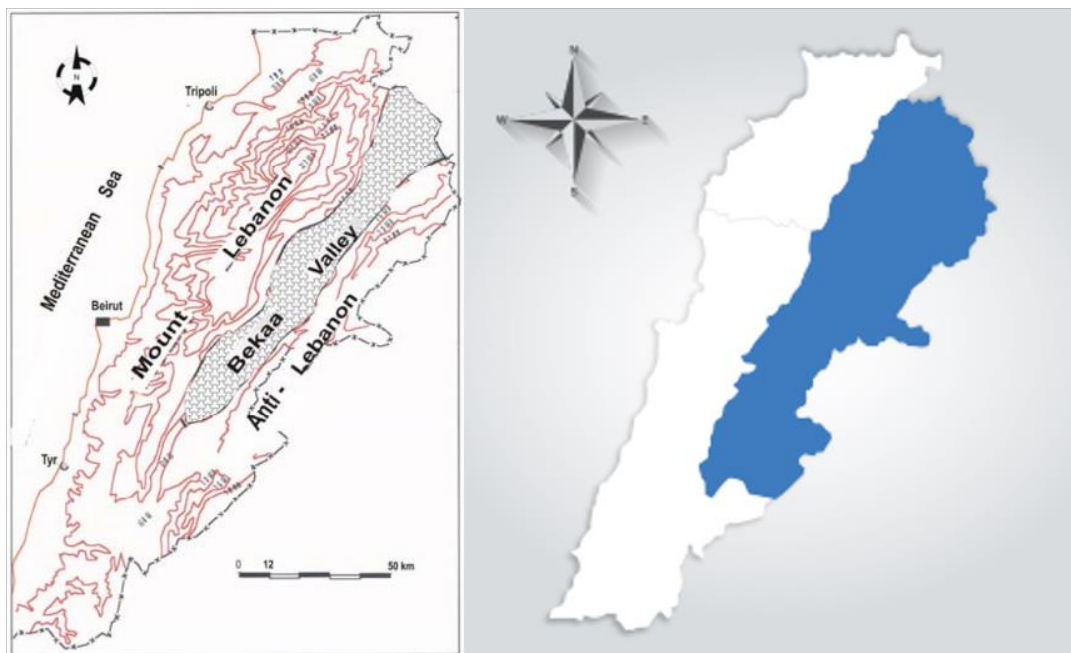


Figure 5: La vallée de la *Beqā'* dans ses frontières naturelles (à gauche) et administratives (à droite). Sources : (A. Lateef, 2007) et site internet d'IDAL

La vallée de la *Beqā'* présente en elle-même des variations de température, d'humidité et de précipitations particulière en raison de localisation entre deux reliefs importants. En hiver, les montagnes du Mont Liban créent une barrière qui capture la plupart des précipitations provenant des nuages humides saturés de la mer et en laisse beaucoup moins pour l'intérieur de la *Beqā'*. Les précipitations deviennent beaucoup moins prévisibles, ce qui rend la vallée plus sensible à la sécheresse. Des précipitations minimales sont généralement enregistrées dans le nord de la *Beqā'* au Qaa à environ 50 mm / an et atteignent la section centrale de la vallée à environ 150 mm / an (Karam, 2002). Malgré ces différences dans l'étendue des

précipitations annuelles, le Liban reste généralement relativement plus riche en ressources en eau par rapport aux pays voisins du Moyen-Orient, beaucoup plus secs. Le Liban possède les quatrièmes ressources en eau renouvelables par habitant après la Turquie, l'Irak et l'Iran (Verdeil, 2019). L'une des caractéristiques les plus distinctes de la vallée de la *Beqā'* est peut-être celle de son sol et de ses qualités foncières. En fait, le sol est un autre élément diversifié et unique qui caractérise l'ensemble du pays. Étant donné sa nature géologique et topographique, les différentes sections du pays créent également une combinaison de différents types de sols et de caractéristiques physiques. La vallée de la *Beqā'* comprend en fait la *terra rossa* fertile de couleur rougeâtre, le centre et le sud de la *Beqā'* étant décrits comme les sections les plus fertiles de la vallée. Son sol se distingue en outre par une profondeur de plusieurs mètres par rapport aux autres sols du pays, généralement peu profonds. Dans l'ensemble, le sol a été décrit comme ayant une mosaïque frappante de types de sol que l'on trouve "rarement dans des zones comparables" (Darwish, 2013). Cependant, des problèmes de pollution du sol sont également apparus dans la vallée de la *Beqā'* : en raison de la concentration des activités agricoles, certaines mauvaises pratiques telles que la mauvaise rotation des cultures et la faible efficacité de l'utilisation des engrais et de l'eau ont contribué à l'élévation des teneurs en nitrates localement. Les caractéristiques du sol de la vallée de la *Beqā'*, sont également liées à son exposition plus élevée à l'irradiation solaire directe (World Bank, 2019). Cet ensemble de spécificités naturelles et localisées nous offrent premier niveau de caractéristiques différenciables du territoire.

Ce qui fait de la vallée de la *Beqā'* un excellent terrain pour cette étude est sa relation historique longue avec l'agriculture et la production alimentaire. Étant la principale plaine fertile des environs, elle reste un espace attrayant pour ses habitants. La vallée de la *Beqā'* a longtemps été reconnue pour son agriculture et a servi pendant des milliers d'années de zone de production et d'approvisionnement en nourriture pour ses environs. La capitale de la vallée est la ville métropolitaine de Zahle, dans le centre de la *Beqā'*. Zahle était une halte et une intersection célèbres sur les routes commerciales de la Route de la soie et elle était connue pour accueillir les marchands et les voyageurs dans ses auberges où ils se reposaient avant de poursuivre leur voyage (UNESCO-Beirut, 2013). Aujourd'hui, la vie vibrante de la ville de Zahle, son histoire, et en particulier son fort attachement à son patrimoine culinaire en font l'unique ville libanaise à faire partie des villes du réseau mondial des villes créatives de l'UNESCO désignée comme *Ville de la Gastronomie*. La ville de Zahlé reste à ce jour la plus grande ville intérieure du pays grâce à son emplacement stratégique et, en plus de ses liens avec la cuisine traditionnelle, elle est devenue un centre logistique, une zone de concentration de la population et l'entrée principale de toute la vallée de la *Beqā'*, ce qui en fait également un lieu de rassemblement.

La vallée de la *Beqā'* était un producteur important dans les temps anciens et était même connue pour être le "*grenier à blé*" de l'Empire romain. Cela s'explique par le fait que la vallée était un fournisseur de blé à l'époque de l'empire, et en particulier de la variété de qualité supérieure appelée *Salamouni* (*Triticum aestivum* L. var. *Salamouni* également appelée localement *breiji*) qui a été cultivée sans interruption depuis plus de 5 000 ans (Zurayk & Rahman, 2008). Cette variété de blé est encore aujourd'hui privilégiée pour la production de l'un des aliments les plus traditionnels et typiques du *mūne*, le *burghul* et qui est utilisé dans le *Kishk*. Outre le blé, la *Beqā'* est probablement surtout connue pour sa

production de vignes. C'est l'un des plus anciens sites de production de vignes et de vins au monde, qui remonte à l'époque des Phéniciens. La vallée de la *Beqā'* était si importante dans sa position de productrice de vin que les Romains ont choisi la *Beqā'* pour construire le célèbre temple de Bacchus en hommage au dieu du vin sur le site de Baalbeck. Les ruines du complexe du temple romain subsistent à ce jour et constituent l'un des principaux sites touristiques du pays et l'un des deux sites du patrimoine mondial de l'UNESCO qui se trouvent dans la vallée de la *Beqā'* sur un total de 5 sites pour le Liban². Plusieurs autres zones de la vallée de la *Beqā'* ont également été indiquées pour leur importance touristique et culturelle. Il s'agit notamment de zones comme Zahle, Hermel et Anjar. En plus de l'attachement touristique et culturel, le CDR (Conseil pour le Développement et la Reconstruction) désigne très clairement et directement le tourisme et le secteur agro-alimentaire (en relation avec les aliments traditionnels) comme les deux secteurs qui sont fortement liés à leur territoire. Les principaux éléments qui lient ces secteurs à leur territoire sont le paysage, le relief varié de la géographie, la terre, le patrimoine, etc. En fait, on reconnaît à l'ensemble du pays des "avantages comparatifs indéniables" dans quatre secteurs : 1) le tourisme, 2) l'agroalimentaire, 3) l'édition et 4) l'artisanat d'art (CDR, 2004).

De plus, les Libanais sont généralement connus pour avoir un lien fort avec leur terre, leur patrimoine et leur région d'origine. La vallée de la *Beqā'* ne fait pas exception à la règle et les gens gardent un lien fort avec leur vie de village. Cette relation a été riche et continue depuis les temps anciens et a surtout joué un rôle clé dans le développement de la vie nationale à travers le pays et avec le mouvement de ses habitants (Tannous, 1949). Ceci est particulièrement vrai pour les agriculteurs libanais qui sont profondément enracinés dans leurs terres depuis de nombreuses générations, et qui, s'ils étaient obligés d'émigrer, auraient toujours l'espoir de retourner sur leurs terres et dans leurs communautés rurales.

[Traduit de l'anglais] " Les habitants de Zahlé et dans une certaine mesure ceux de la Beqā' ont toujours tenu à sauvegarder leurs traditions à travers l'artisanat et la transmission du patrimoine alimentaire. Ils ressentent une certaine fierté dans la préservation de ce savoir-faire ".
(UNESCO-Beirut, 2013, p. 11)

L'agriculture au Liban en général et dans la *Beqā'* en particulier est considérée comme l'un des secteurs piliers de la société libanaise. La vallée de la *Beqā'* peut être considérée comme la principale zone de production agricole du pays, couvrant près de 40% de la superficie nationale et constituant près de la moitié de l'ensemble des zones cultivées. Lors de la planification de l'utilisation des terres dans la *Beqā'* ainsi que dans les régions agricoles du nord du Liban, ces régions ont été décrites comme ayant les " meilleures " terres agricoles dans lesquelles des réseaux d'irrigation étaient existants ou prévus (Darwish et al., 2012). La *Beqā'* détient spécifiquement la surface principale dédiée à la production de céréales et de légumineuses (57%), de légumes (57%), et d'arbres fruitiers (36%)³. La vallée de la *Beqā'* contient également la majorité de la production animale (chèvres, moutons et bovins) et laitière. Les troupeaux de chèvres sont les plus grands et les bovins les plus petits. 57% des

² <https://whc.unesco.org/en/statesparties/lb>

³ https://investinlebanon.gov.lb/en/lebanon_at_a_glance/invest_in_regions/

chèvres du pays (total 434 700 têtes) et 38,6% des bovins (total 77 400) se trouveraient dans la vallée de la *Beqā'* (Ghadban, 2013). Bien que le secteur agricole ait une faible contribution nationale au PIB, estimée à 4 % en 2018 par la Banque mondiale (World Bank, 2018) et à 6,8 % en moyenne entre 1994 et 2007, cette contribution augmente jusqu'à 80 % dans les zones rurales du Liban, comme l'indique la fiche pays du site de l'Organisation des Nations unies pour l'alimentation et l'agriculture (FAO)⁴. Ceci est particulièrement vrai dans les régions à prédominance rurale et agricole telles que la vallée de la *Beqā'*, le Nord et le Sud du Liban, ce qui renforce encore le poids du secteur et démontre comment le secteur agricole est considéré comme une source primaire de revenus dans ces régions. La Banque mondiale reconnaît l'importance combinée de l'agriculture avec les intrants du secteur de la production alimentaire. Ensemble, avec leurs contributions indirectes, les secteurs agroalimentaires augmentent la contribution au PIB national du Liban de 4 % à 25-30 % et sont donc capables de soutenir la croissance car ils combinent jusqu'à un quart à un tiers de l'économie. En fait, l'Autorité locale de développement des investissements du Liban (IDAL) affirme que le secteur emploie un nombre important de personnes, représentant 25% de la main-d'œuvre du secteur industriel (IDAL, 2020b), et certaines sources rapportent même ces chiffres jusqu'à 40% (L. Chalak et al., 2011).

Au niveau national, le top 5 des produits agricoles fabriqués par le pays comprend 1) les légumes (pommes de terre, tomates, concombres et cornichons à 1 340 443 tonnes produites en 2018), 2) les fruits et noix (oranges, pommes, citrons et limes à 816 800 tonnes produites en 2018), 3) les animaux vivants et les produits animaux (lait frais de vache, viande de poulet et de bovin à 410 155 tonnes produites en 2018), 4) le tabac non manufacturé (8 694 tonnes produites en 2018), et 5) les céréales (blé, orge et maïs à 170 737 tonnes produites en 2018) (IDAL, 2020a). En termes de commerce, le Liban exporte principalement du café, du raisin, des pommes de terre et des bananes, dont la majeure partie (77,8%) est exportée vers les pays arabes et du Golfe, notamment l'Arabie saoudite, le Qatar, la Syrie et le Koweït (IDAL, 2020a). Le Liban fait en fait partie de plusieurs accords commerciaux qui favorisent son intégration économique. Il s'agit de l'accord d'association euro-méditerranéen, de l'association européenne de commerce équitable-Liban et de l'accord de libre-échange du Grand Arabe ; notons qu'un statut d'observateur au sein de l'Organisation mondiale du commerce a été accordé au Liban en 1999 mais qu'il n'a pas encore évolué vers un statut de membre à part entière (Ghadban, 2013).

⁴ <https://www.fao.org/lebanon/fao-in-lebanon/lebanon-at-a-glance/en/>

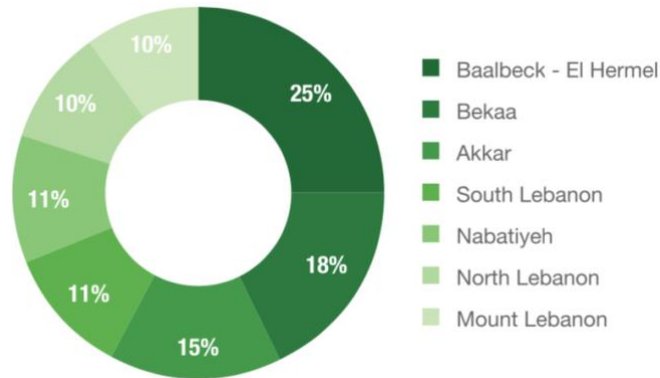


Figure 6: Terres cultivées par gouvernorat (*mohafaza*) part en % au Liban selon (IDAL, 2020a) en utilisant les dernières données de la FAO, 2010

Lorsque l'on décrit les caractéristiques et la production agricoles de la vallée de la *Beqā'*, on distingue généralement deux régions. La première est la vallée de l'Oronte dans la partie nord de la vallée de la *Beqā'*, et la seconde est la *Beqā'* centrale et sud (généralement appelée ouest). Dans une étude du pays réalisée par (Darwish et al., 2012), ces régions ont été décrites en plus des caractéristiques de l'Anti-Liban. En résumé, la description comprenait :

- **La vallée de l'Oronte** qui a des niveaux de précipitations plus faibles, est plus sujette à la désertification et comprend de grands pâturages avec une SAU atteignant 20 000 ha (53% irrigués) et une présence importante de bétail avec 21 000 grandes unités de chèvres et de bovins principalement.
- **La *Beqā'* centrale et sud** (généralement appelée *Beqā'* Ouest) qui est décrite comme la région la plus fertile du pays et dont la part dans la production nationale est significative (comprend 25% des grandes unités de bétail, 25% de la SAU nationale et 30% de la SAU irriguée). Cette région connaît des précipitations plus importantes que son homologue du nord et sa part de SAU est de 64 000 ha (61% irriguée) et a également une présence importante de bétail avec 44 000 grandes unités.
- **L'Anti-Liban** qui est une chaîne montagneuse accidentée bordant la Syrie qui a de faibles niveaux de précipitations et qui peut également être divisée en deux sections. Il s'agit de 1) l'Anti-Liban qui a une SAU de 7.000 ha (13% irriguée) avec 12.000 grandes unités de bétail, et 2) le sud de l'Hermon qui est situé au fond de la vallée et est l'endroit où les frontières internationales du pays rencontrent la Syrie et la Palestine. Cette région a une SAU de 13.000 ha (16% irriguée) avec 20.000 unités de gros bétail.

A ce jour, le Liban ne dispose pas de chiffres précis sur la taille et la distribution spatiale de la population générale. Le dernier recensement de la population remonte à 1943, au moment de l'indépendance (Tabar, 2010). Il n'existe en fait que des estimations de la population, dont la plus récente a été réalisée par l'Administration centrale des statistiques (CAS) et l'OIT. Celles-ci ont estimé la taille de la population en 2019 à 4,842 millions (CAS, 2019), sans compter les personnes vivant dans des unités non résidentielles comme les camps de réfugiés et les établissements informels. La vallée de la *Beqā'* (c'est-à-dire les données estimées pour les résidents de ses 5 *cazas*) était estimée à environ 11% de la population (environ 550 000 individus) pour le territoire dont la taille couvre un peu moins de 40% du

pays. À ce jour, il n'existe pas de registre de la répartition spatiale de la population et le mécanisme général s'appuie généralement sur les listes électorales et les registres d'état civil qui sont conservés dans la localité d'origine de la naissance et non dans le lieu de résidence. Certaines régions, comme le nord de la vallée de la *Beqā'*, le Liban Nord et Hasbaya, ont connu une fuite de la population vers des zones plus urbanisées, notamment dans et autour de la capitale Beyrouth. D'autre part, d'autres régions sont devenues des zones qui accueillent un nombre croissant de résidents, comme les zones de la côte autour de la capitale (appartenant au gouvernorat du Mont-Liban) et les grandes villes (en pleine expansion) comme Zahle, Baalbeck et Hermel dans la vallée de la *Beqā'*. En ce qui concerne la vallée de la *Beqā'*, nous pouvons constater que certaines zones de concentration existent, la plus grande de toute la vallée étant la ville de Zahlé, dans le centre de la *Beqā'*, qui est en fait la capitale, le centre urbain et administratif du gouvernorat de la *Beqā'*. En outre, Zahlé est la plus grande ville intérieure du Liban, les autres grandes villes étant toutes situées sur la côte. C'est également dans le caza de Zahlé que se trouve le principal poste frontière avec la Syrie voisine. La partie nord de la vallée de la *Beqā'* présente également d'importantes zones de concentration de la population. Il s'agit de zones comme la ville de Baalbeck et Hermel. Ce sont les principales villes autour desquelles s'articulent les noms administratifs, tant au niveau du gouvernorat que du caza.

Lorsqu'il s'agit de décrire les disparités spatiales dans la distribution de la population à travers le Liban, il est important de mentionner également la migration interne des personnes des espaces ruraux vers les espaces urbains. Ce phénomène existe depuis longtemps dans l'histoire contemporaine du pays. Les habitants des zones rurales, pour de nombreuses raisons telles que la pauvreté, la recherche d'éducation, les incertitudes économiques, la guerre, etc., se sont déplacés vers des zones urbaines telles que la ville de Beyrouth ou ses environs depuis de nombreuses années (Bahn & Abebe, 2017). Dans le contexte du Liban à l'échelle nationale et de la vallée de la *Beqā'* à l'échelle locale, et malgré le potentiel, plusieurs défis entravent encore le potentiel économique optimal et efficace du secteur de l'agriculture et de la production alimentaire, ce qui fait qu'il est aujourd'hui encore fragmenté, mal contrôlé et avec beaucoup d'informalité dans les opérations. Plusieurs raisons peuvent être associées au retard pris par ce secteur précieux dont dépendent les moyens de subsistance d'une grande partie de la population. Elles vont des raisons politiques, structurelles et institutionnelles aux raisons financières, environnementales et techniques, comme le résume la Figure 7. Il est également important de comprendre l'événement le plus important qui ait eu lieu dans l'histoire moderne du pays et dont les implications se manifestent encore aujourd'hui ; la crise économique de 2019. Outre les défis institutionnels et économiques inhérents auxquels le pays a été confronté, l'effondrement économique de 2019 a véritablement changé toute la dynamique et la trajectoire du développement. L'économie libanaise est lourdement grevée par le 3ème ratio dette/PIB le plus élevé au monde, soit environ 153% (Youssef, 2020). Le désavantage le plus grave réside peut-être dans le tissu de l'économie libanaise qui marginalise le secteur agricole à seulement 4% du PIB (World Bank, 2018). Cette situation s'accompagne d'une dépendance extrême à l'égard des importations, qui représenteraient jusqu'à 80 % des seuls besoins alimentaires (UN.ESCWA, 2016). La concoction malheureuse ci-dessus a atteint son apogée en octobre 2019 lorsque des soulèvements nationaux ont paralysé le Liban après l'introduction d'une nouvelle taxe sur les communications. Ils ont été rapidement suivis par

une forte dévaluation de la monnaie locale dans les marchés informels et noirs en raison de la pénurie de devises fortes (Youssef, 2020). Cette tendance à la dévaluation était la première à frapper le pays en 20 ans, depuis l'arrimage de la monnaie nationale, la livre libanaise (LBP), au dollar américain en 1997 au taux de 1,515 LBP/\$⁵. Pourtant, cette période a connu des taux de change qui ont dépassé les 3 000 LBP/\$ pour la première fois dans l'histoire du Liban. Avec une situation qui reste très volatile à ce jour et qui connaît parfois des variations quotidiennes, voire horaires, certains échanges au marché noir ont été enregistrés à des taux allant jusqu'à 30 000 LBP/\$, soit une perte de plus de 90% de la valeur de la monnaie avant la crise.

Certains des effets néfastes de la situation générale sont estimés avoir augmenté les niveaux de pauvreté multidimensionnelle de 30 à 80% des citoyens selon l'UN.ESCWA, parmi lesquels l'extrême pauvreté approche 50% des ménages (UN.ESCWA, 2021). Le chômage a également été estimé officiellement par l'Organisation des Nations unies pour l'alimentation et l'agriculture (FAO) comme ayant touché 40% de la population active en 2020⁶. La Banque mondiale a également signalé une baisse de près de 21,5 % du PIB global d'ici 2020 et un taux d'inflation annuel de 154,8 % en 2021⁷. Cette situation financière a paralysé la plupart, sinon la totalité, de l'économie locale et a été décrite comme l'un des trois pires effondrements économiques observés dans le monde depuis le milieu du XIXe siècle⁸. En tant que pays dépendant des importations et soumis à de fortes restrictions en matière de devises étrangères nécessaires au commerce et aux achats, de nombreux producteurs et consommateurs libanais ont de plus en plus de mal à accéder à des ressources et des biens de plus en plus chers. Cette situation catastrophique a considérablement accru l'insécurité alimentaire dans le pays, d'autant plus que la multitude des crises a été exacerbée sur le plan social et économique par d'autres complications. Celles-ci ont notamment été ajoutées par la pandémie de COVID-19, ses épisodes de mobilisation générale et de lockdowns, et plus récemment par la guerre Ukraine-Russie et donc la fluctuation globale des prix du carburant et du blé.

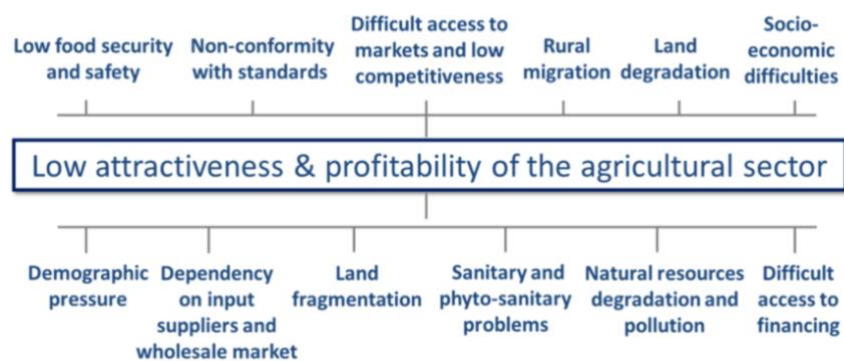


Figure 7: Représentation compilée des défis du secteur agricole au Liban. Source : (Aw-Hassan, et al., 2018, p.)

⁵ <https://www.reuters.com/article/lebanon-crisis-currency/crisis-hit-lebanese-pound-weakens-to-3000-to-the-dollar-for-first-time-%20idUSL5N2C24FG>

⁶ https://reliefweb.int/sites/reliefweb.int/files/resources/LBN_11.pdf

⁷ Interactive chart available at: <https://data.worldbank.org/country/lebanon?view=chart>

⁸ <https://www.worldbank.org/en/news/press-release/2021/05/01/lebanon-sinking-into-one-of-the-most-severe-global-crises-episodes>

1.3. *Mūne* - un système multi socio-spatial multidimensionnel au Liban

1.3.1. L'alimentation comme vecteur de culture et moyen de patrimonialisation

Lorsqu'on pense aux aliments, on ne considère pas seulement les besoins nutritionnels et biologiques qui sont satisfaits par l'ingestion. Une variété de perceptions différentes apparaît chez les personnes en fonction de leur objectif et de leur préférence personnelle. Plusieurs concepts ontologiques des aliments sont possibles, et ceux-ci pourraient inclure des catégories variables telles que l'aspect physique, le facteur artefact des recettes, les événements au cours desquels ils sont préparés, les conditions dans lesquelles ils sont consommés, les processus qui entrent dans leur préparation, et leurs perceptions organoleptiques (Borghini et al., 2021). Ainsi, l'alimentation invite à une approche qualitative supplémentaire qui inclut la culture, le social et l'esthétique, ce qui lui confère des rôles multiples. Selon Massimo Montanari, dans leur livre intitulé "Food is Culture", l'introduction souligne comment : [traduit de l'anglais] " *la nourriture devient culture lorsqu'elle est préparée [...] lorsqu'elle est mangée* parce que l'homme, bien que capable de manger n'importe quoi, ou précisément pour cette raison, ne mange en fait pas tout mais *choisit* plutôt sa propre nourriture, selon des critères liés soit aux dimensions économiques et nutritionnelles du geste, soit aux valeurs symboliques dont la nourriture elle-même est investie " (Montanari, 2006, p. xi). Normalement, les différents contextes géographiques, climatiques et environnementaux où les humains se sont installés ont sculpté les méthodes de conservation utilisées à l'origine par l'homme. Les humains ont innové de manière à utiliser au mieux les conditions et les ressources environnantes où ils se trouvaient. Les pratiques impliquées n'étaient pas statiques mais plutôt une relation dynamique et évolutive qui dépendait fortement du facteur humain. En effet, pour le *mūne*, la conservation des aliments ne relève pas d'une attitude purement technique dans laquelle les ingrédients et les recettes sont standardisés et strictement appliqués. Les techniques utilisées ont été créées par les humains et intègrent ainsi largement les comportements sociaux et collectifs qui lient encore aujourd'hui les groupes et les communautés. La nourriture peut donc être considérée comme un véhicule de la culture et le raffinement des recettes au cours de centaines et probablement de milliers d'années représente les compétences, les connaissances qui entrent dans la transformation des ingrédients en produit alimentaire final. Cette représentation prend normalement une forme différente aux échelles locales et régionales, et constitue une forme d'identité territoriale. Lorsque l'on pense aux aliments conservés dans le *mūne*, il faut prendre en compte la façon dont les communautés, pendant des centaines d'années, ont établi leurs propres formes de conservation des aliments et de préparation (techniques particulières et recettes raffinées) qu'elles ont transmises de génération en génération et qui survivent encore aujourd'hui. Ces petites variations géographiques ajoutent à l'unicité du *mūne* dans le sens où le même type d'aliments conservés peuvent avoir de petites variations dans leurs recettes, la façon dont ils sont préparés, dont ils sont consommés, ou même dans la façon dont ils sont appelés, selon la ville ou la région et à travers le pays.

À partir de là, nous voyons comment le lien entre le produit final (soit les plats ou un ensemble de plats dans une cuisine, ou dans ce cas les aliments *mūne* conservés) et le terroir est direct. Cela se reflète directement sur la conservation des aliments *mūne* dont la matière

première est fournie par les agriculteurs locaux des communautés rurales, depuis les temps anciens et dans les conditions actuelles, comme nous le verrons plus loin. Selon Rouvellac et al, il est également important de mentionner que pour les géographes français, " *le terroir est avant tout une portion de territoire, un taxon, homogène à tous points de vue, naturel et socio-économique. Le concept est pris dans toute sa complexité entre nature et culture, sans minimiser l'une ou l'autre dimension* " (Rouvellac et al., 2011, p. 339). Dès lors, un terroir devient la base d'action pour le développement de territoires. Cela devient possible en actant la construction sociale d'un terroir dans lequel la spécificité (ou typicité) des produits est mise en avant avec l'apport de leur valeur matérielle et immatérielle. Ici, il est nécessaire de rentrer dans la compréhension et les différences entre les notions françaises de "terroir" et de "territoire", à l'inverse du monde anglophone où les termes sont équivalents. La principale différence relevées par l'auteur entre ces deux notions est qu'un territoire est capable d'exister indépendamment de l'existence ou de l'absence de produits ou d'une communauté, alors que le terroir peut être pensé comme le territoire d'un ou plusieurs produits (en tant que biens ou services) (Prévost et al., 2014). En suivant ces lignes, il devient plus évident comment la construction d'une forme de différenciation territoriale dans l'alimentation sert de déterminants qui construirait une forme de " manger géographiquement " avec ce qui englobe non seulement l'alimentation elle-même mais toute l'expérience gastronomique connue pour un territoire donné.

L'association de l'alimentation comme facteur déterminant du développement durable d'un lieu a été abordée dans des articles tels que ceux examinés par Rinaldi (2017). La littérature sur la conservation des aliments dans les sciences sociales et leur '*traditionnalité*' n'est cependant pas très répandue comme le notent Click et Ridberg (2010). Pourtant, une analyse du *mūne* pourrait être positionnée en référence au processus de patrimonialisation des aliments traditionnels dans le monde et surtout en Europe. Avant cela, il est essentiel d'aborder la pierre angulaire de la notion elle-même : ce qui constitue un produit traditionnel. Le fait de qualifier un produit alimentaire de traditionnel est généralement associé directement au patrimoine, au mode de vie sain du passé, au savoir-faire partagé transmis par des groupes ou des communautés spécifiques, et qui sert finalement de "marque d'approbation" (Sebastia, 2017). Guerrero et al. (2009) ont détecté quatre dimensions émergentes de la compréhension des produits alimentaires traditionnels par les consommateurs dans six pays européens (Belgique, France, Italie, Norvège, Pologne et Espagne). Il s'agit de *habitudes et du naturel* (consommation fréquente et courante), de *l'origine et de la localité* (liées aux espaces locaux et ne pouvant être exportées), de *la transformation et de l'élaboration* (transfert du savoir-faire artisanal à travers les générations en ce qui concerne non seulement les ingrédients mais aussi les méthodes et techniques de transformation traditionnelles, également liées au fait qu'il s'agit d'aliments naturels et peu transformés), et des *propriétés sensorielles* (goût distinct). Ces quatre dimensions de la compréhension par les consommateurs de ce qui constitue les aliments traditionnels peuvent également s'appliquer pour le cas du Liban. Les Libanais conservent un lien avec l'alimentation traditionnelle et cela se traduit par une consommation fréquente de produits *mūne*, avec un minimum de transformation et même d'emballage, parfois dans une version modernisée (Hwalla & Khoury, 2008; Nasreddine et al., 2006), et selon leurs préférences sensorielles ; la réalisation de ces produits est concentrée sur la conservation des techniques artisanales, du savoir-faire,

des recettes et des ingrédients des anciennes générations et avec des indications claires de la typicité de certaines spécialités régionales (Kanafani-Zahar, 1994; Massaad, 2017; Pugliese et al., 2013; Zurayk & Rahman, 2008).

Le lien géographique des humains avec leur terre, leur environnement et leur paysage global est donc essentiel pour décider de ce qui constitue une culture, y compris les aliments traditionnels. Ces lignes sont finalement devenues la base sur laquelle les droits de propriété intellectuelle ont été construits, et ils ont également été considérés par certains comme le témoin de la marchandisation, de la génération de profits et même du prestige social (Sebastia, 2017). Il a été constaté que les aliments culturels jouent de multiples rôles, notamment dans la construction de l'identité et dans les économies touristiques, en particulier dans les espaces locaux. Une organisation comme l'OCDE (Organisation de coopération et de développement économiques) mentionne que les services alimentaires représentent plus de 30% des dépenses touristiques en général (OECD, 2012). La gastronomie et la culture alimentaire augmentent l'attractivité et la compétitivité d'un lieu et à son tour le développement durable des lieux (Rinaldi, 2017). L'utilisation des aliments traditionnels comme ressource pour une communauté est possible, surtout si l'on définit bien la typicité qui, d'une part, dépend fortement du processus de production, mais qui, d'autre part, comprend également une composante de relations qui unit les différents acteurs d'un système territorial, incluant ainsi une dimension collective (Florek & Gazda, 2021). Pourtant, des mises en garde ont été émises quant au fait que, même si le processus de patrimonialisation est une pratique politique et descendante, il faut toujours veiller à la bonne compréhension de la valorisation et à la manière dont elle doit être " élaborée " par les acteurs sociaux dans leurs interactions quotidiennes sur le terrain (Jones, 2017).

La protection du patrimoine introduit des aspects qui concernent le côté intellectuel ou les pratiques immatérielles (également connu sous le nom d'immatériel) ainsi que celui, matériel et physique des produits et des lieux. En ce qui concerne l'alimentation, il a été spécifiquement noté qu'elle a la capacité atypique d'englober à la fois ces composantes immatérielles et matérielles (Florek & Gazda, 2021) puisqu'elle fusionne à la fois la composante produit et l'aspect social, environnemental et paysager de sa préparation, de sa consommation et des habitudes sociales qui l'entourent.

En ce qui concerne l'aspect immatériel, la référence au "patrimoine culturel immatériel" (PCI) de l'UNESCO apparaît pertinente. La Convention de l'UNESCO pour la sauvegarde du patrimoine culturel immatériel a été adoptée le 17 octobre 2003 après avoir été ratifiée par les États membres de l'UNESCO (178 États en 2018), dont le Liban en tant que signataire en 2007. L'un des objectifs initiaux du projet dans le cadre duquel le PCI a été élaboré vise à *"favoriser une meilleure communication entre les chercheurs travaillant dans le domaine du patrimoine culturel immatériel. Il peut améliorer la diffusion des recherches liées au PCI au sein de la communauté universitaire et orienter les futures activités de recherche vers des domaines présentant des besoins particuliers"*⁹.

Dans sa composante tangible (matérielle), des mécanismes de protection ont été pensés pour ces produits, principalement dans le système des indications géographiques. En fait, l'une des raisons de la réapparition de l'intérêt pour la production locale d'origine était une

⁹ <https://ich.unesco.org/en/project-objectives-and-coordination-01071>

réponse aux préoccupations croissantes en matière de santé et aux exigences de qualité des consommateurs (Gracia & Albisu, 2001). Cela s'est produit à un moment où le lien entre l'alimentation et l'espace est devenu moins clair en raison de la mondialisation de l'alimentation et des routes commerciales mondiales. Ces enquêtes portent sur des produits tels que les 200 produits locaux de la région Rhône-Alpes en France, ainsi que sur des produits tels que ceux de Trás-os-Montes au Portugal, de la Catalogne en Espagne et de l'Émilie-Romagne, de la Ligurie et du Piémont en Italie. Celles-ci englobent une grande variété d'aliments historiquement abondants et couramment consommés comme les produits laitiers, la charcuterie, les boissons fermentées, les huiles et les farines. L'organisation autour de ces produits se présente sous forme d'espace, de temps et de savoir-faire. Dans un article qui traite spécifiquement de l'aspect judiciaire international des indications géographiques, l'auteur, Geuze M. (2009), explique qu'il existe généralement trois catégories différentes d'indications de protection en tant que signes collectifs (contrairement aux marques qui sont destinées à un usage individuel) ; comme indiqué ci-dessous :

1) Indications de provenance

L'utilisation de ce terme apparaît dans la Convention de Paris de 1883 et dans l'Arrangement de Madrid de 1891 pour la répression des indications de provenance fausses ou fallacieuses des marchandises. En raison de l'absence de toute définition directe du terme dans ces conventions, mais plutôt d'une élaboration indirecte de l'expression, l'auteur en déduit que la référence à un pays (ou à un espace à l'intérieur d'un pays), ou à un lieu d'origine doit être spécifiée. Cependant, deux caractéristiques doivent être notées dans cette indication. Premièrement, aucun type autre que l'espace géographique ne peut être référencé, ce qui signifie qu'aucun fabricant spécifique n'est éligible, et deuxièmement, ce type d'indication n'exige pas que le produit ait des spécificités identifiables, des qualités particulières ou des caractéristiques dérivées de son origine géographique. Un exemple d'indication de provenance serait la mention du pays dans l'expression "fabriqué en [...]".

2) Appellations d'origine (Lisbonne, art. 2)

C'est l'Arrangement de Lisbonne de 1958 et sa mise en place d'un système international qui a défini et désigné la protection des appellations d'origine. Conformément à sa définition des appellations d'origine, l'arrangement indique ainsi la désignation des qualités et caractéristiques des produits qui sont essentiellement ou exclusivement liées à l'espace géographique (délimité) du produit, y compris les facteurs naturels et humains, ainsi que le nom du pays (ou de l'espace) dont le produit est réputé et originaire. Contrairement à l'indication géographique, la réputation dans le cas d'une appellation d'origine (qui peut être considérée comme une forme particulière et plus stricte d'indication géographique) ne suffit pas à elle seule à constituer un lien entre un produit et son lieu. Il faut plutôt trouver des facteurs de qualité clairs du produit qui sont déterminés à partir de son lieu par des facteurs naturels ou humains. Parmi les exemples d'appellations d'origine, citons "Noix de Grenoble" pour les noix, "Bordeaux" pour le vin, "Tequila" pour les spiritueux et "Jaffa" pour les oranges.

3) Indications géographiques (ADPIC, art. 22.1)

Les indications géographiques entrent dans l'Accord sur les ADPIC dont la définition ressemble, dans une certaine mesure, à celle de l'appellation d'origine de l'Arrangement de Lisbonne mais est considérée comme moins stricte. Elle identifie un produit avec une

réputation ou une qualité spécifique qui est essentiellement attribuable à son origine géographique mais n'est pas strictement limitée à avoir des qualités ou des caractéristiques spécifiques attribuables directement à leur environnement géographique en tant que facteurs naturels ou humains. Il est intéressant de noter que les indications géographiques reconnaissent également, en plus des noms, d'autres signes tels que des symboles ou des images emblématiques comme par exemple la Tour Eiffel pour Paris ou la montagne Matterhorn Alps en Suisse.

Dans l'Union européenne, la réponse que nous voyons aujourd'hui aux indications géographiques a pris forme en 1996 par l'adoption du règlement sur l'appellation d'origine de l'UE-EUDO qui a protégé les produits alimentaires d'une origine géographique spécifique sous *l'appellation d'origine protégée* (AOP), l'indication géographique protégée (IGP) (Gracia & Albisu, 2001) et la *spécialité traditionnelle garantie* (STG) en 2006. Trois conditions principales désignent la conformité d'une indication géographique. Il s'agit de : 1) être principalement sous la forme d'un produit, bien que certains exemples de services aient été notés dans des pays comme l'Azerbaïdjan, le Bahreïn et la Croatie), 2) ces produits doivent être originaires d'une zone géographique définie, et 3) ces produits doivent avoir des propriétés et des qualités caractérisables (ou une réputation) qui peuvent être liées à leur origine géographique définie (O'Connor, 2008). Dans un article de synthèse de Dias et Mendes (2018), les auteurs fournissent une analyse bibliométrique autour de ces trois types de labels de qualité. Ils expliquent comment ceux-ci ont été basés sur les systèmes nationaux qui existaient à l'origine en France (AOC - *Appellation d'Origine Contrôlée*) qui lie un produit de terroir à son origine géographique spécifique et aux traditions locales, et en Italie (DOC - *Denominazione d'Origine Controllata*). Ils précisent la différence entre les trois labels et mentionnent que l'AOP consiste à ce que les trois étapes (production, transformation et préparation) des produits agricoles ou des denrées alimentaires proviennent d'une zone géographique spécifique, l'IGP à ce qu'au moins une de ces trois étapes soit liée à une zone déterminée, tandis que la STG couvre ceux qui sont produits selon des méthodes traditionnelles ou en utilisant une matière première ou une composition traditionnelle sans aucune restriction quant aux délimitations géographiques.

Bien qu'initialement très utilisés pour les vins et les spiritueux, les labels de qualité s'appliquent désormais aux produits agricoles et alimentaires tels que les fromages, les produits carnés, les poissons, les fruits, les légumes, les céréales, le pain, les pâtisseries et autres. Les exemples les plus notables de produits par pays sont par exemple le *Prosecco* et le *Parmigiano Reggiano* en Italie, le Champagne et le Comté en France, le *Cabrales* et le *Queso Manchego* en Espagne, le *Porto* et le *Douro* au Portugal, et la *Feta* et le *Manouri* en Grèce. Une inspection supplémentaire du registre des indications géographiques de l'UE montre que 13 pays non-membres de l'UE ont un minimum de 1 et jusqu'à 99 produits enregistrés comme AOP ou IGP, par exemple le Cambodge (2 enregistrements), le Cameroun (1 enregistrement), la Chine (99 enregistrements), la Thaïlande (4 enregistrements), la Turquie (8 enregistrements) et le Vietnam (1 enregistrement).

1.3.2. Utiliser la tradition et la culture comme une ressource économique spécifique - le concept de développement néo-endogène et territorial

L'importance de se concentrer sur les micro-économies locales fait de plus en plus l'objet d'un discours scientifique. Dans un monde régi par la mondialisation, le commerce international et les économies globales, favoriser le "local" est encouragé pour atteindre des stratégies de développement capables d'atténuer les déséquilibres spatiaux, la distribution de la richesse et l'inclusion des localités habituellement considérées comme marginalisées et principalement rurales. Selon Stiglitz (2007, p. 7), " [traduit de l'anglais] *la mondialisation a réussi à unifier les gens du monde entier contre la mondialisation*". Sans remettre en cause son rôle dans le façonnement des économies mondiales, une nouvelle échelle d'activités économiques, plus petite, a cependant émergé. Elle concerne les niveaux locaux, et plus spécifiquement territoriaux, de l'espace et leurs acteurs locaux sont progressivement reconnus comme des acteurs économiques capables d'influer sur leurs voies de développement. Une forte croyance est fondée sur l'activation d'un développement ascendant provenant des forces internes de territoires spécifiques (Lamine et al., 2012). Dans son article, Swyngedouw (2004) a décrit le processus comme la "*Glocalisation*", en référence au passage simultané de dispositions institutionnelles et d'activités économiques à des niveaux plus locaux. Ainsi, plutôt que de s'appuyer uniquement sur des stratégies descendantes dirigées par l'État ou d'autres autorités et donateurs, des zones géographiquement distinctes à plus petite échelle sont considérées comme des espaces fertiles pour la construction d'activités économiques. Cette dernière solution est généralement privilégiée lorsqu'elle repose sur l'identification, la capitalisation et la gestion durable de facteurs de différenciation - les ressources endogènes - dans le contexte local, par les acteurs locaux. Ce que l'on appelle les "marqueurs" englobent des facteurs qui ne sont pas seulement pertinents pour le secteur primaire de l'agriculture et de l'alimentation, mais on a constaté qu'ils incorporent les langues et les dialectes, le folklore, les arts et le théâtre, les sites archéologiques et les composantes du paysage (Ray, 1998; Solima & Minguzzi, 2014) dans le cadre d'une approche culturelle globale renvoyant à une identité territoriale. D'où l'origine de " l'approche de l'économie de la culture au développement " qui est pensée comme la localisation du contrôle économique dans un certain territoire, en valorisant ses ressources culturelles au sein de son réseau local d'acteurs. C'est ainsi qu'une approche néo-endogène du développement, un concept introduit par Ray (2001), peut être considérée comme la création de conditions appropriées qui stimulent les initiatives locales dans le cadre de directives générales ; une manifestation à la fois du "par le haut" et du "par l'intérieur". Si l'on considère l'alimentation comme un vecteur typique de l'identité d'une culture, il a été démontré que les consommateurs recherchent aujourd'hui des produits d'origine locale, caractérisés par leur proximité géographique, par des pratiques respectueuses de l'environnement et un retour au traditionnel et au naturel plutôt qu'au commercial et à l'industriel.

Selon Torre, la finalité générale du développement est comprise comme " *l'amélioration du bien-être et éventuellement de la richesse des populations, avec le choix d'un intérêt étendu aux territoires aux fonctions industrielles réduites, par préférence ou par manque de ressources* " (Torre, 2015). Une définition du développement territorial a été mentionnée par Angeon et al. (2006) citant Deffontaines et al. (2001) comme " *la capacité des acteurs situés*

sur un territoire à maîtriser les évolutions futures ". Pecqueur (2013) quant à lui utilise le terme " *développement territorial* " au lieu de " *développement local* " car la notion de territoire dépasse celle de localité, c'est-à-dire ceux qui se trouvent dans une localité particulière. C'est la raison pour laquelle cette notion de développement territorial s'est construite à partir celle de "développement local" en référence à des échelles plus larges. Dans son article, Pecqueur définit le développement territorial comme "tout processus de mobilisation des acteurs qui conduit à la création d'une stratégie d'adaptation aux contraintes extérieures, stratégie fondée sur l'identification collective à une culture ou à un territoire". Et il continue de décrire le développement territorial comme un processus qui "*ne se décrète pas et reste une construction entre les mains des acteurs ou des parties prenantes locales, même si des politiques publiques appropriées peuvent être utilisées pour le stimuler dans le temps*" (Pecqueur, 2013, p. 11). A partir de la définition de Pecqueur, Torre (2015) ajoute trois points dans lesquels le développement territorial se distingue du développement régional ou local. Il s'agit d'abord du fait que le développement territorial s'étende à divers acteurs territoriaux (autorités locales/régionales, services décentralisés de l'État, associations, et autres) au lieu d'être " réduit " au comportement des acteurs productifs et à la régulation institutionnelle. Ensuite, par la coopération au niveau du territoire (social et institutionnel) et surtout dans la mise en réseau des acteurs locaux dans le pilotage collectif de leur propre itinéraire de développement. Enfin, en intégrant les questions relatives à l'usage et à l'occupation des sols, concurrence et rareté des terres, érosion des sols, foncier, comme éléments déterminants des projets de développement territorial. Selon Torre (2015), ces facteurs rendent le développement territorial plus étendu que l'économie et la géographie en intégrant une dimension sociale et les éléments biotechniques tels que l'écologie et les sciences du sol.

Ce qui est intéressant dans le développement territorial par rapport à cette étude sur la vallée de la *Beqā'* est qu'elle se base sur l'identification des atouts qui sont capables de différencier un territoire de la vallée des autres territoires. Ceux-ci peuvent en effet prendre la forme d'une " accumulation de savoir-faire " ou de " biens collectifs " (Pecqueur, 2013). C'est dans cet aspect que le *mūne* pourrait se positionner. En effet, dans le même article, Pecqueur cite une définition des " ressources " de Leila Kebir (2004) comme " *un métasystème qui met en relation un objet (savoir-faire, matière première, artefact, etc.) et un système de production produisant un bien ou un service* " (Pecqueur, 2013, p. 18).

Les approches de développement territorial ont pu prendre une forme relativement plus solide dans les pays développés et notamment en Europe. Les raisons principales peuvent être liées au pilotage des politiques de développement rural par une forte capacité institutionnelle et à la présence d'un cadre politico-administratif bien établi et stable parmi ses pays membres, ce qui a facilité par conséquent l'introduction d'interventions innovantes avec une composante expérimentale testée à grande échelle : le projet LEADER englobe probablement l'une des approches les plus pertinentes du développement territorial rural dans l'Union européenne (UE), dans le cadre des approches qui s'inscrivent dans le développement "néo-endogène" et "territorial". Le développement néo-endogène peut être considéré comme la création de conditions appropriées qui stimulent les initiatives locales dans le cadre de lignes directrices générales ; il s'agit donc d'une manifestation à la fois "d'en haut" et "de l'intérieur" (Ray, 2001). Avec plus de 30 ans d'exécution en cours, le projet LEADER est considéré par la plupart, malgré certains niveaux de critique (Petrick, 2011; Ray, 2001), comme un outil qui a

stimulé avec succès la (ré)organisation et/ou la construction de territoires sous la forme de groupes d'action locale (GAL). L'un des domaines importants de sa réussite consiste en l'engagement des acteurs locaux dans la réflexion sur leurs territoires, la compréhension de leurs distinctions et la formulation de plans d'action collectifs basés sur la structuration des réseaux et des acteurs locaux. Les principales réalisations à ce jour comprennent, selon le site web du Réseau européen pour le développement rural (ENRD), la création de plus de 2 800 GAL, concernant plus de 60 % de la population rurale européenne. Au cours de ses trois phases, LEADER I (1991-1993), LEADER II (1994-1999) et LEADER + (2000-2006), et à l'exclusion de LEADER CLLD (2014-2020), le budget global alloué par l'UE a été multiplié par cinq, passant de 442 millions d'euros pour LEADER I à 2,105 milliards d'euros pour LEADER +, tandis que les zones couvertes ont été multipliées par quatre (de 367 000 km² à 1 577 386 km²), pour ne citer que quelques statistiques. Lorsqu'on interroge directement les GAL et/ou les bénéficiaires, la principale perception des points forts du projet LEADER, comprend la promotion de la mise en réseau, l'encouragement de la coopération entre les entreprises et les organismes publics, l'adoption d'approches ascendantes, le soutien à l'innovation et l'amélioration globale des localités (Bosworth et al., 2016). Ces résultats peuvent alors probablement être considérés comme des chiffres de la stimulation réussie des communautés locales réalisée par LEADER.

Certaines littératures théoriques et de nombreuses études de cas soulignent la possibilité de transférer ces approches de développement aux pays en développement avec certaines adaptations (Bosworth et al., 2016; Delgado-Serrano et al., 2015; Galdeano-Gómez et al., 2011). Pecqueur (2013) reconnaît par exemple que l'émergence du développement territorial comme solution potentielle aux changements de l'économie mondiale s'applique aussi bien aux économies industrialisées qu'aux pays en développement. La prise d'une forme tangible dans les pays en développement est principalement due à la flexibilité et à l'adaptabilité du modèle. Dans son article, Pecqueur (2013) met l'accent sur l'importance d'avoir une compréhension claire du contexte local sur lequel se construira l'émergence ou la construction de ressources identifiables et de stratégies d'exploitation. D'autre part, il indique clairement que le modèle n'est pas spontané mais qu'il requiert une approche holistique de l'action publique, qui va au-delà de la simple, mais nécessaire, capacité de l'État et des politiques de régulation, mais qui nécessite une mobilisation et une coordination entre les acteurs. Le même point d'attention a également été souligné par Torre et Wallet (2015) lorsqu'ils ont mentionné que "les efforts et les projets des populations locales" sont aussi importants que les politiques lorsqu'on vise le développement rural. À cet égard, l'organisation des acteurs joue un rôle crucial dans la définition d'une canalisation efficace des ressources. C'est ce qu'ont affirmé Stöhr et Taylor en 1981 en soulignant que le développement ascendant nécessite à la fois des organisations territoriales spécifiques de cadres socio-politico-administratifs et des systèmes de transactions économiques (Stöhr & Taylor, 1981). Suivant la même logique, une partie intégrante de l'organisation des acteurs locaux se reflète dans les relations qui régissent le réseau d'acteurs. Chevalier *et al.* (2017) affirment ainsi que l'étude des systèmes de relations entre les acteurs permet d'identifier l'interconnaissance et l'interdépendance. À son tour, cela reflète le potentiel d'action collective d'un groupe au sein d'un certain réseau, ce dernier étant une condition préalable à la mobilisation sur un territoire et à la construction d'une identité collective. On parle

généralement d'action collective lorsqu' "un membre du groupe s'engage dans une action collective à tout moment où il agit en tant que représentant du groupe et où l'action vise à améliorer la condition de l'ensemble du groupe" (Wright et al., 1990, p. 995).

Se peut-il que de tels concepts puissent être transférés ou adaptés aux pays en développement ayant un potentiel de capitalisation du patrimoine culturel et dans des territoires spécifiques telle que la vallée de la *Beqā* au Liban ?

C'est ce que cette étude tente de mettre en évidence en mobilisant le *mūne* comme une ressource du patrimoine culturel. La définition du terme de ressource dans ce cas s'inscrit dans celle qui a été citée par Pecqueur (2013) à partir de Levy et Lussault (2003). Elle se base sur la compréhension qu'une ressource est une forme inventée du monde physique ou biologique, et même après avoir été découverte, elle ne peut être considérée comme telle que si elle participe à un processus de production identifié provenant de la société. Il convient également de mentionner la distinction qui est faite entre les facteurs existants (actifs) qui sont considérés comme des "actifs" et les facteurs latents (virtuels) qui sont considérés comme des "ressources" en réserve jusqu'à ce qu'ils soient transformés en actifs suite à leur révélation ou valorisation (Colletis & Pecqueur, 2005). Par conséquent, la reconnaissance d'une ressource et sa transformation en actif impliquent un effort collectif selon un processus d'organisation et de mobilisation des acteurs et leur engagement dans des contextes institutionnels ainsi que, géographiques donnés au sein des territoires et administrations concernés. Dans ce sens, et en considérant l'alimentation comme une ressource ou un atout pour le développement, il convient de mentionner que le sujet de la géographie de l'alimentation a suscité une attention croissante, notamment à des fins de développement pour les territoires. Ce fait a été noté par exemple par Atkins en 1988, lorsqu'il a reconnu que le domaine de la géographie avait jusque-là négligé des approches très importantes, car d'une part, 87% des agriculteurs du monde vivent dans des pays à faible revenu (soit environ 1 600 dollars par habitant), et d'autre part, 50% de la valeur des aliments dans les rayons des supermarchés provient de l'aval de la chaîne de valeur et donc intervient après la ferme (Atkins, 1988). Parallèlement, le domaine de la géographie sociale s'interroge sur le rôle que l'alimentation pourrait jouer dans le développement, en abordant notamment l'alimentation en termes d'inégalités d'accès et de justice. Dans un article de synthèse, Del Casino (2015) met l'accent sur cette discipline plus large qu'est la géographie et ses analyses spatiales, non seulement en abordant les déserts alimentaires, la sécurité alimentaire et les mouvements de justice alimentaire, mais aussi en mentionnant la « *socialité* » complexe et la relation entre l'espace et l'identité. L'article de synthèse cite Costa et Besio (2011) dans leur examen de la cuisine régionale hawaïenne (HRC) comme un exemple de l'effort nécessaire à la construction de l'identité. Les auteurs affirment que l'essor de la cuisine locale ne s'est pas simplement produit naturellement mais s'est plutôt construit grâce aux travaux et aux efforts des chefs de l'industrie hôtelière au début des années 1980 qui souhaitaient améliorer la qualité et les propriétés organoleptiques de leur cuisine. C'est ainsi que la construction de cette identité s'est articulée autour des politiques alimentaires pour aboutir finalement à l'appropriation et au renforcement de cette culture alimentaire indigène hawaïenne spécifique. La même chose se reflète également dans la structure des processus pour les identités de la cuisine nationale mexicaine et leur positionnement à la région frontalière entre le Mexique et les États-Unis faisant ainsi circuler un espace local pour le tourisme et l'identité frontalière

(Del Casino, 2015). C'est ainsi que Del Casino (2015) souligne comment " *l'espace et l'identité sont intimement liés* " et donne le marché français " Marché Paysan d'Antigone " dans la ville de Montpellier comme exemple où l'identité paysanne joue un rôle sous-jacent dans les aliments de qualité et la position affirmée des producteurs comme " *gardiens uniques du patrimoine du terroir* " (Del Casino, 2015, p. 4). Finalement, le système de reconnaissance (de la ressource territoriale), de sa spécificité, de son appropriation et de sa construction identitaire se manifeste par une valorisation à travers un mécanisme de protection qui permet sa différenciation. C'est ici que le thème de la protection, dans les approches matérielles (tangibles) ou immatérielles (intangibles), fait à nouveau son entrée pour compléter le processus de différenciation.

1.3.3. La culture du *mūne* - un concept bien plus large que la conservation des aliments

Lorsque l'on considère l'ensemble des informations recueillies sur la conservation traditionnelle des aliments *mūne*, il devient évident que le système de production et de consommation présente un ensemble de dynamiques et de fonctions différentes. Celles-ci dépassent l'acte direct de conservation des aliments pour augmenter leur durée de vie, et incluent un système qui présente des liens forts avec l'espace, l'histoire et la culture, ainsi que les activités socio-économiques environnantes. Ces liens vont, par exemple, d'une forte appartenance géographique des activités à une organisation sociale et économique claire reflétée au niveau des ménages de la région et qui peut se décliner également sous des aspects de genre.

En plus d'être un outil de sécurité alimentaire, de mobilisation communautaire et de solidarité, la production saisonnière annuelle d'aliments *mūne* s'est également transformée en un moyen plus moderne d'inclusion économique, caractérisé par une valeur ajoutée culturelle, un rapprochement rural-urbain et une autonomisation socio-économique des femmes. La force derrière cette transformation reste l'évidence d'une valeur culturelle qui est maintenue dans ces dynamiques sous des formes matérielles et immatérielles.

Tout d'abord, l'objectif direct initial de la conservation des produits saisonniers en aliments stables à la température ambiante était un **moyen de survie et de sécurité alimentaire** pour les ménages et les communautés rurales. Historiquement, il s'agissait d'une forme d'autonomie et de renforcement de la résilience dans des circonstances de transport limité, d'isolement géographique et en temps de crise. La tradition est née dans les villages ruraux et en particulier dans le Mont Liban, une chaîne de montagnes accidentées qui fait face à la côte libanaise dans le sens longitudinal et qui abrite de nombreux villages éloignés les uns des autres et facilement isolés en hiver. À l'époque, les hommes agissaient principalement en tant que fermiers qui cultivaient les terres autour d'eux et lorsque les produits agricoles étaient récoltés pendant les saisons de pointe, les **femmes jouaient un rôle majeur**. En plus d'être les principales contributrices à l'entretien régulier de leur foyer, les femmes étaient principalement responsables du bien-être de leur famille et géraient l'entretien quotidien de leur maison, la nourriture, le stockage et la préparation. Cependant, le rôle des femmes était accru surtout au printemps et en été, lorsque la récolte atteignait son intensité maximale. À ce moment-là, les femmes géraient ce que leur famille consommait à partir de la récolte brute et conservaient et stockaient le reste de la récolte pour en faire des produits de garde-manger.

Les femmes mobilisaient le savoir-faire, les compétences et les techniques qu'elles construisaient à partir des informations acquises par transfert générationnel, de mère en fille, pour créer les recettes qu'elles connaissaient et perfectionnaient. Les techniques qu'elles utilisaient étaient intensives en travail et nécessitaient des jours, voire des mois, pour les réaliser et faisaient appel à une variété d'outils et de techniques de stockage. En raison de sa forte intensité de travail, le *mūne* est devenu une activité qui organisait et reliait les communautés entre elles lors de la coopération et de l'aide collective à la récolte, la préparation et la transformation. Les hommes et les femmes d'une communauté s'entraidaient pendant les processus de récolte, et ce sont spécifiquement les femmes qui regroupaient leurs efforts pour s'entraider collectivement dans la conservation de certains produits laborieux comme avec le *kishk*. Ces périodes ont créé des **cadres sociaux riches** qui se sont caractérisés par la consolidation des efforts à l'échelle collective pour la solidarité et les relations de voisinage. À ce niveau, il devient clair que la dynamique du *mūne* tisse un lien fort entre le terroir et la communauté environnante. C'est l'ensemble de ces facteurs qui ont sculpté et créé non seulement une matière première disponible mais aussi des conditions naturelles particulières pour la préservation des aliments, ainsi que la **mobilisation et l'organisation des gens**, autour de leurs compétences et savoir-faire hérités, et de leurs techniques. Ainsi, les interactions sociales avant, pendant et après la production du *mūne* émergent comme un des facteurs de sa spécificité. L'une des preuves les plus évidentes de la position qu'occupait le *mūne* dans les foyers est peut-être son **effet sur l'architecture**. Les gens de l'époque concevaient leurs maisons en plaçant la nourriture et le *mūne* au centre. En fin de compte, les conserves de *mūne* sont devenues un ingrédient principal qui entre dans la table libanaise, qu'elles soient consommées seules séparément ou comme ingrédients des repas. La cuisine libanaise est aujourd'hui reconnue et plébiscitée à l'échelle mondiale avec des centaines de restaurants dans de nombreuses grandes villes du monde. Le nom de ces restaurants et leurs menus incluent généralement celui du pays, en signe de fierté autour de la cuisine nationale.

Techniquement, il serait **difficile de créer une liste unifiée** d'aliments conservés spécifiques pouvant être considérés comme des *mūne*. De même, il serait difficile d'attribuer directement les produits *mūne* à des territoires spécifiques. En effet, l'idée même de *mūne* est fluide dans son application et les types de produits dépendent directement des cultures environnantes de chaque région, celles-ci étaient très variables, parfois même d'un village à l'autre. Il n'existe pas de caractéristique unique capable d'encadrer la spécificité des produits *mūne*. Il s'agit en fait d'un assemblage de différents éléments qui entrent dans la spécificité et qui varient également d'un produit à l'autre. Parfois, c'est la qualité de la matière première qui est en jeu, alors que d'autres fois, ce sont les compétences et le savoir-faire maîtrisés, les recettes, ou encore les conditions géo-climatiques et l'effet du terroir. On retrouve encore aujourd'hui une certaine **variabilité régionale** en fonction du type de recettes et des techniques légèrement différentes auxquelles chaque famille ou village était habitué. Pourtant, la production de *mūne* est capable de présenter un ensemble de produits qui se ressemblent au niveau national, régional et local pour certains produits, tout en présentant une forme de variabilité spécifique et de typicité aux mêmes échelles. Certaines régions et même certains villages sont devenus réputés pour certains de leurs *mūne* en raison de cette différenciation non seulement des conditions géo-climatiques et donc de la qualité de la

matière première, mais aussi du facteur humain qui a créé cette typicité : par exemple, les *makdous* réputés du nord de la vallée de la *Beqā'*, les olives et l'huile d'olive du nord et du sud du Liban, les produits laitiers (comme le *kishk* et le *labneh* à l'huile d'olive) de la vallée de la *Beqā'*, et bien d'autres encore. Lorsque l'on réfléchit à ce qui constitue la spécificité du *mūne*, plusieurs points apparaissent et doivent être mentionnés. Ce ne sont pas seulement les recettes traditionnelles qui ont été transmises de génération en génération qui rendent le *mūne* si spécial, ni les compétences et le savoir-faire dans les processus de production, ni les qualités de la matière première, ni les versions régionales du même produit, etc. Il s'agit en fait de tous ces éléments, ensemble dans certains cas, ou séparément dans d'autres. Parfois, c'est l'un de ces facteurs qui joue la qualité dominante, et parfois c'est un autre. Parfois, c'est aussi la combinaison de deux ou plusieurs de ces facteurs. Par exemple, la vallée de la *Beqā'* est réputée pour les qualités souhaitables de son *kishk*. Ceci est dû à plusieurs parmi les facteurs mentionnés. D'une part, son *kishk* est dû à la qualité de ses deux ingrédients principaux, le lait (yaourt ou *labneh*) et le blé concassé (*burghul*), qui tirent tous deux leur qualité désirable de leur terroir environnant. Dans la plupart des cas, on préfère que les produits laitiers proviennent de chèvres pour être utilisés dans le *kishk*, et la vallée de la *Beqā'* est également connue depuis longtemps pour l'élevage de petits ruminants. Le lait en lui-même tire ses caractéristiques souhaitables non seulement de la race des chèvres, mais aussi des aliments que les animaux broutent pendant leurs parcours de transhumance au cours desquels les troupeaux sont déplacés d'une saison à l'autre, des basses altitudes de la vallée en hiver aux hautes altitudes en été. Quant au blé concassé (*burghul*), la vallée de la *Beqā'* est également connue pour sa longue histoire millénaire dans la culture du blé dont la célèbre variété *Salamouni*. Elle a même acquis une réputation dans la culture du blé, étant nommée le grenier à blé de l'Empire romain. D'autre part, ce sont les conditions géo-climatiques qui jouent également un rôle crucial dans les étapes de séchage du *kishk* qui prennent moins de temps étant donné l'humidité moyenne plus faible et le rayonnement solaire plus fort (connu sous le nom d'irradiation normale directe). Enfin, les deux facteurs les plus importants qui sont à la base du *kishk* sont probablement les recettes et les techniques elles-mêmes, et certainement les compétences des femmes qui sont mobilisées pour obtenir le produit final souhaité. Un exemple serait les mouvements spécifiques des mains dans l'étape appelée le *farak* dans lequel le *kishk* est frotté entre les paumes des mains des *farrākāt* (un groupe de 5 ou 6 femmes spécialisées) afin de réduire la taille du *kishk* en une forme de farine plus fine. De même, chaque élément du garde-manger du *mūne* pourrait être examiné et analysé pour son lien avec un ou plusieurs de ces aspects de spécificité. Ces éléments peuvent être considérés comme ce qui donne au *mūne* sa valeur qualitative unique. Les principaux éléments de spécificité du *mūne* sont récapitulés ci-dessous.

- **Types et qualité des produits agricoles primaires.** Il peut s'agir, par exemple, de caractéristiques spécifiques des produits frais ou des sous-produits de l'élevage qui les rendent appropriés et construisent la qualité de produits spécifiques (comme la variété, la taille et les dimensions des aubergines utilisées dans les *makdous* ou la variété spécifique de rose utilisée dans le distillat d'eau de rose connu sous le nom de *Rosa Damascena*) ou encore, de variétés endémiques préférées dans certains cas (généralement appelées *Baladi*).

- **Compétences et savoir-faire appliqués aux pratiques traditionnelles de préservation.** Il s'agit de pratiques et de compétences des femmes qui ont été transmises de génération en génération et développées de manière à optimiser l'utilisation des conditions environnantes et des ressources disponibles. En se basant sur la définition fournie par Moity-Maïzi et Bouche (2011), le savoir-faire a une valeur heuristique et peut être compris comme suit : " *l'ensemble des compétences acquises, incorporées, transmises, qui se manifestent dans l'acte technique et qui supposent la mobilisation de nombreuses connaissances et représentations* " (Moity-Maïzi & Bouche, 2011, p. 27). Ceux-ci se concrétiseraient par l'application de savoir-faire spécifiques dans la maîtrise des compétences (techniques, physiques, de jugement et de perception) liées à la sélection de la matière première et des ingrédients, à la préparation, à la transformation et au stockage, l'ensemble créant le *mūne* conservé final. Un exemple serait l'étuvage, le séchage puis le craquage du blé pour obtenir le *burghul* ou les compétences en matière de fumage appliquées à la torréfaction du *freekeh* ou l'étape typique du *farak* dans la production du *kishk*, comme mentionné ci-dessus.
- **Des recettes spécifiques, vieilles de plusieurs générations, avec des variations régionales.** Il ne s'agit pas des compétences réelles en matière de conservation, mais plutôt de la combinaison d'ingrédients qui, utilisés ensemble, révèlent une qualité organoleptique et de conservation spécifique au produit final. Les recettes de base peuvent également varier légèrement d'une région à l'autre, ce qui ajoute à la diversité et à la spécificité. Par exemple, les différents ingrédients locaux mélangés pour créer le mélange de *za'atar* (feuilles de *za'atar*, sumac, graines de sésame grillées et sel). Un autre exemple serait les différents types de lait, la proportion et la variété de blé, et les temps de fermentation ou de séchage utilisés dans la production du *kishk* dans différents villages.
- **Effet des conditions géo-climatiques locales.** Étant donné la diversité géographique du Liban, il est normal que les types et les qualités de la production agricole varient dans tout le pays, avec des dates de début et de fin de saison légèrement différentes. Le sol, l'eau, la température, l'humidité et de nombreux autres facteurs variables déterminent la qualité finale des produits. Les produits de qualité supérieure de la vallée de la *Beqā'* sont par exemple réputés pour leurs raisins (raisins de table et vignobles), abricots, aubergines *makdous*, sous-produits animaux et bien d'autres.
- **Les contextes sociaux et les modes de consommation.** Il s'agit des différences de coutumes et d'habitudes qui découlent de la diversité des groupes sociaux dans le pays, comme les différences religieuses par exemple, et qui ont un effet sur la consommation alimentaire. Les communautés chrétiennes par exemple qui consomment des boissons alcoolisées effectuent des activités saisonnières supplémentaires de *mūne*. Celles-ci incluent par exemple la distillation de l'*arak*, la boisson alcoolisée indigène de la Méditerranée orientale à base d'anis et de raisins. Cette boisson est normalement consommée avec le *Mezze* mais pas dans les communautés musulmanes.

Un autre aspect clé à prendre en compte pour la préservation des aliments *mūne* est leur **évolution** à l'époque contemporaine. Aujourd'hui, la production collective domestique et communautaire de *mūne* a fortement diminué pour plusieurs raisons. Celles-ci incluent normalement le développement des modes de vie par lequel la technologie, la propagation de l'urbanisation et l'introduction des marchés commerciaux ont rendu la nourriture facilement accessible aux zones rurales et ont diminué le besoin de conserver les aliments dans chaque domicile. Avec ces changements, la production de *mūne* est passée des ménages domestiques aux producteurs locaux. A ce stade, la consommation de *mūne* a évolué dans le pays vers une forme d'habitude en lien direct avec le passé, et se métamorphosant en une sorte de patrimoine plutôt que ressortant d'un besoin direct. En conséquence, les producteurs de denrées alimentaires auraient répondu à cette demande en transformant les aliments *mūne*. En effet, on trouve sur le marché de nombreux types différents de producteurs qui fabriquent des conserves de *mūne*. Cependant, il **n'existe pas de distinction** claire lorsqu'il s'agit de différencier les produits finis, les méthodes de fabrication, les matières premières, les ingrédients ou les pratiques en référence au maintien de traditions. Cette absence de distinction claire entre les différentes origines du *mūne* rend le contrôle difficile et ouvre la possibilité à toute forme d'entité légale, et parfois même à des start-ups non enregistrées, de s'engager dans l'échange de ces produits sur les marchés. Un autre point qu'il est important de mentionner à ce stade étant donné le risque croissant d'insécurité alimentaire au Liban reste le lien entre les aliments *mūne* et la **réémergence de leur fonction originale de sécurité alimentaire** dans le contexte d'aujourd'hui. Le *Mūne* peut maintenant être compris comme ayant de multiples dimensions : il ne s'agit pas seulement d'un système de production et de vente de produits, mais d'une pratique collective avec des effets en termes d'organisation et de coopération dans les communautés, les familles et les ménages. La position clé du *Mūne* dans la vie quotidienne des familles s'est également manifestée autour des us et coutumes de consommation et d'hospitalité, par des éléments d'architecture, et par la planification des cycles annuels des cultures et de consommation/préservation, etc. Ces indices présentent des similitudes avec, par exemple, d'autres produits décrits comme étant étroitement liés à leur terroir et à leur culture, ou encore des aliments qui ont une forte composante patrimoniale dans leurs aspects matériels et immatériels (ces points seront discutés dans la section suivante). Ils reflètent le lien direct que la production et la consommation du *mūne* ont créé avec les gens, la tradition, les compétences et le savoir-faire, l'organisation et la mobilisation de la société, et le cœur de l'environnement social ; par conséquent, le *mūne* peut être considéré comme un système à part entière.

Lorsque l'on pense à sa dynamique au niveau local, régional et national, le système de *mūne* révèle une dimension patrimoniale importante. Il présente à la fois des **caractéristiques spatiales et a-spatiales**. Basé sur un cycle de production à l'échelle territoriale locale, il relie les communautés urbaines et rurales, il fournit aux individus qui se déplacent un lien direct avec leur environnement rural d'origine et enfin, il sert de pont à travers le temps en mobilisant un patrimoine issu du passé. La saisonnalité des produits *mūne* en tant que modèle provient de la nécessité de nourrir les espaces locaux environnants, mais elle s'est également développée au cours du temps en relation avec la ville. La localisation géographique des activités de production au niveau local et le mouvement des produits territoriaux traditionnels entre les espaces ruraux et urbains entrent dans le cycle naturel du *mūne* puisqu'ils ont été

observés à travers l'histoire. Le système *mūne* a la capacité de présenter une typicité ainsi que des dynamiques plus génériques à plusieurs échelles géographiques. Non seulement le système *mūne* est porteur d'indications pour des produits typiques dont les caractéristiques et la qualité se construisent au sein d'espaces spécifiques (environnement naturel et facteur humain), mais ce système est également valide à une échelle plus grande et de façon plus élaborée (ce point sera creusé par la suite). La **mobilité du *mūne*** est enfin importante car le système *mūne* intègre des produits qui voyagent bien et qui sont recherchés par les consommateurs urbains ainsi que par la grande diaspora internationale. C'est donc une occasion pour les Libanais de reconnaître cette mobilité des produits *mūne* tout en commençant à penser à leur protection d'une part en tant que vecteur culturel, et d'autre part comme une ressource économique interne dotée d'un potentiel d'atténuation des effets des crises et des insécurités alimentaires actuelles.

Au Liban, aucune approche n'est encore établie pour la valorisation d'un patrimoine à la fois immatériel et matériels comme la pratique de la conservation traditionnelle des aliments *mūne*. Bien qu'elle montre les signes clairs d'une activité économique dynamique, la production d'aliments *mūne* reste une activité essentiellement non réglementée. De ce fait, le secteur et les multiples chaînes de valeur qui le composent ne sont pas correctement contrôlés, ne sont pas protégés, et sont soumis à l'exploitation commerciale au risque de perdre leur lien avec les précieuses pratiques traditionnelles du passé. La gamme de conserves traditionnelles de *mūne* disponibles sur le marché libanais aujourd'hui ne bénéficie certainement d'aucune reconnaissance nationale par le biais de spécifications officielles ou d'un système de valorisation construit. Cet état est suspecté d'affecter fortement la perception et les choix des consommateurs en raison d'une incapacité à identifier clairement l'origine et la qualité des produits (Zurayk & Abu Ghyda, 2009). C'est donc une raison principale pour laquelle les aliments *mūne* sont considérés comme nécessitant de toute urgence un moyen de reconnaissance officielle et de différenciation par rapport à d'autres produits similaires mais industriels. Dans son étude, Abou-Habib *et al.* (2013b) ont décrit des petites entreprises féminines utilisant des marqueurs comme " *mūne* maison " pour distinguer leurs produits de ceux qui sont similaires mais caractérisés par une production de masse. La préparation de ces derniers ne suivait pas les pratiques traditionnelles ou avait eu recours à des additifs. Finalement, cette étude recommande de mettre davantage l'accent sur la différenciation des sexes dans la production du *mūne* en faisant de la publicité pour le soutien aux productrices plutôt que pour le produit en lui-même, étant donné que des produits présentant des caractéristiques similaires sont disponibles sur le marché. En fait, le système *mūne*, lorsqu'il est pensé dans sa totalité, s'inscrit bien dans les facteurs implicites et explicites qui émergent de la définition du Patrimoine Culinaire Immatériel (PCI) qui ont été identifiés par Federico Lenzerini (2011, p. 108) et qui sont :

a) l'auto-reconnaissance, par les communautés, groupes et individus concernés, du PCI comme faisant partie de leur patrimoine culturel ; b) la recreation constante du PCI en réponse à l'évolution historique et sociale des communautés et groupes concernés ; c) le lien profond du patrimoine concerné avec l'identité idiosyncrasique de ses créateurs et porteurs ; d) la condition d'"authenticité" comme exigence implicite du PCI ; et e) la profonde interrelation du PCI avec les droits de l'homme, dans la double perspective des normes des droits de l'homme comme paramètre de la "légitimité" du patrimoine concerné et de ce

dernier comme outil pour favoriser la jouissance effective des droits de l'homme. Ces facteurs énumérés sont normalement liés et interconnectés les uns aux autres.

En fait, il est impératif de voir le *mūne* comme un système holistique avec l'ensemble de ses composants qui peuvent être compris comme ayant à la fois une valeur tangible (matérielle) et une composition culturelle intangible (immatérielle). Le *mūne* peut maintenant être considéré comme un système aux multiples composantes et échelles spatiales, y compris la culture et la fourniture directe de nourriture à l'échelle territoriale (locale) et nationale. Il agit désormais comme un système patrimonial matériel et immatériel capable de construire la société à travers la gastronomie. La question qui se pose à ce stade est de savoir comment concilier et équilibrer les natures matérielles et immatérielles du système *mūne*.

Partie 2 Le mouvement coopératif - caractéristiques et potentiel au Liban et dans la vallée de la *Beqā'*

Les coopératives jouent un rôle important pour l'intérêt collectif d'un nombre significatifs d'individus dans le monde aujourd'hui. On estime qu'une personne sur six sur la planète est en moyenne directement ou indirectement liée à des coopératives. Reconnu comme ayant vu le jour au milieu du XIXe siècle en Angleterre, le mouvement coopératif moderne a évolué en tant que modèle d'entreprise particulier qui se distingue des entreprises à but lucratif en se concentrant sur le bénéfice collectif, la participation, la solidarité et la démocratie. L'un des principaux moteurs de l'esprit coopératif est en fait basé sur son nom, la "coopération", dans laquelle, les efforts des individus sont consolidés dans des initiatives économiques qui ne peuvent être réalisées séparément. Lorsque des individus regroupent leurs efforts et leurs compétences sous la forme d'une coopérative, ils sont en mesure de réduire les coûts de production, de créer des emplois, de garantir des revenus et de planifier un objectif commun spécifique souhaité par ce groupe spécifique. En ce sens, une variété de types de coopératives sont possibles. Il peut s'agir de coopératives de production agricole primaire, de commercialisation, de consommation, de finances, de logement, de travailleurs, etc. C'est pourquoi la plupart des désignations font référence aux coopératives en tant que sociétés coopératives, ce qui souligne l'importance de la construction de la société, des opérations et de l'impact final sur la communauté. Les coopératives ont connu un succès impressionnant à l'échelle mondiale. Dans les pays développés, les coopératives contribuent aujourd'hui à une valeur significative du PIB de certains pays comme la Nouvelle-Zélande (20%), la France (18%), les Pays-Bas (18%) et la Finlande (14%). Les coopératives sont également en mesure d'avoir un impact significatif dans les pays en développement, notamment en matière de soutien aux moyens de subsistance, de création de revenus, d'accès aux ressources et autres, avec l'avantage supplémentaire de mobiliser et de soutenir les groupes marginalisés et l'emploi ainsi que l'autonomisation des femmes. C'est pourquoi les coopératives sont considérées comme des outils efficaces de développement local et territorial, capables de contribuer à plusieurs des Objectifs de développement durable (ODD) de l'agenda 2030 des Nations unies.

2.1. Les coopératives sur le plan théorique et leurs dynamiques aux échelles mondiales et nationales

Smith (2014, p. 2) qui cite la définition des coopératives adoptée par l'Alliance coopérative internationale¹⁰, les coopératives sont définies comme " *une association autonome de*

¹⁰ <https://www.ica.coop/en/cooperatives/cooperative-identity>, puis adoptée par l'Organisation internationale du travail (OIT) dans sa recommandation n° 193.

personnes unies volontairement pour répondre à leurs aspirations et besoins économiques, sociaux et culturels communs par le biais d'entreprises détenues conjointement et contrôlées démocratiquement ". Cette définition est reconnue au niveau international et adoptée sur la scène mondiale par des organisations telles que l'Organisation internationale du travail (OIT) et les Nations Unies. Une coopérative est un regroupement volontaire d'individus pour consolider légalement leurs efforts et leurs ressources en vue d'un bénéfice collectif partagé d'une initiative économique qui n'aurait pas été possible sur une base individuelle. La propriété, le contrôle et le bénéfice sont tous dirigés vers les membres, donc les types de coopératives qui existent dépendent des membres éligibles qui possèdent les coopératives et des activités qu'ils réalisent. Les coopératives peuvent donc exister dans pratiquement tous les secteurs. La coopération remonte aussi loin que l'organisation entre humains a été réalisée pour un bénéfice mutuel, depuis les tribus et les groupes de chasseurs-cueilleurs jusqu'à la forme moderne de société d'aujourd'hui. Le mouvement global des coopératives dans le monde est régi par les 7 principes de la coopération, les 6 premiers ayant été établis par la Rochdale Equitable Pioneers Society en 1844 et le septième ayant été ajouté en tant que forme de responsabilité envers l'environnement et la communauté. L'origine des principes de la société coopérative moderne est reconnue par beaucoup comme étant la création de la coopérative de Rochdale dans l'Angleterre du XIXe siècle (Merrett & Walzer, 2016). Les sept principes des coopératives dans leur forme finale ont été adoptés par l'ACI en 1995 et sont fortement encouragés à ce jour, bien que certains principes puissent être modifiés en fonction de la culture locale ou des contraintes légales de certains pays (Williams, 2007). Dans une déclaration sur son site web officiel¹¹, l'ACI affirme que "*les coopératives sont basées sur les valeurs d'auto-assistance, d'auto-responsabilité, de démocratie, d'égalité, d'équité et de solidarité. Dans la tradition de leurs fondateurs, les membres des coopératives croient aux valeurs éthiques d'honnêteté, d'ouverture, de responsabilité sociale et d'attention aux autres*". L'ACI déclare en outre que les sept principes sont des lignes directrices qui devraient être utilisées par les coopératives pour mettre ces valeurs en pratique. Les sept principes coopératifs sont, tels que listés et décrits par l'ACI :

1. Adhésion volontaire et ouverte

Les coopératives sont des organisations volontaires, ouvertes à toutes les personnes capables d'utiliser leurs services et prêtes à accepter les responsabilités liées à l'adhésion, sans discrimination de genre, sociale, raciale, politique ou religieuse.

2. Contrôle démocratique des membres

Les coopératives sont des organisations démocratiques contrôlées par leurs membres, qui participent activement à l'élaboration de leurs politiques et à la prise de décisions. Les hommes et les femmes qui sont élus comme représentants sont responsables devant les membres. Dans les coopératives primaires, les membres ont des droits de vote égaux (un membre, une voix) et les coopératives à d'autres niveaux sont également organisées de manière démocratique.

3. Participation économique des membres

Les membres contribuent équitablement au capital de leur coopérative et le contrôlent démocratiquement. Au moins, une partie de ce capital est généralement la propriété commune

¹¹ <https://www.ica.coop/en/cooperatives/cooperative-identity>

de la coopérative. Les membres reçoivent parfois une compensation limitée, le cas échéant, sur le capital souscrit comme condition d'adhésion. Les membres affectent les excédents à l'une ou à l'ensemble des finalités suivantes : développement de leur coopérative, éventuellement par la constitution de réserves, dont une partie au moins serait indivisible ; bénéfice des membres en proportion de leurs transactions avec la coopérative ; et soutien d'autres activités approuvées par les membres.

4. Autonomie et indépendance

Les coopératives sont des organisations autonomes d'entraide contrôlées par leurs membres. Si elles concluent des accords avec d'autres organisations, y compris des gouvernements, ou si elles lèvent des capitaux auprès de sources extérieures, elles le font dans des conditions qui garantissent le contrôle démocratique de leurs membres et maintiennent leur autonomie coopérative.

5. Éducation, formation et information

Les coopératives assurent l'éducation et la formation de leurs membres, de leurs représentants élus, de leurs gestionnaires et de leurs employés afin qu'ils puissent contribuer efficacement au développement de leur coopérative. Elles informent le grand public - en particulier les jeunes et les leaders d'opinion - de la nature et des avantages de la coopération.

6. La coopération entre les coopératives

Les coopératives servent leurs membres le plus efficacement possible et renforcent le mouvement coopératif en travaillant ensemble à travers des structures locales, nationales, régionales et internationales.

7. Une dimension pour la communauté

Les coopératives œuvrent pour le développement durable de leurs communautés par le biais de politiques approuvées par leurs membres.

Les caractéristiques des structures coopératives les différencient, au niveau fondamental, d'autres types d'entreprises telles que les sociétés par actions ou détenues par des investisseurs du secteur privé et même les organisations à but non lucratif. Cela se traduit normalement par une différence législative également. Les sept principes de la coopération régissent et guident le mouvement international, tandis que la "Promotion des coopératives, Recommandation" de 2002 de l'OIT (**R. 193 de l'OIT**) constitue le seul droit international public universel sur les coopératives dans le monde, et que certains considèrent comme juridiquement contraignant (Henry, 2013). Dans une coopérative, la structure organisationnelle et la gouvernance classiques reposent sur quatre organes principaux. Il s'agit de l'assemblée générale, du conseil d'administration (CA), de la direction et du comité de surveillance (My.Coop, 2011). Tout d'abord, l'assemblée générale est constituée de la totalité des membres réunis (c'est-à-dire les usagers et les propriétaires collectifs) et constitue la partie prenante la plus importante d'une coopérative. C'est l'assemblée générale qui assure le contrôle démocratique d'une coopérative par ses membres (principe " un membre, un vote ") sur certaines des questions les plus importantes et les plus sérieuses telles que les stratégies de travail, le partage des surplus, les bilans annuels, l'initiation de l'adhésion à une union ou à une fédération, la dissolution, etc..., (Ghadban, 2013). L'assemblée générale se réunit une fois par an au cours de laquelle elle élit le conseil d'administration (CA) et le comité de surveillance, et elle peut éventuellement être convoquée pour tenir des réunions exceptionnelles si nécessaire. Le conseil d'administration est l'organe général de direction et d'élaboration des politiques d'une coopérative, auquel est

normalement délégué le droit de prendre des décisions au nom de l'assemblée générale (c'est-à-dire la totalité des membres d'une coopérative). Le CA et son président élu rendent compte à l'assemblée générale des réalisations et des progrès accomplis et dirigent la gestion d'une manière générale sans entrer dans les petits détails ou les tâches quotidiennes. Le CA s'assure principalement que les décisions prises par l'assemblée générale sont mises en œuvre par la direction dans la mesure du possible. C'est ensuite la direction (le directeur, le personnel, etc. qui peut être recruté et pas nécessairement les membres, bien que cela soit également possible) qui s'occupe des opérations quotidiennes d'une manière similaire en termes de pouvoir et de responsabilités à une société d'investissement et qui est en fait une délégation pour mettre en œuvre les politiques et les décisions prises par l'assemblée générale (Ghadban, 2013). Enfin, le comité de surveillance (parfois aussi appelé conseil de surveillance) est l'organe indépendant élu par l'assemblée générale, qui supervise et contrôle le CA et rend compte à l'assemblée générale. La Figure 8 est un diagramme schématique qui représente la relation interne et les principales responsabilités entre ces quatre principaux organes de gouvernance d'une coopérative.

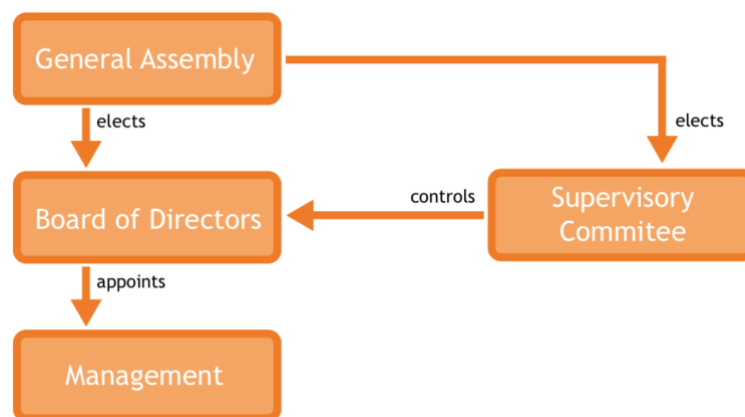


Figure 8: Représentation schématique des quatre principaux organes de gouvernance et de la relation entre eux dans un modèle coopératif classique. Source : (My.Coop, 2011)

Comme la structure organisationnelle d'une coopérative est plus clairement élaborée, nous pouvons maintenant voir comment la gouvernance coopérative touche à des questions plus larges que l'attribution des droits de décision, et inclut plus largement, par exemple, la responsabilité, la relation entre les membres et le CA, et celle entre le CA et les gestionnaires. En effet, les coopératives sont détenues collectivement et contrôlées démocratiquement par leurs membres, contrairement à d'autres entités économiques "autocratiques". Cela signifie que la chaîne de commandement, les moyens de contrôle et les rapports doivent être clairement établis, d'autant plus que les coopératives fonctionnent en déléguant leurs droits de décision (My.Coop, 2011). Cela signifie que l'assemblée générale génère une voix par membre sur les décisions majeures et délègue la mise en œuvre de ces décisions au conseil d'administration (qui rend compte à l'assemblée générale) qui lui-même les délègue à la direction (qui rend compte au conseil d'administration), et le contrôle global est effectué par le comité de surveillance.

Le mouvement coopératif sous le néolibéralisme est considéré comme faisant partie de l'économie sociale, plus précisément comme des organisations privées appartenant au secteur tertiaire du non-profit qui s'occupe d'initiatives socio-économiques que ni le secteur privé ni

le secteur public n'abordent correctement (Ghadban, 2013). Depuis l'expansion du mouvement coopératif à l'échelle mondiale, les coopératives ont été, et sont encore aujourd'hui, considérées comme des vecteurs de justice sociale face aux injustices inhérentes au capitalisme concurrentiel (Hoyt, 2004). En tant que modèle social d'entreprise qui diffère des entreprises à but lucratif en se concentrant sur le bénéfice collectif, la participation, la solidarité et la démocratie, les coopératives sont considérées comme des agents de développement. Le rôle des coopératives en tant que contributeurs à l'agenda 2030 des Objectifs de Développement Durable (ODD) des Nations Unies a été souligné à différents niveaux. Les ODD (également connus sous le nom d'objectifs mondiaux) sont un appel universel urgent lancé par les Nations Unies pour inciter à une action mondiale visant à mettre fin à la pauvreté, à protéger la planète et à améliorer la prospérité des populations d'ici 2030. Un rapport de l'Organisation internationale du travail (OIT) a exclusivement analysé le lien entre les coopératives et les ODD avant même l'annonce des objectifs, cibles et indicateurs spécifiques fin 2015 (Wanyama, 2016). Le rapport soulignait comment " *les coopératives sont bien placées pour contribuer au triple résultat du développement durable, à savoir les objectifs économiques, sociaux et environnementaux, plus le programme de gouvernance [...]* " (Wanyama, 2016, p. 1). Une vaste base de données sur les coopératives créée pour le Secrétariat des Nations Unies fait état de l'existence de 2,6 millions de coopératives, dont 770 000 emploient 12,6 millions de personnes et génèrent 3 billions de dollars US de revenus annuels (Grace, 2014).

Le succès du mouvement coopératif a été salué pour son impact positif sur les moyens de subsistance de milliards de personnes dans le monde. Les coopératives ont été reconnues comme une source de crédit, de nourriture, de protection sociale, d'énergie, de services de santé, de logement, d'emploi et de représentation dont plus de trois milliards de personnes ont bénéficié dans le monde, un milliard sont membres et 100 millions sont employés (S. Smith, 2014). Leur succès mondial se reflète dans leur contribution au PIB mondial qui était estimée entre 3 et 3,5 % en 2014, et avec un taux très élevé dans des pays comme la Nouvelle-Zélande (20 à 22 %) et la France (18 %) (Grace, 2014). En 2014, il a été constaté que les coopératives généraient 3 000 milliards de dollars de revenus à partir de 20 000 milliards de dollars d'actifs, ce qui fait des coopératives la cinquième plus grande unité économique si le mouvement devait être considéré comme un pays, dépassant l'économie de la France et venant juste derrière celle de l'Allemagne (Grace, 2014). Les emplois générés par les coopératives dans des pays tels que la France, l'Italie, l'Espagne et le Royaume-Uni dépassent ceux de l'économie générale en général. Dans une étude de Smith et Rothbaum (2013), il a été démontré que les coopératives maintenaient généralement un niveau d'emploi plus élevé par rapport à l'économie générale dans ces pays et étaient moins susceptibles de licencier du personnel. Cela rendait les coopératives moins volatiles en temps de crise où les salaires étaient susceptibles d'être réduits pour maintenir l'emploi. En ce qui concerne les pays en voie de développement, les coopératives ont fait preuve d'une performance évidente dans les activités liées à la microfinance et au soutien aux microentreprises, ce qui a permis de stabiliser la génération de revenus et la création d'emplois stables. Ainsi, les personnes qui ont bénéficié de ce type de soutien se sont retrouvées capables de créer des revenus stables et d'améliorer leur qualité de vie et leurs moyens de subsistance ainsi que ceux de leurs familles. C'est surtout dans les contextes variés des pays en développement que la valeur des

coopératives s'est révélée intéressante, car les initiatives seraient détenues et contrôlées par les personnes elles-mêmes, d'une manière adaptée à leurs besoins à une échelle collective. Ces domaines d'impact ont été notés principalement dans la **réduction de la pauvreté, l'éducation, la santé, la sécurité alimentaire, l'accès à l'eau et la gestion des ressources, l'énergie durable et l'inclusion du genre.**

Les coopératives au Liban ont eu une histoire longue et instable. Elles ont d'abord existé dans le pays en vertu d'un décret gouvernemental qui organisait les coopératives en 1941 (Esim & Omeira, 2009) mais qui s'est manifesté beaucoup plus tard, en 1964, avec l'introduction de la loi sur les associations coopératives, qui a ensuite été re-amendée en 1972, 1977 puis 1983. L'introduction de la loi nationale sur les coopératives a eu lieu pendant l'une des rares périodes de prospérité qu'a connues le pays, l'ère Chehab entre 1958 et 1970, au cours de laquelle de nombreuses initiatives de réforme sociale et de nationalisation de l'économie ont eu lieu. En vertu du décret n° 17199 du 18/08/1964 et de l'article 1 de cette législation, les coopératives au Liban sont définies comme suit :

"... chaque association composée de personnes au capital illimité et ne visant pas le profit... et dont le but est d'améliorer le statut économique et social de ses membres en concertant leurs efforts conformément aux principes de la coopération publique." (Traduit de l'arabe).

Pourtant, le Liban, sous ses différents gouvernements, a été critiqué pour ne pas toujours avoir appliqué correctement les lois nationales qu'il a promulguées. Selon la loi, les coopératives sont limitées à l'échelle géographique locale et peuvent être établies avec un minimum de 10 membres. Une seule coopérative par objectif spécifique (c'est-à-dire un ensemble d'activités) peut être créée dans un village, à moins que le nombre d'habitants ne dépasse 20 000. Cela positionne donc les coopératives dans les espaces locaux de leurs villages ou villes, comme c'est le cas des coopératives en France par exemple (Peres et al., 2010), ce qui en fait des organisations typiquement territoriales et locales. En outre, dans le cadre de la loi, le mouvement coopératif est encouragé par l'exemption de divers impôts tels que l'impôt sur les bénéfices, la TVA, les taxes municipales de location et de construction, les frais de contrat, les taxes immobilières, les taxes d'importation de véhicules, les taxes de timbre, les frais d'analyse des laboratoires affiliés, etc. Cependant, la législation nationale des coopératives au Liban reste adaptée aux coopératives agricoles et manque de différenciation des textes juridiques pour les autres catégories de coopératives, tout en étant plutôt ambiguë dans son interprétation. Après la promulgation de la loi nationale sur les coopératives, l'Union nationale du crédit coopératif (NUCC) et la Fédération libanaise des sociétés coopératives ont été créées en 1968 et 1969 respectivement. Après la promulgation de la loi nationale en 1972, le secteur coopératif a pris son envol et a été stimulé par la création du ministère du logement et des coopératives en 1973. Cependant, le début de la guerre civile en 1975 et sa prolongation jusqu'en 1991 ont eu des effets dévastateurs sur le secteur coopératif comme sur de nombreux autres aspects humanitaires, économiques et sociaux du pays. C'est à cette époque que près d'un million de Libanais ont été déplacés (NRC/IDMC, 2004) et qu'un nombre important d'entre eux ont migré vers la ville et ses banlieues (Esim & Omeira, 2009), laissant les villages où les coopératives étaient auparavant actives, vides et atones. Lorsque la guerre civile a pris fin, les efforts de reconstruction n'ont pas été distribués de manière égale, que ce soit sous forme sectorielle ou géographique. La reconstruction d'après-

guerre s'est concentrée sur la ville de Beyrouth et a encouragé l'essor du tourisme, des services et du commerce. Cela a laissé les secteurs productifs (agriculture et industrie) et leurs coopératives associées beaucoup plus marginalisés, tout comme de nombreuses régions rurales situées aux extrémités du pays. À partir de ce moment, l'économie libanaise est devenue beaucoup plus axée sur la rente et beaucoup moins productive.

Les coopératives sont bien réparties dans le Liban et leur nombre le plus élevé (30%) est enregistré dans les gouvernorats du Sud et de Nabatiyeh alors que leur nombre le plus faible est dans le gouvernorat de la capitale Beyrouth (4%), sachant que le gouvernorat primordialement agricole de la *Beqā'* n'est pas loin derrière avec seulement 7% dans le caza de Zahle (ILO, 2018). Il convient également de noter qu'un pourcentage beaucoup plus élevé (14%) de petites et moyennes entreprises (PME) se trouve dans le centre économique de Beyrouth par rapport aux coopératives. La concentration des coopératives dans les espaces ruraux est due à la nature de leurs activités, c'est-à-dire en étant situées à proximité de leurs ressources et en bénéficiant aux membres (Daleel Tadamon, 2020). L'une des principales raisons de la création des coopératives était d'aider à créer des opportunités de revenus pour les familles pauvres et à revenus limités, en particulier celles qui résident dans les régions rurales du Liban, qui sont beaucoup plus marginalisées que les milieux urbains ou les villes à forte concentration de population. Les coopératives au Liban ont été décrites récemment par la FAO en 2021 comme un secteur ayant peu de poids avec des coopératives pour la plupart inactives (dormantes) qui ont un accès limité aux marchés, qui sont inefficaces dans leurs activités collectives de fourniture de services à leurs membres et qui se concentrent sur la réception de fonds provenant d'organismes externes comme les donateurs internationaux, les agences de développement local et l'État (Dal et al., 2021). Le même rapport mentionne un lien faible entre les coopératives et l'industrie alimentaire, caractérisé par moins de 5% des ventes des coopératives. Des dynamiques similaires sont également mentionnées dans la culture des fruits et légumes ainsi que dans la culture des agrumes et des bananes. Dans ces chaînes de valeur, on note de faibles niveaux de coopération ainsi qu'une inefficacité au niveau des ventes et du marketing et des agriculteurs n'appartenant même pas à des coopératives. De nombreuses sources estiment que seulement 10 à 20 % des coopératives enregistrées sont actives, c'est-à-dire qu'elles ont des activités réelles, tandis que les autres sont des coopératives fantômes ou dormantes qui ne sont enregistrées que sur le papier et dont on dit qu'elles l'ont fait pour obtenir des fonds externes, des équipements ou divers soutiens de la part de donateurs, de l'État ou de fonctionnaires (Dal et al., 2021; Ghadban, 2013; ILO, 2018; McKinsey & Company, 2018).

Une autre raison pour laquelle les coopératives du pays manquent d'efficacité à ce jour est qu'elles subissent les conséquences d'un secteur agricole fragmenté et hétérogène, encore très informel. La population agricole libanaise est vieillissante, l'âge moyen des agriculteurs se situant autour de 52 ans et seuls 2% ont moins de 24 ans. La plupart des exploitations sont de petite taille, 70% des agriculteurs cultivant des parcelles ont moins d'un hectare, et la répartition de l'utilisation des terres varie fortement d'une région à l'autre. A cela s'ajoute l'incapacité des agriculteurs à s'organiser, seuls 4,5% d'entre eux étant associés en tant que membres de coopératives (Saade et al., 2021). Ce faible pourcentage a été attribué à la faible attractivité des coopératives pour les agriculteurs et au fait que les coopératives ne respectent pas le principe d'adhésion ouverte (ILO, 2018). Toutes ces caractéristiques créent des

obstacles face à la création de coopératives, à leur capacité à fournir des services qui répondraient aux besoins de leurs membres, et donc à leur positionnement en tant qu'organisations attractives ayant une bonne réputation pour attirer des membres potentiels. Même la Direction Générale des Coopératives (DGoC), le principal organisme officiel de réglementation, reconnaît elle-même le fait que le secteur coopératif au Liban a encore un long chemin à parcourir pour atteindre son potentiel. Dans l'ouverture du guide " Introduction aux sociétés coopératives au Liban " publié par la DGoC en collaboration avec la FAO en 2020, le représentant de la FAO au Liban a déclaré qu'au Liban :

[Traduit de l'arabe] "[...], le secteur coopératif n'a pas encore répondu aux attentes en termes de performance, de gouvernance, de participation effective à l'économie rurale ou d'égalité des sexes, bien qu'il ait enregistré un certain nombre d'expériences très réussies. Cela est dû à un ensemble de facteurs et de circonstances complexes et interdépendants que de nombreuses initiatives et projets n'ont pas été en mesure de transformer en composantes d'un secteur prospère. "

*Discours d'ouverture du Dr. Maurice Saade,
représentant de la FAO au Liban à l'époque,
Introduction aux sociétés coopératives au Liban.
(Osta, 2020, p. v).*

Malgré les nombreux et sérieux défis, le secteur coopératif reste un secteur reconnu pour son potentiel stratégique de développement. Il est capable d'obtenir des avantages au niveau collectif pour un groupe de producteurs en mettant en commun leurs ressources, en réduisant leurs coûts de production individuelle, et en aidant à créer des revenus et à améliorer le pouvoir de négociation face aux intermédiaires. Ce dernier point est d'autant plus important que le secteur agricole au Liban est fortement contrôlé par des intermédiaires et des commerçants privés qui maximisent leurs propres marges bénéficiaires et minimisent celles des agriculteurs et des petits producteurs. Ce type de manipulation et d'inégalité systémique marginalise davantage les producteurs et accroît le fossé entre le producteur primaire et le consommateur final, rendant la distribution des bénéfices très injuste et biaisée. Les coopératives peuvent donc contribuer à atténuer cette dynamique et à renforcer la position des coopératives agricoles face aux intermédiaires privés. On peut en dire autant des coopératives de transformation alimentaire. En plus des mêmes avantages que le modèle coopératif, ce type de coopérative peut canaliser les bénéfices spécifiquement vers les femmes et donc contribuer à l'équité entre les sexes et à l'autonomisation des femmes dans un environnement rural autrement marginalisé. Ces coopératives opèrent également dans une activité de valeur qui est la conservation traditionnelle des aliments *mūne* et dont le produit final détient une valeur ajoutée qui est très demandée dans le pays. En plus d'être un vecteur de l'héritage culturel, les aliments *mūne* sont capables de contribuer à la réduction du risque d'insécurité alimentaire pour de nombreux ménages, une activité menée historiquement à travers de nombreuses générations et qui n'est malheureusement relancée qu'aujourd'hui pendant la crise.

2.2. ***Mūne* et ses coopératives alimentaires rurales - un système productif socio-spatial caractérisé par des liens étroits entre le milieu rural et le milieu urbain et par une dynamique d'inclusion des femmes¹²**

Cette section mettra l'accent sur la façon dont les coopératives de transformation alimentaire de la vallée de la *Beqā'* montrent qu'elles constituent un système dynamique qui dépend de son environnement et qui, en même temps, présente des liens clairs et solides en dehors de son territoire. Les coopératives sont également des vecteurs dans lesquels les femmes sont capables de participer activement à la vie économique en mobilisant des compétences dans lesquelles elles sont spécialisées et qu'elles ont acquises à travers les générations pour se manifester dans un bien alimentaire culturel final. Cette section reprendra les conclusions importantes extraites du chapitre cinq et les compilera pour décrire les tendances générales observées dans les coopératives de transformation alimentaire du territoire. La description s'attachera également à démontrer, à l'aide d'une carte de visualisation, comment les coopératives ont des dépendances purement territoriales pour leurs opérations (production) et comment ces dynamiques s'étendent en outre à l'extraterritorialité à travers leurs liens avec les espaces urbains. De cette façon, cette section montrera la fluidité des coopératives en termes de variété d'opérations commerciales qu'elles sont capables d'utiliser pour leur bénéfice local et extra-local.

Pour commencer, il est important de revenir à la compréhension de la signification des résultats. Les résultats montrent que les 40 coopératives alimentaires interrogées, représentant la totalité des coopératives agroalimentaires enregistrées dans la vallée de la *Beqā'*, et sont pour la plupart de **petite taille, tant en nombre de membres qu'en volume de production**. En moyenne, ce type de coopératives comprend moins de 20 membres alors que le double est généralement enregistré auprès des coopératives agricoles au Liban (ILO, 2018). Seuls 18 membres de la coopérative sur près de 700 au total avaient moins de 30 ans alors que près de 60% de l'ensemble des membres avaient plus de 40 ans. Des préoccupations similaires concernant le **vieillessement de la population agricole** et la diminution de la participation des jeunes dans le secteur agroalimentaire ont également été récemment exprimées par d'autres comme Chalak *et al.* (2017) et l'OIT (2018). Des chiffres comparables à ceux de l'OIT (2018) sont également enregistrés par cette étude montrant seulement 27% des membres âgés de 30 à 40 ans. Ces résultats sont préoccupants car la durabilité de ce secteur coopératif est menacée si la jeune génération ne le considère pas comme une voie attrayante pour l'emploi et la génération de revenus. Cependant, une attention particulière devrait être accordée aux profils de genre des membres. Les résultats montrent en effet que ces coopératives alimentaires sont composées principalement de femmes, même si seulement la moitié d'entre elles sont actives dans le processus de production. **L'engagement des femmes est très évident** dans les coopératives alimentaires, contrairement à leur faible taux d'adhésion dans les coopératives agricoles, un fait également souligné par les rapports des donateurs (ILO, 2018; UNDP, 2020). Il est intéressant de noter que 12 coopératives (30%) sont composées uniquement de femmes et que seulement 12 (30%) ont déclaré avoir moins

¹² Veuillez-vous référer à la dissertation complète en anglais pour les détails sur la méthodologie ; chapitre 5 et chapitre 7.

de 70% de femmes parmi leurs membres. Ces chiffres reflètent une participation impressionnante des femmes à des rôles de premier plan dans le mouvement coopératif alimentaire, contrairement à d'autres secteurs du pays. Un rapport du PNUD (2020) (Programme des Nations unies pour le développement) fait état d'une faible participation des femmes sur le marché du travail libanais en général, avec seulement 4% des postes de direction, contre 5% dans la région MENA et 19% dans le monde. Cela se reflète également dans le fait que le Liban se classe 119 sur 153 dans l'indice mondial de l'écart entre les sexes de 2022 (World Economic Forum, 2022). Pour les secteurs de l'agriculture et de l'alimentation, le même rapport du PNUD mentionne une estimation de 35% de femmes participant à la population active, ce qui reste stable et cohérent avec les chiffres rapportés en 1970. Cependant, les travailleurs migrants, hommes et femmes, de la Syrie voisine sont fortement intégrés, officiellement et surtout officieusement, dans les activités agricoles du Liban, avec des chiffres estimés entre 200 000 et 1 000 000 de travailleurs (Habib & Fathallah, 2012). Au vu de ces chiffres, il n'est pas surprenant que la majorité des coopératives agroalimentaires (17 sur 40) emploient des travailleurs supplémentaires de nationalité syrienne. Cela résulte de la pratique conventionnelle de recruter de la main d'œuvre étrangère qui est moins coûteuse alors que le nombre de cette main d'œuvre a considérablement augmenté au cours des 10 dernières années en raison de l'afflux de réfugiés de la Syrie voisine en guerre. Bien que les statistiques exactes ne soient pas claires, le rapport du PNUD (2020) susmentionné indique que les femmes participent davantage à la culture, à la récolte et au conditionnement, alors que leur rôle diminue considérablement lorsqu'il s'agit de commercialiser les produits frais. En revanche, il indique que les femmes des coopératives de transformation alimentaire surmontent ces obstacles et sont exceptionnellement considérées comme prenant en charge la commercialisation de leurs aliments transformés, un fait qui se reflète également dans les résultats de cette étude.

En termes de production, les résultats montrent que **le volume annuel total des coopératives alimentaires varie entre 1 et 7 tonnes** sur une base saisonnière pour plus de la moitié des coopératives. Il a toutefois été noté que ces faibles chiffres ne représentent que des quantités déterminées par le marché, produites à la demande, et ne représentent pas la pleine capacité des coopératives, soulignant ainsi un potentiel d'augmentation. Pourtant, 23% des coopératives interrogées ont déclaré produire plus de 7 tonnes et un maximum de 15 tonnes. La plupart des coopératives alimentaires interrogées produisent un large éventail d'aliments traditionnels, dont la plupart sont à base de fruits, de légumes, d'herbes et de produits laitiers. Il s'agit notamment de produits tels que les confitures, les cornichons, les conserves, les fruits secs, les mélanges d'herbes et les produits laitiers traditionnels. Seuls quelques-uns, 20%, se sont avérés spécialisés dans des produits particuliers (comme les produits laitiers de chèvre par exemple) plutôt que dans un ensemble. Cette **faible étendue de la production spécialisée** pourrait être attribuée à plusieurs facteurs. Premièrement, le *mūne* en tant que pratique culturelle n'est pas spécifique à un type de produit. Il comprend plutôt un large éventail de techniques de conservation qui visent à augmenter la durée de vie des cultures qui étaient disponibles à proximité d'un ménage. Il s'agissait simplement d'utiliser ce qui était disponible, c'est-à-dire ce que le chef de famille (généralement un homme) faisait pousser dans ses champs pour le ramener à la femme afin de le conserver et de le stocker. Différentes techniques se sont donc développées autour de plusieurs cultures comprenant principalement

des produits bruts comme les fruits, les légumes et les céréales, et ceux qui étaient collectés à partir de la ou des quelques têtes de bétail (généralement des petits ruminants ou des bovins) qui étaient élevés dans la maison. La viande ne jouait un rôle central qu'en de rares occasions, car elle était considérée comme chère et était consommée en petites quantités, généralement lors d'occasions spéciales. Par conséquent, en ce qui concerne le *mūne*, il serait difficile d'identifier une spécificité unique d'un seul produit. Les techniques sont elles-mêmes spécifiques et lorsqu'elles sont associées aux variétés d'ingrédients utilisés, aux recettes et aux conditions environnementales, ce sont elles qui constituent les caractéristiques finales uniques. La pratique du *mūne* est directement liée à la culture agricole et donc à l'environnement et au terroir. C'est pourquoi elle présente des caractéristiques territoriales et a-territoriales à la fois communes et variables. Le *mūne* est d'abord saisonnier et le début et la fin de ses pratiques sont directement liés au début et à la fin d'une saison de production d'un produit spécifique. D'une part, on constate que des caractéristiques uniformes et similaires s'étendent à différentes échelles territoriales, depuis les territoires locaux jusqu'à l'échelle nationale et même supranationale avec les pays voisins. Ceci est dû au fait qu'il existe des variétés similaires de cultures et de races animales qui sont communément utilisées. En revanche, certains produits et territoires préservés peuvent être caractérisés par des qualités uniques ou des réputations spécifiques qui ont grandi avec le temps au fil des siècles. Certaines régions ou villes sont aujourd'hui réputées pour la production de certains aliments. La vallée de la *Beqā'* par exemple, en plus d'être le principal acteur de la production et du commerce agricoles au Liban, est connue pour sa production laitière. Ceci est vrai parce que la vallée est connue pour son élevage de petits ruminants et ses routes de transhumance semi-nomades spécifiques. Lorsqu'il s'agit de *mūne* de type laitier, la qualité du lait et les autres ingrédients (tels que les variétés de blé locales) qui entrent dans la recette sont tous affectés par les conditions climatiques. Comme nous l'avons vu précédemment, la vallée de la *Beqā'* a une humidité moyenne plus sèche, une plus forte exposition au soleil et une plus grande amplitude des températures diurnes et nocturnes. De plus, en tant que producteur agricole majeur, la vallée met les producteurs à proximité de nombreux agriculteurs qui cultivent une plus grande variété de produits. Ce sont les raisons attendues pour lesquelles les coopératives préfèrent diversifier leurs productions pour augmenter leur production de produits *mūne* plutôt que de se concentrer sur la production de produits spécifiques. Pourtant, cela n'empêche pas certaines coopératives de se spécialiser dans des aliments réputés comme les produits laitiers. On a remarqué que 14 de ces coopératives (35%) ont cité le produit typique de *mūne* Kishk comme l'une de leurs trois principales productions. En fait, ce produit a été spécifiquement mentionné par le Ministère de l'Économie et du Commerce (MoET) comme l'un des produits ayant une éligibilité potentielle pour le label d'indication géographique dans la région de Baalbeck de la vallée de la *Beqā'* (Abu Ghyda, 2007), et constitue donc un produit pilote, attractif pour le territoire en tant que produit réputé et de l'importance du patrimoine culinaire. Il est intéressant de noter que les résultats de cette étude montrent que toutes les coopératives alimentaires du réseau, à l'exception de deux d'entre elles, ayant une production importante de kishk, sont effectivement situées dans le gouvernorat de Baalbeck-Hermel, dans le segment nord de la vallée.

L'un des résultats les plus importants de cette étude est probablement de montrer à quel point les coopératives de production alimentaire de la vallée de la *Beqā'* **présentent des liens**

territoriaux (locaux) et a-territoriaux (urbains) très forts. D'une part, les coopératives de transformation alimentaire sont fortement liées à leur environnement local pour l'approvisionnement en matières premières agricoles. Cela signifie que les coopératives dépendent des agriculteurs qui les entourent pour la culture des produits agricoles bruts qu'elles achètent le plus souvent directement. Cette relation en amont entre la coopérative de transformation et l'agriculteur est aussi généralement informelle, basée sur la confiance et les accords verbaux plutôt que sur un contrat formalisé. Dans le même temps, les coopératives de transformation alimentaire semblent être très dépendantes du marché urbain de la capitale pour leurs ventes, ce qui ne les empêche pas de vendre localement dans leurs villages et régions respectifs. Cette dynamique est reflétée par la Figure 9. Les résultats montrent que plus de 80% des coopératives dépendent directement des agriculteurs locaux au niveau du district, et près de 60% ont déclaré que plus de la moitié de leur chiffre d'affaires provient de la capitale urbaine Beyrouth ; parmi celles-ci, la moitié atteint jusqu'aux trois quarts du chiffre d'affaires urbain. Les coopératives s'appuient principalement sur les événements saisonniers et les expositions de produits alimentaires pour accéder aux consommateurs urbains et seulement 30% ont déclaré commercialiser leurs produits auprès des détaillants et des magasins d'alimentation spécialisés. Cependant, il n'est pas clair si ces coopératives atteignent directement ces points de vente ou si elles dépendent de médiateurs avec lesquels environ 40% des coopératives déclarent avoir des liens. Une dépendance géographique comparable est observée dans d'autres coopératives de pays en développement, comme en Éthiopie. Bien que tous les processus ne soient pas réalisés par la même coopérative comme au Liban, la coopérative laitière Ada'a, par exemple, a contribué à une organisation informelle des liens entre les zones rurales et urbaines en distribuant la production, la transformation et la commercialisation dans diverses zones et auprès de divers acteurs (Tegegne et al., 2007). Cette stratégie est appelée à reconnaître son bénéfice pour les échelles rurales et urbaines. A cet égard, une différence entre les modèles européens et américains de coopératives est dénotée. Bien que les coopératives laitières américaines, par exemple, soient aussi fortes que leurs homologues européennes dans les premières étapes de la production, elles vendent au contraire leurs productions à des installations de transformation plutôt que de mener elles-mêmes ces procédures. Pour en revenir aux coopératives alimentaires de la vallée de la *Beqā'* au Liban, les dynamiques rurales-urbaines exposées font que les coopératives sont non seulement des acteurs territoriaux typiques, mais aussi que leurs produits dépendent directement de la localité de leur espace, leur terroir se reflétant ainsi dans les types de produits qu'elles produisent. Il s'agit d'une caractéristique importante sur laquelle **s'organisent les caractéristiques sociales, économiques et de spécificité (et sans spécificité, c'est-à-dire générique et commune)**. A travers le *mūne*, les coopératives alimentaires se sont approprié ce bien culturel précieux et ont pu construire leur intégration économique. Afin de compléter le cycle de manière plus efficace, c'est à ce moment que le marketing et les ventes ont été étendus avec succès au marché urbain avec leurs liens urbains extraterritoriaux. Dans ce type de dynamique, il est important de se rappeler deux points. Le premier est que le *mūne* lui-même est un produit qui est historiquement produit dans des ménages situés dans des environnements ruraux éloignés et quelque peu déconnectés. Cela signifie que les ménages qui produisent encore le *mūne* aujourd'hui ont tendance à être également situés dans des villages ruraux où se trouvent normalement les coopératives elles-

mêmes. Le deuxième point important est de se rappeler qu'un nombre important de la population des espaces urbains est originaire des villages ruraux et a conservé un fort appétit pour les aliments traditionnels. Étant donné que les citadins ne conservent pas les aliments *mūne* autant que dans les villages ruraux, le retour des coopératives alimentaires dans l'espace urbain est donc logique et bénéfique étant donné la présence d'une demande plus élevée.

Cependant, une **intégration verticale affaiblie dans la chaîne de valeur** pourrait également décrire les coopératives alimentaires de la vallée de la *Beqā'*. Bien que des signaux montrent leurs tentatives de s'attaquer à la commercialisation en aval, les approvisionnements en amont restent dépendants des agriculteurs individuels plutôt que de s'occuper eux-mêmes de leur production ou de leur approvisionnement auprès d'autres coopératives agricoles. Pourtant, l'accès aux marchés reste généralement difficile pour les coopératives alimentaires de la vallée de la *Beqā'*. Bien que ces coopératives semblent exprimer leur désir d'établir des liens avec l'étranger et d'augmenter leurs exportations (Abou-Habib et al., 2013a), il s'avère que l'accès au marché dépend de plusieurs facteurs internes aux coopératives autant qu'externes. Cela signifie que le fait que les coopératives alimentaires produisent le précieux *mūne* n'est pas suffisant pour permettre une présence solide et durable sur le marché. Certains critères de base doivent en effet être respectés et appliqués par les coopératives de *mūne* par rapport aux exigences du marché. Il s'agit notamment de la conformité à la sécurité alimentaire, de l'existence de recettes de production stables qui maintiennent des qualités organoleptiques constantes (goût, couleur, etc.) et d'une communication transparente avec les consommateurs par le biais de l'étiquetage. En outre, les coopératives alimentaires ont besoin des moyens de base pour atteindre les marchés, tels que le transport et la logistique. À cet égard, seulement 11 des 40 coopératives alimentaires de la *Beqā'* possèdent des moyens de transport appropriés tels que des camionnettes réfrigérées ou non, ce qui limite un accès facilité aux consommateurs et aux détaillants. En outre, près de 75% des coopératives ne semblent pas disposer d'étiquettes appropriées. Elles ont obtenu un score inférieur à 5 sur 10 dans leur conformité aux exigences d'étiquetage, 35% d'entre elles ne possédant même pas d'étiquettes. Les principales non-conformités de ces coopératives incluent des modèles d'étiquettes écrits à la main et l'absence d'informations importantes telles que les ingrédients, les valeurs nutritionnelles, les dates de production/d'expiration et les informations de contact. Les coopératives qui ont obtenu des **scores plus élevés (plus avancées) étaient corrélées à des transactions urbaines importantes** et à des ventes à des intermédiaires tels que d'autres coopératives de commercialisation ou au soutien d'organisations non gouvernementales. Néanmoins, il convient de noter qu'une grande partie de ces intermédiaires au Liban collecte les produits finis de différentes coopératives et les expédie sur le marché en utilisant leur propre marque collective. En effet, 35% des coopératives ont déclaré vendre une partie de leur production sous le label privé d'autres intermédiaires. Les pourcentages varient entre un minimum de 10% de la production et un maximum de 70%. Des recherches supplémentaires sont nécessaires dans ce domaine pour décrire clairement les mécanismes, les liens avec le marché et les réseaux externes du travail coopératif au Liban, ainsi que la dynamique et la qualité de la production. Cette dernière joue un rôle majeur dans la création d'une qualité standard des produits qui, à son tour, pourrait affecter la confiance du marché, en particulier lorsque les coopératives alimentaires ont été signalées comme variant dans l'étendue de leur équipement et de leurs installations (ILO, 2018).

Les coopératives alimentaires de la vallée de la *Beqā'* ont manifestement **reçu une aide importante**, principalement de la part des ONG et, dans une moindre mesure, de l'État. 65 % des coopératives interrogées ont reconnu avoir reçu un soutien de la part des ONG, contre 28 % de la part de l'État, principalement sous forme d'équipements et de renforcement des capacités. Le même constat est fait pour les coopératives en général (ILO, 2018). D'une part, ces formes de soutien auraient aidé à améliorer la qualité de la production de certaines coopératives et leur capacité à répondre aux normes locales et d'exportation (.ibid). Ces affirmations ont également trouvé un écho dans les résultats de cette étude, sous une forme différente. Les résultats montrent en effet que les coopératives plus avancées que les autres ont tendance à recevoir des aides extérieures répétitives, à générer plus de chiffre d'affaires et à avoir un accès plus fort aux marchés urbains. Cette aide fréquente pourrait, d'un certain point de vue, être considérée comme la raison de la progression des structures de coopératives et du chiffre d'affaires généré par ces mêmes coopératives. D'un point de vue opposé, ces observations pourraient être considérées comme la raison pour laquelle l'aide plus fréquente est concentrée sur les performances plus avancées des coopératives alimentaires et, de la même manière, sur le chiffre d'affaires plus élevé et l'accès aux marchés. Cependant, ces résultats pourraient renforcer les déclarations décrivant un état de dépendance des coopératives au Liban (Esim & Omeira, 2009) qui menacerait leur principe d'autonomie et de stabilité. De telles préoccupations ont été récemment exprimées par McKinsey & Company dans leur rapport qui commente que les coopératives se concentrent grandement sur l'obtention de fonds ainsi que sur les ventes locales facilitées par l'État et le soutien des donateurs internationaux (McKinsey & Company, 2018). D'autres résultats pertinents ont montré que plus de la moitié des coopératives alimentaires de la vallée de la *Beqā'* reçoivent un soutien régulier sur une base annuelle, parmi lesquelles 26% reçoivent un tel soutien plus fréquemment, jusqu'à 3 à 5 fois par an. Ces coopératives ont enregistré des ventes urbaines élevées, en particulier dans les points de vente liés aux marques privées des intermédiaires. Cela soulève la question de savoir si ces projets de donateurs sont à mettre au crédit des coopératives pour faire le lien avec le marché et si des liens durables sont établis avec succès.

Bien que les coopératives alimentaires de la vallée de la *Beqā'* et du Liban ne soient pas très importantes par rapport aux industries privées et qu'elles soient considérées comme dépendantes des donateurs, leur **contribution possible au développement local reste viable**. En fait, le mouvement coopératif à l'échelle mondiale serait également confronté à la concurrence croissante des grandes industries alimentaires (Nilsson & Dijk, 1997). Inversement, ce même auteur note que les coopératives pourraient généralement bénéficier d'une sorte de "*pouvoir de marché*" en lien avec la "*satisfaction des préférences des consommateurs pour les aliments produits localement, et ici les coopératives sont le plus souvent fortes*", observations identiques à (Ponte, 2016). Ces observations s'inscrivent dans le contexte libanais d'autant plus que (Tueni et al., 2015) prouvent comment les citoyens libanais conservent une grande importance pour les aliments traditionnels, consommant en moyenne 2 plats traditionnels par jour. Les produits *mūne* étant bien intégrés dans la cuisine libanaise, on peut donc supposer que les populations rurales comme urbaines ont une grande affinité pour les aliments traditionnels en conserve. Les consommateurs ruraux et urbains sont concernés car le Liban a connu d'importantes migrations internes pendant et après ses années de conflit. Une grande partie de la population s'est concentrée dans la capitale

Beyrouth (Esim & Omeira, 2009), tandis que la population des villes plus petites et intermédiaires a plus que quadruplé entre 1980 et 2016 (Lerner et al., 2013; Thapa & Murayama, 2008). Malgré des recherches limitées sur le comportement des consommateurs, on peut donc soupçonner que cette migration a fait de Beyrouth et de sa banlieue, un vivier d'habitudes de consommation traditionnelles. Avec la petite superficie du Liban (10 452 km²), il est également probable que les citoyens conservent un lien avec leurs villages d'origine proches et deviennent ainsi une clientèle potentielle. Une opportunité supplémentaire se présente également avec l'importante diaspora libanaise qui est estimée à plus du double du nombre de résidents nationaux, même si l'exportation de produits alimentaires reste faible à moins de 4% de la valeur totale des exportations selon McKinsey & Company. Le rapport populaire positionne même les flux de la diaspora comme un moteur clé de l'économie. Comme il mentionne que 25 % de tous les dépôts bancaires proviennent de cet afflux, la diaspora devient encore plus importante que les secteurs productifs du pays eux-mêmes.

Aujourd'hui, avec l'évolution rapide du contexte libanais et la concomitance des crises économiques, sociales et sanitaires, les coopératives en général et les coopératives alimentaires en particulier ont le potentiel de combler différentes lacunes dans le pays. Il s'agit notamment de la pauvreté, du genre et de la sécurité alimentaire. C'est pourquoi un appel à augmenter la production locale et à revenir au stockage traditionnel des aliments du garde-manger peut même être remarqué dans les médias et les journaux. Les coopératives alimentaires peuvent donc entrer dans le cycle de développement en tant qu'acteurs territoriaux typiques opérant à l'intérieur des frontières municipales locales. Leurs principes appellent de manière pertinente à un bénéfice collectif des membres en partageant les risques et les ressources, en générant des revenus, en améliorant les moyens de subsistance et en maintenant une gouvernance démocratique. Étant donné qu'ils sont situés dans un environnement agricole distinct, une entrée appropriée pourrait consister à valoriser leurs pratiques artisanales dans la production d'aliments traditionnels *mūne* en utilisant des sources locales de produits frais. Cela pourrait avoir un effet bénéfique sur les chaînes de valeur en amont et en aval, étant donné les restrictions à l'importation résultant de la contraction économique et de la perturbation de l'approvisionnement alimentaire mondial de COVID-19. Lorsque l'on considère l'alimentation comme un vecteur de culture (Jones, 2017), le rôle supplémentaire des coopératives alimentaires en tant que protecteurs du patrimoine devient encore plus évident. Bien que la culture du *mūne* soit commune à tout le Liban et présente des similitudes avec les pays voisins du Levant, la vallée de la *Beqā'* semble présenter son propre ensemble de caractéristiques qui résonnent sur les produits agricoles et leurs produits finis transformés. "*Presque chaque résident est un agriculteur*" (Bou-Antoun, 2014) est une observation qui ajoute également à la vallée de la *Beqā'* un facteur social à son atmosphère agricole existante. Néanmoins, il reste impératif d'introduire un schéma de différenciation d'une telle ressource culturelle des analogues commerciaux ; une nécessité déjà exprimée par d'autres chercheurs comme Abou-Habib *et al.* (2013b). Cela pourrait être incarné par des normes nationales construites pour orchestrer les acteurs concernés à travers les chaînes de valeur afin de répondre à des normes spécifiques et de les communiquer aux consommateurs finaux par le biais de la certification et de la stratégie de marque. Cette approche de

différenciation peut encore jouer un rôle significatif dans la capitale urbaine où une grande partie des aliments *mūne* sont déjà commercialisés.

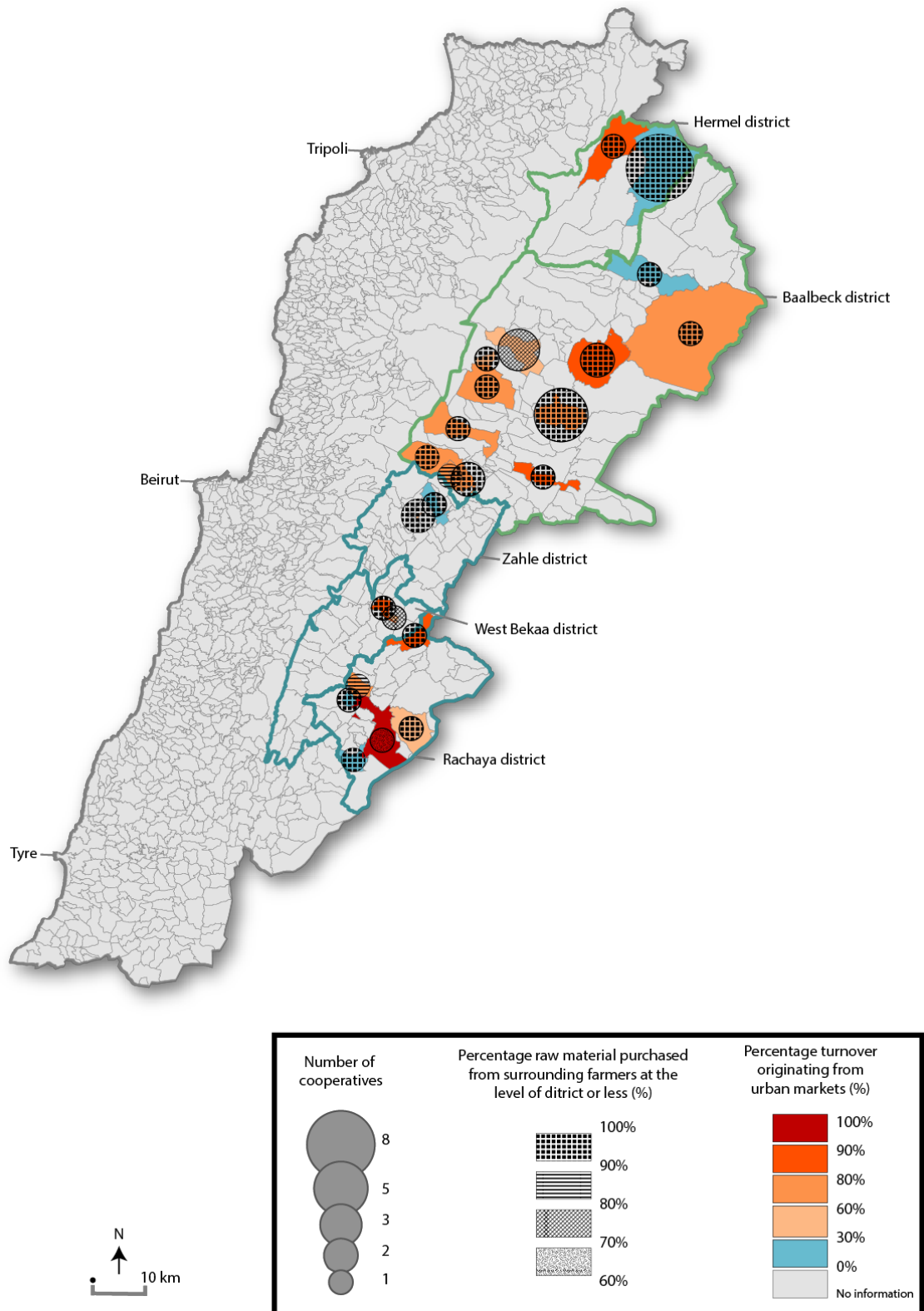


Figure 9: Distribution spatiale des coopératives alimentaires dans la vallée de la *Beqā'*, Liban, couplée avec le pourcentage de matière première provenant des agriculteurs environnants au niveau du district, et le pourcentage de chiffre d'affaires provenant du marché urbain de la capitale Beyrouth. Source : *Produit par l'auteur, Jalkh R., 2020, ART-DEV, UM3*

Partie 3 Le nexus *mūne* - coopératives de transformation alimentaire, un système socio-spatial vivant, ancré et en réseau

Le monde qui nous entoure aujourd'hui est densément connecté. Nous sommes tous liés d'une manière ou d'une autre. À l'ère de la technologie et de la mondialisation, notre monde s'est considérablement rétréci. L'internet, les médias sociaux, la communication et les transports nous ont rapprochés, ont facilité le commerce international et ont dominé les relations mondiales. Tous ces éléments sont basés sur des réseaux, et les réseaux nous entourent plus que nous ne l'imaginons. Toute paire d'entités connectées peut être considérée comme un réseau. Cela va, par exemple, des réseaux biologiques dans notre corps aux réseaux d'infrastructures dans les villes, en passant par les réseaux politiques dans les campagnes, les réseaux de transport, et ainsi de suite. Même le nouveau monde des cryptomonnaies peut être considéré comme un réseau mondial d'utilisateurs connectés numériquement. La méthode par laquelle nous analysons les connexions à travers un réseau est appelée analyse des réseaux sociaux (SNA). Cette méthode est devenue très populaire récemment et a été appliquée à de nombreuses disciplines. L'analyse d'un réseau permet de révéler des caractéristiques intéressantes liées à sa connectivité, au flux d'informations ou de ressources, et en particulier de découvrir des acteurs spécifiques qui jouent un rôle stratégique dans sa médiation. On parle alors de rôles de courtage qui contribuent à la connectivité d'un réseau et à la mise en relation de ses différents nœuds.

Dans cette section, nous allons analyser le réseau des coopératives de transformation alimentaire dans la vallée de la *Beqā'* à partir d'une approche de réseau social. Tout comme nous avons tous notre propre cercle de connaissances auquel nous sommes liés, les coopératives étudiées sont censées avoir le même. Elles sont situées sur le même territoire, elles sont soumises à des conditions socioculturelles comparables, elles appliquent les mêmes pratiques de transformation, elles ont des canaux de commercialisation similaires, et elles traitent avec les mêmes acteurs externes. On s'attend donc à ce que les coopératives soient liées entre elles, directement ou indirectement, socialement ou non socialement.

3.1. L'encadrement des réseaux sociaux et leurs moyens d'analyse

Si vous vous promenez en plein air, il y a de fortes chances que vous tombiez sur une colonie de fourmis à un moment donné. Il y a de fortes chances que vous ne soyez pas surpris par le fait que les fourmis marchent en formation presque parfaite, en ligne droite. Certaines se demanderont peut-être pourquoi, mais la majorité ne le fera pas. Les fourmis communiquent, interagissent et se comportent collectivement comme un groupe. Elles sont connectées, interconnectées, en réseau. Certes, l'explication biologique de ce comportement réside dans les phéromones, mais le fait est qu'un "réseau" n'est pas du tout un phénomène

nouveau. Toute entité reliée par un type de relation quelconque peut être examinée du point de vue du réseau. Les réseaux sont aussi vieux que le monde. Ils existent naturellement autour de nous ou sont construits par nous. Les anciens humains vivaient et chassaient en petits groupes coordonnés pour assurer leur survie. Les civilisations ont été construites et gouvernées dans le cadre de relations en réseau. Les routes commerciales de la soie reliaient l'Est à l'Ouest. Les villes sont accessibles grâce à des réseaux routiers complexes. Aujourd'hui, nous sommes pratiquement reliés au monde entier par une simple bouton. Les exemples sont infinis.

L'étude des réseaux sociaux a initialement émergé dans la discipline de la sociologie autour des années 1930 bien qu'il soit difficile de déterminer la date exacte de l'adoption explicite de la notion (Scott & Carrington, 2011). Ce qui différencie l'analyse des réseaux sociaux de celle des réseaux non sociaux, c'est que les entités étudiées de cette dernière sont de nature physique et que les relations qui les relient entre elles pourraient prendre la forme de lignes de transmission ou de livraison (Knoke & Yang, 2019). Dans le domaine social, les sociologues classiques ont débattu de la question de savoir si les structures sociales peuvent être réduites à leurs composantes minimales, les actions sociales d'acteurs distincts et leurs relations liées. Pourtant, ils ont convenu que les structures sociales présentent des propriétés distinctes et constituent la base de la discipline de la sociologie (Scott, 1988). Selon Zaidi *et al.* (2014), l'une des premières applications de l'analyse des réseaux sociaux a été réalisée par Jacob Moreno en 1934. Dans son étude, Moreno a évalué la structure interpersonnelle d'un groupe d'écoliers pour analyser les fugues. Il a ainsi découvert que c'était leur position sociale dans le réseau qui poussait les élèves à fuguer. L'analyse des réseaux sociaux a également été décrite par Knoke et Yang (2019) comme "d'une importance vitale pour la création de la sociologie économique, une spécialité majeure de la sociologie". Au milieu des années 1980, Granovetter (1985) a analysé comment les institutions économiques sont affectées par les relations sociales. Il a critiqué l'approche sous-socialisée des économistes par rapport à ce qui motive les décisions humaines, mais a également désapprouvé les opinions sur-socialisées des sociologues. Il a conclu que la compréhension sophistiquée des actions économiques devait tenir compte des structures sociales. C'est alors que l'analyse des réseaux sociaux est devenue un cadre logique pour mieux comprendre comment les décisions et les actions sont prises. Une application importante des réseaux sociaux a également été réalisée par Stanley Milgram à la fin des années 1960 dans le cadre de l'étude désormais populaire des "6 degrés de séparation" ou "problème du petit monde" (Milgram, 1967). Dans son expérience, Milgram a conclu que deux individus dans le monde sont en moyenne séparés par 5 connexions. Il est parvenu à cette conclusion en échantillonnant 160 personnes aux États-Unis et en leur demandant d'expédier un paquet à une personne spécifique à Boston et de le faire en utilisant uniquement leurs connexions personnelles. Sur l'échantillon initial, 64 paquets sont finalement arrivés à destination en une moyenne de 5,5 ou 6 étapes. Dans certains cas, il n'a fallu qu'une ou deux étapes et pas plus de 12. Ces résultats montrent que les gens disposent généralement de connexions adéquates pour accéder aux personnes concernées. Au début de son article, Milgram a judicieusement commencé par la ligne ci-dessous pour relier sa théorie à une expression courante que nous utilisons fréquemment.

[Traduit de l'anglais] "Nous avons presque tous fait l'expérience de rencontrer quelqu'un loin de chez nous, qui, à notre grande surprise, s'avère avoir une connaissance commune avec nous. Ce genre d'expérience se produit assez fréquemment pour que notre langue fournisse même un cliché à prononcer au moment opportun de reconnaître des connaissances mutuelles. Nous disons : "Le monde est petit".

(Milgram, 1967, p. 61)

Tous les concepts d'analyse des réseaux sociaux sont basés sur une branche des mathématiques appelée théorie des graphes (Scott & Carrington, 2011). En termes simples, la théorie des graphes est l'étude des points et des lignes entre eux. A l'origine se trouve un problème historique en forme de puzzle du 18ème siècle appelé les *Sept Ponts de Königsberg*. Dans ce problème, la question était de savoir s'il était possible de réaliser une promenade fermée le long de la ville de Königsberg en traversant chacun de ses sept ponts de la rivière Pregel une seule fois. Le problème a été résolu par le mathématicien Leonhard Euler (1741) qui a prouvé qu'aucune solution n'existait. Ses découvertes ont ensuite été traduites en anglais et publiées par Scientific American (Euler, 1953). Pour arriver à cette conclusion, Euler a basé son analyse sur le dessin d'un graphe non orienté avec quatre sommets représentant quatre zones géographiques et sept connexions entre ces sommets représentant les ponts. Euler a prouvé que pour que la solution soit possible, un graphe non orienté doit être connexe et chacun de ses sommets doit avoir un nombre pair de degrés (connexions) (Gribkovskaia et al., 2007). Ce n'était pas le cas à Königsberg et ses sept ponts ; la solution était donc impossible. On dit que les découvertes d'Euler dans les sept ponts de Königsberg ont jeté les bases de la théorie des graphes et des idées derrière la topologie, qui est une autre branche des mathématiques étudiant les propriétés conservées après la déformation des objets. Son article a été décrit comme ayant eu une importance considérable non seulement sur la théorie des graphes mais sur le développement des mathématiques dans leur ensemble (Biggs et al., 1986).

Dans sa forme la plus simple, un réseau social se compose de deux éléments principaux, des nœuds (également appelés sommets) et des liens (également appelés arêtes). Les nœuds représentent des entités d'intérêt (en tant qu'individus ou institutions) et les liens représentent les connexions entre eux. Une analyse des réseaux sociaux révèle donc une certaine forme de connexion entre les nœuds évalués. Une représentation simple de ces deux éléments se trouve sur la Figure 10. Pour être construit, un réseau peut être révélé par l'utilisateur ou simplement projeté à partir d'un préréglage. Par exemple, si un chercheur mène une étude sur un ensemble connu de nœuds comme une liste d'individus, alors ces nœuds représenteraient simplement chacun de ces individus identifiés à partir des entrées de cette liste. Néanmoins, un chercheur peut également découvrir et construire un réseau caché si ses nœuds ne sont pas connus. Cela pourrait être réalisé en demandant au premier membre interrogé au sein du réseau de citer d'autres membres qu'il connaît et de construire le réseau en conséquence à partir de ces types de références. Cela peut être décrit comme une méthode *boule de neige*. Ces considérations sont ce qui arrivent à former les frontières d'un réseau. Cependant, il est important de considérer que les réseaux établis avec des frontières rigides existent rarement. Même si les chercheurs doivent définir des limites dans leur analyse analytique des réseaux,

ils ne doivent pas traiter les réseaux comme absolus, et une adhésion dynamique évolutive est généralement le cas dans la réalité (Marin & Wellman, 2011).

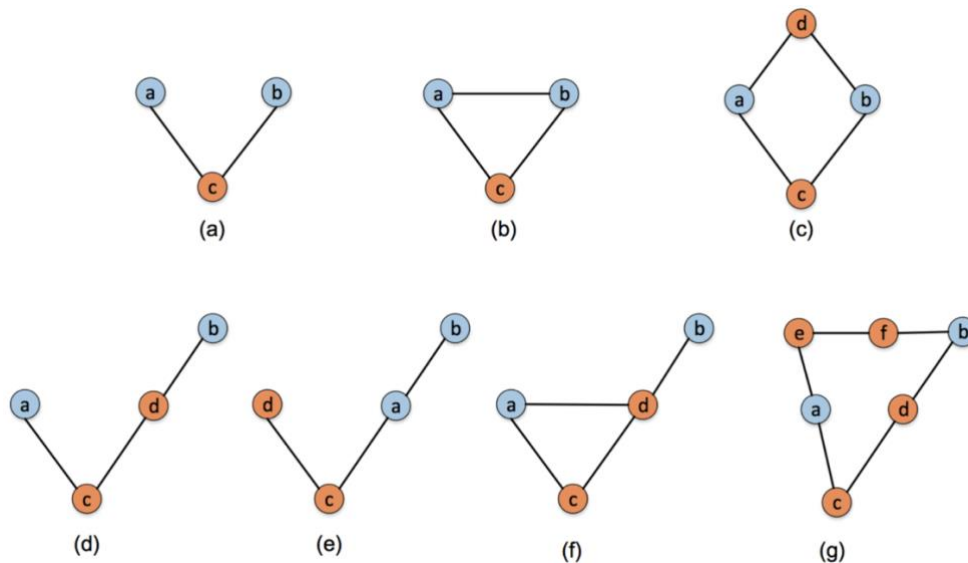


Figure 10: Représentations de réseaux simples constitués de trois à six nœuds et de leurs liens de connexion montrant différentes façons dont les nœuds a et b peuvent être connectés directement ou indirectement. Source de l'illustration : (Jiang et al., 2018)

Les réseaux peuvent être de nature homogène ou hétérogène. On parle de réseaux homogènes lorsque les nœuds sont du même type, par exemple un ensemble de bureaux commerciaux, ou comme dans notre cas un réseau de coopératives agroalimentaires dans la vallée de la *Beqā'*. Un réseau peut également être de nature hétérogène et comprendre différents types de nœuds, comme par exemple un réseau d'enseignants et de leurs élèves, ou un réseau interne des différents services et personnels d'une entreprise. Dans ce cas, le réseau serait qualifié de « *multimodal* ». Les différentes caractéristiques peuvent être reflétées sur ce que l'on appelle les « attributs » des nœuds. Ils peuvent être incorporés par exemple dans la forme ou la couleur des nœuds. Dans un cours en ligne offert par l'Université de Californie Davis sur l'analyse des réseaux sociaux auquel j'ai assisté (Hilbert, n.d.), l'instructeur a expliqué comment les attributs des nœuds pouvaient être des facteurs importants dans l'évaluation d'un réseau multimodal en se référant à l'idée de ' Homophilie ' où les gens ont tendance à se connecter, ou à se rassembler, avec d'autres qui leur ressemblent. Une cafétéria de lycée est un bon exemple qui démontre cette idée. Les étudiants ont tendance à se diviser en différents groupes auxquels ils s'associent et avec lesquels ils préfèrent s'asseoir au déjeuner. Ils pourraient se rapporter à un groupe spécifique éventuellement motivé par la race, la religion ou le sexe. Il se peut que ce soit simplement plus facile, avec moins de coûts transactionnels de communication, qu'ils aient des facteurs en commun ou qu'ils soient peut-être affectés par des pressions sociales. La parenté est une forme d'homophilie. Les familles prennent soin les unes des autres pour se protéger, se renforçant avec les membres directs de la famille et moins avec les membres élargis. Ce sont ces types de dynamiques qui contribuent probablement à placer un individu sur un certain chemin de réseau social.

Quant aux liens, ils pourraient également abriter plusieurs caractéristiques. Premièrement, les liens doivent représenter un type de relation qui relie les nœuds entre eux. Un réseau de conseil est un exemple où les liens représentent les nœuds qui préfèrent se contacter pour

obtenir des informations ou des conseils. Ce type spécifique de réseau a été utilisé par exemple pour évaluer l'efficacité organisationnelle et la gestion des connaissances dans les organisations (Cross et al., 2001). Celles-ci sont réalisées en demandant aux employés de nommer qui ils approcheraient pour obtenir des conseils liés au travail, qui pourraient ensuite être comparés à l'organigramme initial prévu. Les réseaux de conseil sont reconnus comme des canaux importants pour la circulation de l'information dans les organisations, ce qui rend les acteurs qui occupent une position centrale dans ce type de réseau très importants en termes de connaissances liées au travail (Cangialosi et al., 2021). Un réseau de confiance est un autre exemple où les liens indiquent la préférence des nœuds se connectant en fonction de leurs niveaux de confiance. Celles-ci, par exemple, pourraient se manifester dans les relations au sein des membres des organisations et, en fin de compte, affecter l'efficacité de leur gestion et des opérations qui en résultent. Imaginez avoir une autorité supérieure dans une organisation dont les subordonnés ont tendance à faire moins confiance que les autres membres. En ayant une confiance biaisée, leurs subordonnés dans ce cas pourraient avoir une tendance réduite à interagir avec leur supérieur. Ainsi, lors de la visualisation du réseau de confiance, cette autorité supérieure apparaîtrait à la périphérie alors qu'elle est en fait située à une position centrale et à une hiérarchie élevée dans l'organigramme. Ce type d'enquête pourrait donc révéler certaines incohérences dans les organisations qui pourraient être à la source d'inefficacités. Chow et Chan (2008) ont été parmi les premiers à fournir des preuves à ce sujet. Ils ont conclu que même si la confiance sociale n'avait pas d'effet direct sur le partage des connaissances dans les organisations, elle influençait en fait l'attitude et l'intention de partager les connaissances. Ils ont également montré que le fait d'avoir des objectifs communs est l'une des raisons qui contribuent à la volonté de partager les connaissances entre les membres d'une organisation.

Les liens peuvent également être symétriques ou asymétriques. Les liens symétriques indiquent une direction à sens unique d'un nœud à un autre et peuvent être renvoyés ou non par ce nœud voisin. Les réseaux ayant ces types de liens sont dits "*orientés*", alors que ceux avec des liens symétriques qui représentent simplement l'existence d'une relation sans sa direction spécifique sont dits "*non orientés*" (Figure 11). Supposons que l'on demande à un groupe d'élèves de citer leurs camarades de classe avec lesquels ils sont amis. Si un élève A indique qu'il est ami avec un élève B, la réciproque n'est pas nécessairement vraie. Cette direction serait rendue visible dans un réseau, contrairement à celle de la figure, en ajoutant des flèches à la fin des liens par exemple ou toute autre forme d'indication pour affecter la direction. De plus, tout comme différents types de nœuds peuvent être représentés dans le même réseau, différentes catégories de liens peuvent également être représentées simultanément. Ceci est démontré en revenant à la Figure 11 où l'on peut voir que les maillons ont l'une des deux épaisseurs différentes ; épais représentant les liens amicaux et mince représentant les liens ennemis. Par conséquent, différents attributs peuvent être intégrés de la même manière aux liens, tout comme les nœuds, afin de mieux visualiser les caractéristiques d'intérêts. Pour les liens, ils peuvent être reflétés par exemple dans l'épaisseur de la ligne, le nombre de lignes ou d'autres caractéristiques comme étant pleines ou pointillées ou colorées, et ainsi de suite.

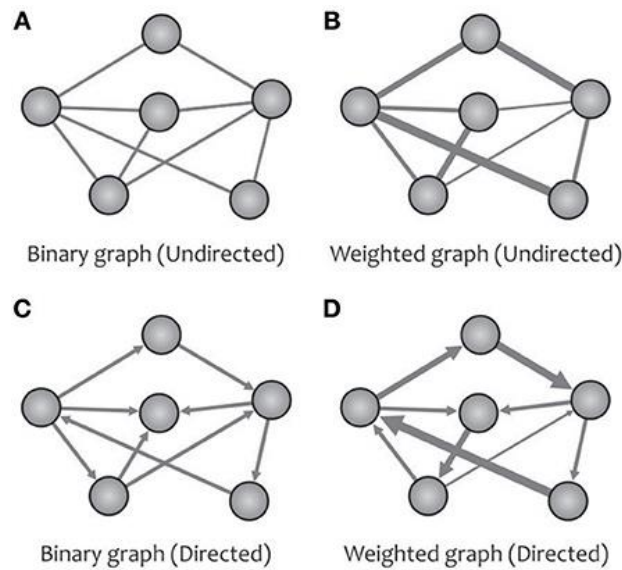


Figure 11: Différence visuelle entre (A) les réseaux non pondérés non dirigés, (B) pondérés non dirigés, (C) non pondérés dirigés et (D) dirigés pondérés. Source de l'illustration : (Farahani et al., 2019)

Aujourd'hui, les réseaux sociaux sont devenus beaucoup plus pertinents et précieux, en particulier avec l'intégration des plateformes de médias sociaux à l'échelle mondiale. L'étude des réseaux sociaux a beaucoup évolué, et de nombreux logiciels et outils ont maintenant été développés pour visualiser les réseaux et effectuer une analyse quantitative détaillée de ses caractéristiques. Gephi, Cytoscape et NodeXL ne sont que quelques exemples et de nombreux autres pourraient être publiés dans un avenir prévisible. La visualisation d'un réseau social fait en effet apparaître des informations précieuses qui ne seraient autrement pas comprises si elles étaient inspectées visuellement. Pourtant, il est extrêmement important de comprendre que les réseaux sociaux peuvent être visualisés de différentes manières et peuvent mettre en évidence des aspects variés, voire trompeurs, au premier plan. C'est pourquoi, il faut avant tout s'appuyer sur des métriques arithmétiques. Ces métriques mesurent les réseaux et fournissent une compréhension numérique construite sur un backend de réseaux. Celles-ci pourraient par exemple impliquer des mesures de taille, de densité, de diamètre, de centralité, de détection de communauté, et bien plus encore. De nombreux logiciels qui construisent les visualisations de réseau sont également capables d'effectuer ces types de calculs. L'une des informations les plus précieuses offertes par l'analyse des réseaux sociaux concernerait probablement l'identification des rôles de courtage. Ces rôles sont extrêmement importants pour la connectivité d'un réseau et les nœuds détenant ces types de rôles sont stratégiquement positionnés pour contrôler, faciliter ou entraver le flux d'informations des ressources au sein d'un réseau.

Dans le Sage Handbook of Social Network Analysis (Scott & Carrington, 2011), un réseau social est défini comme « *un ensemble de nœuds socialement pertinents connectés par une ou plusieurs relations. Les nœuds, ou membres du réseau, sont les unités qui sont reliées par les relations dont nous étudions les modèles. Ces unités sont le plus souvent des personnes ou des organisations, mais en principe toutes les unités qui peuvent être connectées à d'autres unités peuvent être étudiées comme des nœuds* ». Un réseau est généralement composé de

deux composants principaux, des nœuds qui représentent les acteurs et des arêtes qui représentent les relations entre ces acteurs. Une caractéristique principale des réseaux est de savoir si la direction de leurs relations est reflétée ou non, ils peuvent donc être décrits comme orientés ou non orientés.

- **Nœuds** : est un sommet représenté par un nœud ou un point. Les nœuds représentent des acteurs spécifiques, les coopératives de transformation alimentaire, dans cette étude. L'utilisation des mots « nœud » et « sommet » est interchangeable.
- **Arêtes** : sont des liens dessinés comme une ligne reliant deux nœuds, représentant une relation dans ce cas. L'utilisation des mots « bord » et « lien » est interchangeable.
- **Réseaux orientés** : sont des réseaux asymétriques et représentent le sens unidirectionnel d'une relation de l'Acteur A vers l'Acteur B (indiqué par une flèche), qui pourrait être réciproque. Ce type de réseau est utilisé dans le cadre de cette étude.
- **Réseaux non orientés** : ce sont des réseaux symétriques qui ne représentent aucune forme de direction dans la relation indiquée. Ce type de réseau n'est pas utilisé dans le cadre de cette étude mais n'est mentionné qu'à titre indicatif.

Se déplacer au sein d'un réseau

Deux nœuds peuvent être reliés indirectement. Il existe donc plusieurs chemins pour aller d'un nœud à un autre dans un réseau. Cela peut être considéré comme l'itinérance d'un réseau et cela peut être utilisé pour calculer des caractéristiques spécifiques telles que la connectivité d'un réseau et les distances entre les paires. Ces chiffres sont également des éléments importants d'analyses ultérieures telles que les mesures de centralité, définies dans la section suivante.

- **Marche** : représente le passage entre les nœuds par les arêtes.
- **Chemin** : est un type de marche spécifique qui ne passe que par différents nœuds.
- **Cycle** : c'est une promenade qui se termine là où elle a commencé.
- **Géodésique** : c'est le chemin le plus court entre deux nœuds.
- **Diamètre** : c'est la plus grande géodésique.
- **Longueur moyenne du trajet** : moyenne géodésique.

Mesures de réseau

Différents types de mesures peuvent être appliqués à un réseau et à ses composants. Celles-ci varient des mesures spécifiques aux nœuds et aux liens tels que le degré de centralité, et qui à leur tour peuvent être utilisées pour mesurer davantage la connectivité d'un réseau, comme avec les différentes autres valeurs de centralité telles que la proximité, l'intermédiarité et le vecteur propre qui sont définies ci-dessous. Ces mesures sont effectuées automatiquement par des logiciels et leurs algorithmes pour chaque nœud.

Mesures nodales

- **Degré** : est le nombre total de liens/arêtes de chaque nœud.
- **In-Degré** : est le nombre total de liens/bords entrants d'un nœud dans un réseau dirigé, représentant la citation d'un nœud par d'autres et pourrait donc être décrit comme la popularité d'un acteur. En-degré est représenté par une flèche entrant vers le nœud en question.

- **Out-Degré** : est le nombre de liens sortants d'un nœud dans un réseau orienté, représentant la citation qu'un nœud fait des autres et pourrait donc être décrit comme l'intégration d'un acteur dans un réseau. Le degré sortant est représenté par une flèche sortant du nœud en question.
- **Centralité de proximité** : se mesure par la somme de tous les chemins géodésiques qui relient un nœud à tous les autres du réseau. Cette mesure se rapporte à la distance sociale des acteurs et est donc liée à la proximité et aux degrés de séparation. Une centralité de proximité plus élevée traduit une meilleure capacité d'un acteur à jouer le rôle de « diffuseur » et à mieux diffuser l'information à l'ensemble du réseau.
- **Intermédiaire Centralité** : est mesuré par le nombre de fois qu'un nœud se trouve sur les chemins géodésiques reliant d'autres nœuds dans un réseau. Cette mesure fait apparaître des nœuds qui sont considérés comme des « passerelles » entre nœuds et reflètent donc l'importance d'un acteur dans la connectivité du réseau. Les nœuds avec une centralité d'intermédiation plus élevée ont des positions intermédiaires importantes et pourraient jouer divers rôles en tant que gardiens, courtiers, intermédiaires, etc., élaborés dans la section des rôles, qui pourraient contrôler le flux d'informations dans un réseau.
- **Eigenvector Centralité** : également appelée Eigencentrality est une mesure de centralité qui n'est pas seulement basée sur les liens d'un nœud, mais calcule également les liens de ses liens. La centralité du vecteur propre tient donc compte de la qualité de la connexion d'un nœud à des nœuds bien connectés en attribuant des scores relatifs à chaque nœud du réseau et en faisant augmenter ce score chaque fois qu'un nœud est lui-même connecté à des nœuds à score élevé. Cela reflète l'influence d'un nœud sur le réseau et pas seulement sur ses liens.
- **Coefficient de clustering** : est mesuré par le nombre de liens entre les nœuds adjacents au nœud spécifique en question (ses liens directs) par rapport au nombre maximum de liens possibles entre eux. Cette mesure de centralité se traduit, avec une densité croissante de liens, par un coefficient de clustering plus élevé et donc une probabilité plus élevée pour cet acteur de former une clique ou un cluster avec ses voisins (défini ci-dessous).

Mesures métriques du réseau

- **Réciprocité du Vertex Pair Ratio** : représente le rapport des sommets (nœuds) qui sont impliqués dans des liens qui sont « retournés », donc dans des relations bidirectionnelles qui sont réciproques.
- **Réciprocité du Lien Ratio** : représente le rapport des bords (liens) qui sont « retournés », donc bidirectionnels et réciproques.
- **Maximum Distance Géodésique (Diamètre)** : indique le plus court chemin maximal (distance géodésique) reliant deux nœuds, donc le diamètre du réseau.
- **Distance géodésique moyenne** : indique la distance géodésique moyenne reliant deux nœuds.
- **Densité** : c'est le rapport du nombre de liens existant dans un réseau par rapport au maximum de liens possibles, et reflète donc la densité globale d'un réseau. Cette

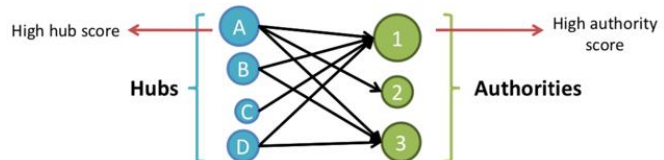
mesure est généralement utilisée pour comparer la densité de deux réseaux avec différents types de liaisons.

Communautés

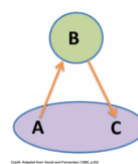
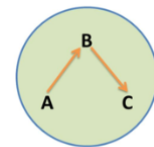
- **Cluster** : est une partition d'un réseau sous la forme de groupes séparés qui se caractérisent par des liens denses entre les nœuds au sein de chaque groupe (nombre le plus élevé possible) par rapport à la densité des liens avec d'autres groupes/clusters (nombre le plus bas possible). Cette division d'un réseau en clusters est contrôlée par l'indice de modularité qui est défini comme « *une propriété d'un réseau et une proposition de division spécifique de ce réseau en communautés. Il détermine si la division est bonne, et en déduit de nombreux bords au sein des communautés et seulement quelques-uns entre eux.* » (Clauset et al., 2004).
- **Clique** : est le nombre maximum de nœuds entre lesquels tous les liens possibles sont présents. Une clique représente le sous-groupe le plus fort qui pourrait exister puisque tous les nœuds sont connectés ensemble mais est une forme fragile d'une communauté qui se déstabiliserait si un seul lien était rompu.

Les rôles

- **Hubs et Autorités** : La popularité d'un acteur augmente chaque fois qu'il est cité par des acteurs qui citent eux-mêmes d'autres acteurs populaires. Plus ces tendances sont populaires, plus cet acteur, ou nœud, est une autorité. La pertinence d'une autorité dépend donc du in-degré. Inversement, un hub peut être compris comme un nœud qui cite ou pointe vers d'autres nœuds populaires. Plus un nœud cite d'autorités, plus ce nœud est un hub. Les hubs dépendent donc du out-degré. Les liens entre autorités et pôles « se renforcent mutuellement » : un acteur est une bonne autorité s'il est cité par plusieurs bons pôles, et un acteur est un bon pôle s'il cite plusieurs bonnes autorités.
- **Broker** : est un nœud qui connecte d'autres nœuds qui ne sont pas connectés autrement, et comble donc les lacunes d'un réseau. 5 rôles de courtage peuvent être identifiés, et représentés ci-dessous par le nœud B :

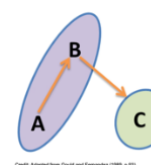
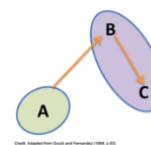
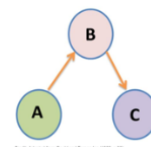


- **Coordinateur** : dans le cas où trois nœuds appartiennent au même groupe (ou cluster), un coordinateur relie deux nœuds qui ne sont autrement pas liés. Un coordinateur est donc un acteur important de la circulation de l'information à l'intérieur d'un groupe lorsque la communication au sein de son groupe est bloquée et nécessite l'intervention d'un tiers interne.
- **Médiateur itinérant** : relie deux nœuds trouvés dans le même groupe mais est lui-même membre d'un groupe différent des nœuds qu'il reliait. Un courtier itinérant joue donc un rôle important de mise en relation indirecte ou de médiation de la



communication entre des acteurs non connectés d'un même groupe via un tiers extérieur.

- **Intermédiaire ou Liaison** : relie deux nœuds se trouvant dans deux groupes différents et est lui-même membre d'un troisième groupe différent des nœuds qu'il reliait. Un agent de liaison est donc un intermédiaire qui a le pouvoir de relier deux autres groupes.
- **Gardien ou Gatekeeper** : relie un acteur extérieur d'un groupe différent à un acteur non connecté au sein de son propre groupe, connectant ainsi deux groupes et contrôlant le flux d'informations ou de ressources entrantes au sein de son propre groupe.
- **Représentant** : met en relation un acteur interne de son propre groupe avec un acteur externe non connecté hors de son propre groupe, connectant ainsi deux groupes et contrôlant le flux d'informations ou de ressources sortantes sortant de son propre groupe. Un représentant est similaire à un gatekeeper mais avec un sens de circulation différent et donc « représente » son groupe et pourrait négocier avec des groupes extérieurs.



3.2. Analyser le réseau et ses caractéristiques et acteurs clés

3.2.1. Visualiser le réseau de coopératives de transformation alimentaire sous forme de sociogrammes

La représentation graphique des réseaux sociaux sous forme de nœuds et de liens s'appelle un sociogramme. Le dessin de sociogrammes est une étape importante dans la visualisation des réseaux, l'analyse des configurations et l'étude des caractéristiques pertinentes. La méthode dans laquelle les sociogrammes sont dessinés doit donc fournir une disposition visuelle claire des nœuds, équilibrer le moins de chevauchement possible des bords et représenter les éléments d'intérêt.

NodeXL v.1.0.1.418 était le principal logiciel utilisé pour dessiner le sociogramme du réseau. Le logiciel intègre plusieurs schémas de visualisation pour le dessin de sociogrammes. Les deux mises en page les plus populaires généralement utilisées suivent un algorithme « dirigé par la force » et sont appelées la mise en page Fruchterman-Reingold et la mise en page Harel-Koren Fast Multiscale. Le type d'algorithme dirigé par la force se concentre généralement sur le placement de nœuds fortement connectés à proximité les uns des autres et les nœuds moins connectés plus loin, guidés par les « forces » de leurs connexions (Hansen et al., 2010). Le Fruchterman-Reingold est la disposition par défaut utilisée par NodeXL qui "traite les arêtes comme des ressorts qui rapprochent ou éloignent les sommets les uns des autres dans le but de trouver un équilibre qui minimise "l'énergie" du système" (Semperebon et al., 2018, p. 8). La configuration Harel-Koren Fast Multiscale, quant à elle, privilégie la configuration autour de clusters qualifiés de « groupements naturels ». Cette mise en page est généralement recommandée pour mettre en évidence les individus clés d'un réseau (Hansen et al., 2010). D'autres dispositions géométriques sont également

disponibles dans NodeXL, notamment le cercle, la spirale, l'onde sinusoïdale horizontale et verticale, la grille, la polaire, l'absolu polaire, le Sugiyama (nivelé) et l'aléatoire. Dans l'une des dispositions sélectionnées, il peut être nécessaire d'exécuter l'algorithme plusieurs fois avant de s'installer sur une disposition appropriée en fonction de ce que l'utilisateur désire et considère comme une position stable. De plus, les nœuds peuvent être déplacés manuellement pour éviter les occlusions, et d'autres modifications visuelles peuvent être incorporées dans le réseau sous la forme, par exemple, de couleurs, de formes, de tailles, d'opacité et autres de nœuds et de bords. C'est finalement la vision subjective de l'utilisateur qui détermine quelle configuration et quelles caractéristiques visuelles sont souhaitées pour l'affichage.

Afin de réaliser une analyse globale en parallèle avec des observations triangulées, il a été préféré de commencer par visualiser l'ensemble du réseau de manière holistique. C'est pourquoi le premier sociogramme présenté combine les différentes variables et résultats réalisés. Après cela, les principales observations notées dans ce sociogramme global seraient étayées par différentes variations qui mettront en évidence des informations spécifiques. Pourtant, la combinaison des différentes variables dans un sociogramme signifiait utiliser différentes formes de représentation. Cette section présente donc les différentes approches utilisées pour représenter chaque variable sur le sociogramme global. En commençant par les **nœuds**, chacun représente une coopérative et est visualisé sous la forme d'une sphère, pour les coopératives interrogées dans la composante de catégorisation, ou d'un cercle pour les coopératives non interrogées dont la ligne de travail s'est avérée non liée à la transformation des aliments ou production *mūne*. La taille des nœuds est proportionnelle au degré d'entrée et reflète donc la popularité. Ainsi, plus le nœud est grand, plus ce nœud est souvent cité par d'autres coopératives. La couleur des nœuds représente l'une des cinq classes selon le **profil Relationnel**, auquel appartient chaque coopérative. Les nœuds peuvent donc avoir l'une des cinq couleurs suivantes, 1) Classe 1 (Acteur le plus intermédiaire et intégrateur) en Rouge, Classe 2 (Acteurs importants avec de nombreux contacts) en Orange, Classe 3 (Acteurs populaires liés à des acteurs importants) en Jaune, Classe 4 (tendances Clique, acteurs moins centraux) en bleu clair et classe 5 (acteurs isolés) en bleu foncé. Ensuite, l'étiquette de chaque nœud désigne d'abord le code d'identification de chaque coopérative. Ces codes ont été construits sur la base de la localisation géographique sous la forme de [Gouvernorat] [District *caza*] [ordre numérique]. Les codes de gouvernorat incluent soit BH pour Baalbeck-Hermel ou B pour *Beqā'*, tandis que les codes de *caza* de district incluent l'une des cinq options suivantes ; B pour Baalbeck, H pour Hermel, Z pour Zahlé, R pour Rachaya ou WB pour West *Beqā'*. BHH1 signifie par exemple que cette coopérative spécifique est la première de la liste du gouvernorat de Baalbeck-Hermel (BH) et est située dans le *caza* de Hermel (H). Une autre caractéristique de l'étiquette est la police et la couleur qui indiquent **la classe de rôles** à laquelle appartient chaque nœud. Les libellés des nœuds peuvent donc avoir l'une des 6 couleurs de police suivantes, 1) Classe 1 (Brokers généraux) en Rouge, Classe 2 (Brokers itinérants généraux et gardiens) en Rose foncé, Classe 3 (Coordinateurs et/ou représentants distincts) en Orange, La classe 4 (gardiens distincts) en jaune, la classe 5 (liaisons distinctes) en vert et les autres en gris n'ont aucun rôle de courtage. De plus, certaines coopératives sont dotées d'un anneau qui entoure leurs nœuds. Cette fonctionnalité représente les nœuds qui sont des **hubs et/ou des autorités**. Ces anneaux peuvent avoir l'une des trois couleurs

suivantes, Hubs et autorités en rouge, Hubs uniquement en orange et Autorités uniquement en jaune.

Les **clusters** sont délimités par des frontières qui regroupent les nœuds d'appartenance. Ces bordures sont colorées en violet pour le cluster 1, en orange pour le cluster 2 et en vert pour le cluster 3. Étant un réseau orienté, les **bords** sont représentés par des flèches dans la direction du lien entre deux nœuds connectés. Les bords unilatéraux ont une flèche pointant vers le nœud destinataire et ont une ligne pointillée, tandis que les bords bilatéraux ont des flèches aux deux extrémités indiquant les liens retournés et ont une ligne continue. La couleur des bords varie selon que les liens sont internes aux clusters (colorés en Noir) ou externes entre clusters (colorés en Gris clair). La largeur des arêtes est proportionnelle à l'intensité de la relation qui a été déterminée par la somme des cinq poids du questionnaire d'interrelations. Enfin, les **niveaux de base** sont représentés par des zones de couleur translucide en arrière-plan du sociogramme. La zone en rouge représente le niveau de base 4 suivi du niveau de base 3 dans la zone orange, le niveau de base 2 dans la zone jaune et le reste du niveau de base 1 dans la zone blanche. La zone rouge (niveau central 4) a les liens les plus concentrés dans lesquels chacune des 21 coopératives appartenant à cette zone est directement connectée à un minimum de 19 autres. La zone orange (niveau central 3) comprend celles de la zone rouge (21) avec 9 coopératives supplémentaires, ce qui signifie qu'un total de 30 coopératives sont directement connectées à 14 à 16 autres dans cette zone. Il en va de même pour les niveaux de base restants. Les caractéristiques ci-dessus sont consolidées dans le sociogramme global représenté à la Figure 12. Il est à noter que toutes les valeurs trouvées entre parenthèses dans les légendes indiquent le nombre de coopératives ou de liens qui appartiennent à l'entité correspondante.

Lors de la première observation du réseau consolidé, l'une des premières remarques principales que l'on peut faire concerne **la densité apparente et la concentration des liens** entre les nœuds sur l'ensemble du réseau. Il existe un nombre important de liens (537) par rapport au nombre de nœuds (47). La densité des liens est visuellement claire, comme le montre le grand nombre de liens qui relient les nœuds appartenant à un même cluster et ceux qui sont en arrière-plan et relient les clusters entre eux. Cette densité est déjà calculée à 0,248 (liens existants sur le maximum de liens possibles), ce qui indique que presque un quart de tous les liens qui pourraient exister sont déjà formés dans le réseau. Des preuves supplémentaires de la forte concentration de liens ont déjà été mises en évidence dans les métriques globales et les niveaux centraux du réseau. En outre, le réseau dans la vallée de la *Beqā'* est si dense que les relations s'étendent au-delà des coopératives de transformation alimentaire et atteignent d'autres types de coopératives qui s'engagent dans d'autres activités que la conservation des aliments *mūne*, comme les fermes laitières. Ces coopératives sont normalement situées à la périphérie du sociogramme, mais elles restent néanmoins très usuelles et familières avec les coopératives de transformation alimentaire. Ceci montre comment les relations dans la production alimentaire à travers la vallée de la *Beqā'*, au moins dans le secteur coopératif, sont très bien dispersées le long des acteurs de la vallée. Par ailleurs, la configuration du réseau selon la disposition multi-échelle rapide de Harel-Koren qui a été adoptée met en évidence les **acteurs importants à un emplacement central pertinent**. À l'inverse, on constate que les acteurs moins centraux et isolés sont situés à la

périphérie du réseau. Les nœuds qui appartiennent aux classes les plus performantes dans le profil relationnel et les rôles de courtage, plus précisément les classes 1 et 2 de chaque catégorie, sont situés dans le niveau central le plus concentré, relativement au cœur du réseau.

Beaucoup de ces nœuds ont également enregistré des valeurs supérieures pour le degré d'intégration, sont donc considérés comme populaires et sont en outre des nœuds et/ou des autorités. Ces coopératives jouent des rôles stratégiques et clés dans la médiation des nœuds internes à leurs clusters ou dans la mise en relation de différents acteurs du même cluster ou de clusters différents. Ces coopératives ont également un certain niveau de contrôle sur le flux d'informations entrant ou sortant et ont la possibilité de négocier et de représenter leur cluster. Il est intéressant de noter que ces nœuds clés sont placés par l'algorithme à l'entrée de leurs clusters correspondants, là où leur rôle se manifeste le mieux. On peut citer comme exemple les coopératives BHB5, BHB12, BHB22 et BZ2 qui sont des gardiens importants. Ces acteurs jouent spécifiquement un rôle à l'entrée de leurs clusters respectifs en faisant en sorte que toute entité externe souhaitant entrer dans le cluster doive passer par eux pour établir des liens avec d'autres coopératives au sein de leur cluster. Pourtant, certains paradoxes existent. La coopérative BHB22 a enregistré certaines des valeurs les plus basses pour le in-degré ($n=8$) bien qu'elle soit classée uniquement comme l'acteur le plus intermédiaire et le plus intégré du réseau. Cela montre que des facteurs autres que la popularité (in-degré) d'un acteur ont un impact sur sa considération comme important et donc son placement dans le réseau. La disparité entre les in-degrés et les out-degrés de cet acteur spécifique se reflète également dans son attribution en tant que hub uniquement plutôt qu'à la fois hub et autorité. Un autre exemple serait la coopérative BHB13. L'algorithme de dessin du graphe a trouvé que le placement le plus stable de cette coopérative était au centre, bien qu'elle n'ait pas de profil relationnel important ni de rôle de courtage. En fait, cette coopérative a obtenu des valeurs moyennes pour la majorité de ses centralités et de ses degrés d'entrée et de sortie (13 et 8 respectivement). Cette coopérative est également considérée comme ayant un rôle majeur de liaison distinct, ce qui signifie qu'elle a tendance à jouer ce rôle elle-même, individuellement, plutôt que d'avoir un impact à la grande échelle du réseau. Il est intéressant de noter que c'est la seule coopérative ayant ce rôle spécifique de courtage (classe 5- liaisons distinctes) à appartenir à la classe 3 du profil relationnel (classe 3- acteurs populaires liens avec des nœuds importants) et à être située dans le cluster 2. Le reste des 5 liaisons distinctes appartiennent toutes à la classe 4 du profil relationnel (classe 4- tendances cliques, acteurs moins centraux), et sont situées dans le cluster 3. En dehors de cela, la coop BHB14 appartient à la classe 3 du profil relationnel, relativement moyenne (acteurs populaires liés à des nœuds importants), tout en étant à la fois un hub et une autorité. Cette observation permet de démontrer visuellement qu'un même acteur peut avoir un profil relationnel et des rôles de courtage un peu moins centraux tout en étant un hub et une autorité. L'inspection visuelle du réseau permet donc d'identifier de telles réflexions transversales, même si la théorie conceptuelle distingue clairement les différentes variables.

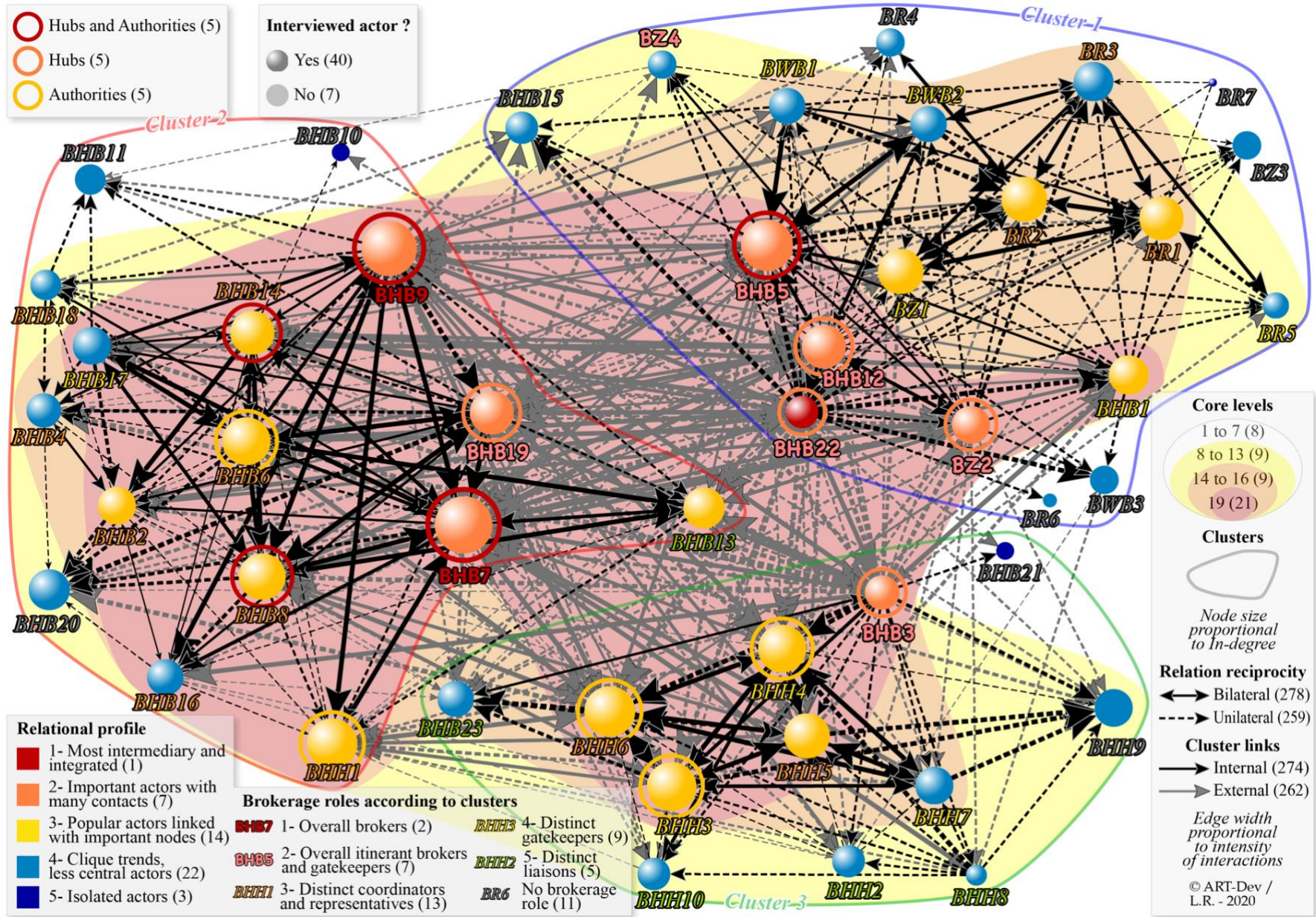


Figure 12: Représentation globale du réseau des coopératives de transformation alimentaire (*mūne*) dans la vallée de la *Beqā'*, y compris les caractéristiques de traitement des données consolidées comme les profils relationnels, les rôles de courtage, les niveaux de base, les clusters, les hubs et les autorités. Source : Réalisé en collaboration avec Razafimahefa L., Jalkh R., 2020, ART-Dev, UM3.

D'autres observations au niveau des clusters montrent que le cluster 2 accueille les deux coopératives ayant les rôles de courtage les plus importants qui ont un impact sur la connectivité de l'ensemble du réseau (classe 1- courtiers généraux). Ce cluster comprend également 4 des 5 coopératives qui sont simultanément des hubs et des autorités. Le cluster 1 accueille cependant l'acteur le plus intermédiaire et le plus intégré dans le profil relationnel (BHB22) et le seul hub et autorité simultanés restants. En ce sens, il apparaît que le cluster 1 est celui qui est cité, le cluster 3 est celui qui cite, et le cluster 2 est celui qui fait les deux en même temps. Cinq des sept coopératives ayant le deuxième rôle de courtage le plus important (classe 2 - courtiers itinérants et gardiens) se trouvent dans le cluster 1, tandis que les deux autres sont distribuées, une dans le cluster 2 et une dans le cluster 3. Comme pour la classe 1, ces coopératives sont capables d'avoir un impact sur le réseau lui-même. Le cluster 3 ne compte donc qu'une seule coopérative influente (BHB3) qui joue un rôle dans le réseau global. Cette même coopérative appartient également au deuxième profil relationnel le plus important (classe 2). Toutes les autres coopératives de ce cluster ont des tendances de rôle individuel secondaire (dites distinctes) et appartiennent soit à la classe 3 moyenne, soit aux classes 4 et 5 moins centrales du profil relationnel. Ce cluster abrite en fait 4 des 5 liaisons distinctes de l'ensemble du réseau. Ce dernier point pourrait être considéré comme une spécialisation relative dans les tendances de rôle individuel de ses coopératives, bien qu'elles n'aient aucune influence sur le réseau plus large. BHB3 est également le seul hub à exister dans le cluster 3 alors que 3 autres autorités existent. Ces observations commencent à souligner **certaines différences qui distinguent le cluster 3 des autres** clusters 1 et 2. Le cluster 3 est le plus petit groupe dans la détection de la communauté, montrant le plus petit nombre de liens inter-clusters, et présente le plus petit taux d'échange dans les liens intra-clusters. Avec les réflexions ci-dessus, il semble que le cluster 3 tend à être moins connecté et ses acteurs moins influents que les deux autres clusters. À ce stade, il serait intéressant d'examiner si les caractéristiques du réseau analysé ci-dessus peuvent être liées à une logique géographique. Cette étape est réalisée dans la section suivante en utilisant une autre version du sociogramme.

3.2.2. Tendances géographiques et spatiales dans l'analyse des réseaux sociaux

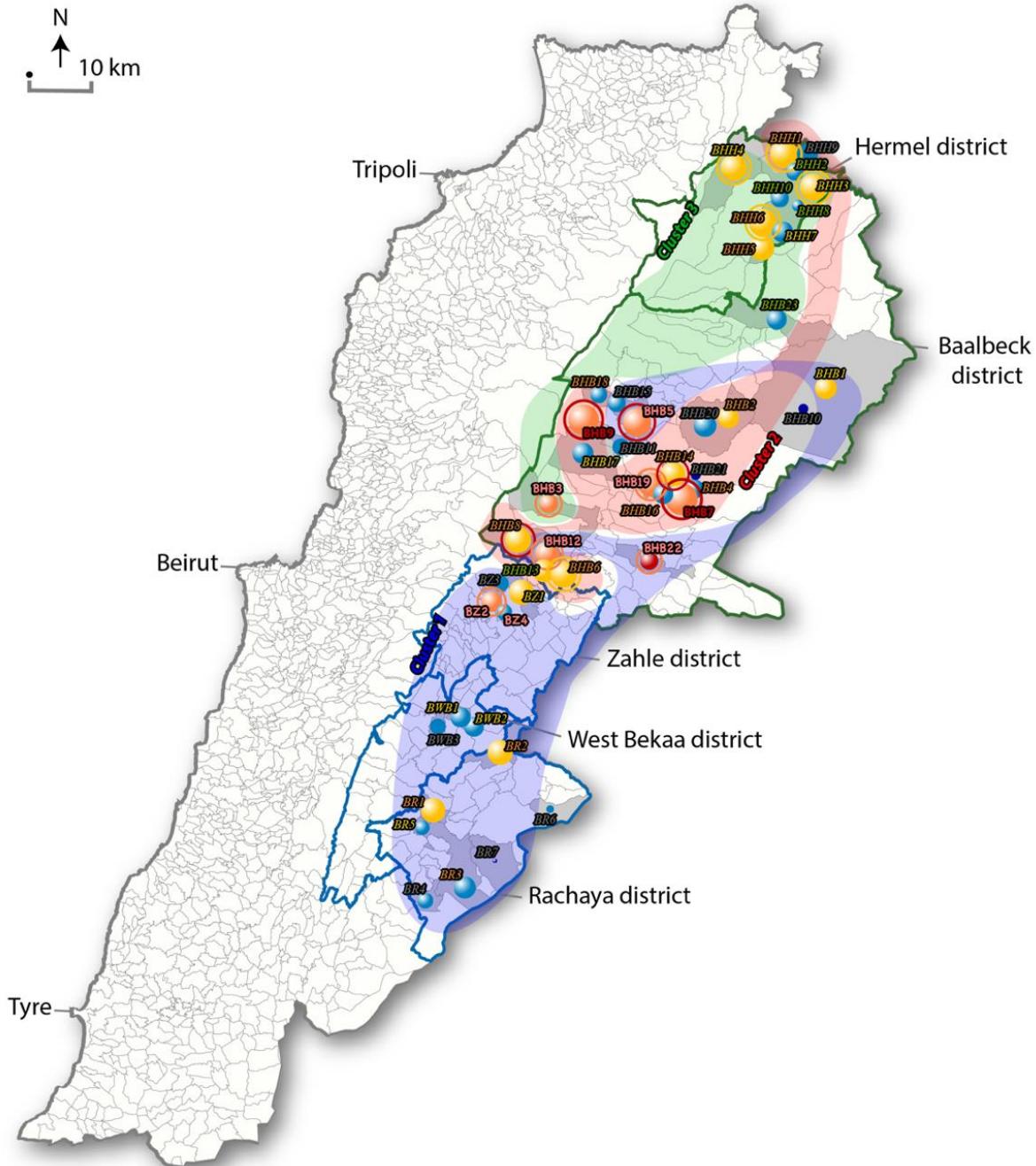
Puisque certaines caractéristiques commencent à émerger dès la première lecture du sociogramme consolidé, alors une nouvelle représentation est mobilisée dans cette section pour tenter et rechercher si elles peuvent être liées à un raisonnement territorial et spatial. Ainsi, la Figure 13 a été développée pour représenter la distribution du réseau par district caza où se trouve chaque coopérative. Ceci a été réalisé en intégrant des zones de fond de couleur différente qui délimitent les nœuds appartenant à un même caza. Il est à noter que les coopératives non interviewées n'ont pas été incluses dans le zonage afin de restreindre l'analyse spatiale aux seules coopératives pertinentes travaillant dans la production de *mūne*. Le premier regard sur cette version du sociogramme révèle effectivement une **disposition spatiale apparente**. Des clusters peuvent être vus pour la plupart divisés par base géographique. Tout d'abord, le cluster 1 semble regrouper tous les nœuds du gouvernorat de *Beqā'* (incluant les caza de Zahle, *Beqā'* Ouest et Rachaya) ainsi que quelques autres acteurs du caza de Baalbeck. Le cluster 2 est presque entièrement composé de coopératives du caza

de Baalbeck, à l'exception d'un nœud de Hermel (BHH1). De même, le cluster 3 semble être formé de coopératives du caza de Hermel mais aussi à l'exception d'un nœud de Baalbeck (BHB3).

Cette composition révèle également certaines dynamiques relationnelles. En partant des liens intra-clusters, il est maintenant clair que le caza de Hermel représenté dans le cluster 3 est le moins connecté avec le caza de *Beqā'* représenté dans le cluster 1. En fait, ces deux caza sont géographiquement les plus éloignés l'un de l'autre en termes de distance, le caza de Baalbeck étant situé entre les deux. En effet, le caza de Baalbeck représenté par le cluster 2 a démontré des connexions plus fortes avec les deux autres zones (en termes de proximité géographique, Baalbeck est en fait situé entre la section la plus au nord de la *Beqā'* et les sections centrale et sud). D'autres observations pertinentes incluent la Coop BHB3 par exemple qui est l'une des deux coopératives de Baalbeck à appartenir au cluster 3. Ce cluster comprend les nœuds de Hermel mais la coopérative BHB3 détient les caractéristiques les plus stratégiques de tout le cluster, sachant que son homologue de Baalbeck, la coopérative BHB23, n'en a pas. La coopérative BHB3 est considérée comme un acteur important avec de nombreux contacts, appartient à la classe 2 du profil relationnel, et est un courtier itinérant et un gatekeeper (rôles de courtage de classe 2) globalement important. Ce nœud externe est donc la seule coopérative du cluster 3 à avoir un rôle influent capable d'avoir un impact sur le réseau et démontre également une connexion et une intégration plus fortes que ses autres nœuds. En tant que gatekeeper important, cette coopérative se trouve donc à l'entrée de ce cluster bien qu'elle appartienne à une échelle géographique différente. En tant que courtier itinérant, cette coopérative relie également les nœuds à l'intérieur des clusters 1 et/ou 2 tout en se trouvant elle-même dans le troisième cluster différent. Un autre exemple serait la coopérative BHH1 qui est le seul nœud outsider originaire de Hermel à appartenir au cluster 2 qui est par ailleurs entièrement composé de nœuds de Baalbeck. Contrairement au premier exemple, cette coopérative ne semble pas jouer le plus grand des rôles stratégiques dans ce cluster. Cette coopérative appartient à la classe moyenne 3 du profil relationnel (acteurs populaires liés à des nœuds importants) et ne joue qu'un rôle distinct à son échelle individuelle (coordinateur et représentant distinct). Pourtant, elle est catégorisée comme une autorité qui est donc citée par des nœuds importants du réseau. De plus, le cluster 1, associé au gouvernorat de *Beqā'*, a ses positions stratégiques principalement dédiées à des nœuds situés dans une autre région, plus précisément à Baalbeck. Trois coopératives sont impliquées dans ce sens. Il s'agit des coopératives BHB22, BHB12 et BHB5. La coopérative BHB22 est considérée comme l'un des nœuds les plus centraux et les plus importants du réseau, elle est en fait originaire de Baalbeck et appartient au cluster numéro 3. Avec les coopératives BHB12 et BHB5, elles constituent 3 des 4 nœuds qui ont des profils relationnels de haut rang et sont donc considérés comme importants, centraux et connectés. La seule coopérative appartenant au gouvernorat de la *Beqā'* qui joue un tel rôle dans le cluster 1 est la coopérative BZ2 qui appartient à la classe 2 du profil relationnel. En dehors de cela, seules les coopératives BZ2 et BZ4 du gouvernorat de la *Beqā'* ont des rôles globaux capables d'avoir un impact sur l'ensemble du réseau (rôles de courtage de classe 2). Il est intéressant de noter que la coopérative BZ4 est caractérisée comme un acteur beaucoup moins central (profil relationnel de classe 4), bien qu'elle joue des rôles de courtage aussi importants. Les trois autres rôles de courtage importants dans ce cluster sont tenus par les coopératives de

Baalbeck mentionnées ci-dessus (BHB22, BHB12, BHB5). Ces coopératives qui sont physiquement situées dans la partie supérieure nord de la vallée de la *Beqā'* mais qui se tiennent activement à l'entrée du cluster pour le centre et le sud de la *Beqā'* dont les acteurs ont tendance à être moins centraux dans le réseau. Ils " gardent la porte " vis-à-vis des étrangers et ont la capacité de contrôler le flux d'informations ou de ressources entrantes. Ces observations commencent à montrer comment les **corridors stratégiques de coopératives d'excellence** existent dans la vallée de la *Beqā'*. Bien qu'elles se trouvent dans un espace géographique différent, ces coopératives sont toujours capables de jouer des rôles clés de courtage qui semblent vitaux pour la connectivité des autres espaces du territoire. Cette version du sociogramme délimite la vallée de la *Beqā'* et ses cinq *caza* de district et indique les clusters dans des zones de fond de couleur translucide.

Cette vision spatiale globale du réseau indique également l'existence de différentes **performances territoriales**. Le sociogramme montre d'abord que la majorité des autorités, 4 sur 5, sont originaires du *caza* de Hermel. En dehors de cela, les acteurs majeurs du *caza* de Hermel semblent avoir des profils relationnels moyens, caractérisés comme populaires et liés à des nœuds importants. Bien que ces acteurs soient populaires, ils restent un peu moins centraux que les acteurs excellents des classes 1 et 2 du profil relationnel. Le *caza* de Hermel peut donc être compris comme l'espace **qui tend à être cité** par les autres hubs du réseau. A l'inverse, le *caza* de Zahle, dans le gouvernorat de la *Beqā'*, **apparaît comme marginal**. Comme mentionné précédemment, il ne compte aucune autorité et ne comprend qu'un seul hub (BZ2), qui cite les autres autorités du réseau et qui, par coïncidence, est la seule coopérative centrale du réseau (classe 2 du profil relationnel). La plus grande division administrative, le *caza* de Baalbeck, regroupe le plus grand nombre de ces nœuds pertinents. Elle détient les 5 nœuds qui ont la double fonction supérieure de plaques tournantes et d'autorités simultanément ainsi que 4 des 5 plaques tournantes uniques. Le *caza* de Baalbeck est donc l'espace le plus efficace et le plus familier pour les acteurs du réseau. Ce sous-territoire démontre une capacité à citer (attirer l'attention sur) et être cité par (être l'attention de) d'autres hubs et autorités en même temps, dans son propre espace et dans d'autres autour du territoire. En outre, le *caza* de Baalbeck comprend clairement la majorité des coopératives les plus performantes. 6 des 7 coopératives centrales catégorisées comme acteurs importants avec de nombreux contacts (classe 2 du profil relationnel) ainsi que 7 des 9 coopératives qui ont une capacité "globale" à impacter la connectivité de l'ensemble du réseau (classes 1 et 2 des rôles de courtage) sont situées dans le *caza* de Baalbeck.



Relational profile

- 1- Most intermediary and integrated (1)
- 2- Important actors with many contacts (7)
- 3- Popular actors linked with important nodes (14)
- 4- Clique trends, less central actors (22)
- 5- Isolated actors (3)

Brokerage roles according to clusters

- BHB7** 1- Overall brokers (2)
- BHB5** 2- Overall itinerant brokers and gatekeepers (7)
- BHH1** 3- Distinct coordinators and representatives (13)
- BHH3** 4- Distinct gatekeepers (9)
- BHH2** 5- Distinct liaisons (5)
- BR6** No brokerage role (11)

- Hubs and Authorities (5)
- Hubs (5)
- Authorities (5)

Figure 13: Représentation globale du réseau de coopératives de transformation alimentaire (*mūne*) dans la vallée de la *Beqā'* réparti sur la carte nationale selon la distribution spatiale au niveau du *caza* de district avec les frontières vertes appartenant au gouvernorat de Baalbeck-Hermel, les frontières bleues au gouvernorat de la *Beqā'* et les zones colorées de fond affiliées aux clusters correspondants. Source : Produit par l'auteur, *Jalkh R., 2021, LAGAM, UM3.*

Ces résultats valident clairement que le caza de **Baalbeck est l'espace supérieur** qui peut à lui seul être considéré comme le cœur du réseau en termes de nombre et de performance de ses coopératives. Les caractéristiques des coopératives de la caza de Baalbeck démontrent leur capacité élevée à contrôler la connectivité du réseau à ses différents niveaux spatiaux, la reconnaissance et la perception de ses acteurs principaux, et leur fort positionnement central avec des profils relationnels importants. Cette performance est probablement renforcée par la position centrale de Baalbeck dans la vallée située entre le nord du caza de Hermel et le gouvernorat de *Beqā'* du centre-sud. L'imprégnation des coopératives de Baalbeck dans les deux autres clusters témoigne de cette observation et de la force de ses relations avec ses voisins. Pourtant, toutes les observations notées dans l'analyse des réseaux sociaux devraient finalement considérer que la majorité des coopératives de la vallée de la *Beqā'* sont situées dans le gouvernorat de Baalbeck-Hermel (n=33) et spécifiquement dans le caza de Baalbeck (n=23) ce qui pourrait conduire à une probabilité plus élevée de caractéristiques concentrées. Cependant, les observations données indiquent que le caza de Baalbeck démontre de loin sa capacité à contrôler le réseau et pourrait être considéré comme le cœur du réseau en termes de nombre de coopératives et en termes de performance et de rôles.

3.2.3. Comment se manifeste la proximité sur le territoire et dans le réseau des coopératives de transformation ?

Pour tenter d'expliquer les observations observées dans l'analyse des réseaux sociaux des coopératives, un cadre conceptuel est mobilisé à ce stade. Plus précisément, le concept de Proximité devrait permettre de rationaliser les tendances des relations observées au sein du réseau des coopératives du territoire d'étude. Comme son nom l'indique, la proximité fait référence à la "proximité" ou à la "distance" de deux unités. Pourtant, la compréhension de la proximité va bien au-delà de la distance physique. Plusieurs auteurs ont identifié différents types de proximité. Naturellement, la distance spatiale, connue sous le nom de **proximité géographique**, est l'un des principaux types initialement retenus. Ce concept de base de la proximité est défini par Torre et Rallet (2005) comme "*la distance kilométrique qui sépare deux unités (par exemple, des individus, des organisations, des villes) dans l'espace géographique*". En fait, le rôle de la distance physique a été un axe sous-jacent dans les concepts économiques et géographiques classiques pour l'étude de la localisation économique et l'existence ou l'absence ou l'interaction entre les objets (Zamyatina & Pilyasov, 2017). Dans la plupart des cas, la proximité géographique est définie et utilisée de manière cohérente par les auteurs, même si elle peut être qualifiée de proximité territoriale, spatiale ou physique (Knoben & Oerlemans, 2006). Torre et Rallet (2005) décrivent également un autre type de proximité basé sur les relations plutôt que sur la géographie et qualifié de "**proximité organisée**". La proximité organisée est décrite par les auteurs comme la capacité d'une organisation à faciliter l'interaction entre ses membres. La compréhension du terme "organisation" est également décrite comme toute "unité structurée de relations", qui peut comprendre des entreprises, des administrations, des réseaux sociaux, des communautés et autres. Ce type de proximité rapproche donc les membres d'une même organisation en raison des relations qu'ils partagent dans leur appartenance commune par rapport à d'autres personnes extérieures à l'organisation. Comme il se concentre sur les relations créées par

l'homme, ce type de proximité est de nature non spatiale et peut donc se refléter dans les interactions à distance. Selon les auteurs, "*parce que l'organisation n'est pas géographique par essence, elle a la capacité de traverser les territoires et les frontières*". Torre et Rallet (2005) attribuent à la proximité organisée deux raisons qui sont en partie complémentaires et en partie substituables. Ils les intitulent la **logique d'appartenance** (parfois appelée adhésion) et la **logique de similarité**. La première est attribuée aux règles et aux routines créées par le cadre d'une organisation qui dirige finalement les interactions et le comportement de ses membres. Elles prennent par exemple la forme d'un groupe de chercheurs ou d'ingénieurs d'une même entreprise soumis aux mêmes règlements internes. La seconde est décrite comme une forme tacite de proximité lorsque les membres tendent à se ressembler en partageant un "même système de représentations, ou un ensemble de croyances, et les mêmes connaissances" lorsqu'ils sont affiliés à la même entité collective. Un exemple de cela serait la coopération plus facile entre deux chercheurs de la même communauté scientifique qui partagent éventuellement la même langue, mais surtout le même "système d'interprétation des textes, des résultats, etc." (Torre & Rallet, 2005). La pluralité du concept de proximité a été posée de manière éloquent dans la déclaration suivante de Zamyatina et Pilyasov (2017) :

[Traduit de l'anglais] "En substance, le concept de proximité élargit le champ de la recherche géographique, passant d'un monde plat et unidimensionnel mesuré exclusivement par des paramètres spatiaux à un monde multidimensionnel qui intègre différents espaces sociaux, politiques, culturels, informationnels et autres."

(p. 198)

En appliquant les concepts ci-dessus sur le territoire de la vallée de la *Beqā'* avec le réseau de coopératives, il convient de rappeler qu'une forte évidence géographique a été démontrée comme élaboré précédemment malgré une forte concentration de liens en général. Ceci est particulièrement vrai au niveau de la division spatiale des clusters avec une plus grande concentration de liens internes les uns par rapport aux autres. Le cluster 1 est principalement affilié aux coopératives du gouvernorat de la *Beqā'*, le cluster 2 à celles du *caza* de Baalbeck, et le cluster 3 à celles du *caza* de Hermel. Certaines intersections sont mises en évidence dans le fait que certaines coopératives appartiennent physiquement à un espace mais appartiennent en même temps au cluster d'un autre espace, indiquant une plus grande proximité dans leurs relations avec cet autre espace. Certaines de ces coopératives sont décrites comme des corridors stratégiques de coopératives d'excellence, car elles jouent des rôles clés de courtage et ont des profils relationnels centraux et de premier ordre. De plus, en analysant les intra-liens externes entre les clusters eux-mêmes, nous pouvons voir que ceux du Cluster 1 (gouvernorat de *Beqā'*) et du Cluster 2 (*caza* de Baalbeck) ont une concentration plus élevée de liens échangés entre eux (61 et 62 liens) que lorsqu'on les compare au Cluster 3 (*caza* de Hermel). Par ailleurs, le Cluster 1 et le Cluster 3 semblent être les moins familiers entre eux, comme le montre la plus faible concentration de liens échangés (20 et 29 liens). Ces deux clusters sont également les plus éloignés l'un de l'autre en termes de distance et il pourrait donc s'agir dans ce cas d'une (in)proximité géographique qui éloigne ces deux groupes à la fois en termes de distance et de relations entre eux. Dans ce sens, la **proximité géographique**

est évidente au cœur et à la base de la structure du réseau, en particulier parmi les trois espaces majeurs communément appelés la vallée de la *Beqā'* ; les sections nord, centrale et sud (appelée ouest). En définitive, la vallée de la *Beqā'* est un territoire qui s'étend sur 4 000 km², soit 38% du pays (Bou-Antoun, 2014) et le Liban est généralement l'un des plus petits pays du monde avec 10 452 km². Pour ne pas étiqueter le territoire comme petit ou grand, c'est plutôt la topographie du paysage qui oriente la description derrière les distances. La vallée de la *Beqā'* elle-même, c'est-à-dire le plan qui comprend la majorité des villes, à l'exclusion des périphéries accidentées ou des zones montagneuses éloignées qui sont incluses dans la division administrative, a une longueur de 120 km et une largeur de 16 km. La vallée est donc plus longue que large, est en grande partie relativement plate et est entourée de chaînes de montagnes à l'est (Anti-Liban) et à l'ouest (Mont Liban). Le réseau routier de la vallée de la *Beqā'* se compose principalement d'une autoroute/route principale qui s'étend sur toute la longueur de la vallée, reliant les principales villes et convergeant vers la ville de Zahle (plus précisément à Chtaura), la capitale du gouvernorat de la *Beqā'* et les villes les plus grandes, administratives et centrales de toute la vallée. Zahlé est ensuite reliée à la capitale Beyrouth par une autoroute qui traverse la chaîne du Mont Liban. Ceci est visible sur la carte du réseau routier du Liban. Par conséquent, les coopératives situées aux extrémités éloignées de la vallée de la *Beqā'* devraient traverser en sens inverse sur cette route principale pour se retrouver à Zahlé. Cela signifie normalement qu'il faut parcourir à peu près la moitié de la distance de la vallée avant de continuer à descendre vers la capitale et l'arène du marché principal. Par conséquent, la vallée se trouve plus ou moins dans une proximité géographique acceptable qui permet de relier deux coopératives de manière assez raisonnable.

Pourtant, comme l'indique Boschma (2005), la proximité géographique ne signifie pas à elle seule qu'une relation va nécessairement se développer. En effet, la force et la dynamique observées parmi les relations du réseau suggèrent fortement que d'autres formes de proximité sont en jeu. Si l'on se base sur le cadre conceptuel élaboré précédemment, **plusieurs dimensions de la proximité sont suspectées**. La typologie des relations constitue une preuve intéressante à cet égard. Tout d'abord, la typologie montre clairement un degré élevé de familiarité existant entre les coopératives. 78% des relations actives ont au moins 5 ans, dont 32% ont plus de 10 ans (question n°2 de l'enquête). Malgré cette intense familiarité entre les coopératives, il est normal de ne pas atteindre la même intensité dans les échanges techniques. Les intensités relatives les plus élevées dans l'échange de soutien technique ont été enregistrées dans 26% (fourni, question 4) et 20% (reçu, question 5) des liens. Un niveau encore plus élevé a été enregistré dans les relations sociales et de confiance. L'échange de soutien social et de faveurs a été enregistré dans 35% (fourni, question 8) et 32% (reçu, question 9) des liens. La volonté de s'impliquer dans ces types d'échanges techniques et sociaux était beaucoup plus élevée, les coopératives ayant exprimé ces dispositions à 92% et 91% respectivement. La confiance envers d'autres coopératives dans des entreprises conjointes de marketing et de vente a été enregistrée dans 87% des liens. Même si l'expression de la volonté et de la confiance ne se traduit pas par des actions concrètes, les résultats démontrent tout de même un degré impressionnant d'ouverture des coopératives. En conséquence, il apparaît que ce n'est pas le fait que les coopératives se connaissent qui stimule une relation entre elles. En y regardant de plus près, il apparaît que les coopératives

ont des lieux communs où elles se réunissent régulièrement. La typologie des liens fournit une telle preuve dans les questions 7 et 11. Les réponses à ces questions montrent qu'environ 65% des liens reconnaissent le regroupement fréquent des coopératives dans des formations et des événements, et plus de 23% prennent part à des entreprises communes de promotion, de marketing et de vente. Il semble donc que des **forces extérieures** soient à l'origine du regroupement répété des coopératives dans le cadre d'activités collectives organisées. L'origine de ces forces extérieures est très probablement dirigée par des agences de développement et éventuellement des acteurs du secteur privé, principalement pour les foires alimentaires. Les expositions saisonnières et les marchés de producteurs sont également couramment organisés au Liban par les autorités locales et les municipalités, notamment pendant la saison estivale, les festivals annuels et les fêtes populaires. L'implication des agences de développement a déjà commencé avec les résultats obtenus dans la composante 1. Les résultats de la caractérisation ont montré qu'un nombre important de coopératives (près de 58%) reçoivent fréquemment une aide extérieure sur une base annuelle de la part des sources de développement sous forme d'équipement, de renforcement des capacités et/ou d'accès au marché. C'est par le biais de ces initiatives que les agences de développement organiseraient régulièrement des sessions de formation et des marchés de vente occasionnels. Les résultats de cette première composante ont également montré que pas moins de 65% des coopératives ont identifié les expositions comme l'un des principaux canaux de commercialisation sur lesquels elles comptent pour leurs ventes. Près de 43% d'entre elles ont également indiqué qu'elles étaient leurs principales sources de chiffre d'affaires. Ces facteurs ont même été un facteur déterminant dans la division des coopératives en classes rurales, semi-rurales et urbaines dans le thème 2 (spatialité). Par conséquent, il semble que beaucoup, sinon la majorité, des coopératives du réseau ont un accès constant à des arènes communes et à des ventes collectives dirigées par ce que l'on appelle des "forces extérieures". Entendre ces déclarations ne serait pas une surprise pour les acteurs locaux, les parties prenantes du secteur ou même le grand public libanais. L'implication de l'aide internationale a toujours été un élément clair dans l'arène libanaise et est recherchée par la politique nationale et locale. Ce sujet sera développé plus loin dans une autre section.

La rencontre répétitive d'acteurs dans des cadres communs a été abordée par A. Torre (2008), qui l'appelle **Proximité géographique temporaire**. Compte tenu du développement des transports et des technologies de l'information et de la communication (TIC) dans un monde de plus en plus globalisé, l'établissement de liens et de relations à l'échelle locale et mondiale est devenu plus facile. De ce fait, la proximité géographique perd progressivement de son importance et n'est plus qu'un moyen parmi d'autres d'assurer le transfert de connaissances. Il n'est pas nécessaire aujourd'hui que deux partenaires soient situés dans le même espace pour qu'ils puissent collaborer, se coordonner et innover. Au lieu des approches traditionnelles, les réunions à court ou moyen terme sont désormais considérées comme suffisantes pour échanger des informations nécessaires à la coopération. Cette affirmation a été comparée au fait que deux individus se rencontrent lors d'un déjeuner, ce qui constitue une forte opportunité de renforcer les liens sociaux lors de cette rencontre temporaire (Torre, 2008). Torre émet l'hypothèse que les personnes compensent l'intermittence de leurs rencontres et utilisent leur colocation temporaire pour maximiser l'interaction et l'échange. Dans le même sens, la proximité géographique temporaire joue une dynamique similaire dans

les milieux professionnels. Certains des lieux où se déroule ce type d'échange ont été cités comme étant des salons professionnels, des conférences et des conventions, tandis que d'autres ont été qualifiés de lieux "ordinaires", comme les sièges sociaux.

Bien qu'elles ne soient pas couramment organisées à la même échelle que les conventions ou les foires commerciales, les expositions et les foires alimentaires au Liban peuvent dans ce cas être alignées avec le type de lieu des clusters temporaires. Il en va de même pour les sessions de formation groupées organisées dans le cadre d'efforts collectifs de renforcement des capacités, bien qu'il ne soit pas rare qu'elles relèvent de l'autre type de lieu (en passant par l'emplacement de la coopérative). Cela signifie qu'il s'agit d'un espace où l'échange entre les acteurs est facilité et réellement intégré dans la conception de l'événement comme un objectif. Ces événements servent également à mettre en relation directe les producteurs avec leurs consommateurs finaux, ce qui, on l'espère et on le dit, contribue à augmenter les ventes. En fait, un tel constat a déjà été fait par Delfosse et Bernard (2007) en affirmant une relation des aliments avec leur origine de production. Les auteurs affirment clairement que les différentes formes de vente directe contribuent à renforcer et à promouvoir le lien des produits alimentaires avec leur terroir d'origine et donc à affirmer davantage l'identité, surtout si cela est soutenu par la dégustation des aliments (Delfosse & Bernard, 2007), ce qui est le cas dans les expositions du Liban. S'agissant d'un espace collectif visant à relier les producteurs entre eux et avec les consommateurs, il apparaît que le **facteur organisé de proximité n'émerge pas de l'intérieur du réseau** lui-même mais plutôt d'un tout autre acteur. Il semble que cette force directive extérieure agisse comme le moteur capable d'organiser les coopératives, de partager les connaissances, de faciliter l'interaction et de stimuler la construction de relations. En effet, une corrélation semble exister entre l'intensité accrue des coentreprises et l'intensité accrue des autres types de relations. L'inverse ne serait pas nécessairement vrai car c'est la réunion conjointe initiale qui est censée stimuler les relations et les collaborations et non l'inverse. Les coopératives caractérisées comme isolées ont tendance à avoir une intensité bien moindre dans ce domaine, bien que leur niveau de familiarité semble comparable mais un peu moins intense. S'agissant d'un groupe plus ou moins homogène de producteurs ayant des connaissances scientifiques comparables et des activités sectorielles communes qui les réunissent, la logique de similitude devient alors en plus prévalence dans ce cas. Elle constituerait même logiquement un motif pour des initiatives d'aide extérieure qui, d'une part, maximiseraient l'impact collectif et, d'autre part, réduiraient les coûts et les efforts associés à ces projets. Vice versa, les mêmes raisons constituent des avantages attractifs qui incitent les coopératives à participer de manière répétée. La fidélité et la dépendance apparentes à ces formes d'événements collectifs sont évidentes dans la mobilité des coopératives, puisque ces événements sont le plus souvent organisés en milieu urbain ou périurbain. Les efforts de renforcement des capacités pourraient en fait être organisés selon les deux modes, soit collectivement, soit individuellement, et soit en milieu urbain (organisateur), soit en milieu rural (participant), puisque la mobilité est possible et réciproque dans ce cas.

En résumé, il semble que les coopératives ont tendance à avoir des relations de type territorial et a-territorial, et ce sont les liens a-territoriaux qui constituent un carburant majeur pour leurs relations territoriales. Ce sont Torre et Rallet (2005) qui ont souligné l'importance de distinguer ces deux types puisque les organisations ont une origine territoriale, mais leur

nature reste a-territoriale dans les relations et les interactions. Les coopératives du réseau étudié semblent conserver une approche territoriale de fonctionnement dans laquelle elles démontrent des liens forts avec leur environnement. Leurs relations territoriales semblent être fondées davantage sur une proximité institutionnelle sociale et informelle, maintenue par une proximité organisée gérée par des forces extérieures. Cette même dynamique territoriale devrait se refléter dans leurs relations et interactions avec les acteurs de la chaîne d'approvisionnement et du marché. Cependant, les coopératives ne montrent aucun signe d'avantage de leur proximité géographique pour réduire les coûts de production ou de transaction, un avantage connu de l'agglomération géographique (Zamyatina & Pilyasov, 2017). Leurs relations semblent s'ancrer dans des aspects sociaux plutôt que professionnels, ce qui pourrait également s'avérer bénéfique. Leurs relations a-territoriales sont soupçonnées d'être dirigées par des forces extérieures, comme des agences de développement stimulées par leur proximité cognitive et leur logique de similarité, plutôt que d'être initiées de manière proactive par les coopératives elles-mêmes. Leur proximité géographique temporaire émergeant de leur assemblage en clusters temporaires tels que les foires alimentaires et les marchés de producteurs peut en fait être nécessaire pour leur survie et leur durabilité. Les regroupements temporaires ont été remarqués pour leurs avantages et comme étant des sites d'interactions verticales et horizontales (Rychen & Zimmermann, 2008). De telles arènes, notamment dans les foires alimentaires spécialisées, pourraient constituer un moyen efficace de communication avec le grand public. Ces lieux permettent de mettre en avant les producteurs locaux traditionnels et encouragent le contact direct entre les producteurs, avec les acteurs présents et avec les consommateurs. On peut s'attendre à ce que ces lieux de rencontre en personne soient de plus en plus appréciés et recherchés aujourd'hui, surtout depuis le début de la pandémie de COVID-19 et les périodes prolongées de confinement. De plus, les thèmes de ces événements peuvent être construits pour mettre en valeur la spécificité et la tradition de la conservation locale des aliments, ce qui contribuerait à raviver et à soutenir la mémoire culinaire collective des différents territoires et pas seulement celle de la vallée de la *Beqā'*.

La vitalité qui émerge de ces types de contacts directs fait donc de la proximité géographique temporaire, en plus d'une source de rendement économique, une opportunité précieuse et même un outil qui pourrait être utilisé pour optimiser l'apprentissage potentiel et le transfert de connaissances. Ceci est particulièrement important pour les coopératives de transformation alimentaire car, contrairement à leurs homologues agricoles, elles suivent des canaux de marché différents, produisent des quantités plus faibles et, surtout, créent une manifestation directe du patrimoine alimentaire local. Pourtant, le fait d'être dirigées par des forces extérieures et l'aide internationale renforce probablement leur territorialité. Non seulement, les coopératives semblent attirées par la participation à de tels regroupements temporaires et accueillent favorablement les avantages de l'aide extérieure, mais elles semblent en fait qu'elles l'exceptent. De telles observations renforcent les déclarations de Ghadban (2013) concernant les raisons pour lesquelles la plupart des coopératives au Liban ne semblent pas respecter les sept principes de la coopération, y compris le principe d'autonomie et d'indépendance. Il s'agit de diverses raisons contextuelles et individuelles mais qui sont liées par la volonté de canaliser l'aide internationale qui est même parfois couplée à l'influence et l'ingérence des partis politiques. Ainsi, les coopératives adapteraient leurs

stratégies pour recevoir cette aide plutôt que de répondre aux besoins de leurs membres. Cependant, il faut également considérer le point de vue parallèle. Puisque les coopératives manquent de fonds et sont soumises à un faible soutien centralisé et institutionnel, alors les coopératives ne survivraient probablement pas sans aucune source d'aide, surtout en devises fortes. Cela devient particulièrement vrai dans le contexte actuel suite à l'effondrement post-COVID-19 et post-2019 dans lequel les comptes bancaires gelés, l'inflation sévère, la dévaluation extrême, la levée des subventions, la dégradation des infrastructures, les restrictions à l'importation, le rationnement des ressources et la géopolitique régionale sont des opérations gravement déstabilisantes. La question ici pourrait être de savoir si le secteur coopératif au Liban peut être considéré comme l'une des mesures d'atténuation qui pourraient être mobilisées et optimisées. En définitive, il serait intéressant de recréer l'analyse des réseaux sociaux à une échelle élargie qui incorpore les coopératives d'autres régions et leur réseau externe avec d'autres acteurs de la chaîne de valeur agroalimentaire. D'autres domaines d'investigation seraient recommandés sur les forces externes qui sont capables d'orienter la dynamique interne des coopératives de transformation alimentaire. Cela pourrait aider à déterminer les sources spécifiques de ces sources externes et comment elles se chevauchent. Une analyse des réseaux sociaux externes permettrait également de comprendre si les coopératives ont les capacités potentielles pour une action collective seule en tant que groupe fermé ou de montrer de manière décisive si les coopératives sont complètement dépendantes d'un soutien externe qui entrave cette action. Pour l'instant, il existe des preuves solides que les coopératives de transformation alimentaire sont des unités typiquement territoriales qui dépendent de forces extérieures pour augmenter leurs chances de succès. Une démonstration claire de cette corrélation avec des coopératives de transformation alimentaire actives, isolées et dormantes et leurs relations correspondantes avec les agents de réussite serait appréciée.

3.2.4. Les coopératives agroalimentaires de la vallée de la *Beqā'* sont des acteurs locaux ancrés dans leur territoire et dans leurs relations sociales en raison de facteurs de proximité.

La compréhension du concept d'ancrage est variable et large. Si l'on regarde la définition du mot, l'ancrage signifie avoir la qualité d'être ancré, c'est-à-dire être *"fermement et profondément enraciné ou fixé sur place"*¹³. En examinant le dictionnaire Britannica des sciences sociales, le sens du mot ancrage s'élargit pour inclure *"la dépendance d'un phénomène - qu'il s'agisse d'une sphère d'activité comme l'économie ou le marché, d'un ensemble de relations, d'une organisation ou d'un individu - par rapport à son environnement, qui peut être défini alternativement en termes institutionnels, sociaux, cognitifs ou culturels"*¹⁴. Cette définition enlève au mot son lien direct avec un lieu et y ajoute d'autres dimensions comme les relations sociales, l'environnement, le marché, etc. Pour en revenir à la littérature, l'école française utilise généralement deux notions pour le même concept ; "ancrage" en référence au concept d'"ancrage territorial" en français qui fait

¹³ Définition du dictionnaire de langue Oxford pour le mot *"embeddedness"* en anglais.

¹⁴ Définition de *"embeddedness"* en sciences sociales par le dictionnaire Britannica <https://www.britannica.com/topic/embeddedness>

référence au lien entre le terroir et un lieu particulier (Dedeire & Tozanli, 2019). Dans cette optique, les composantes naturelles, sociales et patrimoniales sont normalement incluses dans la notion de terroir. Une autre approche est celle présentée par Moity Maïzi et Bouche (2011). Les auteurs abordent l'ancrage des produits dans leur localité de production par le transfert de savoir-faire au fil des générations et ayant ainsi une composante culturelle et patrimoniale. Ils l'appliquent au cas du fromage corse et décrivent un ancrage culturel dans un territoire qui peut être identifié par des pratiques et des réseaux socio-techniques et qui est préservé par la mémoire. Les auteurs s'appuient également sur le raisonnement de Bérard et Marchenay (2007) pour affirmer que les aliments sont porteurs d'une identité par leurs caractéristiques physiques et organoleptiques et par la matière première dont ils sont issus et qui découle de leur lieu d'origine (et donc de celui auquel ils sont ancrés). À cela s'ajoutent les aspects historiques et cognitifs qui sont incorporés dans l'évolution des systèmes de production dans la création des produits finis et cet aspect est principalement communiqué par des méthodes telles que les certifications.

D'autre part, lorsqu'on examine les publications des chercheurs anglophones, il devient rapidement évident que l'ancrage tend à être mobilisé davantage dans le cadre du lien et des relations sociales (Hinrichs, 2000; Winter, 2003). On dit que cela a commencé par les premiers travaux de Polanyi (1944) et a été développé plus tard par Granovetter (1985). Ce qui est certain, c'est que les relations sociales étaient au cœur du développement de la réflexion sur l'ancrage dans cette ligne de travail. Il est certain que, lorsqu'elle est appliquée aux systèmes et réseaux alimentaires, une composante pertinente de l'explication de l'ancrage est directement liée aux relations et aux comportements des consommateurs avec l'aliment, et en particulier avec les paramètres de "qualité" de cet aliment. Les aliments "locaux" et la "qualité" deviennent un pilier de la compréhension de cet ancrage social en matière d'alimentation. Dans l'étude menée par Winter (2003) dans plusieurs régions rurales d'Angleterre et du Pays de Galles, l'auteur a été surpris de constater que les clients sont beaucoup plus susceptibles d'acheter des aliments produits localement que des aliments biologiques. Il a noté de manière intéressante que les trois quarts de son échantillon interrogé ont mentionné leur préférence pour l'achat d'aliments produits par les fermes environnantes et que 41% d'entre eux y retournaient régulièrement, sur une base hebdomadaire. L'auteur a fait correspondre ces résultats à l'ancrage des relations sociales des consommateurs sur la base de la confiance entre ces consommateurs et les producteurs locaux. Enfin, l'un des principaux commentaires de l'auteur est que les données observées dans le cadre de son étude révèlent le potentiel, peut être caché, des aliments produits de façon conventionnelle. Il considère qu'il n'est pas nécessaire de faire pression sur les agriculteurs pour qu'ils se convertissent à la production biologique afin de conquérir de nouveaux marchés ou des marchés de niche, mais que le potentiel pourrait plutôt résider dans leur réponse à la demande d'aliments produits localement (Winter, 2003); et c'est ce point qui est très intéressant dans le contexte de la vallée de la *Beqā'* en particulier et du Liban en général.

Un groupe d'universitaires du monde anglophone partage les mêmes vues sur l'ancrage que l'école française. Il s'agit de Jonathan Murdoch, Terry Marsden et Jo Banks. Dans leur article, les auteurs ont analysé ces approches dans le contexte du secteur alimentaire. Ils ont clairement montré comment le changement de comportement des consommateurs se nourrit de ce qu'ils considèrent comme le lien avec la nature. En retour, cela soulève une double

caractéristique de l'alimentation : une caractéristique naturelle et une caractéristique sociale. Murdoch *et al.* (2016) reconnaissent d'abord la composante sociale telle qu'analysée par Hinrichs (2000) et Winter (2003) en termes de relations socio-économiques existantes. Les auteurs décrivent cela comme une " *interaction entre l'économique et le social* ", qui pourrait soulever des défis au niveau de la stabilité de ces relations marchandes. En même temps, les auteurs expliquent comment les conditions de l'espace local ont un effet sur le secteur de l'agriculture, la qualité des produits et donc cela empêche leur transformation industrielle, qui constitue l'une des composantes de la qualité appréciée provenant de la nature de la localité. Ils décrivent ce lien du produit avec la nature comme "[...] *ce produit est profondément ancré dans une écologie locale de production et, lorsqu'il est vendu, il porte avec lui de nombreuses traces de cette localité*" (Murdoch et al., 2016, p. 117). Dans cette composante, l'analyse des auteurs va dans le sens de celle de Dedeire et Tozanli (2019) et de celle de Moity Maïzi et Bouche (2011) et aboutit à la conclusion que l'ancrage peut en fait avoir une compréhension étendue qui ne concerne pas seulement les liens sociaux, mais qui inclut également les relations naturelles et sociales (Murdoch et al., 2016).

Lorsqu'elle est appliquée au contexte des aliments traditionnels conservés de type *mūne*, des coopératives de transformation alimentaire et de la vallée de la *Beqā'*, la compréhension ci-dessus de **l'ancrage peut être analysée à plusieurs niveaux**. Ceux-ci comprennent à la fois l'ancrage naturel (territorial) dans leur localité en tant que produit et en tant que producteur, et l'ancrage social (relations) à deux niveaux (*auxquels je parviendrai pour montrer qu'ils sont alimentés par les différentes formes de proximité*) ; ceux internes au réseau de coopératives entre elles et ceux externes qui relient les coopératives du réseau à d'autres acteurs qui sont principalement des consommateurs et des agences de développement, surtout dans l'environnement urbain. Premièrement, la conservation des aliments *mūne* est une activité **directement liée à la localité environnante** car elle est normalement basée sur la conservation des produits saisonniers d'origine végétale et animale cultivés dans chaque région. Par conséquent, elle dépend avant tout des types de produits bruts de la vallée de la *Beqā'*. Et comme nous l'avons vu précédemment, la vallée de la *Beqā'* est caractérisable et peut être considérée comme un territoire constructible, à caractéristique dominante agricole (colonne vertébrale du secteur agricole du pays et qui entre dans la subsistance d'une partie importante de la population), et ayant une relation sociétale forte ancrée dans la production et la consommation d'aliments traditionnels. Elle présente des conditions géo-climatiques typiques qui la distinguent du reste du pays. Ces conditions (que ce soit par le sol, le climat, la température, les précipitations, l'eau, l'irradiation, et autres) s'imposent non seulement au type de productions qui pourraient être cultivées mais ont plutôt un effet sur la qualité de la matière première récoltée utilisée pour créer la large gamme d'aliments conservés. Ils créent donc un lien unique entre le produit et le terroir de sa localité et s'inscrivent ainsi dans la lignée de la compréhension de Dedeire et Tozanli (2019) et de Murdoch *et al.* (2016). De plus, nous voyons que le *mūne* a un lien fort avec le patrimoine et la culture et inclut divers aspects à sa spécificité. Comme expliqué précédemment 6, il peut s'agir 1) des types et de la qualité des produits agricoles primaires, 2) des compétences et du savoir-faire appliqués dans les pratiques de conservation traditionnelles, 3) des recettes spécifiques ancestrales avec des variations régionales, 4) de l'effet des conditions géo-

climatiques locales et 6) des contextes sociaux et des modes de consommation. Ensemble, ces éléments alimentent l'identité locale et la relation qui s'est développée entre l'espace local, les humains, leur manipulation et leur transformation en produits finis uniques au fil du temps. Cette composante d'héritage culturel et de transfert de savoir-faire à travers les générations est en parallèle avec la compréhension de Moity Maïzi et Bouche (2011). Nous constatons également que les coopératives engagées dans la conservation des aliments *mūne* aujourd'hui sont fortement dépendantes de leur espace de production pour la conduite de leurs activités. Plus de 80% des coopératives alimentaires achètent leur matière première directement auprès des agriculteurs locaux au niveau du district de la vallée de la *Beqā'*. Ces dynamiques présentent donc des preuves solides de l'ancrage non seulement du *mūne* en tant que produit mais aussi de l'action de sa production dans sa localité d'origine naturelle. Nous ajoutons à cela le fait que les coopératives **sont des acteurs intrinsèquement ancrés localement**, comme le reflète la structure de leur modèle et de leurs principes (Levi & Pellegrin-Rescia, 1997). Elles sont également mandatées en tant que telles par la loi nationale libanaise sur les coopératives et en particulier par leur principe numéro sept : la dimension de la communauté, un principe qui devrait également se refléter dans leur contribution financière aux projets communautaires.

Deuxièmement, l'analyse de l'ancrage des coopératives de transformation alimentaire comporte également une **forte dimension basée sur les relations sociales**. Celles-ci ont été observées aux niveaux interterritorial et extraterritorial qui sont alimentés par les différentes formes de proximité. Au **niveau interterritorial de l'ancrage social**, nous constatons que les coopératives de transformation alimentaire appartiennent toutes à un réseau étroitement uni qui se caractérise par une très forte concentration de connexions, ce qui signifie que les coopératives non seulement se connaissent mais ont diverses formes de relations qui les unissent. Ces relations peuvent aller d'une simple familiarité (les coopératives se connaissent simplement) à une coopération au niveau commercial ou personnel, que ce soit par l'échange d'informations ou d'autres services au niveau commercial ou personnel. Le degré élevé de connexion du réseau coopératif est reflété par la densité des liens. Nous avons vu que près d'un quart de tous les liens qui pourraient exister sont déjà formés dans le réseau. Nous avons également vu qu'il faut moins de deux connexions sociales pour relier deux nœuds du réseau, comme le montre la distance géodésique moyenne du réseau (1,63). La densité du réseau et sa connectivité sont si grandes que même les coopératives s'engageant dans d'autres activités dans la vallée de la *Beqā'* qui ne sont pas pertinentes pour le réseau, comme les coopératives de collecte de lait, ont des liens détectables et quantifiables. Tout ceci indique que le réseau des coopératives de conservation des aliments est densément connecté et qu'en fait, les coopératives dépendent les unes des autres, que ce soit pour la diffusion d'informations ou autres. Ceci a été clairement reflété par les rôles dans lesquels l'étape du SCN a révélé précédemment. Par exemple, nous voyons que les deux coopératives BHB7 et BHB9 du cluster 2 (toutes deux appartenant au *caza* de Baalbeck) ont un niveau exceptionnellement élevé et puissant de tous les rôles et cela signifie qu'ils sont capables de s'engager en tant que coordinateurs (reliant deux nœuds ensemble au sein de leur propre cluster), brokers itinérants (reliant indirectement deux nœuds du même cluster tout en appartenant lui-même à un cluster différent), liaisons (reliant deux nœuds dans des clusters différents tout en appartenant lui-même à un troisième cluster différent), gardiens (reliant un nœud extérieur

entrant à un nœud appartenant en interne à son cluster), et représentants (reliant un nœud interne appartenant à son cluster à un nœud extérieur d'un autre cluster). En même temps, ces deux nœuds étaient des nœuds hubs et des autorités, ce qui signifie qu'ils ont enregistré les niveaux les plus élevés d'entrées et de in-degrés et out-degrés, c'est-à-dire qu'ils sont populaires et bien connus des autres coopératives du réseau et qu'ils connaissent eux-mêmes une part importante des autres coopératives du réseau. Compte tenu de leur position centrale, ils sont également des acteurs importants avec de nombreux contacts, car ils ont enregistré des niveaux élevés de centralité d'intermédiarité, d'in-degré, d'out-degré, de centralité de proximité et de centralité de vecteur propre. Cela signifie que la position de ces deux coopératives est importante non seulement pour les membres de leur propre cluster mais aussi pour la position et le bénéfice des membres des deux autres clusters. De même que ces deux brokers globaux, il y a sept autres coopératives classées dans la catégorie des brokers itinérants globaux et des gardiens, ce qui signifie la dominance de ces deux rôles dans leurs caractéristiques et l'impact qu'ils sont capables d'obtenir au niveau de l'ensemble du réseau. Les coopératives ayant ces rôles se retrouvent dans les trois clusters, bien que leur distribution ne soit ni égale ni homogène. En fait, 5 des 7 coopératives se trouvent dans le cluster 1 (associé à la région centrale et sud de la *Beqā'*), tandis que les 2 autres se trouvent dans chacun des clusters 2 (associé au *caza* de Baalbeck) et 3 (associé au *caza* Hermel du nord de la *Beqā'*). Cela montre qu'en termes de liens (donc de relations), le cluster 1 comprend le plus grand nombre de cette classe de rôles. Cependant, et en termes de distribution géographique, 5 des 7 coopératives sont en fait situées à Baalbeck (nord de la *Beqā'*) tandis que les deux autres se trouvent à Zahle (centre de la *Beqā'*). Il s'agit d'une représentation intéressante qui montre comment, même si un groupe de coopératives à une composante de proximité géographique qui alimente d'un côté leurs liens relationnels, elles **pourraient en fait être plus proches dans leurs liens avec des coopératives situées à une plus grande distance**, bien qu'il y ait une distribution géographique dominante dans les clusters en général. Il s'agit de ce que l'on appelle les corridors stratégiques de coopératives qui font le pont géographiquement et ont des liens plus étendus au sein du réseau. Nous pourrions alors commencer à voir comment l'ancrage des coopératives pourrait être déterminé par les différentes formes de proximité géographique et organisée.

Nous avons également vu que le facteur de proximité organisée qui anime le réseau ne provient pas de l'intérieur du réseau lui-même mais est issu de forces extérieures. C'est ce qui ressort des réponses communes des coopératives alimentaires qui se rassemblent dans des activités groupées dans des arènes communes. Les activités qui rassemblent les coopératives vont des formations et des événements à la promotion conjointe, au marketing et aux entreprises de vente. Ces espaces ont été décrits comme des lieux conjoints temporaires. L'organisation de ces activités collectives était principalement assurée par des agences de développement et éventuellement par des acteurs du secteur privé, notamment pour les foires alimentaires. Dans ce sens, **deux types de motifs extraterritoriaux d'encastrement apparaissent**. Le premier est constitué par les relations sociales qui lient les coopératives alimentaires aux consommateurs directs, principalement sur les marchés urbains et les pôles de concentration de population (et de migration) dans ou autour de la capitale Beyrouth. Ces régions, comme nous l'avons vu, compte tenu des mouvements internes de population, sont devenues des espaces où une partie importante des résidents sont originaires de villages

ruraux et conservent donc un lien fort avec la terre et la tradition et ont donc tendance à être très fidèles à la consommation d'aliments traditionnels libanais. Le deuxième motif extraterritorial d'ancrage est celui qui lie les coopératives alimentaires à la source de la proximité organisée et plus particulièrement à celle des lieux de rencontre temporaires et donc aux agences qui s'engagent dans le développement du secteur agroalimentaire dans le pays. Ensemble, ces deux éléments créent un espace d'interaction directe à travers lequel l'identité des produits et des producteurs est communiquée et à travers lequel le facteur de confiance est construit. Je rappelle ici l'avis intéressant de Winter (2003) qui mentionne que, étant donné le facteur de confiance des consommateurs envers leurs producteurs locaux, il n'est pas particulièrement nécessaire que les agriculteurs (et par extension les producteurs de *mūne*) se convertissent aujourd'hui à la production biologique pour conquérir des parts de marché, mais qu'ils pourraient en fait répondre à la demande non prioritaire d'aliments produits localement. Lorsque nous récapitulons les forces en jeu, nous constatons que les différentes formes de proximité géographique (interterritoriale) et organisée (extraterritoriale), y compris les lieux communs temporaires, sont les facteurs et la logique d'interaction qui aboutissent à l'ancrage en tant que résultat, les coopératives alimentaires étant ancrées à la fois dans leur territoire (naturel) et dans leurs relations (socialement interterritoriales et extraterritoriales), la force motrice étant la signification culturelle des aliments traditionnels conservés de *mūne*.

Enfin, le dernier point intéressant à soulever est celui qui est lié à la **mobilité des aliments *mūne***. Murdoch *et al.* (2016) mentionnent que les chaînes alimentaires locales seraient impactées si les aliments devaient être transportés plus loin que leur lieu de production immédiat. L'auteur fait référence à l'ancrage et au dé-ancrage compliqués dans de tels cas. Selon lui, si les produits alimentaires devenaient très domestiques, ils ne pourraient probablement pas voyager loin et auraient donc un caractère dominant d'ancrage. Cependant, si les produits alimentaires devaient être emmenés loin de leur contexte de production, les distances plus longues impliqueraient d'avoir une caractéristique industrielle qui pourrait défavoriser les consommateurs conscients des qualités locales et donc les produits auraient dans ce cas un caractère dominant de dé-ancrage (Murdoch *et al.*, 2016). Dedeire et Tozanli (2019) abordent les paradoxes qui découlent de la mobilité des aliments et de la construction de l'identité au milieu de l'ancrage local. Les auteurs définissent d'abord la mobilité comme " *le déplacement d'êtres humains dans l'espace, ne prenant en considération ni l'échelle (locale, régionale ou internationale) ni la caractéristique temporelle du déplacement (jour, semaine, mois, année)* " (Dedeire & Tozanli, 2019, p. 1). Le point d'ancrage de la compréhension repose sur le fait qu'une personne conserve ses souvenirs au cours de sa vie et de ses déplacements, et que ces souvenirs incluent la nourriture. Ceux-ci sont en fait considérés comme des facteurs d'identité, qui sont tout autant liés à l'alimentation et aux connaissances techniques et sociales qu'aux coutumes et habitudes, à la culture, aux croyances et aux valeurs sociales. Par conséquent, lorsqu'un individu se déplace, l'ancrage devient un "lien organique" entre cet individu et son lieu d'origine. C'est là que les produits alimentaires et la consommation deviennent un lien fort qui se rattache au lieu d'origine, mais qui se manifeste dans le lieu d'accueil. Ce qui est soulevé ici est la mobilité des terroirs sociaux et patrimoniaux par rapport à l'immobilité du terroir naturel. Une approche similaire a également été présentée précédemment par Timothy (2008) dans lequel l'auteur développe

les différentes échelles de ce qu'il appelle le tourisme patrimonial. L'auteur explique que ces échelles sont un facteur du site de visite ou d'accueil et s'étendent de l'échelle du touriste jusqu'à l'échelle la plus basse des vies et identités personnelles, des normes et des habitudes. L'auteur s'appuie également sur sa compréhension du terme diaspora en le décrivant comme " [traduit de l'anglais] *des groupes de personnes dispersées dans le monde entier mais réunies en une communauté par leurs liens communs réels (et dans certains cas perçus ou imaginés) d'ethnicité, de culture, de religion, d'identité nationale et, parfois, de race* " (Coles & Timothy, 2004, p. 3). Timothy (2008) associe ensuite directement la consommation d'aliments locaux, qu'ils soient servis dans des restaurants ou rapportés de leur pays d'origine, à une " *consommation littérale du lieu* " (Timothy, 2008, p. 123), tout en préservant de la même manière d'autres activités du lieu d'origine. En réfléchissant à ces analyses, il devient très clair et direct comment les aliments *mūne* s'intègrent parfaitement et leur mobilité entre dans le physique comme dans le moral. Tout d'abord, la taille de la diaspora libanaise est immense et dispersée dans la majorité des pays du monde. Également, les personnes d'origine libanaise maintiennent un lien très fort avec leur pays d'origine et qu'elles constituent en fait la plus grande force d'entrée de devises fortes grâce aux fonds envoyés par les expatriés à leurs familles. Même après que plusieurs générations soient nées dans des pays étrangers, les gens ont tendance à conserver leur sens de la " *libanité* " ou "*Lebaneseness*" et surtout lorsqu'il s'agit de leur attachement à la culture de leur pays d'origine et à la consommation d'aliments traditionnels (Abdallah et al., 2019; Rowe, 2012). Le *mūne* ici est normalement au cœur de la cuisine libanaise et la mobilité des aliments *mūne* est d'abord géographique grâce au produit et son origine géographique. Les aliments *mūne*, étant conservés, sont stables et ne nécessitent pas de conditions de stockage particulières. Ils peuvent donc être simplement placés dans un entrepôt sec (traditionnellement ou dans le domicile) ou sur les étagères (marché contemporain), et ils ont été historiquement mobiles dans le pays tout au long de l'histoire, de leur lieu d'origine rural au lieu de résidence, se déplaçant ainsi avec le mouvement des populations adeptes de ces aliments. Ces produits sont par nature, adaptés à la mobilité générale et notamment à l'exportation vers des pays étrangers. Les aliments *mūne* conservés sont également porteurs de patrimoine et de culture, ce qui en fait une caractéristique importante de leur mobilité morale et de la connexion aux souvenirs des gens, un lien à leur pays d'origine lorsqu'ils les consomment. Grâce à sa mobilité, le *mūne* ne fait pas que raviver ces souvenirs, il les préserve et les entretient en fait. Il s'agit d'un point majeur qui nécessite plus d'attention et qui pourrait être capitalisé davantage en référence aux stratégies qui pourraient être mises en place pour la préservation et potentiellement, la certification des produits dans leurs composantes matérielles et immatérielles.

Conclusion

Cette étude est basée sur trois piliers qui, ensemble, constituent une forte interaction dans l'engagement social, économique et spatial des espaces ruraux du Liban, tout en étendant les liens aux régions urbaines. Le premier pilier est la conservation traditionnelle des récoltes agricoles saisonnières grâce à des aliments de garde-manger stables appelés *mūne*. Il s'agit d'une tradition qui a longtemps mobilisé et responsabilisé les femmes et qui est devenue un lien avec la tradition et le patrimoine culinaire. Historiquement, cette tradition était pratiquée à l'échelle du foyer pour assurer la nutrition en période de pénurie alimentaire, mais elle a aujourd'hui évolué vers le marché, les coopératives alimentaires féminines étant l'un des principaux producteurs. Mais aujourd'hui, la conservation des aliments *mūne* n'est ni reconnue ni réglementée et est laissée ouverte à l'appropriation et à la capitalisation par les entreprises sans aucune stratégie de protection. Compte tenu de l'unicité du *mūne* au niveau territorial et national et de son lien fort avec le patrimoine culinaire du pays, il a donc été décidé de construire les caractéristiques de cette tradition alimentaire sur des dimensions historiques, techniques et sociales de la production et en tant que collectivité de produits. L'objectif de ce travail de terrain était de comprendre la spécificité du *mūne*, ses logiques socio-spatiales et territoriales, et ce qui en fait un point d'ancrage approprié pour construire une stratégie de développement basée sur son espace local et ses acteurs locaux. Les principaux acteurs locaux engagés dans la production de conserves traditionnelles de *mūne* sont les coopératives de femmes transformatrices de produits alimentaires et constituent le deuxième pilier de cette thèse. Les coopératives sont intrinsèquement locales par leur modèle social d'entreprise et par la loi au Liban. Ce sont des entités qui suivent un mouvement coopératif global et se conforment aux sept principes de la coopération qui sont basés sur la solidarité, le bénéfice collectif, la participation et la démocratie. Malgré leurs défis à l'échelle interne, externe et institutionnelle ainsi que leur marginalisation en tant qu'entités de production compétitives, les coopératives au Liban sont considérées comme des acteurs locaux stratégiques opérant dans une pratique typiquement traditionnelle et préservant le patrimoine culinaire du *mūne*, en voie de disparition et non protégé. Ensemble, le *mūne* comme ressource et les coopératives comme producteur stratégique, ces deux piliers deviennent la base des micro-économies locales de leurs territoires. En fait, les niveaux locaux, et plus spécifiquement territoriaux, de l'espace et leurs acteurs locaux sont progressivement reconnus comme des terrains économiques capables d'atteindre leurs propres voies de développement. Ils s'inscrivent dans des démarches ascendantes initiées par des acteurs locaux utilisant des ressources locales. Ce processus repose généralement sur l'identification, la capitalisation et la gestion durable de facteurs de différenciation - les ressources endogènes - dans le contexte local, par les acteurs locaux. Ces ressources sont décrites comme des "marqueurs" dont les facteurs peuvent inclure le secteur agricole et alimentaire primaire, mais aussi les langues et dialectes, le folklore, les arts et le théâtre, les sites archéologiques et les composantes du paysage. Ceux-ci entrent dans le cadre d'une approche culturelle globale de ce que l'on appelle le développement néo-endogène ou territorial et sont équivalents à une identité territoriale. En valorisant potentiellement la mobilisation d'acteurs localisés et leurs ressources et identités caractérisables, les approches

de développement basées sur le développement néo-endogène ou territorial pourraient être considérées comme une manifestation à la fois "par le haut" et "par l'intérieur". Normalement, lorsqu'on parle d'acteurs typiquement locaux tels que les coopératives, le territoire devient essentiel car il constitue la base de l'échelle de la production de produits *mūne*. Dans cette recherche, la principale région de production agricole du Liban a été choisie ; la vallée de la *Beqā'*, comme troisième pilier de l'étude. La vallée de la *Beqā'* est une plaine naturelle relativement plate qui couvre 38% de la surface du pays et qui est située entre les deux chaînes de montagnes du Liban : le Mont Liban qui fait face à la mer Méditerranée à l'ouest, et la chaîne de l'Anti-Liban qui borde la Syrie à l'est. La vallée de la *Beqā'* a une longue histoire et une relation avec la production de *mūne* et la consommation d'aliments traditionnels. La vallée de la *Beqā'* a été choisie non seulement en raison de son importance en tant que région productrice, agroalimentaire ou en raison de son lien avec les aliments traditionnels du *mūne*, mais aussi pour diverses autres raisons qui en font un premier choix logique de territoire pour mener cette étude. Ceci est d'autant plus vrai que la culture du *mūne* transcende en fait les spécificités locales, toujours possibles, mais elle présente en réalité des similitudes et des dynamiques extraterritoriales à travers tout le pays et s'étend même aux pays voisins de la région du Levant sur la Méditerranée orientale. Pourtant, la vallée de la *Beqā'* possède plusieurs attributs qui, ensemble, construisent le territoire et sa spécificité. Il s'agit notamment de ses conditions géo-climatiques compte tenu de sa délimitation géographique naturelle, de l'existence de microclimats, de ses facteurs de température, de précipitation, de sol, d'eau, d'humidité et d'irradiation solaire qui sont différents du reste du pays. En outre, d'autres facteurs entrent en jeu, notamment son emplacement général à la frontière, sa connectivité aux voies de transport et de commerce, et son contexte socio-économique vulnérable.

Afin de parvenir à décrire l'étendue de la spécificité des aliments *mūne* et la dynamique socio-territoriale de leur production par les coopératives de transformation alimentaire dans la vallée de la *Beqā'*, cette thèse s'est basée sur une méthodologie descriptive et systématique. Outre un corpus littéraire et scientifique approfondie sur les trois piliers de l'étude, la méthodologie a consisté à identifier et à cartographier l'ensemble du réseau des coopératives de transformation alimentaire qui s'engagent dans la conservation des aliments *mūne* dans la vallée de la *Beqā'*. L'achèvement de cette étape comportait plusieurs défis en soi, mais finalement le réseau a été identifié pour inclure 40 coopératives, principalement de femmes, qui sont activement engagées dans la production de *mūne*. Le réseau identifié a été soumis à deux types de questionnaires qui ont été préparés pour deux types de traitement des données et d'analyses. Les deux types de questionnaires ont été remplis auprès des coopératives lors de la même réunion d'entretien qui était prévue avec chacune d'entre elles. Ceux-ci ont eu lieu entre août et décembre 2019. La première était une étape de catégorisation qui visait à révéler les différentes typologies de coopératives alimentaires dans la vallée de la *Beqā'* et à comprendre en quoi elles sont similaires et ce qui les différencie les unes des autres. Cette catégorisation a été effectuée sur la base de quatre thèmes principaux suivant la dynamique du fonctionnement de la coopérative. Ces quatre thèmes étaient leur structure, la spatialité des activités, l'étendue du soutien externe, et le label et la conformité. La deuxième étape a consisté à comprendre la nature des relations qui existent entre les coopératives alimentaires elles-mêmes en utilisant l'analyse des réseaux sociaux (SNA). Cette étape était basée sur le

deuxième type de questionnaire rempli dans cette étude et qui encadrait la capture des différents types et intensités de relations existant entre les différentes coopératives et leur visualisation à travers des sociogrammes. L'exécution des différentes étapes de cartographie, de traitement des données, d'analyse et de visualisation a nécessité l'utilisation de plusieurs logiciels. Parmi ceux-ci figuraient SPAD v.8 - Coheris Analytics, Pajek v.64-XXL 5.10, NodeXL v.1.0.1.418, PhilCarto V.6.07-2018 et Adobe Illustrator CC 19.0.0-2015. Des observations supplémentaires de soutien ont été fournies par un ensemble de données collectées dans le cadre d'un stage de fin d'étude de Master réalisé par un étudiant à l'Institut agronomique méditerranéen de Montpellier. Celles-ci ont contribué à ajouter des preuves aux observations formulées par les résultats de la méthodologie ci-dessus.

Comme nous l'avons vu dans la première partie, la prise en compte de l'ensemble des informations construites autour de la compréhension du *mūne* met en évidence ses multiples objectifs, ses liens étroits avec l'histoire et la culture, et sa dépendance à l'égard de l'espace local environnant dans lequel les rôles de genre se manifestent avec des liens sociaux profonds et diverses formes de dynamique géographique. Ces éléments montrent que la culture du *mūne* est bien plus vaste que la simple activité de conservation des aliments et comporte des dimensions à la fois tangibles (matérielles) et intangibles (immatérielles). Nous avons vu que la première fonction originelle de la conservation des aliments du *mūne* était la survie et la sécurité alimentaire, lorsque les récoltes excédentaires étaient transformées en aliments conservés et stables pendant les périodes de pénurie alimentaire. Ces périodes se situaient principalement en hiver, lorsque les villages étaient isolés ou en cas de crise résultant de facteurs économiques, de guerre ou de maladie. Cela était nécessaire pour les ménages, en particulier dans les villages ruraux situés dans les chaînes de montagnes du Liban ou à l'intérieur des terres, car le transport dans les temps anciens était difficile en raison de la nature accidentée du terrain qui rendait les régions rurales beaucoup moins accessibles aux sources de nourriture et au marché. À cette époque, les hommes étaient pour la plupart des agriculteurs qui cultivaient leurs terres et les femmes étaient les principaux contributeurs à l'entretien régulier de leur foyer et géraient l'entretien quotidien de leur maison, la nourriture, le stockage et la préparation. Cependant, le rôle des femmes était plus important en raison de la gestion de la nourriture et des décisions qui s'y rapportaient, et il atteignait son apogée pendant les saisons de récolte, lorsque l'excédent devait être conservé. Les femmes mettaient en œuvre un savoir-faire et des compétences hautement techniques qui étaient transmises de génération en génération, de mère en fille. Les femmes suivaient les recettes et les techniques qu'elles avaient apprises pour créer une gamme élaborée d'aliments conservés qui étaient normalement disponibles dans leur voisinage, chacun selon la saison de récolte de l'année. Comme de nombreuses tâches demandent beaucoup de travail et sont longues, les gens se réunissent également pour coopérer et s'entraider. Un exemple typique de cette coopération communautaire était la tâche technique consistant à frotter un produit appelé *kishk* ; un mélange alimentaire fermenté, séché et moulu de *burghul* de blé concassé et de lait ou de yaourt. C'est alors qu'un groupe de six à sept femmes, appelé *farrākāt* (ce qui signifie "celles qui frottent"), se réunissait sur le toit de leur voisin et utilisait une technique spécifique pour frotter le *kishk* séché entre leurs paumes afin de le réduire en farine. Les occasions où les gens se réunissaient pour coopérer à des tâches de ce type étaient aussi normalement engageantes et remplies d'interactions sociales. L'importance de la conservation

et du stockage des aliments était si essentielle que sa position centrale se reflétait dans l'architecture et donc dans la relation entre les humains, leur terre et la nourriture. À cette époque, les maisons étaient construites avec divers espaces de stockage de la nourriture incorporés à l'intérieur et/ou autour, comme les pièces séparées appelées *h̄zēne* ou *beit el mūne* ou l'espace ressemblant à un sous-sol appelé *kaboo* qui était utilisé pour le stockage et parfois pour élever quelques têtes d'animaux. Le *mūne* est donc devenu une activité qui organisait, mobilisait et liait les communautés entre elles et dictait la planification de l'année.

Ce qui rend le *mūne* si spécial ne se limite pas à une seule caractéristique, mais la spécificité est plutôt construite par une combinaison de facteurs comme les types et la qualité des produits agricoles primaires, les compétences et le savoir-faire, les recettes spécifiques, l'effet des conditions géo-climatiques locales, les cadres sociaux et les modes de consommation. La géographie du Liban est très diversifiée en raison de la variété de sa topographie, qui comprend la bande étroite et plate du littoral, les chaînes de montagnes très accidentées du Mont Liban, qui font face à la mer Méditerranée, et l'Anti-Liban, qui borde la Syrie voisine, et qui sont séparés par la plaine de la vallée de la *Beqā'*. Cette topographie changeant rapidement sur la surface relativement petite de 10 452 km² du pays donne lieu à des conditions locales très diverses et donc à des productions agricoles tout aussi diverses qui pourraient être préservées dans le *mūne*. Puisque le *mūne* est normalement dépendant du milieu environnant, ces variations se reflètent également sur le *mūne* lui-même, ainsi que sur les dimensions sociales changeantes de la population très diverse du Liban. Nous voyons donc des points communs au *mūne* ainsi que des spécialités régionales possibles. Il s'agit d'une caractéristique plutôt atypique des produits alimentaires dans la mesure où le *mūne* a la capacité de présenter des caractéristiques à la fois interterritoriales et extraterritoriales à différentes échelles géographiques. D'une part, les différentes variations régionales existent et sont connues depuis longtemps, au point que certains villages et régions sont devenus réputés pour leurs productions. Par exemple, l'eau distillée de fleur d'oranger (*mazaher*) de Maghdoucheh, le *kishk* et le *makdous* de Baalbeck, le *shankleesh* du nord du Liban, et bien d'autres encore. D'autre part, on trouve également des produits plus génériques qui sont communément produits et consommés dans le pays et même dans les pays voisins, ce qui est normal étant donné l'établissement contemporain relativement récent des frontières dans les pays du Levant dans la première moitié des années 1900. Les aliments conservés sont également transportés depuis longtemps de leur origine rurale vers l'environnement urbain dans le cadre du mouvement habituel des personnes établi depuis le passé. Par conséquent, l'une des dynamiques exposées du *mūne*, en plus d'être localisé, comporte également un facteur de mobilité dans le cadre de son histoire et qui existe encore aujourd'hui, ce qui fait que le *mūne* d'aujourd'hui est intégré dans la plupart des foyers libanais. De cette façon, et puisque la nourriture est porteuse d'héritage et d'identité, le *mūne* devient un lien direct avec l'héritage culinaire du Liban et reflète plusieurs échelles géographiques : celles du territoire et du local, mais aussi celles du national.

Étant donné le lien inné du *mūne* avec l'environnement naturel et le facteur humain, il est important de considérer le *mūne* comme un système holistique avec l'ensemble de ses composants qui peuvent maintenant être compris comme ayant une valeur tangible (matérielle) et une composition culturelle intangible (immatérielle). Cependant, la culture

reste sans aucune reconnaissance officielle et il n'y a pas de stratégie spécifique pour sa différenciation, sa protection, ni sa valorisation, à l'exception d'un effort mineur de l'Institution libanaise de normalisation pour standardiser certains produits tels que le *za'atar*. Cette grave lacune fait peser des menaces sur la culture et les nombreuses chaînes de valeur qui y entrent et les laissent sans protection, sans réglementation et ouvertes à la capitalisation par des entreprises selon des modalités qui ne respectent pas les pratiques traditionnelles, et celles-ci existent déjà aujourd'hui. Il s'agit de l'industrie alimentaire commercialisée dominante qui n'investit pas nécessairement dans le maintien des approches traditionnelles de production et de commercialisation. Ces industries s'engagent dans la production de certains aliments *mūne* qui leur sont accessibles mais n'appliquent pas les techniques habituelles, ne font pas appel à des compétences spécialisées, sont fortement automatisées, ne s'approvisionnent pas nécessairement en produits bruts localement et utilisent des ingrédients artificiels et des emballages atypiques. Cette stratégie industrielle altère fortement la perception du consommateur, et par conséquent la consommation durable, en raison d'une incapacité à identifier clairement l'origine et la qualité. Il existe plusieurs labels de qualité et systèmes de certification dans le monde, dont beaucoup sont basés sur les produits alimentaires dans leur lieu d'origine. Il s'agit par exemple des indications de provenance, des appellations d'origine et des indications géographiques qui ont été appliquées avec succès à des produits tels que le thé indien Darjeeling, le café colombien, de nombreux fromages et vins français, et bien d'autres encore. Le patrimoine culturel immatériel (PCI) est un autre système mis en place par l'UNESCO qui se concentre sur la protection de la culture et du patrimoine émergent de sa spécificité immatérielle. Malgré le grand besoin de différenciation, le défi avec les produits alimentaires en général et avec le *mūne* en particulier est de trouver un système de protection qui équilibre à la fois ces caractéristiques tangibles (qui pourraient être normalisées et standardisées) et intangibles et un système qui équivaut à plusieurs produits ensemble plutôt qu'à des produits standardisés individuellement. Cela devient encore plus difficile avec le *mūne* puisque l'on est en présence d'une collectivité des différents aliments qui peuvent être considérés comme *mūne* et la fluidité de la culture à un niveau géographique et social rendent très difficile le développement d'une liste spécifique de produits, ce qui soulève d'autres défis. Si des approches territoriales du développement doivent être construites, certaines questions se posent quant aux mécanismes d'encadrement du secteur de production des aliments *mūne*. Quelle serait la meilleure approche pour identifier les espaces d'origine spécifiques et leurs spécificités au sein d'un système qui comprend des dynamiques qui traversent régulièrement les frontières et qui est basé sur des coutumes, des habitudes et des aliments communs ?

Le contexte de la production de *mūne* a changé aujourd'hui. Nous avons vu que pour plusieurs raisons, la pratique de la conservation des aliments au niveau des ménages a fortement diminué et est devenue une activité rare dans les foyers libanais d'aujourd'hui. L'évolution des modes de vie, les contraintes économiques, la technologie, l'exode rural et l'inclusion des femmes sur le marché du travail sont quelques-unes de ces raisons. Le processus de conservation lui-même a cependant évolué et intègre aujourd'hui l'utilisation d'approches modernisées comme par exemple le broyage à la machine, l'approvisionnement du marché en matières premières, l'utilisation de bocaux en verre au lieu des traditionnels bocaux en terre cuite, et autres. Comme nous l'avons vu dans les sections précédentes de cette

thèse, les coopératives rurales de transformation des aliments, qui sont pour la plupart détenues et gérées par des femmes, ont progressivement participé aux chaînes de production de *mūne* au Liban, et ce de manière conforme à celles appliquées traditionnellement, mais modernisées en termes de sécurité alimentaire et de standardisation de la qualité. Ces types de coopératives s'appuient sur les femmes comme main d'œuvre qualifiée et restent à ce jour respectueuses des techniques et recettes traditionnelles. Mais nous avons vu que les coopératives au Liban sont encore des acteurs plutôt marginalisés qui font face à de nombreux défis. Après avoir été négligées pendant la guerre civile de 1975 à 1990 et être réapparues après l'an 2000 à la suite de la fin de l'occupation du Sud-Liban, les coopératives sont décrites comme dépendantes de fonds extérieurs par les donateurs internationaux et les ONG. Elles sont des acteurs attrayants, considérés comme un moyen d'aider à atteindre les objectifs de développement des donateurs internationaux et de faire le lien avec le contexte local du pays. Cette dépendance sape leur principe d'autonomie, ouvre la voie à la corruption et à la déviation de la satisfaction des besoins communs des membres, et met en danger leur durabilité en tant qu'entreprises viables. En fait, malgré le fait qu'il s'agisse d'un acteur stratégique intrinsèquement local par principe et par la loi, on estime que deux tiers des coopératives au Liban sont inactifs (dormantes ou virtuelles) et il a été révélé que beaucoup d'entre elles se sont engagées dans des aspirations financières et politiques. Les raisons de leur marginalisation sont nombreuses. Elles vont de la structure même de l'économie, qui ne donne pas la priorité aux secteurs productifs, à la capacité institutionnelle limitée des organismes officiels et à l'absence de politiques réglementaires dans leur conception et leur mise en œuvre, en passant par l'ambiguïté de la législation, le manque de clarté des divisions géographiques et des frontières nationales et locales, l'instabilité politique, le sous-développement de la base de données en matière de transparence et de précision, et bien d'autres encore.

En tentant de caractériser les coopératives qui produisent du *mūne* dans la vallée de la *Beqā'* et de comprendre les relations qui les unissent, diverses caractéristiques communes ont d'abord été observées. L'étude montre que les coopératives alimentaires de la vallée de la *Beqā'* sont majoritairement détenues et gérées par des femmes et restent de petite taille avec moins de 20 membres en moyenne ; un fait qui pourrait vraisemblablement faire écho aux coopératives alimentaires du Liban en général. La taille de la production varie principalement entre 1 et 7 tonnes et dépasse rarement 15 tonnes, mais ces chiffres ne représentent pas la pleine capacité des coopératives alimentaires. Ces types de coopératives présentent également des dynamiques territoriales et a-territoriales dans leurs opérations, avec de forts liens entre les zones rurales et urbaines. D'une part, elles sont fortement liées à leur espace local environnant, notamment pour l'approvisionnement en produits agricoles bruts auprès des agriculteurs locaux. D'autre part, les coopératives de transformation alimentaire semblent être très dépendantes du marché urbain de la capitale pour les ventes et la génération de revenus économiques, bien que cela ne les empêche pas de vendre localement dans leurs villages et régions respectifs. En fait, plus de 80% des coopératives dépendent directement des agriculteurs locaux au niveau du district, et près de 60% ont déclaré que plus de la moitié de leur chiffre d'affaires provient de la capitale urbaine de Beyrouth ; parmi celles-ci, la moitié atteint jusqu'aux trois quarts du chiffre d'affaires urbain. Pourtant, les coopératives ne sont pas très bien intégrées verticalement dans la chaîne de valeur, ce qui se traduit par un faible

niveau de collaboration avec d'autres coopératives, telles que les coopératives agricoles qui pourraient aider à construire une chaîne d'approvisionnement parallèle jusqu'aux consommateurs. Pourtant, on constate que certaines coopératives ne répondent pas à certaines exigences du marché. Il s'agit notamment de la nécessité d'améliorer la conformité à la sécurité alimentaire, d'obtenir des recettes de production cohérentes en matière de qualités organoleptiques et d'améliorer la communication transparente avec les consommateurs par le biais de l'étiquetage. Les trois quarts des 40 coopératives alimentaires de la vallée de la *Beqā'* ont toujours des étiquettes de base placées sur leurs produits *mūne* qui ne parviennent pas à transmettre correctement les informations de base aux consommateurs conscients d'aujourd'hui, comme les faits nutritionnels, les ingrédients, les codes-barres pour la traçabilité, les informations de contact, et autres. La question de l'aide extérieure est également très évidente dans les résultats de cette étude. Il ne s'agit pas seulement de recevoir un soutien de la part d'organisations de développement sous la forme d'un renforcement des capacités, d'équipements ou de marketing, mais plutôt de voir cette aide prolongée très fréquemment, jusqu'à deux fois par an dans la plupart des cas, mais avec certains rapports trois à cinq fois par an. Les coopératives alimentaires elles-mêmes ont argumenté comment elles considèrent le modèle coopératif au Liban, en particulier dans son engagement dans la production de *mūne*, comme une source d'emploi utile pour les femmes rurales, étant donné leur relation innée avec la conservation des aliments et leur maîtrise des compétences requises. En ce qui concerne les approches de commercialisation, la majorité des coopératives ont eu une préférence pour les ventes par contact direct avec les consommateurs et surtout dans des espaces tels que les expositions et les foires alimentaires qui permettent l'accès aux consommateurs urbains et sont généralement facilités par les agences de développement. En fait, ces espaces de rassemblement ont joué une position principale dans la description de la logique d'interaction entre les coopératives alimentaires. La proximité a été utilisée pour cela car il était fortement suspecté que les coopératives, étant actives dans l'espace local, ne sont pas seulement en proximité à l'échelle géographique, mais s'engagent plutôt dans des activités collectives extraterritoriales stimulées par des acteurs externes aux territoires, comme le secteur privé ou les agences d'aide à travers leurs projets de développement. En fait, l'étape du SCN a fourni un apport précieux dans la compréhension des relations complexes et de leurs intensités qui existent au sein même du réseau, et c'est ainsi que ce lien avec l'assemblage extraterritorial a été renforcé. Tout d'abord, la proximité géographique en termes de distance était une composante normale des opérations des coopératives car, en plus d'être dépendantes des agriculteurs environnants, cette composante se manifeste également dans l'engagement des coopératives ensemble, que ce soit en termes de familiarité (se connaître) ou dans des cas plus avancés où les coopératives collaborent ensemble dans le cadre de relations commerciales ou personnelles. Il s'agissait par exemple de l'échange de savoir-faire technique, de conseils ou de faveurs personnelles. Cette proximité géographique a été mise en évidence par les trois clusters qui étaient principalement divisés géographiquement (Baalbeck, Hermel, et *Beqā'* centre-sud) mais qui comprenaient également des corridors stratégiques. Ceux-ci sont constitués de coopératives qui sont géographiquement plus proches d'un certain cluster mais qui, en termes de relations, sont plus proches d'un autre cluster. Par conséquent, certaines coopératives étaient également positionnées stratégiquement par rapport à leur rôle de courtage, qui consiste normalement à négocier ou à créer une connexion

entre deux autres coopératives qui n'existeraient pas autrement. Certaines étaient plus centrales, plus populaires ou connaissaient plus de membres des coopératives du réseau, ces acteurs ayant la capacité de faciliter la diffusion d'informations ou de ressources au sein de leur cluster ou même avec ceux capables de le faire au niveau de l'ensemble du réseau. Certaines coopératives cumulaient une ou plusieurs de ces fonctions. Ces caractéristiques se reflétaient dans les rôles spécifiques de courtage et de centralité qui décrivaient la position de certaines coopératives en fonction de la dynamique que leurs relations avaient. Dans l'ensemble, le réseau des coopératives alimentaires productrices de *mūne* dans la vallée de la *Beqā'* est très dense et les coopératives sont fortement liées entre elles. Outre la proximité géographique, il est apparu une forte influence exercée par une proximité organisée provenant de sources externes au réseau. Plus intéressant encore, l'explication de la dynamique relationnelle par la proximité de lieux communs temporaires, également connue sous le nom de proximité géographique temporaire. Ces conclusions ont été tirées lorsqu'environ 65% des liens ont reconnu le regroupement fréquent des coopératives dans des formations et des événements, et plus de 23% la collaboration dans des entreprises communes de promotion, de marketing et de vente. C'est ainsi qu'il apparaît que la logique de proximité organisée est un moteur externe qui stimule les coopératives à s'organiser dans certains événements collectifs. Ce sont ces événements qui constituent une proximité géographique temporaire qui a été décrite comme aidant grandement à véhiculer des thèmes spécifiques (comme celui de la conservation des aliments, de la production et de la consommation de *mūne* traditionnels pour le Liban) et à rapprocher producteurs et consommateurs. En fait, ce sont les différentes formes de proximité qui jouent finalement dans l'ancrage global des coopératives alimentaires tant au niveau de leur ancrage territorial que de leur ancrage social. Une fois de plus, l'ancrage territorial est évident par la dépendance des coopératives vis-à-vis des ressources naturelles, des matières premières et des conditions générales de leur territoire nécessaires à la production de leurs aliments *mūne* qui s'expliquent par la proximité géographique. Les coopératives sont aussi des acteurs intrinsèquement ancrés localement, comme le dictent les principes de la coopération et comme l'exige la loi nationale sur les coopératives au Liban. De plus, cet ancrage territorial est encore accentué par la force des relations, car les coopératives semblent dépendre les unes des autres d'une manière ou d'une autre, comme le montrent la centralité et les rôles spécifiques qui existent entre les coopératives elles-mêmes en tant que réseau social. C'est le premier axe de leur ancrage social, celui qui existe à l'intérieur du réseau et de leur territoire. Pour le reste, l'ancrage social émerge encore plus au niveau des relations qui lient directement les coopératives aux acteurs extraterritoriaux, que ce soit avec les acteurs externes responsables de la composante de proximité organisée ou directement avec les consommateurs finaux du fait des lieux communs temporaires. Pour réitérer les forces en jeu, il semble que les différentes formes de proximité géographique (interterritoriale) et organisée (extraterritoriale), y compris les lieux conjoints temporaires, sont les facteurs et la logique d'interaction qui aboutissent à l'ancrage en tant que résultat, par lequel les coopératives alimentaires sont ancrées à la fois dans leur territoire (naturel) et dans leurs relations (socialement interterritoriales et extraterritoriales), la force motrice étant la signification culturelle des aliments traditionnels conservés de type *mūne*.

Avec ces observations, nous voyons la particularité que révèle le lien entre le *mūne*, les coopératives alimentaires et la vallée de la *Beqā'*. Nous constatons tout d'abord que la culture du *mūne* n'est pas une simple activité de conservation des aliments dans un objectif de sécurité alimentaire ou de patrimoine culinaire, mais qu'elle transcende une compréhension et une dynamique plus larges qui en font un outil unique pouvant servir de base à des chemins potentiels de développement territorial. Il agit comme un moteur derrière la mobilisation des communautés et des producteurs et la relation qu'ils entretiennent à différents niveaux ; en interne sur leur territoire et ensemble, et en externe avec les consommateurs urbains, les événements et les activités collectives, et avec les acteurs concernés. *Mūne* révèle un système territorial organisé qui existe et s'étend à des régions au-delà du territoire. Le *mūne* est donc une collectivité de produits patrimoniaux qui pourrait constituer un noyau sur lequel un cycle socio-économique entier peut être construit avec le *mūne* comme ressource, les coopératives de femmes comme acteur productif, et la vallée de la *Beqā'* comme territoire de départ. Les avantages que détient ce système pourraient être utilisés aujourd'hui pour élever son statut compte tenu des besoins et des développements récents. Il pourrait servir de voie stratégique pour améliorer la position des femmes sur le plan socio-économique et leur inclusion dans la vie économique et l'amélioration des moyens de subsistance. Il pourrait améliorer la vivacité des organisations, les cycles économiques et la mobilisation ascendante des acteurs locaux tout en améliorant l'enracinement des communautés dans leurs localités rurales. Il pourrait contribuer à l'entrée de devises précieuses s'il est promu et exporté correctement, d'autant plus que le *mūne* est bien positionné par sa mobilité et s'il est dirigé vers l'importante diaspora libanaise dont le nombre dépasse largement la population nationale et qui est répartie dans la majorité des pays étrangers. Cela pourrait servir à atténuer l'impact de la récente crise économique post-2019 qui a laissé plus de la moitié de la population sous le seuil de pauvreté. Il pourrait également remplir sa fonction initiale de sécurité alimentaire aux niveaux local et national, étant donné que les craintes d'insécurité alimentaire ont fortement augmenté en raison de la crise et de ses complications aux niveaux social, économique, sanitaire et bien d'autres. Cependant, le *mūne* en tant que culture et système a encore besoin d'une reconnaissance officielle et d'une différenciation afin d'atteindre une valorisation et une protection efficaces, mais le défi reste de trouver des moyens d'équilibrer et de normaliser ses caractéristiques tangibles et intangibles. Enfin, si l'on considère le fonctionnement territorial original du *mūne*, il est également bien positionné en tant qu'activité climato-intelligente, basée sur l'utilisation optimisée des ressources naturelles disponibles et fonctionnant selon des pratiques respectueuses de l'écologie et de l'environnement.

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