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Grace Guerrero Zurita

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Unité de recherche : Pacte, Laboratoire des sciences sociales

**Dynamique territoriale dans les petits cantons en
Equateur. Etude comparative de quatre cantons de 20000
à 50000 habitants**

**Territorial dynamics in small cantons of Ecuador.
Comparative study of four cantons with population
between 20000 and 50000 inhabitants**

Présentée par :

Grace GUERRERO ZURITA

Direction de thèse :

Myriam DONSIMONI

Université de Savoie Mont-Blanc

Directrice de thèse

Rapporteurs :

Patrick PIGEON

**Professeur des universités Université Savoie Mont-Blanc, U.R. Médiations,
Sorbonne Université**

Michel DIMOU

Professeur d'économie à l'université de Toulon, Laboratoire LEAD

Thèse soutenue publiquement le 28 mars 2024 , devant le jury composé de :

Frédéric Santamaria, EXAMINATEUR, PRESIDENT DU JURY, DOCTEUR EN
SCIENCES HDR

Michel Dimou : DOCTEUR EN SCIENCES HDR

Myriam Donsimoni: MAITRE DE CONFERENCES

Andrés Mideros Mora : DOCTEUR EN SCIENCES

Diego Martínez: DOCTEUR EN SCIENCES

Dedication

To my loved ones: Sarita, Antonio, Rene, and my mom Piedad who takes care of me from heaven.

An infinite thanks to Ma Mercedes Prado, Jean Lapeze, who started guiding this investigation, to Myriam Donsimoni who without her guidance, I would not have been able to complete this journey.

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Thanks Rene, my advisor in this investigation. And my family for the endless emotional support.

My infinite gratitude to you all, may God bless you.

Declaration

Grace Piedad Guerrero Zurita, I hereby declare:

The doctoral thesis I submit for evaluation is of my full authorship.

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Introduction, problems and general characterization of the cantons

Problem

Ecuador presents a high territorial inequality. Socio-economic dynamics have favored concentration based on what Deler (1987) refers to as bicephaly, which indicates an accumulation of demographic and wealth increase in two of the country's 221 cantons: Quito and Guayaquil. This historical concentration pattern remains until the present and has become more serious, causing territorial inequity that is expressed in low population growth indicators and lower potential for territorial development in medium sized and small cantons. Quito and Guayaquil concentrate 31.4% of the national population according to INEC's projection for the year 2020. In 1962, Guayaquil registered a population growth rate of 5.92% compared to 1950 and 2.9% in 2001. Quito maintains a rate always higher than the national average, reaching 2.18% in 2010 census¹.

“Historical gaps” persist when speaking about the capacity to generate income or to cover infrastructure needs, which have not been satisfied especially in small cantons, more related to the rural sector. In these cantons, inequality and poverty are prevalent. Although a lot of work has been done by private, public, and social agents through national and international cooperation to improve the quality of life of people in rural areas, poverty and a lack of job opportunities continue to push young people to move to more dynamic urban areas or to travel abroad. Meanwhile, the rural areas become impoverished, creating a vicious spiral in which rural populations leave, reducing chances for income earning or investment for future generations.

Population and Growth

The analysis of the cantonal gross value added (GVA) (BCE, Cuentas Regionales 2007-2014), shows territorial heterogeneity and imbalance in the creation of productive and service value in the 221 cantons. In 2007, 34 cantons generated 80.3% of the total gross value added of the country. In 2007, the contribution of GVA of Guayaquil to the national GVA attained 23.6%, in Quito, it attained 25.4% in the same year. In 2014 - a year in which oil international prices fell, affecting the country's revenues - the situation became

¹ Ecuador carried out a new census in 2022, and analysis have been made on some preliminary data that is currently accessible.

more concentrated, 80.2% of the total GVA was generated in only 23 cantons. In the same period, 30 cantons registered a decrease of the GVA (Comisión del Simposio Nacional de Desarrollo Urbano, 2016: 5-6). According to the table 1, in 2019 the 20 main cantons of 221 represented 74,23% of GVA, while 201 cantons created 25,77% of GVA. Data illustrates a big difference between Quito, Guayaquil and the third canton: Cuenca, whose GVA does not compare to any of the first two. In 2019 Quito and Guayaquil account for 46,8% of the national GVA, see figure 1.

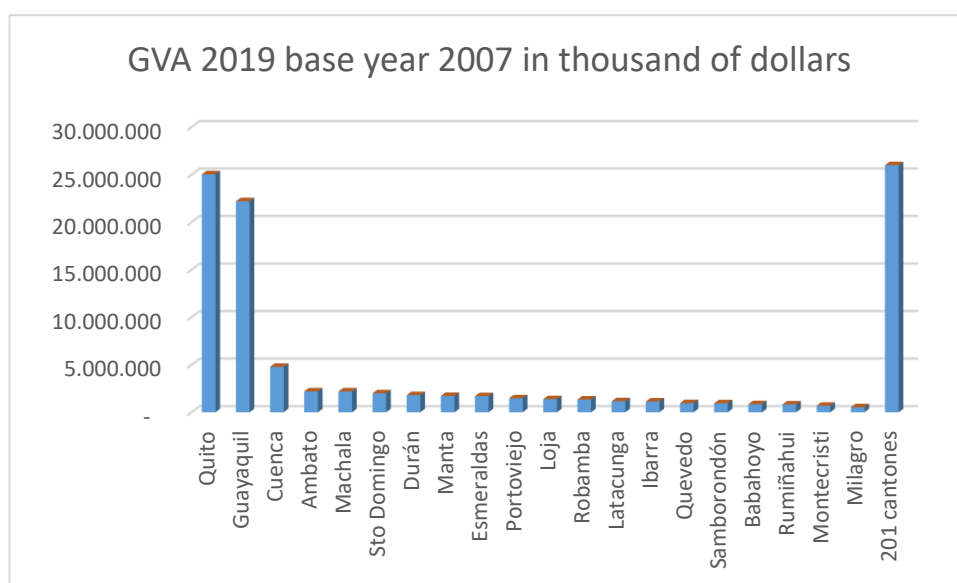
Table 1 - 20 cantons with the highest GVA values in Ecuador, 2019

Canton	GVA 2019	Percentage
Quito	25.032.606	24,82%
Guayaquil	22.201.182	22,01%
Cuenca	4.779.114	4,74%
Ambato	2.195.352	2,18%
Machala	2.192.266	2,17%
Sto Domingo	1.994.040	1,98%
Duran	1.809.622	1,79%
Manta	1.712.731	1,70%
Esmeraldas	1.694.302	1,68%
Portoviejo	1.469.772	1,46%

Canton	GVA 2019	Percentage
Loja	1.381.032	1,37%
Riobamba	1.332.526	1,32%
Latacunga	1.156.034	1,15%
Ibarra	1.134.571	1,12%
Quevedo	958.056	0,95%
Samborondon	945.232	0,94%
Babahoyo	848.390	0,84%
Rumiñahui	823.981	0,82%
Montecristi	685.826	0,68%
Milagro	530.428	0,53%
Total 221 cantons	100.871.577	100,00%

Source: Central Bank of Ecuador.

Figure 1 GVA comparison, all cantons of Ecuador



Source: Central Bank, 2019

In terms of population, many small cantons with populations of fewer than 50,000 people have lower growth rates than the national average, while others experience population decrease and exodus to urban or more densely populated areas with superior infrastructure and service conditions. Some small cantons have stronger

population growth characteristics, either because of natural population expansion or because they attract new residents. The goal in these small cantons is to discover how the economic, demographic, social capital, and city functioning components are changing so that best practices or lessons gained may be visualized. This can help other small cantons who are losing population.

The demographic problem is also prevalent in the study's population range of 20,000 to 50,000 persons, which accounts for 31.2% of the total number of Ecuadorian cantons. Using the 2010 population census and INEC's population projections to 2020, 63% of these cantons exhibit a positive and lower population growth rate than the national average, while 11% show a declining negative rate and are losing population. In terms of growth, the overall range of 69 cantons contributes just 7.32% to national GVA. Of the entire GVA produced within this range, 46.7% is generated by two cantons in the country's east, both of which contribute significantly to mining and quarrying, which includes oil and mining (BCE, 2019).

Agriculture is one of the primary economic sectors in small cantons, both in terms of percentage of GVA and occupation generation, which is associated with a low level of education. Agricultural activity accounts for a significant portion of GVA in the majority of the cantons analyzed. 14 of the 69 cantons in this region have at least 50% agricultural GVA, while 28 have at least 20% agricultural GVA, but with little value added and limited diversification of productive industries.

Institutions and social capital

Inequality between cantons expresses clearly in the institutional dimension as well. Institutional and managerial ability in these areas will be determined by economic importance, management, and governance capacity at various levels of government.

Ecuador is administered decentralized, according to Article 1 of the 2008 Constitution. This reforming of the state process entails that subnational governments make decisions on their development processes via planning and engagement of the local community. Decentralization empowers elected local officials to drive the local development process by transferring competencies, resources, and authority from the central to subnational levels.

The participatory development-planning framework indicates the primary role of the national level in the defining of the development process, to which proposals generated in provincial and municipal areas for local development must align (Article 280 of the Constitution). In fact, planning processes have increased national power while allowing local governments limited ability to push their own development initiatives.

In terms of fiscal dependency on the general state budget, cantons are 90% dependent, whereas provinces are 98% dependent. Fiscal autonomy lies on the ability to earn one's own revenue, which is difficult to do when cantons have limited economic dynamism or, in the worst-case scenario, expel their inhabitants. Small canton governments are at a disadvantage in terms of producing their own funds, whereas large and medium-sized cantons - which have a more dynamic economy, intersectoral links, and more politically significant administrative tasks - can collect more resources from residents.

Certain competencies, such as potable water and sewerage, cannot be effectively implemented if competencies are transferred from the central to the subnational level with insufficient resources, or if small canton governments are unable to generate their own revenues. Furthermore, the urban-rural dispersion of small cantons increases the expense for providing these essential services.

When talking about the political dimension of decentralization, the real participation of territorial actors must be analyzed. Even though there are planning councils involving public, private and social actors, they are not fully involved in the processes of implementation, monitoring and evaluation of local plans. The institutional framework doesn't determine differentiated levels of governance between cantons of different sizes. Additionally, in small cantons the rural sector is very important and the relationship between the local government and rural actors: communities, town councils, etc. can become paternalistic and clientelist. This fact can influence the capacity of stakeholders to activate the territory (Lapeze, 2007), build social capital and generate public action to transform territorial resources and promote territorial development proposals (Gumuchian, Pecqueur, 2007; Pecqueur 2013).

In terms of social capital construction, it begins with the establishment of a social network, which in Ecuador and other nations is manifested in fundamental and basic networks such as family, community, organization, and local network. Relationships that form within the social arena determine the current social energy or complexities of collective activity that reflect on the territory and represent an intentionally built resource (Lapeze, 2007) (Guerrero, 2018: 2).

In the country, social capital is additionally represented in other ways; there are territories where the degree of organization, confidence, and reciprocity is stronger due to cultural causes. This is the case in the highlands, where ethnic and cultural circumstances are more pronounced. On the contrary, this level is lower in the coastal region. Of course, there are exceptions to this pattern; for example, in the coastal region, the levels of business reliability of chambers of entrepreneurs and commerce in Guayaquil and Manta are high and politically powerful. The true extent of the country's social capital, networks, and informal and formal organizations is unclear; even the most vibrant regions show a low degree of organization. Another area where generalization is very difficult, hence examining each territory will be required.

The role of small cities in the creation of territorial dynamics

Although most cities in the world are small, there have been few research on them. Despite their importance as urban-rural nexuses or as centers of built heritage and proximity to natural heritage, studies on cities focus on the problems of large cities and intermediate cities with administrative and commercial functions, leaving small cities out of the picture. ECLAC and GIZ (2017) justify the lack of studies on small cities as a result of a migration from small cities to intermediate and large cities since 1950. Both institutions highlight the decline in the importance of small cities within the city system, as well as the ongoing loss of people in small towns and cities.

According to Demarzière (2014) and Aydalot (1980), disparities exist between large and small cities, implying divergences in access to services and living circumstances.

In Ecuador, the significance of the small city as a facilitator of territorial development has received little attention. The National Territorial Strategy (ETN in Spanish) of the National Development Plans scarcely acknowledges them and gives them little weight in the city system.

Based on the Unsatisfied fundamental requirements poverty index, small cities in Ecuador, with a few exceptions, are unable to provide the population's fundamental requirements, both in terms of infrastructure and access to health and education facilities. (UBN)².

INEC (2010) investigates small cities with less than 25,000 residents and finds that 152 of Ecuador's 221 cantonal capitals had fewer than 25,000 inhabitants, accounting for 68.7%. The UBN in these cities is often high, with between 60 and 98% of persons classified as poor by UBN. Only six of these 152 cities have less than 40% UBN, with

² Unsatisfied Basic Needs Poverty (UBN) is a multidimensional poverty measure created by the Economic Commission for Latin America and the Caribbean (ECLAC) in the 1980s. The technique has five components, including indicators that quantify impoverishment within each dimension:

- Economic capacity

In this dimension, a home is considered impoverished if i) the head of the household has less than or equal to two years of schooling and ii) there are more than three people in the household for every employed person.

-Housing access

If the floor is made of soil or other materials, or the walls are composed of reed, matting, or other materials, the household is deprived.

- Access to essential services

This dimension takes into account the dwelling's hygienic conditions. If the residence i) lacks a toilet or has a cesspool or latrine, or ii) obtains its water from a source other than the public network or another piped source, the household is impoverished.

- Overcrowding

If the number of people per bedroom exceeds three, the household is termed poor. (INEC, 2022, sp)
There are more than three people in the home for every employed individual.

Baños being one of them. The majority of cities, 63, have between 60% and 80% UBN; Montalvo is included in this category.

Another 50 cities have more than 80% poverty, with Jama being one of them. Cotacachi is among the group of places with UBNs ranging from 40 to 60%.

When the same metric is illustrated at the cantonal level, including the rural sectors, the proportion of UBN rises due to the rural sector's lack of services. This implies that if the city is able to give better services to the inhabitants, the rural sector will gain as well, because one of the small city's tasks is to serve as a connection between urban and rural regions.

Although a small city may have a low level of UBN, if the population is dispersed or vast, the cantonal indicator may rise significantly due to the difficulties of providing services closer to the rural population.

Finally, development national plans and their associated national territorial strategies (NTS) have failed to build a strategy for the study of small cities, expecting that focusing on larger cities will solve the problems of a larger population group.

Within this context, it is critical to investigate the demographic, economic, social, institutional factors, and the role that the small city has in small cantons³, as well as the features that distinguish them and contribute to the creation of positive dynamics that lead to territorial development. Analyzing them may assist in imagining critical political and social responds that are essential when articulating developmental territorial plans that will increase dynamism.

The above reasons inspired the performance of this research, which is based on a study of four small cantons with populations ranging from 20,000 to 50,000 people and seeks to identify the factors that favorably or adversely impact their territorial development dynamics.

The population of the country's 221 cantons was considered in the study in order to categorize the size of the cantons based on population. From this total, cantons with populations ranging from 20,000 to 50,000 people were chosen, yielding 69 cantons with a total population of 2,286,842 people, or more than 15% of the national population,

³ Currently, Ecuador has three levels of political and administrative territorial division: parish, canton, and province. COOTAD indicates that a canton has a population of more than 50,000 people, comprising rural as well as urban areas. Most cantons, however, fail to meet this condition because they formed before this standard was established. Small cantons do not fulfill this population size criteria. This definition differs depending on whether the region is Amazonian or border territory. (Article 22 COOTAD). The National Territorial Strategy (NTS) categorizes cities in Ecuador based on population and function. The small city is characterized in this document by its population and function as a cantonal capital.

according to the 2010 census. Two coastal cantons (Jama and Montalvo) and two highlands' cantons (Cotacachi and Baños) were researched. The population growth rates of Montalvo and Baños are higher than the country's average population growth rate. To establish a comparison, I selected their population growth rates: two increase faster than the national average. Two have slower growth rates than the national average. The cantons are classified into two natural areas. This suggests that there are significant disparities in geographic, morphological, and environmental circumstances. One issue that the four cantons have in common is their potential as tourism attractions at the local, regional, national, and internationally levels.

I explored four factors that generate differential dynamics and are connected to demographics, economy, the role of small city in the development of the canton and finally, institutions and social capital. These are understudied topics in cantonal development planning, despite their importance in territorial dynamics and each canton's distinctive territorial development commitment. This is due to the vertical nature of the planning process; while the Planning Code provides sufficient methodological freedom for local planning, most plans adhere to the guidelines established by the Secretariat of Planning, which do not achieve the comprehensiveness required by the territory's complexity.

In Ecuador, the pursuit for territorial development poses significant obstacles to territorial public, business, and social actors, particularly when it comes to presenting effective ways for generating virtuous processes that might lead to socioeconomic regional development. Development plans might be more integrated and relevant to the development of the territories if these factors are studied together.

My research question: What are the factors that might explain disparities in territorial development dynamics in small cantons?

The hypothesis: The factors that explain differences in territorial development dynamics in small cantons include demographic, economic, and related to the importance of small cities, social capital, and institutionalality.

The Study's Methodology

This is a mixed-methods study that allows the researcher to investigate several territorial issues within small cantons, using not only a quantitative approach but also appreciating the perspectives of the population, forming a triangle, and meeting various interests and representations (Creswell, 2007, pp. 23, 127). It's worth noting that there are significant gaps in territorial qualitative and quantitative information, therefore mixed techniques can assist fill in the gaps.

According to Dankhe's (1986) definition of study kinds, the study is an explanatory inquiry since it seeks to identify and explain the systemic links of the four components in the dynamics of the territories. However, the explanatory value of the discovered relationships is relative, given that the causalities are not the same in various regions. This is due to the diversity and uniqueness of each territory.

This is applied research because of the subject of the study. It has a practical usefulness in terms of the results acquired; the results may be valuable as inputs for analyzing and proposing territorial development strategies. The ultimate goal is to determine the dynamics of the examined components that might contribute to territorial development processes in minor cantons of Ecuador due to the country's territorial disparity. It is clear that this is not an experiment, and that the research will not intrude in the territory. To determine the aforementioned factors, the research will employ a combination of methodologies. Qualitative and quantitative indicators are used to determine the cantons' unique dynamics.

Several variables were analyzed in relation to the four factors, and those that best contribute to explain differences in cantonal dynamics were prioritized. Attention was given to migration, population segmentation into age groups in population pyramids, and population structure among the factors investigated in demography. Occupation by productive activity, productive specialization, linkage with markets, and cantonal firms and institutions are all socioeconomic factors. The focus for institutionalism and social capital is the level of associativity, as well as the engagement and effect of stakeholders in local government. Finally, in order to study the function of small cities, urban-rural articulation and access to services were addressed. The entire number of variables in the study and their operationalization are listed in the appendix table.

A comprehensive diagnostic was performed using a wide range of indicators from the document Territorial Development Program and Strategies (Lapeze, 2006). The interpretation of quantitative and qualitative data responds to the research subject.

In terms of information resources, the study employs data from two national censuses: 2001 and 2010, as well as official data from decentralized autonomous governments and interviews. I conducted 83 semi-structured interviews with actors from the four territories' various socioeconomic sectors, including leaders of civil society organizations, representatives of micro, medium, and large enterprises, officers from various areas of municipal and provincial governments, farmers, and trade union representatives, among others. Respondents signed a paper requesting informed consent.

I conducted the interviews using a non-probability snowball sampling approach. The research began with lists of cantonal actors given by the municipalities and enlisted additional participants based on the study's themes.

According to the hypothesis, semi-structured interviews were necessary. There were elements that emerged in one canton but not in others; they are part of a distinct context; therefore, the question guides caught the differences for each canton while keeping the hypothesis's key difficulties in mind. The on-site work took two years to complete. The appendix contains an example of interview instructions for each canton.

The content of the guide report shows the following axes: demography, socio-economic characterization of the canton, level of institutionality and social capital, finally the role of small city as a cantonal capital.

The interviews enabled me to identify the social processes in which the actors were involved, the regional connections they were forming, and the influence of national policies on the area. The testimonials and observations assisted me in identifying the cultural, social, and economic linkages that exist between small cities and rural communities. Interviews allowed me to identify social and commercial dynamics inside small cities as well as with other cantons and regions, which served as the foundation for choremas⁴. All information gathered through interviews has been processed and analyzed, categorizing it by canton and conducting the previously mentioned comparisons.

I utilized the Atlas Ti program to analyze the qualitative data from interviews, categorizing it along four research axes based on the hypotheses given. The goal was to discover testimonial aspects in the discourse of actors in relation to the previous axes and probable development plans presented by the actors (Creswell, 2007, p.40).

Quantitative data includes population and housing census statistics to assess population trends, migration, occupation, access to basic services and housing, and educational levels. The Central Bank provides economic GVA data. Official national government databases aid in the identification of health and education offers. The research employs the 2010 economic census as a framework for firms and establishments, and secondary material includes INEC reports, National Development Plans, and Development Plans of the four cantons as a basis for data. Furthermore, the available historical data was used to develop milestones or indicators that showed changes in these dynamics across time and between the 2001, 2010 censuses and preliminary data from 2022 census.

Each canton also has a collection of maps that are useful to determine its morphology and special geographic circumstances. I utilized choremas to identify regional or worldwide relations in order to obtain information about business movements. Chorema is a graphic representation of linkages that are difficult to visualize on a map. The starting point is a stylized map that has been made more abstract. On this basis, we aim to

⁴ Choremas are a method of visualizing a territory's connections without relying on georeferencing validity. They are diagrams that illustrate geographic dynamics and reference locations.

represent many types of relationships, such as social, economic, and cultural links. The expression of the links to be represented, rather than the accuracy of the georeferencing, is key in the chorema.

The findings will be presented to cantonal citizens; members of the Cantonal Council and actors questioned during the research are anticipated to attend. A primary goal is to connect and share information that territories may utilize in their planning processes.

Given that territories are complex systems, we will try to persuade the public of the need to evaluate each canton using a complex and diversified analysis, emphasizing the interconnectivity of the elements that explain their dynamics.

The theoretical frame

The Theory of Complexity is the large canopy that protects the research's theoretical foundation. Some writers present the perspective of territorial research from an integrative, interdisciplinary, and complex perspective in an effort to include a systemic vision into the study of territories. This theoretical approach emphasizes the examination of many elements that influence territorial development. The technique overcomes unidirectional vision and enables for the visualization of the territories' numerous interactions (Boisier, 2003; Tomadoni, 2007; Santos, 2000; Pecqueur, 2013; Dallabrida and Becker, 2010; Vargas, 2012).

The theory on territory-space-time-region and territorial dynamics, the complementarity between territory and space, and the links created between them in a regional scope are all included in the text. Deterritorialization, territorialization, and reterritorialization are spatial temporal processes. The theoretical treatment of these difficulties is based on the French and Spanish-American schools (Raffestin, 2018, Lapeze, 2007; Martinez, 2012; Gumuchian 2007, Tomadoni 2007, Dallabrida & Becker, 2010; Abramovay 2006; Bordieu, 1989; Santos, 2000).

The decentralization process is a context of state transformation that provides as a framework for the debate and study of territorial development as a result of the consequences of transferring duties, power, and resources from the central to subnational levels (Falleti). It is possible to achieve more active participation of social actors in oversight and decision making in public policy and public action at the subnational level (Falleti, 2011; Kooiman, 2003; Moulaert, F., & Parra, C., & Swan, 2003; Parra, C., & Swyngedouw, E. 2014).

The study aims to investigate four factors that, when considered individually, reflect distinct dynamics of small cantonal territories, but when considered together, the area can

be viewed as a system. It is an effort to apply complexity theory to the study of Ecuador's small cantons.

The research's first dynamic is demography; the study examines demographic trends and demographic transitions such as migration, death and birth rates, and population pyramids. Kuznets (1974), Manzano and Velásquez (2018), Simon (1986), Posadas (2013), and Polèse (2008). The demographic research is the beginning point for better characterizing the cantons' other dynamics. It aids in determining the potential consequences of small cantons' economic and social pathways.

The second dynamic, the traditional theories of growth and endogenous growth (Romer, 1994), and national and regional accounts indicate a starting discussion of the distinction between growth and development (Stiglitz, 2002; Talandier et Donsimoni, 2022). We get to the ideas of regional development and territorial development, as well as the importance of Marshallian industrial districts and local production systems, after a brief historical review. This dimension of the territorial economy exhibits varying levels of competitiveness and competitive advantages (Porter, 1991), as well as the proposal of ongoing valorization of territorial resources, which is part of the theory of territorial development (Marshall, 1890; Vázquez Barquero, 2007; Stiglitz, 2002a, 2002b; Jacobs, 1971; Polèse and Barragán 1998; Berdegué and Proctor, 2014; CAF 2017; Chiriboga, 2011b; Tello 2018). The metamorphosis from generic to specific resources is part of this scope (Pecqueur, 2013; Campagne and Pecqueur, 2014).

It is vital to situate the reality of Latin America and Ecuador within the context of theory, defining the country's agricultural structure and agrarian reform, which have a significant influence on the country's productive structures. Finally, According to ECLAC, information at the cantonal disaggregated level is scarce, so the research focuses on different relationships between cantonal and provincial GVA, taking the province as a whole into account (De Janvry, 2002; Szirmay, 2015; Arroyo, 1990; Figueroa, 1999; ECLAC, 2005; Carrión and Herrera, 2012; FAO 2015).

The function of the small city comes next. I allude to the French school for theoretical development, as well as Jane Jacobs' argument that city administration is critical to the flourishing of cities, contextualized to small and intermediate cities. The definition of a small and intermediate city entails identifying the link between urban and rural areas as well as the services it provides. It also considers the heritage of its attractions, as well as its capacity to promote development through economic, social, and cultural activities (Demazière, 2014; Sánchez, 2016; CAF, 2017; Jacobs, 1975; Aubert, Larmagnac y Emmanuelle, 2012; Courlet, Pecqueur, 1994; Talandier, 2014; Martinez, 2017; Mainet y Edouard, 2014; Berdegué & Proctor, 2014).

Finally, the institutional component, and within it, social capital, a relational capital with varied degrees in the cantons analyzed, is a factor creating dynamics. The selected

theory relates to the Neoinstitutional approach in this factor, which recognizes the relevance of existing networks both within and outside. We use the conceptualization of Latin American theorists who explored the factor in case studies in Europe and Ecuador (Donoso, 2000; Falleti, 2006; March & Olsen, 1989; Marshall, 1920; Martinez, 2012; North, 1990; Ostrom, 2015; Putnam, Leonardo, & Nanetti, 1994; Polanyi, 1957).

The Thesis structure

The first chapter has two sections: Begins with an overview of the Ecuadorian context and an explanation of territorial inequality from an economic and geographic standpoint. As a result, in this section we will go over some of the country's basic problems, particularly the huge territorial gaps and the anomaly of bicephaly. This first section provides background information on the cantons analyzed from a location-based and geographical standpoint.

The theoretical basis of the investigation is presented in the second section. As previously said, it has the complexity umbrella, from which emerges the theorization about the four factors studied in the thesis, which are demography, economic and commercial dynamics, the function of small cities, institutionality, and social capital.

The second chapter contains the empirical findings and contains information about the four factors. The first section of this chapter looks at the study findings in terms of demographic dynamics such as growth, migration, birth and death rates, and population structure; contains many testimonies from interviews done during the research.

The second section describes the economic and commercial trajectories of the four cantons by comparing the key distinguishing factors in terms of occupation, GVA, productive specialization, businesses, and market connectivity.

In the third section, components of reflection on the responsibilities of small cities are introduced, as well as census statistics on infrastructure comparing the four cantons and testimony reflecting residents' perceptions of the role of small cities.

In the fourth section, interviews help to identify the territories' levels of involvement and social capital, as well as the institutional framework of local government.

The conclusions are the final section of the paper and represent the findings of the whole comparative study, addressing the question and hypothesis provided at the start of the research and providing some key orientations. Its core focus is a reflection on numerous elements that are part of territorial dynamics in small cantons around the country and can explain differences in regional development.

Chapter 1

1.1 General Ecuadorian context

This chapter will examine the Ecuadorian socioeconomic context, including a synopsis of the geographical configuration and history of the country. It outlines various indicators that highlight the country's territorial inequality. A brief overview of the status of decentralization and the institutional crises, reviewing factors that has created the impacts of poverty in the country.

1.1.1. A determining geography in the development process

A. Geographical characteristics of the country

Ecuador is located in the north-west of South America, bordered to the north by Colombia, to the south and east by Peru, and to the west by the Pacific Ocean. The presence of the "Cordillera de los Andes" mountain range, which crosses it vertically (from north to south), generates three large continental regions. The Amazon region (from the eastern foothills of the mountain range to the east), the Sierra or highlands region (between the eastern and western ranges of the Andes), and the coastal zone (from the western foothills of the Andes to the Pacific Ocean). The insular region of the Galapagos Archipelago also belongs to the country (Báez, Ospina, Ramón, 2004). Ecuador's natural regions are represented in the figure 2.

Since it owns territories at sea level, and others that rise up to 6263 m.a.s.l., at the top of the Chimborazo volcano, Ecuador has several altitudinal floors of vegetation and climate, which allows maintaining differentiated productions by climatic floor and ecosystems. The Ministry of Environment identifies 25 ecosystems. Being in the tropics, the climate does not differ much in each zone during the year, which allows for year-round production. Another aspect linked to this position is the high biodiversity. More than 20,000 animal and plant species have been found in its ecosystems, and three of the largest "hotspots" on the planet (places with the highest number of endangered species) are also located there, the humid forests of the northwest (Andean Chocó), the outer faces of the Cordillera and the Amazonian forests of the northeast. (INABIO, sf).

Another interesting element linked to the country's central position is its energy potential. It is one of the nations with the greatest reliance on hydroelectricity, and the potential for solar energy throughout the year is also significant, in addition to wind, geothermal, and biomass energy (Serrano et al, 2017).

According to Deler (1987), there are three natural determinants of Ecuador's spatial geography: The first one is the Andes Mountain range that crosses Ecuador from north to south. It is an extensive and important mountain range whose formation dates back to the Cretaceous period.

The second element is the presence of jungle areas separated by the mountain range - the Pacific jungles to the west and the tropical rainforests of the Amazon basin to the east - (Deler 1987) quoted in (Báez, Ospina, Ramón, 2004, p 21), which implies the existence of geographic limits or natural barriers to settlement in certain geographic areas, and thus a low population density. In addition, the Amazon jungle has another disadvantage, the lack of navigable rivers till the plains that generated additional natural isolation. Besides, the jungle zone of Esmeraldas with its exit to the Pacific, made possible trade and relations with other countries. The port of Esmeraldas enabled the integration of Ecuador to the coastal region and the rest of the world, but in practice, this port was not utilized for commercial purposes. although the potential existed.

Finally, the third factor is the Gulf of Guayaquil, considered by several authors as the most extensive hydrographic system of the South American Pacific. The gulf has between 30 and 35 thousand square kilometers of extension, formed by an extensive network of rivers of plains, which are rich and of weak slope that allows to have fertile land for cultivation. Undoubtedly, a fabric of intense communication that propitiated the increase of population around the Gulf. Before the construction of the railroad, the rivers of the Guayas basin marked the dynamism of commerce and travel along the coast. Guayaquil remained the hegemonic port in the colonial period, accentuating the monopoly and central connection between Ecuador and the world. It even had international importance as a shipyard and steamboat building city (Báez, Ospina, Ramón, 2004).

B. The historical structure of the territory

Ecuador was born as a country in 1830, after the division of the state of "Gran Colombia", which united Venezuela, Colombia, and Ecuador between 1819 and 1830 (Echeverry et al, 2018). Its political history has been very complex, with several moments of internal commotion⁵, (Lair and Sanchez, 2004) that also implied legal

⁵ The most representative upheavals occur approximately every twenty years. Among others, we highlight the Ecuadorian Marxist revolution (March of 1840s), the conservative restoration (1860s), the

instability, which is expressed in the permanent changes of constitutional regulations⁶ (Chimborazo et al, 2021).

The territorial base of the Ecuadorian country is the "Real Audiencia de Quito", an administrative organization that was once under the Viceroyalty of "Lima" (present-day Peru), and later under that of "Nueva Granada" (present-day Colombia) (Guerrero and Quintero, 1977).

This intermediate position between the two Spanish viceroyalties implied boundary difficulties that marked the national history for almost two centuries, with a series of confrontations with the countries of Colombia and Peru⁷ which ended up reducing the territory to a current extension of 283,561 km² (Tobar, 1982; Torres, 1999).

The 2004 study by Baez, Ospina, Ramon, emphasizes the validity and relevance of Deler's (1987) approach and spatially validates the geographic communication networks identified since colonial times, observing and determining the social, cultural, political and commercial connections and interactions that existed at the time, as the genesis of the national bicephaly. Ayala's main work on the New History of Ecuador (1996) also includes the spatial structure of Ecuador that Deler analyzed.

In the seventeenth century, the Audiencia of Quito was part of the Peruvian Viceroyalty and specialized in textile production through *obrajes* (indigenous labor force exploitation in textile production). The Real Audiencia of Quito specialized in textile activity. Other territories specialized in mining, for example the procurement of silver from Potosi. According to Báez, Ospina, Ramón (2004), the province of Quito was closely linked to the port of Guayaquil for the commercialization of textiles in order to establish relations with the rest of the world. During the period of mining in Potosi and gold mining in Nueva Granada, the province of Quito retained its textile specialization. The productive scheme of obrajes and the existence of flocks of sheep that populated the highland territory configured a productive and commercial axis that required the necessary connection with the port to export.

By the 18th century, the productive space was reconfigured due to the exhaustion of the Potosi mines, the vacuum was not filled by the gold mines of Nueva Granada, the viceroyalty of Peru was divided into two and then into three, and these divisions raised

liberal revolution (1890 to 1905), the Julian revolution (1927), the four-day war (1942), the military dictatorships (1960 to 1980), the Alfarista uprising (1990), indigenous uprisings (2019 and 2022).

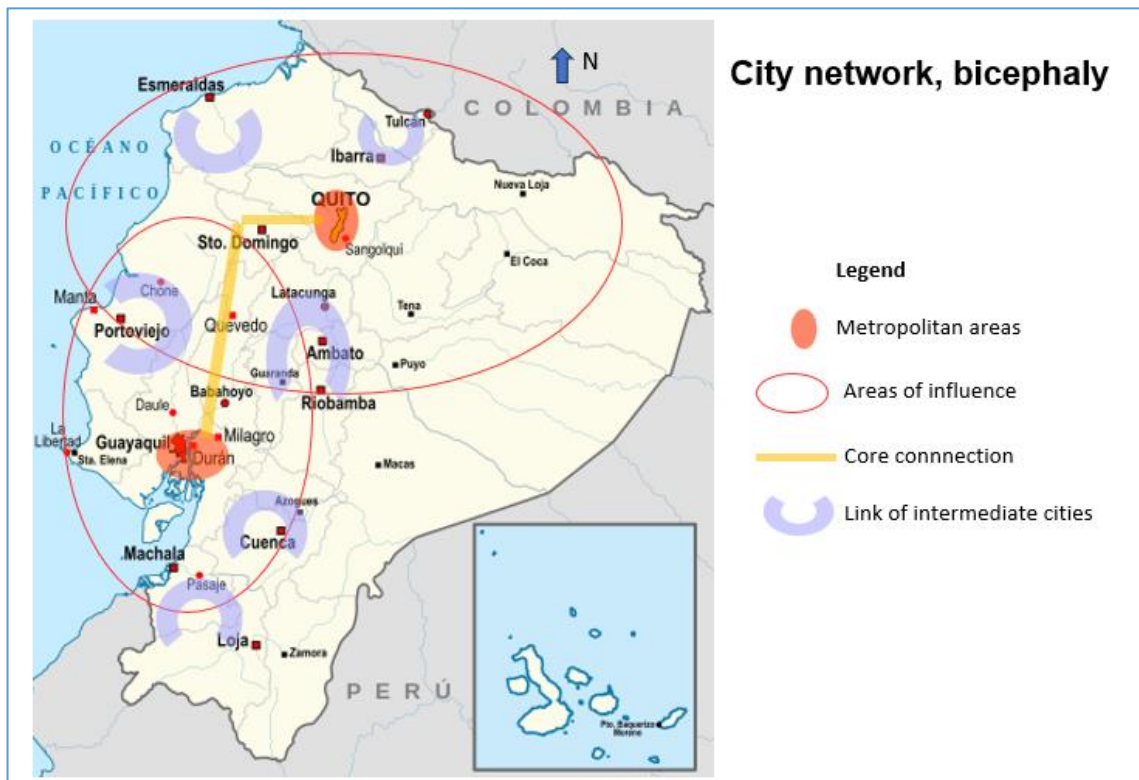
⁶ From the Constitution of 1830 to the Constitution of 2008, there were 21 Constitutions in Ecuador, which implies an average of ten years for each Constitution. The last Constitution has at least four important reforms through amendments.

⁷ The Ecuadorian Boundary History involves a series of confrontations and about 15 treaties, which gradually diminish the Ecuadorian territory.

new regional economic articulations. Subsequently, according to the authors, in the Audiencia of Quito, in the lower regions of the coast at the end of the colony, a new productive stage began due to the cocoa boom that configured a new landscape of economic and commercial dynamism.

According to the authors, at the end of the colony, during the cocoa boom that energized the economy of the coast, the province of Quito continued with its specialization in textile production, seeking new markets, different from the existing one: Guayaquil. Peru was the way to open new markets, which was not sustainable over time. During the 19th century the space of the Republic of Ecuador was configured around a central zone with a high population density located in the inter-Andean alley between Loja to the south and Tulcan to the north. Quito, Guayaquil and Cuenca formed the axis of commercial connection with Guayaquil being the center, and with extensive cocoa plantations that benefited from the Guayas basin and its natural wealth, especially in the province of Los Rios.

Figure 4 City networks of Ecuador



Source: Author, based on Deler (1998)

Until the end of the 19th century, Guayaquil was the largest city in the country (Deler 1987) (Báez, Ospina, Ramón, 2004). By 1930, Guayaquil surpassed in population other coastal cities such as Portoviejo or Machala, also important because of the small ports of

Manta or El Oro. Guayaquil was larger than Quito in terms of population at that time and the trend of population growth continued until a few years ago when Quito surpassed Guayaquil in population.

Another concern is that there is limited colonization in the province of Manabi, with little economic flows and low population density on the route to Esmeraldas and other regions on the coast, as well as towards Zamora in the east. There was an Amazon to be discovered and inhabited, with presence of Jesuit missionaries (Báez, Ospina, Ramón, 2004). In other words, there was a broad geographic space that showed the disintegration of various territories and the consolidation of two stronger centers: Quito and Guayaquil, see figure 4.

The railroad, built between 1861 and 1920, shortened the distance between the coast and the highlands, mainly between the centers of Quito and Durán, canton that was close to Guayaquil, the two poles of growth in Ecuador. Deler points out that this infrastructure work was one of the most difficult engineering constructions in the world, because it crossed the Andes Mountain range, also with a high financial cost in terms of indebtedness for the country (p.54).

From 1920 onwards, the cocoa crisis occurred due to the global fall in prices and the diseases that hit the plantations, many small farmers from the Guayas basin moved to Manabí to expand the cocoa growing areas. Between 1920 and 1950, there was a period of crisis in several sectors: financial-banking, production due to cocoa fluctuations, political and military due to the war with Peru and the signing of the Rio de Janeiro Protocol, border protocol signed by Ecuador and Perú in January 1942.

In 1950, the export of another important commodity: - bananas - mitigated the crisis. Later, in the 1970s, the production and export of petroleum began - a non-renewable mineral in which Ecuador specialize - and on which its trade balance depends. Until today, petroleum is the main export item and is followed by export of agricultural products. Petroleum production stimulated the colonization of several Amazonian provinces, even though this growth did not involve any improvement in living conditions or poverty reduction in the producing provinces. With the aim of building living borders in dispersed and isolated areas, the colonization process in the Ecuadorian Amazon escalated in the 1960s. Oil exports in the northern Amazon attracted colonos - particularly from Loja, a province that was suffering from a severe drought at the time - With the advent of oil exploitation in the 1970s, colonization grew deeper.

C. Bicephaly: Economic and demographic concentration in two cities

The concentration and importance of two cities in Ecuador studied and explained with the geographical studies of Jean Paul Deler (1987) are still valid today. The author studies the territorial structure of Ecuador and locates the importance of the geographical factor

in determining the process of development and economic concentration in the country. A phenomenon that was identified more than 3 decades ago, a persistent and deepening problem. Deler mentions that since colonial times two important territorial axes are positioned: Quito and Guayaquil, the first one as administrative capital and textile center and Guayaquil as port and commercial nexus point of the whole country with the foreign trade. In the previous section, the study analyzed these elements of the historical process that took place in the country that led to maintaining this condition of concentration, especially due to the presence of problems of coverage in connectivity and infrastructure.

At present, although other more current studies focus on the importance of the development of intermediate cities (Berdegue and Proctor, 2014; Tomadoni, 2007) Deler's approach still helps to represent the concentrating spatial scheme, which also takes hold in the productive and wealth accumulation field. For example, if one analyzes the Gross Value Added produced in the main 20 cantons by volume generated in 2019, one can see a high level of concentration in Quito and Guayaquil.

Provincial capital cities have seen distinct growth trajectories, due mostly to commercial and transportation linkages. Cities such as Ambato, Cuenca, and Riobamba were more important due to the regional commercial linkages in which they were involved. They are still dynamic to the present. Several cities have not been successfully integrated and have seen a minimal population increase since colonial times: Loja, Ibarra, Tulcan, Guaranda. Additionally, there has been a considerable dynamization of the eastern area since the 1970s - as a colonization zone that still exhibits strong population growth rates for numerous eastern cantons - this is justified by the productive specialization of non-renewable resources. In the 1980s, dependence on oil for foreign exchange deepened. The 1980s is known as the *lost decade* and has as its context the crisis of the 1970s with the growth of oil prices. The crisis of the 80's was global. However, Ecuador suffered from the El Niño phenomenon, which strongly limited agricultural sectors linked to banana and rice production. At the end of the 1980s, a strong impulse was given to the prescriptions of the Washington Consensus, in an attempt to prevent the crisis of the 1990s. This implied - among other liberalizing policies - financial deregulation processes that would later be the cause of the serious financial crisis experienced by the country between 1999 and 2000, with the consequent dollarization of the economy and emigration processes (Larrea, 2010).

After the banking crisis of 1999 and 2000, the government decided to establish a policy of dollarization of the economy and the financial decision destroyed several companies that could not compete in prices and remain in the domestic market. Unemployment and external migration processes increased. Agriculture for domestic food production was discouraged because of low prices. Agriculture for food production was linked to peasant family farming, characterized by low access to land and other means of production, technological, patrimonial, service and market access gaps (Martínez, 2013). As a result, inequality in the country increased.

Along with the crisis and migration, there was also a process of urban concentration in Ecuador's main cities. At the same time, in most cases, the profits generated in the territories were not reinvested in the regions or in the cantons and their intermediate or small cities, but were concentrated in a few development centers in Quito, Guayaquil, and Cuenca, while other cities lost importance.

1.1.2.- The resulting economic and demographic characteristics

A. An observation by economic sectors and population (cantonal specialization)

Ecuador is a country that specializes in primary production. When we look at the value of GVA with population ranges and without considering oil production - which generates distortions in the annual production information - we can see the importance of primary production linked to agriculture and mining in the small cantons, table 2 highlights this data.

Table 2 Cantons by population range and percentage of activities by sector in the economy in 2020 (Excluding oil production)

Cantons by population range	Total number of cantons	Primary sector	Secondary sector	Tertiary sector*	Public administration, education health
-20,000	99	71	13	17	77
20,000-50,000	66	53	1	13	44
50,000-100,000	34	21	6	8	23
More of 100,000	20	8	8	7	13
More of 1,000,000	2	0	1	2	1
Total general	221	153	29	47	158

*For the purpose of analysis public administration, education and health are listed separately in the table

Source: BCE, 2020

For Ecuador as a whole, the primary sector represented 11.78% of total GVA in 2020. In 153 cantons, out of the 221 that constitute Ecuador, the percentage of representation of the primary sector is higher than the national percentage, 81% out of 153 have a population of less than 50,000 inhabitants and are small.

The secondary sector represents 29% of the country's GVA, however, of the 221 cantons, only 13% represent a higher percentage. In several small cantons, with a population under 50,000 inhabitants, the representation in their GVA is explained by investment in the hydroelectric sector.

The tertiary sector (excluding public administration, education and health) represents 39.2% of cumulative national GVA generation, with a high weight of professional and real estate activities - housing rent, other business activities (for example, automobile

maintenance and repair, personal effects, household goods, machinery rental, information, technology, and research and development) - only 47 cantons exceed this percentage of representation.

Additionally, within the tertiary sector, the activities of the deconcentrated and decentralized public administration, as well as the health and education sectors, which are mostly public, represent 19.9% of the GVA at the national level. For 54.7% of the cantons with less than 50,000 inhabitants, these activities are more representative in terms of GVA. The capacity of the public sector to dynamize local economies is undeniable.

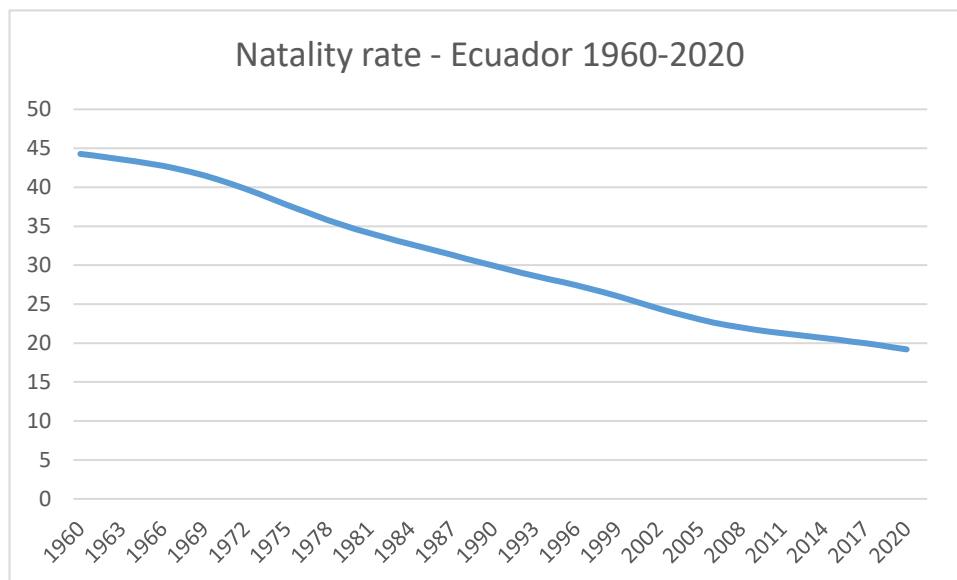
Finally, when 99 cantons with fewer than 20,000 inhabitants are examined, 77 of them rely on the public sector to stimulate their economies. Some small cantons rely heavily on the public sector as a source of stable employment.

B. Population trends in Ecuador

Demographic changes allow us to monitor socio-economic change processes that shape trends of natural growth or migration, improvements or deterioration of living conditions, and changes in socioeconomic or urban-rural growth. These indicators can aid in the study of small cantons to detect reasons of exodus or attraction, variables that make the territory more or less dynamic, more or less equitable.

In the dynamics of demographic transition, birth and death rates are very important. In the case of Ecuador, these illustrate significant population changes.

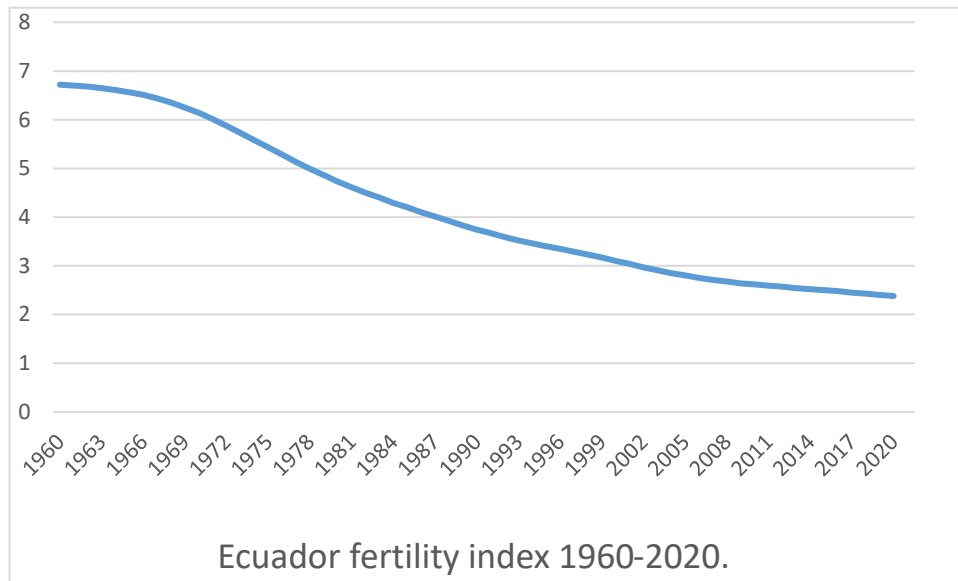
Figure 5 Natality rate



Source: Datos macro with INEC data

The birth rate indicates a significant decrease. From a rate of 44.28 per thousand in 1960, it drops to 19.19 in 2020, see figure 5. The correlative data is the fertility rate per woman, which shows the number of children per family, which also reveals a decrease from 6.72 in 1960 to 2.38 in 2020, see figure 6. It should be noted that the so-called "replacement rate", which allows a population to remain stable, is 2.00, which will be reached if this trend continues.

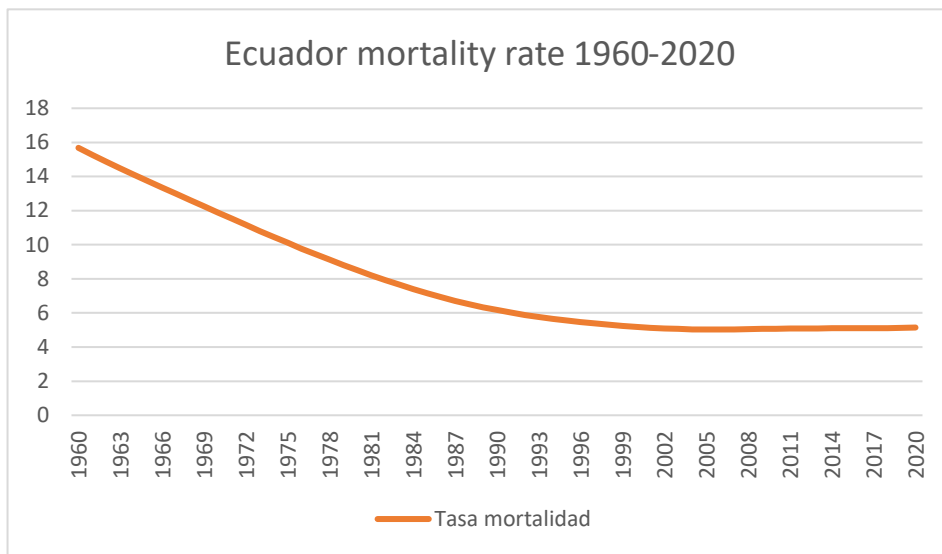
Figure 6 Fertility Index, Ecuador 1960-2020



Source: Datos macro with INEC data

The Mortality rate also illustrates a significant decrease in terms of percentage between the years 1960 and 2020, from 15.68 to 5.14 per thousand. In this case, in recent years, the conditions of poverty and the COVID19 health crisis caused the rate to rise slightly between the decade of 2010 and 2020. In 2005 and 2006, the rate was at its lowest point, 5.03 per thousand as visualized in figure 7.

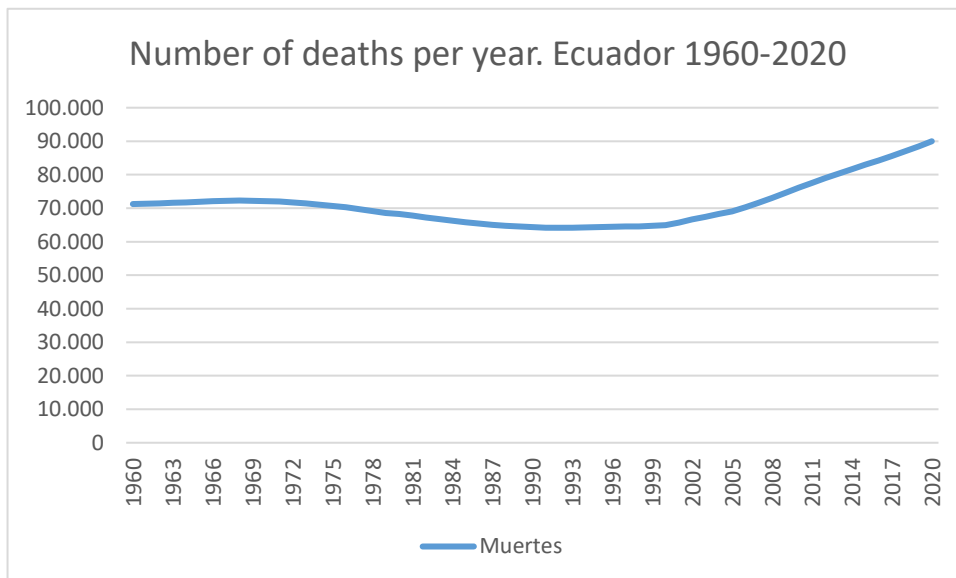
Figure 7 Mortality rate, Ecuador, 1960 - 2020



Source: Datos macro with INEC data

The number of deaths displays a growth from just over 70,000 deaths per year in the 1960s to about 90,000 deaths in the decade from 2010s to 2020, as seen in figure 8. This figure, however, can be relativized by population growth, so the rate is much lower. Nevertheless, it should be noted that infant mortality in the country is much higher (32 per thousand), which reflects deficient health systems and malnutrition deficiencies affecting children and their mothers.

Figure 8 Number of deaths per year



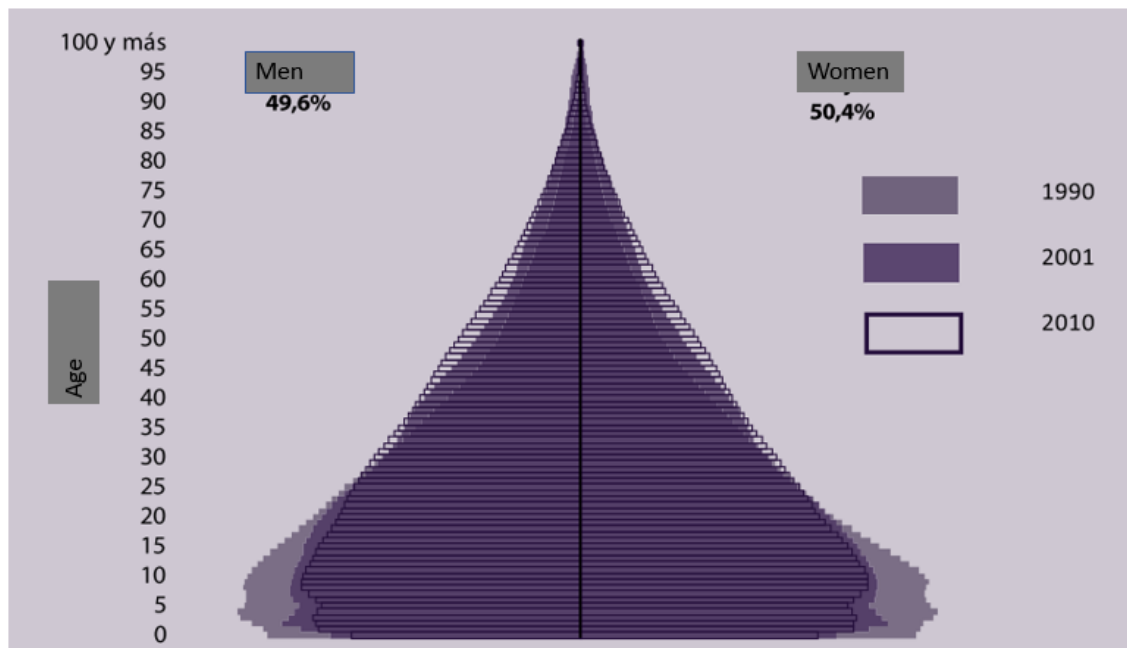
Source: Datos macro with INEC data

All these results illustrate different issues in a very young population: approximately 35% of the population is under 15 years old, and 61% is able to work (between 15 and

64 years old), which implies that the country is at a moment of "demographic bonus". In addition, we may notice the growth in life expectancy, which currently averages 72 years.

The national population pyramid in Ecuador responds to an initial phase of demographic transition. It still shows a pyramid shape, although the young population zone is beginning to widen, and the base is shortening. The figure 9 of INEC illustrates this by comparing three censuses: 1990, 2001, and 2010.

Figure 9 Population pyramid

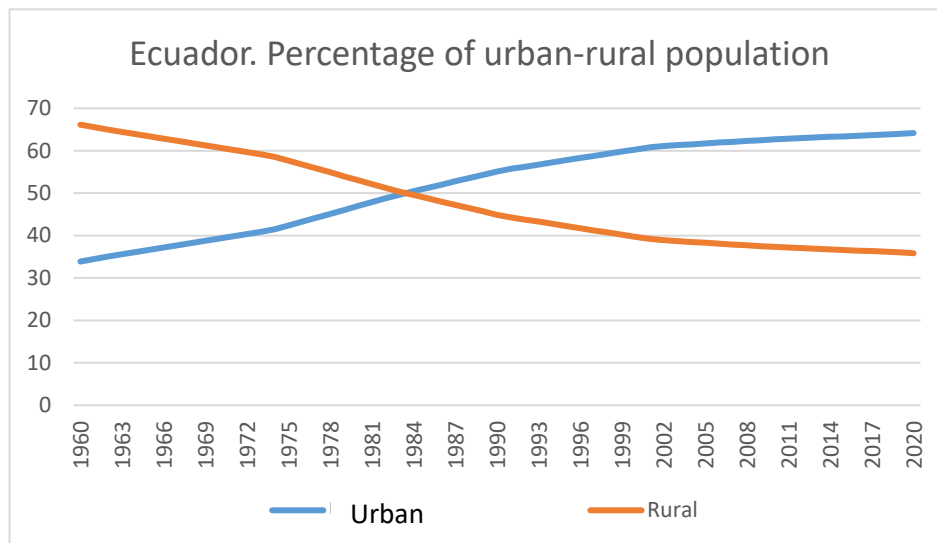


Source: Villacis, Carrillo (2012, p.21)

Rural-urban migration

In Ecuador, the transition from rural to urban population is clearly visible. It is estimated that 64% of the present population lives in urban areas. Compared to 1960, the relationship is almost completely inverted, since in that year 66% of the population lived in the rural sector, as seen in figure 10. The variation occurred between 1984 and 1985.

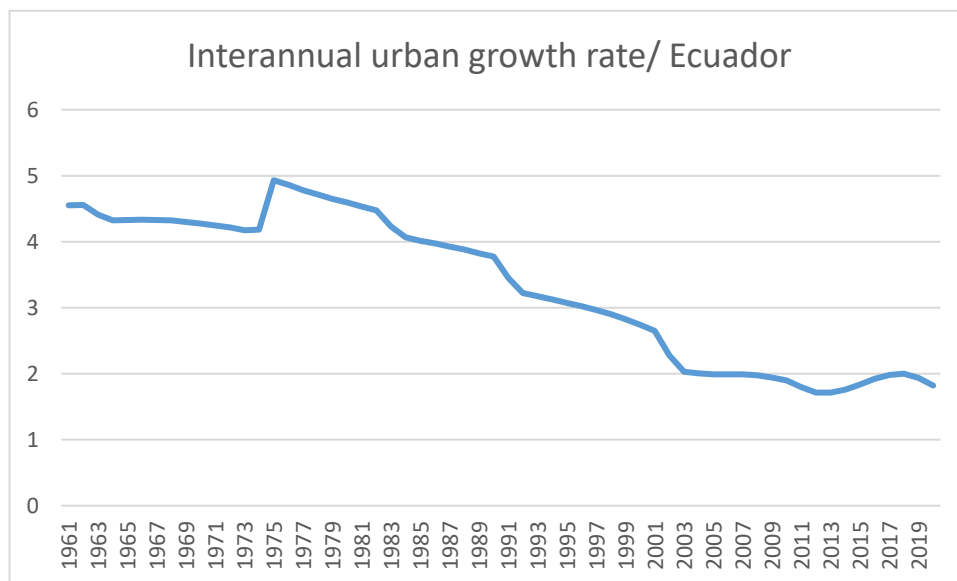
Figure 10 Percentage of urban-rural population



Source: World Bank data 2022

The annual variation of the urban population, according to World Bank data, shows some periods of growth, in which there was a stronger migration from the countryside to the cities. The 1970s decade was particularly memorable, see figure 11.

Figure 11 Interannual urban growth rate



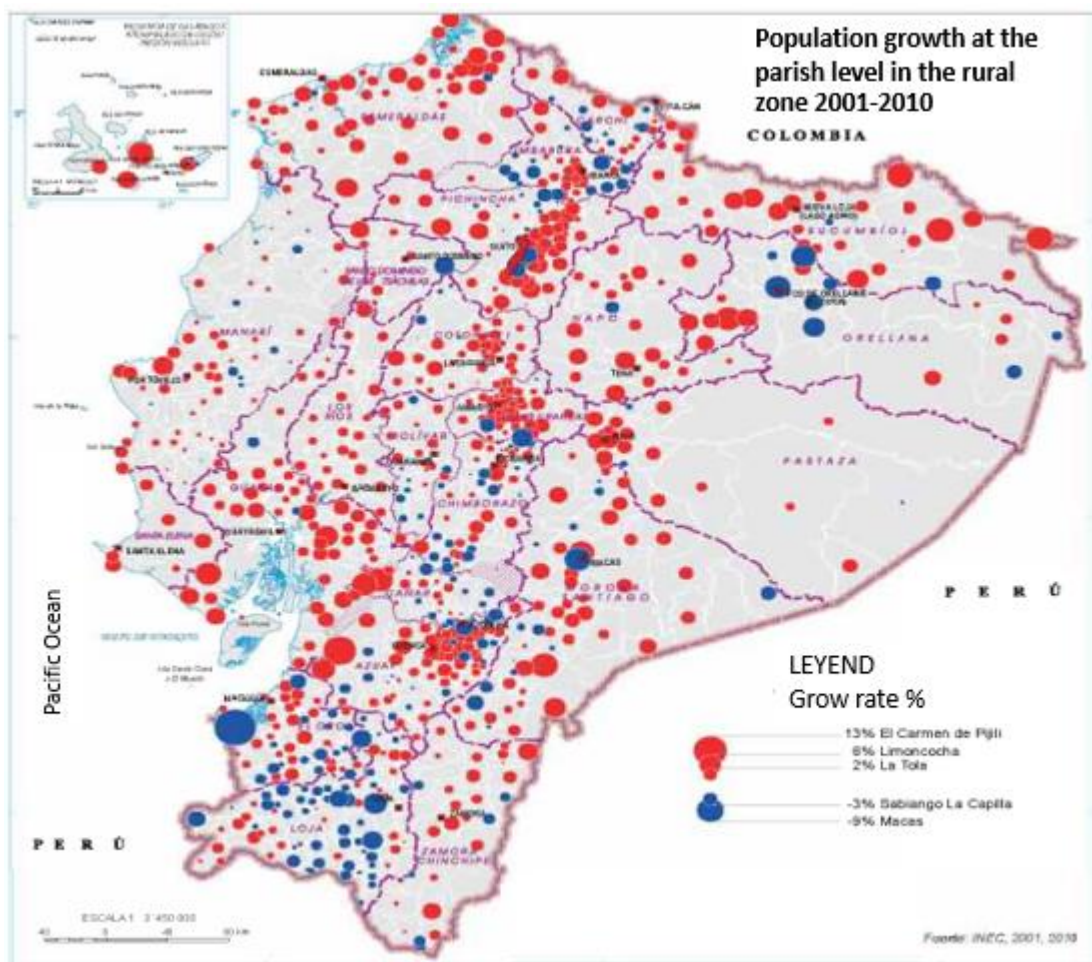
Source: World Bank data 2022

The distinguishing criterion for the National Institute of Statistics and Census (INEC) is administrative: the consolidated areas of the cantonal capitals are urban, out of the 221 cantons in Ecuador. This leads to consider some very small populations as urban,

especially in the Amazon region, and to consider populations of more than 15,000 inhabitants as rural for statistical purposes, such as all rural parishes around Quito. For instance, the parishes Calderón and Conocoto comprise more than 80,000 inhabitants but are still considered rural.

The movement of people from the rural to the city is mostly motivated by the need for a more steady income, improved living conditions, or access to basic services. In general, a pattern of internal migration from the countryside to the provincial capital, and then to intermediate or large cities (Quito and Guayaquil) has been found, especially since the 1970s. Econometric research shows that the "wage" component is a key attractor, but it must be combined with other structuring factors such as ethnic diversity and productive specialization. Variables related to improving human capital - such as access to education and health care - may influence the decision not to migrate. Additionally, Alvarado, Correa and Tituaña, (2017) indicate that indigenous population migrates less.

Figure 12 Population growth at the parish level



Source and elaboration: IGM (2017) Rural Atlas of Ecuador. P. 60

It is noteworthy the number of studies on the "great migratory wave" at the end of the century (between the years 1997 to 2003 approximately), which involved the departure to the United States, Spain, and Italy. A figure of approximately half a million Ecuadorians - especially from the "expelling" provinces of Azuay and Cañar - migrated to other countries as noted by Cardoso (2018).

The "rural exodus" in Ecuador identifies certain territories as "expellers" of population.

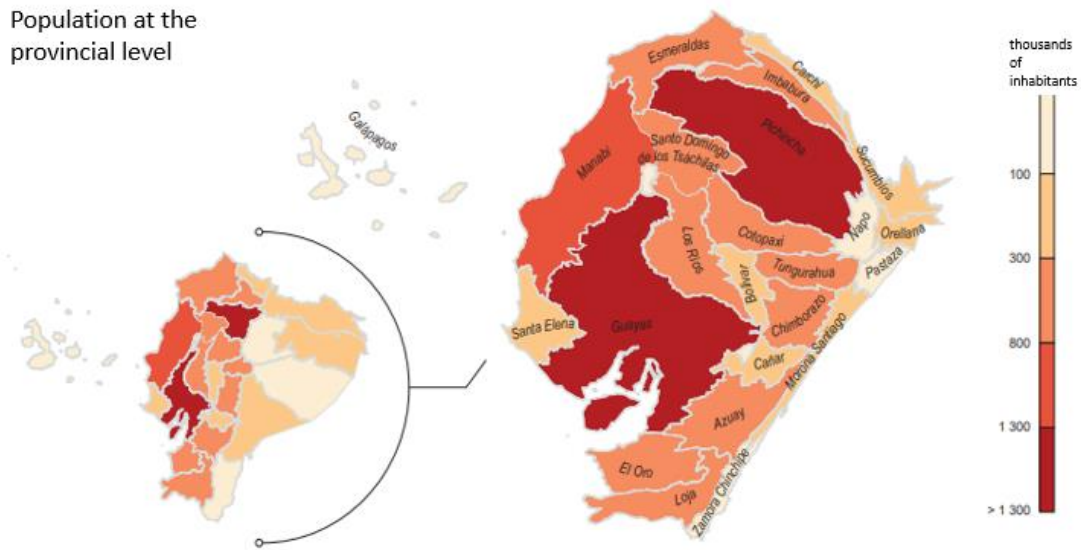
When observed at the level of rural parishes, figure 12, those areas are mostly in the provinces of El Oro, Loja, Azuay, and Cañar (southern zone). The expulsion finds its cause in the lack of economic sources however climatic conditions such as droughts are also mentioned (IGM, 2014).

Spatial distribution of population

As a corollary of the migration processes already explained, this thesis finds a spatial distribution of the population in Ecuador that responds to many variables. The main patterns of occupation refer to the growth of megacities and intermediate cities. Quito and Guayaquil concentrate approximately one third of the national population, and when combined with 14 cities of 100,000 to one million inhabitants (nine of which are province capitals), they account for 58% of the population. This thesis focuses on smaller conglomerates. It is estimated that 63 towns have more than 15,000 inhabitants and less than 100,000, which places them properly as cities (beyond their administrative location). Together, they represent approximately 16% of the Ecuadorian population.

Population analysis at the provincial level shows that the three most populated provinces are Pichincha, Guayas and Manabí (where the cities of Quito and Guayaquil and the Portoviejo-Manta conglomerate are located). These three provinces account for 52% of the national population, see figure 13.

Figure 13 Population for provinces. Distorted map



Source and elaboration (IGM, 2017, 48).

Outside the urban areas, the Rural Atlas estimates a population of 3.7 million as dispersed rural population (IGM, 2017).

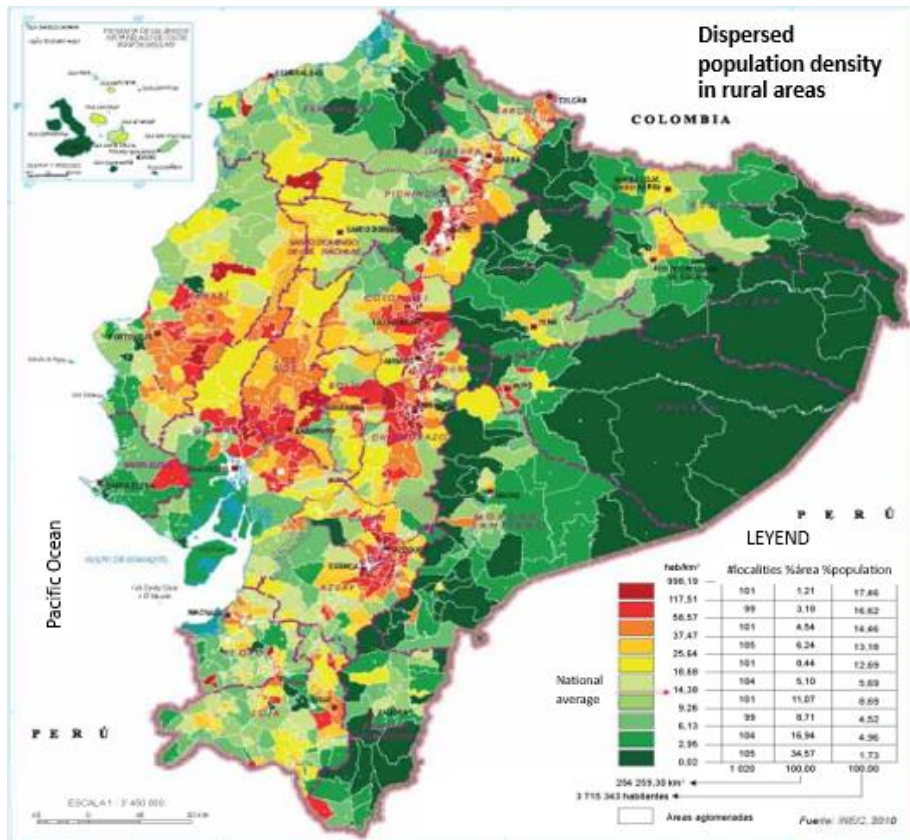
Table 3 Percentages of population by regions

Region/Year	1825	1950	2001	2010
Highlands	84,0	58,0	44,9	44,6
Coast	15,2	40,5	49,8	50,3
Amazon	0,8	1,5	5,3	5,1
Total:	100,0	100,0	100,0	100,0

Source: IGM 2017

For historical motives, the pattern of occupation was greater in the inter-Andean valleys until the middle of the 20th century, when a large part of the population moved to the coast. The coastal region currently has the largest population. In the projection for the year 2020, with an estimated national population of 17.5 million inhabitants. 8.6 million people live on the coast, 7.8 million in the highlands, and less than 1 million in the Amazon. The table 3 illustrates how this distribution occurred by comparing the percentages of some censuses.

Figure 14 Population density in rural areas



Source and elaboration: IGM 2017

This produces a very heterogeneous population density in the country, with some areas of Guayas and Los Ríos, Manabí, Pichincha and Azuay standing out for their high population density (more than 1,000 people per km²). While in large regions of the East, the population is inferior to 10 people per km²), see figure 14.

C. A highly concentrated and decreasing demography

Ecuador's socioeconomic dynamics have favored the main population concentrations, the cities of Quito and Guayaquil, and some intermediate cities, many of which are also provincial capitals and absorb administrative functions inherent to the process of deconcentration and decentralization of the state. There are development gaps between these cities and the other ones in various ways.

"Historical gaps" persist in terms of income generation possibilities and, among other disparities, coverage of unsatisfied basic needs (UBN) with the population living in rural areas. There is a concentration of income, population, and services in a few Ecuadorian cities: Quito, Guayaquil and Cuenca. Additionally, there is territorial inequity in small cantons connected to cities with regional importance and linked to rural areas and

agricultural production, these areas have high levels of poverty, and they report temporary and permanent emigration.

Population concentration processes

Like other Latin American countries (Polèse and Barragán, 1998), Ecuador has experienced a decrease in the rural population over the years. In 1950, Ecuador's first census, 84% of the population lived in rural areas. This percentage has been decreasing according to the following figures, with a notable increase in the urban population, especially in the 2000s. Nevertheless, in absolute numbers the rural population is large, see table 4.

Table 4 Urban and rural population data

Urban and rural population data in Ecuador according to censuses: 1950-2022					
Census	Urban	Rural	Total	% urban	% rural
1950	445,034	2,288,825	2,733,859	16%	84%
1962	746,796	2,951,734	3,698,530	20%	80%
1974	1,275,675	3,822,988	5,098,663	25%	75%
1982	1,919,676	4,153,482	6,073,158	32%	68%
1990	2,737,410	4,351,278	7,088,688	39%	61%
2001	7,431,355	4,725,253	12,156,608	61%	39%
2010	9,090,786	5,392,703	14,438,499	63%	37%
2022	10,687,151	6,251,835	16,938,986	63%	37%

Source: INEC 2015-INEC 2022

The other element is the population concentration in the two national poles: Quito and Guayaquil, whose population growth rates are higher than the national average according to several censuses. This research finds that for the two cantons from 1950 until the 1982 census the trend continues steadily in Quito until now, see table 5.

Since the 1980s, a significant migration has taken place from Guayaquil to Duran and Samborondon, cantons so close to the city so they part of the conurbation. This explains why the population growth rate of the former decreased in the 1990s after the great growth it had experienced in previous decades. Guayaquil's population growth rate was lower than the national average in the first decade of the 2000s and continues to decline until 2022. Ecuador's population growth rate between the last two censuses is 1.9%.

Table 5 Population of Quito and Guayaquil

Year	Guayaquil	Growth rate	Quito	Growth rate
1950	331,942		319,221	
1962	567,895	5,96%	510,286	5,21%
1974	907,013	5,20%	782,671	4,75%
1982	1,328,005	4,23%	1,116,025	3,94%
1990	1,570,396	1,86%	1,409,845	2,59%
2001	2,031,953	2,90%	1,838,709	2,95%
2010	2,350,278	1,61%	2,242,615	2,2%
2022	2,746,403	1,29%	2,679,722	1,48%

Source: INEC 2015- 2022

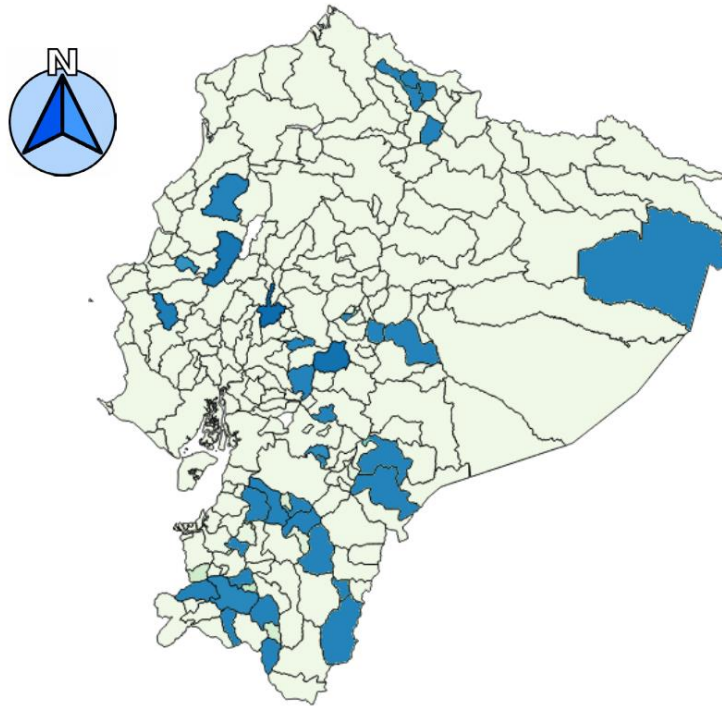
It should be emphasized that migration increased between 1990 and 2003. Possibly due to the economic crisis experienced by the country. Crisis marked by several milestones: the war with Peru in 1995, the financial crisis and subsequent dollarization of the country between 1999 and 2000, the political crises that involved overthrowing governments and that began with the government of Abdalah Bucaram in 1996, and continued with Jamil Mahuad in 2000, and Lucio Gutiérrez in 2005. All these factors deepened the economic crisis and the political and economic instability of Ecuador and put pressure on migration from the countryside to the city and later on to international migration since 2001.

Population decrease

The problem of population decrease, which can be seen in the figure 15, based on the 2001 and 2010 population and housing censuses, demonstrates that 41 cantons, 18.5% of Ecuador's cantons lose population or show minimal population growth rates, as expressed in Annex 3. Of these 41 cantons, 2 had more than 50,000 inhabitants and 19 had less than 10,000 inhabitants. In 19 cantons (not necessarily the same), the population growth rate was negative. These cantons also present conditions of unsatisfied basic needs of the population with an average of 79.1%. Ecuador has an average percentage of 60.1% of population with unsatisfied basic needs⁸ (INEC, 2001-2010).

⁸ People who present persistent deficiencies in the satisfaction of their basic needs, which include economic capacity, health, education, access to services, overcrowding are considered poor by ubn (unsatisfied basic needs) (INEC methodological sheet).

Figure 15 Negative growth rates, cantons of Ecuador, census 2010



Source: Author based on SIISE data, 2001-2010, Scale 1: 2'000,000.

The map illustrates areas of concentration of this problem, a certain regionalization, which is more acute in the southern region of the country. The problem of depopulation of the small cantons in the country is due to multiple factors that date back to the 60s. Among others, there are environmental factors such as drought and flood cycles in Manabí (coast) and Loja (highland), which mainly cause seasonal or permanent migration. Another factor is the concentration of capital, social and economic services in the main cities. Meanwhile, in the east, the area shows a different process of colonization around the labor market caused by the oil boom and the exploitation of mining resources, a situation that is still evident through high population growth rates in several Amazonian cantons, but not in all of them.

Difficult land access

The Ministry of Agriculture and Livestock (MAG) has typified the productive systems in the country by identifying four of them: entrepreneurial, combined, commercial, and marginal.

Table 6 Productive systems

System	Characteristics	Potentialities and market linkages
Entrepreneurial	High use of capital in the purchase of machinery and equipment with state-of-the-art technology. Employs permanent and occasional labor. Its products are focused on exploitation.	Linked to the external market, it allows obtaining income from abroad and the connection with external markets and the national agroindustry, it constitutes 11% of the productive surface of the country.
Combined	It usually applies a technological package. The work is combined with other forms of remuneration. Its production is oriented to the national market.	Related to agribusiness production and with the possibility of adding value; constitutes 10% of the country's productive area.
Mercantile	The use of family labor force prevails. It constitutes a system articulated with the consumer market because it bases its economy on subsistence and self-consumption.	Relative to peasant family agriculture and small-scale production with the weight of intermediaries, link with local markets and self-consumption; it constitutes 68% of the country's productive area.
Marginal	System marginalized from the effects of economic growth, with minimal production exchange and little or no surplus generation. Generally, uses ancestral and/or traditional technologies.	Microfundios with very low productivity, would be off the radar of measurement of national accounts, with little capacity for improvement in productivity has limited access to marketing; constitutes 11% of the productive area of the country.

Source: MAGAP-SIGTIERRAS 2016 cited in Atlas Rural 2017.

As can be seen in the table 6, 79% of the productive area of the country is linked to small-scale production, family farming and microfundios⁹; the mercantile system is characterized essentially by family production, low productivity and a significant weight of intermediation for marketing. The marginal system is linked to the minimal production of microfundios, which, in addition to low productivity, are not very sustainable in

⁹ Microfundio is an area of land smaller than 1 ha, as a result of land division for new generations of small farmers.

environmental terms. The presence of microfundios implies an expansion of the agricultural frontier as well as the use of agrochemicals and chemical fertilizers, which degrade the soil and affect the environment. There have been few cases of agroecological production on microfundios.

The other major factor of exclusion is unequal access to land and the concentration of the resource. Unfortunately, there has not been an agricultural census since 2000; however, several cantons have updated their rural cadastres, indicating that land concentration persists as seen in table 7.

Table 7 Parcel sizes

Natural regions and parcel sizes			
Sizes/Region	Coast	Highlands	East (Amazonas)
Large	>50 ha	>25 ha	>75ha
Medium	From >10 ha to <=50 ha	From >5 ha up to <=25 ha	From >25 ha up to <=75 ha
Small Up to	<= 25 ha	<= 10 ha	<= 5 ha

Source: Rural Atlas 2017

The differences in surface area between regions for classifying a plot as small, medium or large can be explained by the fact that the presence of the Andes Mountain range prevents large extensions. The time of exploitation has resulted in greater subdivision of properties there. In the coastal region, the extension of agricultural land and even the type of production imply larger plots. In the Amazon, the surface area is much larger than in the coast and highlands, and settlement is more recent than in these two regions.

The Atlas data indicate that 2,029,966 ha correspond to large extensions, 1,633,075 are plots with medium extensions and 2,667,462 ha are small. "According to INEC, the area under agricultural labor (permanent, transitory and fallow crops, natural and cultivated pastures) in 2015 was 5.67 million ha" (Atlas, 2017, p.92). The province with the largest area under production is Manabí, then Guayas, Esmeraldas and Los Ríos in the coastal region. The areas of Highlands and East are medium and small, respectively.

The principal crops are destined for foreign trade (cocoa, bananas, and coffee) and agribusiness (rice, hard corn, African palm). The area planted with permanent crops includes bananas, sugar cane, African palm, and transitory crops: hard corn, rice, and potatoes. The floriculture sector is important for foreign trade, and there is inadequate exploitation in the livestock sector for industry and direct milk consumption. Agribusiness is an engine of development in the country through the generation of value added and intermediate consumption; this value addition also allows for better results in terms of employment and rural dynamization.

According to the survey launched by ESPAC (2014), to that year there were 3,642 collection centers throughout the country, of these, 79.5% were located in rural areas with a population under 15000 inhabitants. This infrastructure allowed the collection of milk, coffee, cocoa, poultry production farms. This allows for a relative concentration of

investment and capital in rural areas and makes it possible to generate certain productive and commercial dynamics that have an impact on employment and the rural economy although with connectivity and roadway limitations, as seen above.

1.1.3. Inoperative decentralization

A. Sub-national administrative organization

Ecuador is a unitary country¹⁰; the degree of autonomy of subnational governments to lead local development processes is relatively small. The Ecuadorian State, thanks to its constitution is characterized as a republic governed in a decentralized manner (art. 1 of the Constitution). The country has recently experienced political processes that led to a concentration of power in the President of the Republic and on the central level rather than on the local elected officials.

The current Constitution establishes a territorial division into regions (that are not created yet), provinces, cantons and rural parishes. These territories elect local authorities in democratic electoral processes. The Prefect is elected in the province, the Mayor and his Councilors in the canton or municipality, the Members of the Parish Council are elected in the rural parishes. In the parishes, there is a distinction between urban and rural parishes, as only the latter have a representation mechanism, the so-called "Juntas Parroquiales Rurales", which also elect 5 members of their boards. The inhabitants of each canton elect a mayor and a group of council members every four years to lead the "municipal decentralized autonomous government" (or "cantonal", which can be used as a synonym), as authorities of the territory.

The Executive of the central government also has delegates at each territorial level: the Governor in the province, the Political Chief in the Canton and the Political Lieutenant in the parish.

B. National development plans

A country showing such imbalances and inequalities between urban and rural areas is the result of historical decisions, accumulation, concentration, and of national planning processes that do not build clear strategies in the goals to achieve local development

¹⁰ A unitary country has a single national legal and judicial system that is divided into administrative divisions. At the intermediate level, a federated country means the coexistence of various legal systems. States in the United States and provinces in Argentina have the authority to make their own laws. (Opazo, 2020)

alternatives. It is impossible to speak of a single sustainable development proposal, but rather of the construction of bottom-up development proposals.

The participatory development planning scheme implies the preponderance of the central national level in the definition of the development model, to which local development proposals generated in the territories at the parish, cantonal and provincial levels must be aligned (art 280 of the Constitution).

The National Development Plan 2013-2017 raised the transformation of the productive matrix, aimed at promoting the knowledge economy and the change of the energy matrix. The 2017-2021 National Development Plan raised new challenges around three main axes: "1) Rights for all people throughout life; 2) Economy at the service of society; 3) More society, better State" (ECLAC, 2019). The 2021-2025 development plan seeks to create opportunities for employment generation through five work axes that include the economic and social axes, the ecological transition, comprehensive security, and an institutional axis.

All territorial levels¹¹ - regional (which is envisioned in the Constitution but does not yet exist), provincial, municipal, and parish governments - have the authority to plan the development of their territory in collaboration with national planning and the other levels of government (Art 262 No.1, 263 No.1, 264 No.1, 267 No.1), which have parallel texts applicable to each level of government. In most of the development plans of the municipal and provincial government - elaborated between the years 2011-2012 and updated between the years 2015-2016, and the provincial ones to year 2020 - there is the aspiration to add value to traditional agricultural production. However, the National Development Planning has prioritized the transformation of the productive matrix, the promotion of the knowledge economy, changing of the energy matrix, or the development of export production or natural resource exploitation.

Local planning is coupled to national planning; this implies territorializing national public policy. At the provincial and cantonal level, it is necessary to generate local public policy, which is not so feasible because local planning processes, estimated for 4 years, are in fact reduced to a 2-year planning in order to adapt to National Planning. This happens because the subnational election processes do not coincide with the national election processes.

¹¹ The administrative division in Ecuador includes three current territorial levels: Province, Canton, Parish, all three constitute levels of government. In France there are three levels of territorial authorities of common law, the regions, departments, and communes. Constitutional law 2003-276 attempted to structure the "decentralized organization of the Republic". For its implementation, there are many other organic laws. The number of communes and the overlapping of competences has given rise to the expression "mille feuille territorial" Blairon (2011).

Ecuador appears to have a robust normative framework in place to encourage and regulate the development of its territory and of the country as a whole. Nevertheless, the results are scarce. Since 2008, with a new constitutional framework, a strong normative reform was raised in order to recover the capacity of the governing and regulating state. In the course of twelve years the process has involved more than one hundred legal bodies (Codes and Laws), and an extensive regulatory activity. The orientation of building a "state of rights and justice" gave rise to a certain "normative explosion", which has not always been accompanied by mechanisms that allow the effective enforcement of the law. That promotion of regulations in many cases remains a "dead letter", especially in relation to institutional strengthening: active participation, respect for institutions, citizen training, compliance with rules and regulations, among others.

The legal and regulatory framework is linked to various territorial dimensions: Decentralization, Economic, Planning, Institutional, Social, Environmental, Popular and Solidarity Economy. The laws constitute the formal legal framework that the Ecuadorian State establishes with national and subnational scope. It seems that there is an almost perfect level of institutional development, in practice, hardly applicable. As said before, Ecuador is a country that has developed a large volume of legal regulations that help to exercise public policy, despite the difficulty in putting them into effects.

In practice, the weight of the *Plan Nacional del Buen Vivir, Toda una vida* and the current *Creación de Oportunidades* is greater than the development planning proposals that can be generated by the sub-national territorial levels. The National Planning Secretariat (SENPLADES) has regulated the process of plan construction and has controlled the elaboration of the plans. There is a mechanism for reviewing the implementation of plans, also concentrated in SENPLADES. The National Territorial Strategy (NTS) establishes in a general way the role and functions of cities, cantons, provinces in national country but this conceptual proposal does not give north to the regional and local planning.

This institution: - SENPLADES - decreased in size in 2019. This was transformed into *Planifica Ecuador* and then, has continued to be the governing body for planning at the national and subnational levels, but with less relative weight to regulate the process of plan construction, with respect to its previous capacity. At present, the planning institution is the Secretariat of Planning and has a reduced relative size and preponderance compared to the stage when SENPLADES existed.

National and local objectives do not find a point of convergence. At the national level fiscal pressures lead to seeking to generate income through resources considered strategic, such as oil or mining, while smaller local governments, linked to the primary sector of the economy, seek to add value to production with the prospect of generating greater employment and local dynamism.

C. Difficult territorialization of public policies

Specific economic development issues are addressed at the national level by a series of ministries with a sectoral vision. Such as the Ministry of Agriculture and Livestock, Ministry of Foreign Trade, Ministry of Industries and Productivity, Ministry of Labor, Ministry of Transportation and Public Works, Ministry of Tourism, Ministries of Mining, Hydrocarbons, Environment, Telecommunications and Information Society, and Electricity and Renewable Energy. Many of these implement public policy in the territory, with regional and provincial delegations according to the process of state deconcentration.

The interconnection and coordination capacity of the deconcentrated entities in the territory is a point that causes tension in deconcentrated and decentralized institutions. On the one hand, local governments usually ignore the scope of the strategies and national projects that national government implement in the territories. On the other hand, the national level is unaware of the local contexts and realities, although these strategies seek to solve public and private problems related to production, infrastructure, or poverty. In practice, the standardized strategies present limitations in their implementation in the territory, causing tension of the sectoral-national vision. The latter does not consider the territorial system in its entirety, and the possibility of raising inappropriate and even counterproductive solutions to local needs.

The competence to promote production is an exclusive competence of the provincial level. In the Ecuadorian decentralization scheme, this implies that only this government level can generate territorial policies for the promotion of production. In practice, municipalities and parish councils can also promote local development processes through productive support. The provincial government can articulate local (cantonal) actions with national actions in the territory. However, this intermediation role is very weak - and despite the existence of a resolution of the National Council of Competences (CNC) regarding the competence of promoting production (resolution 008-2014) - the lack of coordination between subnational levels, the overlapping of actions, the lack of clarity to promote equitable territorial economic development are ongoing problems.

Among the competencies of municipal governments are the control over the use and occupation of land use, urban roads, the provision of public services of drinking water, sewage, wastewater treatment, solid waste management, environmental sanitation, maintenance of physical infrastructure and equipment for the health and education sectors. All of these represent important items of municipal investment. Almost all competencies have one or more national regulators in the respective ministries.

Since Ecuador is a heterogeneous country, in cultural, ethnic, geographic, economic, social and institutional terms, some local governments have - in practice - a greater political weight, either because of their population, location factors, the importance of the city in terms of services and administration, economic growth, capacity to diversify their

productive systems or political roles assumed by the prefects or mayors in the political arena. Meanwhile most local governments have few capacities (economic, technical or political). This differentiation of capacities may also be a initial stage for identifying across territories' conditions.

The decentralized autonomous government (DAG) is significantly dependent on resources from the General State Budget, with most municipalities relying on more than 90% of their budget and provinces relying on 98% on average. The municipalities can generate their own resources from the creation of patents and property taxes, while the provinces can generate them from tolls. The stronger the economic activity of the canton, the lower the dependence on the state budget.

The decentralization process seeks a greater participation of local stakeholders. Which requires visualizing the level of participation of territorial actors at the institutional level, as each territory has a network of relationships that configure different governance models. The opportunity of political incidence of organized groups is relative and configures different territorial governance schemes. The alternatives do not necessarily involve the option of achieving co-governance, since the possibility of influencing local public policy or the solution of local problems depends on the will of the elected actor in the territories and their perspectives regarding social participation, not so much on the strength and importance of the local social capital (Kooiman, 2003).

Regarding the fiscal policies with the greatest impact on the country, one of the most influential was dollarization. With dollarization came a certain stability that encouraged productive investment with social consequences like migration and impoverishment that shows a spatial face. Agroindustry was linked to export channels or national industrialization with significantly greater added value, resulting in improved pricing incentives for agro industrial production chain actors. Some industrial companies work with economies of scale and prefer to buy raw materials from large producers to guarantee volume and generally because they offer better quality products. On the other hand, peasant family farming does not find alternatives to improve farming production or add value. Despite the heterogeneities and inequalities in the appropriation of the value creation, the theory says that increasing the added value of a product has a positive impact on the territories (Chiriboga, 2011a; Chiriboga, 2011b; Demazière, 2017; Demenus & Crespo, 2011; FAO, 2015). Nevertheless, there are limits to the possibilities of small cantons to add value to their production in a specific, unequal, and heterogeneous context.

On the one hand, localization factors generate significant productivity differences for producers in small cantons versus bigger cantons. On the other hand, production costs in dollars, which also include labor market costs, make Ecuadorian production more expensive compared to competitors from neighboring countries that are able to generate greater competitiveness due to the exchange rate. This has the greatest impact on small-scale production and indicates an unfavorable context for the small cantons.

D. An institutional crisis

The country is reaching its 200th year as a republic. It has a history marked by a lack of legal and institutional stability. In 200 years, for example, Ecuador has had 21 constitutions and various periods of totalitarian government.

In 1980, democracy returned after a decade of dictatorship, since then we have had three constitutions. We had ten presidents between 1996 and 2006, none of them served their whole term. The present constitution was adopted in 2008, and it has already undergone three significant modifications. This constitution sought to establish a model of state that guarantees rights and a scheme of republic with a balance of powers. In fact, political processes have evolved toward a hyper-presidential structure in which the executive authority absorbs the functions of social control, electoral control, and dominance over the Assembly and the judicial function. Since the oil price crisis in 2014, Ecuador's economy has suffered a decline that is deepened by subsequent crises such as the 2016 Manabi earthquake, the indigenous uprisings between 2019 and 2022 that paralyzed the economy, and the Covid health crisis. In addition, post-Correa governments were unable to maintain the prevalence of the executive function, which has led them to a permanent confrontation with the parliament and the judicial function. In addition, corruption scandals have been facilitated by the hyper-presidential system due to the weakness of public control and oversight.

The arguments detailed above demonstrate a great institutional weakness, in addition to the lack of compliance with regulations. Latin American citizens tend to look for caudillos¹² and leave aside citizen responsibility in public issues, in what is called a delegative and low-intensity democracy which implies a low level of citizen participation. (Duque, 2014) quoting O'Donnell (1993).

The weakness of the national state and its poor governance is transferred to the local level, affecting political decentralization processes. The 2008 constitution, on the other hand, established a paradigm of highly concentrated authority known as hyper-presidentialism, which also indicates a weakening of the decentralization process. From my perspective, this is reflected in the poor results of decentralization in the country. (Larenas, 2013).

O'Donnell (1993) also debates on the quality of democracy; in Ecuador the reforms of 2008 were parallel to the loss of importance of political parties, in favor of personalism

¹² The caudillo is a political leader who maintains authority and is revered by his people as a redeemer or great figure.

movements without ideology¹³. Currently, as for the elections of 2023, there are more than 200 political movements, which makes it difficult for the spaces of representation: National Assembly, Cantonal Councils, and Parish Councils, to be effectively representative, due to the high dispersion of the vote. This has given rise to over-represented minorities and a certain obstruction to decision making due to the lack of clear majorities.

An additional element to consider is the decrease in citizens' confidence in political leadership and institutions, which can be verified by the application of Latinobarometro surveys since the 1990s, which show a permanent decrease in citizens' confidence in democracy and its governors, in the judicial system and in the political system. The situation reflects something similar to what was studied by Buchanan (2009, p34) when he stated that men have a sense of being at the whim of a faceless, unaccountable bureaucracy, vulnerable to unexpected adjusts that break and distort human expectations while providing limited options for remedy and retribution.

1.1.4. The consequences on the dynamics of the different territories

A. Urban-rural relations

Poverty and the lack of job opportunities continue to drive young people to more dynamic urban areas or to other places outside the country. In the meantime, many rural regions remain impoverished, creating a vicious spiral in which depopulation or a lack of productive investment limit investment and income generation options for future generations. On the other hand, there are small territories that show a different dynamic, attracting population, some small urban centers or settlements are growing at a faster rate than the growth rates of larger urban concentrations or national averages. It is necessary to identify the differences between those that are growing at a slower rate and those that are growing at a faster rate.

There are rural regions with different economic and demographic dynamics, varying levels of associativity, and local governments that impose different management on the territory in both conditions. Additionally, small and medium-sized cities have various functioning and linkages, and they play diverse roles among the social actors who inhabit the territory.

¹³ Movements that legitimize a leader's candidacy without presenting a core ideology such as Guillermo Lasso, Rafael Correa, Lucio Gutierrez, Alvaro Noboa, and others.

Regarding the nexus between rural and urban spaces, the Rural Atlas (2017, p 10) notes that among Ecuador the rural-urban relationship is increasingly closer and more diverse than it was in the past, with diverse configurations of rural-urban relations in terms of employment, and diversification of productive activities. In this context, this document analyzes the rurality in all its complexity and possibilities of linkage: in its geographical, economic, social and cultural dimensions. Berdegue and Proctor (2014) also speak of the increasingly interlaced and close relationships between rural and urban areas. These authors highlight the role of small cities in the dynamism of territories considered rural.

Likewise, in relation to the space considered rural in Ecuador, the Rural Atlas indicates the following:

From a statistical point of view, rural in Ecuador is defined as all those areas that are outside of *amanzanas* areas, (urbanized areas) a clearly spatial and administrative criterion. This definition presents strong limitations to be able to interpret the new territorial dynamics of Ecuador (Atlas, 2017, p.11).

Within the concept of rural, the Rural Atlas includes criteria related to population, dispersion, production and identity. The document refers to geographic areas where the population is dispersed in the countryside, in small human settlements and in small cities, with a population limit of 15,000 inhabitants, although it is indicated that this figure is arbitrary. In relation to production, it is linked to natural resources and primary production of agriculture, livestock, fishing, forestry, and occasionally mining. When there is value addition, it is on primary production. It includes family production, i.e. peasant family farming community production, as well as medium and large-scale family production. Value addition also occurs in tourism or service activities.

From a sociological perspective, the rural population identifies with the space in which it lives, values it and develops affective connections with the territory and relationships of closeness and trust with the population that transcend the economic dimension. (Atlas, 2017, p 10). A group of this population is associated with peasant family farming. Food and Agriculture Organization for the United Nations (FAO, 2012, p 5) cited in Martinez (2013, p 6) characterizes peasant family farming associated to limited access to land or capital resources, significant family labor force. The main income-generating activities are “agriculture/forestry/aquaculture/fishing”, although family complements income by other activities carried out in the nearest or regional human settlements; finally, the last characteristic indicates a close relationship between the family and the agricultural land. Additionally, and relevant to Ecuador, Lechon and Chicaiza (2019) discuss about the importance of peasant family farming, which fulfills a double function in the community, first a social and then a cultural function that must be valued. The authors present the

argument after analyzing two rural parishes in Imbabura and Pichincha¹⁴ where they visualize the change from small agricultural production to monocultures.

B. A major disequilibrium between rural and urban areas

Despite urban-rural inequalities, it is impossible to speak in a generic and standardized way about the rural area. The Rural Atlas of Ecuador (2017, p 131) highlights a typology of rural territories and their characterization in order to raise differentiated strategies of development based on territorial particularity. The document shows these categories:

1. Areas with a strong presence of productive dynamism and rural-urban relationship
2. Areas of little diversified production with signs of urbanization
3. Consolidated areas with a strong presence of family agriculture
4. Areas with low productive capacity and predominance of subsistence agriculture
5. Marginal and frontier rural areas
6. Conservation and tourism zones

Among the variables that the Military Geographic Institute (MGI) study, there is population (agglomerated or dispersed areas of less than 15,000 inhabitants); population growth rate (between 2001 and 2010); urbanization (concentration in the parish capital as a percentage); percentage of the Economically Active Population (EAP), km² distance between locations with more than 15,000 people. In the case of type 1, what characterizes these territories is the existence of agricultural productive activities related to the international market and the connection with the city, functional to this type of productive dynamics.

In the case of type 2, territories exhibit a process of economic diversification and a growing population concentration in important localities or urban centers, with low population growth in rural areas.

In the case of type 3, these territories show strong presence of family agriculture, productive diversification and demographic dynamism, which the Atlas indicates as a relevant number of inhabitants in rural and urban areas.

In type 4, population decline, and subsistence farming are characteristic of this type of area, with the population primarily engaged in agricultural activities.

¹⁴ Imbabura and Pichincha are provinces.

In type 5, there are dispersed rural areas, with low population density, a largely indigenous population and long distances to urban centers, limits to the provision of goods and services.

Finally, type 6 refers to unique natural resources, natural parks that constitute unique and preserved environments (Atlas rural, 2017).

Another study that demonstrates geographical disparities in Ecuador by classifying cantons is that of Canelos (2020), who conducted a study of hierarchical clusters. He compares 220 cities and differentiates them into seven categories based on the gaps they display with respect to various economic and social indicators such as GVA, poverty by consumption, Gini index, teenage pregnancy, revenue per capita, among others. Conglomerate¹⁵ one has the greatest hierarchy, with cities with the highest degree of development and housing, including Quito and its conurbation, the Rumiñahui canton, and Guayaquil with the Samborondon canton, which is also a conurbation of Guayaquil, and finally the city of Cuenca.

Conglomerate two contains four cities on the coast that have greater per capita income metrics than the other clusters. Conglomerate 3 contains 11 cities with a greater level of development than the national average. Cluster 4 includes 30 cities with development levels comparable to or slightly higher than the national average. Conglomerate 5 ranks 60 cities as average for the country. The research assigns 74 cities to Cluster 6, which has a poor degree of development and is below the national average. Conglomerate 7, at the bottom hierarchy, is made up of 36 cities with the lowest degree of development. Finally, according to the variables investigated by the author, 110 cities, or 50%, have a lower degree of development than the country's average, establishing a severe scenario in terms of significant territorial and geographic imbalances in Ecuador.

The actuality of the researched cantons appears to be distinct and starkly opposed in both categorizations. According to the Atlas, Jama - a coastal canton - has a major rural-urban link and exportable products, although Canelos placed it in cluster 7 and its small city (the urban settlement of Jama) has the lowest degree of development. The same is true for Cotacachi, which Canelos deems a city with a lower degree of development than the national average, whereas Atlas considers it a productively consolidated zone. The categorization based on numerous parameters in both studies reveals distinct and even opposing reality, demonstrating the academic difficulties in comparing cantons in Ecuador.

For the current study, I used a complexity approach and considered additional factors that had not been studied previously.

¹⁵ The author organizes the cantons into groupings based on structural gaps, which he refers to as conglomerates. The technique is based on Tezanos (2012), according to the author.

C. Rural infrastructure and connectivity

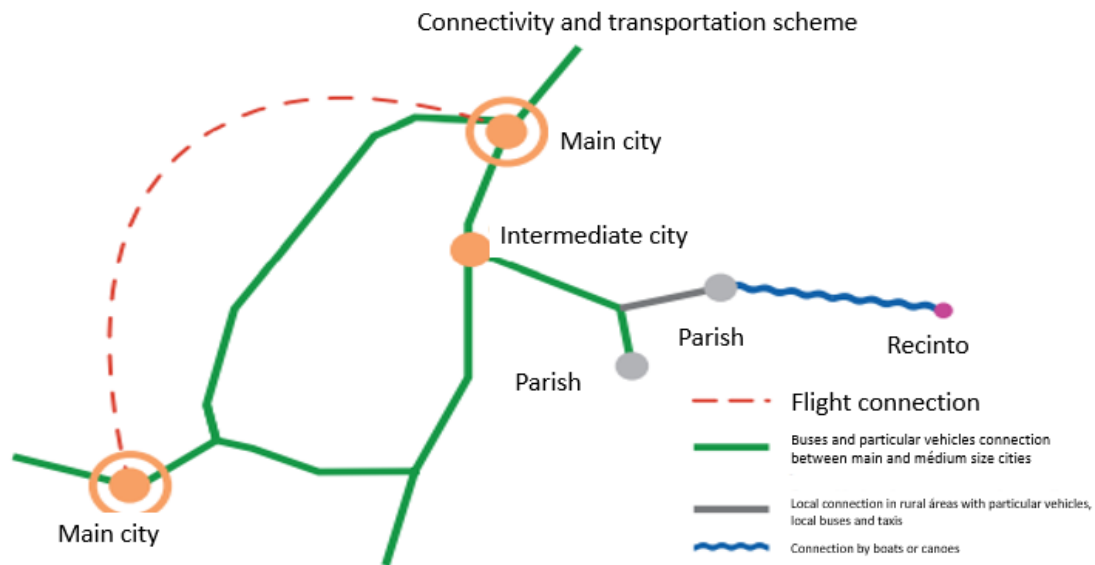
In terms of infrastructure and connectivity, the Rural Atlas (2017) accounts for regional differences and inequalities between the most and least populated areas and their road access. If rural settlements of less than 15,000 inhabitants are considered, a number of 7,117 rural localities is involved (p, 73). "Of the total number of localities that are not parish or cantonal capitals, 65% are less than 5 km from a paved road (4,051 localities)", which implies a significant weakness in terms of connectivity and commercial infrastructure and economic and social integration, mainly for the most remote 35% of localities. On the other hand, in "parish and cantonal capitals, 81% (762 localities) are less than 5 km from a paved road" (p.73).

Likewise, if the information on paved roads per km² is reviewed, an enormous distance between urban and rural areas can be seen: "29 parishes have a very high density of first order roads, 96 have a high category, 219 are medium, 611 are low, and 68 are parishes without paved or ballasted roads" (Atlas, p.75). This implies an enormous cost to transport production from the most remote areas that do not have roads in good condition. Talking about improving productivity in these circumstances becomes complex and almost unrealistic.

The same document points out that the greatest lengths of paved roads are located in areas of high population concentration. The eastern region of the country would be the most affected in terms of connectivity due to its geographic dispersion and low population density. Roads are infrastructures of connectivity that favor social, economic and political cohesion that allow the intensification of urban-rural relations and inclusion. This facilitates the generation of markets, productive diversification and the development of new rural products and services, as well as the addition of value to primary production, increasing the efficiency of productive systems. Their non-existence or low density are indicators of exclusion, inequality and cost inefficiency for production and distribution.

With respect to the mobility of the population at the national level, the interprovincial transportation service is massive and fluid. Urban parishes are served both by private vehicles or small buses that have been in service for a long time in larger cities and have relocated from paved roads to rural regions. Rural areas face infrequent traffic and higher travel costs for residents in terms of time, safety, and frequency. Finally, river mobility in Galapagos and the eastern part of the country has its own dynamics and complexity in terms of costs and transport times (Rural Atlas, p. 72), see figure 16.

Figure 16 Connectivity scheme



Source: IGM, Atlas Rural (2017) p.72

Regarding access to communications, having telephony and internet facilitates inter- and extra-territorial communication, the most populated urban areas have access to landline or cell phone, however there are rural parishes very close to densely populated areas, which do not have the service. Concerning Internet use and despite the high growth of internet users from 2004 to 2010: from 400,000 to 2.5 million users, only 29% of the population in Ecuador has access to this service, due to the cost involved in the absence of adequate infrastructure. Digital media became a basic tool for school education during the pandemic; not having them in rural areas implies a loss of opportunities for the school population and a new knowledge gap and setback for those who had no access to telematics media. There were also problems in learning areas such as mathematics, which are more difficult to learn if the internet service has intermittency or poor quality. In 2020, a crucial year for digital education, the percentage of households that owned a computer was 43.92% nationwide, the urban-rural differences are very strong: 53.39% in urban areas, 23.28% in rural areas (INEC, 2021).

There are also other inequalities in the productive sectors. In the rural area, one of the main economic activities is agriculture, which in general terms registers low productivity and low value addition. Agriculture is also the most important activity that generates employment in Ecuador and does not require skilled labor. According to the Rural Atlas, 62% of Ecuador's economically active population (EAP) is employed in the agricultural sector, a primary sector of the economy that employs a population with low levels of schooling.

D. Access to services

Regarding access to basic services and healthy habitats, there are more urban-rural differences. Out of a national total of 3,748,919 of census homes (INEC, 2010 cited in Atlas 2017), only 45.9% of homes in the rural area have access to drinking water through a public system, unlike the urban area which allows 86.8% of homes access to drinking water through a public system. Only 22.9% of households in rural areas have access to a sewerage system, while in urban areas 71% of households have access to a sewerage system. The same source points out the urban-rural differences in garbage collection: 95.2% of homes in the urban area have garbage collection service, while in the rural area only 45.1% of these have access to the service. This implies an environmental cost of contamination and landscaping to especially dispose of plastics or materials that are not biodegradable, also affecting the environmentally protected areas. These bad conditions are the origin of health problems that have an impact on higher levels of morbidity and on the health of the population, mainly on the food security of families living in the rural sector.

The electricity network is perhaps a less unequal service, access to the service increases the possibility of having household appliances that improve the standard of living and promote the addition of value and productive transformation. The Atlas data show that 93% of homes nationwide have electricity coverage, 96.1% in urban areas and 88% in rural areas. The lowest coverage is found in the dispersed areas of the eastern part of the country. However, rural areas are more susceptible to have intermittent service quality, which reduces the lifespan of equipment and machinery, with the related economic and opportunity costs for families and producers. Moving from the percentage data to a more absolute figure, 7% of Ecuadorians who do not have access to electricity represents approximately 1.2 million of people.

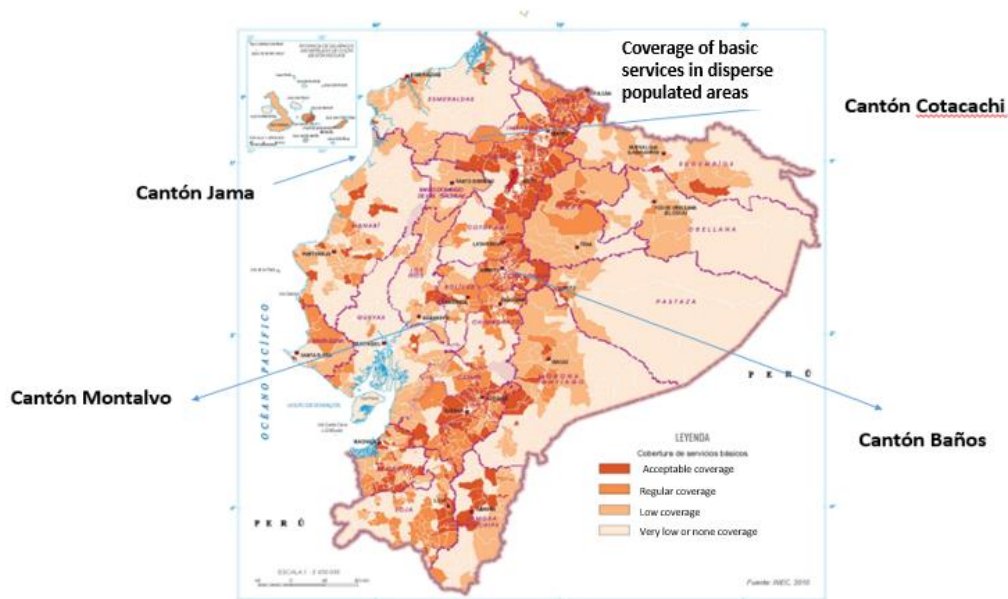
The specifically dispersed areas suffer from the absence of access to basic services infrastructure, 920,571 homes located in these dispersed areas with low population density have several deficiencies: a very small proportion of houses (33%) have access to drinking water via the public network. Only 10% have sewerage, and 26% have access to garbage collection services. Manabí is one of the provinces that shows many of these deficiencies, a situation that is comparable to several provinces of the East whose access to this service is limited.

The most important gaps are connected to access to water and garbage disposal. If there is access to water through tankers, rivers, ditches, the ingestion of this resource can cause serious health problems. Diarrheal disorders can lead to more complicated pathologies in terms of effective biological use of food, which is one of the most essential components of food security. It should be remembered that Ecuador is one of the countries with the highest levels of chronic malnutrition in Latin America, compared to others such as Peru

or Colombia, members of the Andean Community of Nations (CAN) (World Bank, 2021).

According to the map in figure 17, (Atlas, 2017 p. 111) there is a direct relationship between the greater size or concentration of the population and the provision of basic infrastructure. The smaller the population of a human settlement - with more dispersed population - the lower the provision of services. Another explanation is the high cost of service provision for small rural municipalities with low population density, which have less possibility of expanding public water services. The document indicates that territories with less than 15,000 inhabitants have poorer access to basic services than people in more densely populated areas.

Figure 17 Map of basic services coverage in areas of dispersed population. (Including the cantons of the study)



Source: Atlas Rural (2017)

In terms of health, the main causes of death in rural areas are linked to "diseases of the circulatory system" (115), such as hypertension, arteriosclerosis, among several diseases that are linked to malnutrition and that require a treatment that includes healthy eating habits, regular exercise and better access to water and sanitation.

It is also noteworthy that among the main diseases are those of the genitourinary type, that imply the pre-existence of poor water quality for personal hygiene that especially affect women. This is a recurrent situation in the cantons investigated. On the coast, these pathologies become more frequent. Gastrointestinal and skin diseases are also prevalent in rural areas and are symptoms of the poor quality of water for use and consumption. That represents another additional cost for the population living in rural areas.

Looking at the health public supply, there is also a concentration of second, third or fourth level of care services in the larger urban conglomerates, while rural areas have

access to the first level of health care, which implies health centers and sub-centers, while cases requiring more specialized care are referred to hospitals located in urban areas that allow hospitalization. "48% of (health) units are located in the rural areas of the Sierra, 34% in the Coast, 17% in the Amazon and 11% in the Insular region" (p. 117), corresponding to centers or sub-centers with the capacity to attend basic care cases.

Education is also a sector that reflects regional inequalities, especially in terms of access gaps for the Indigenous, Afro-Ecuadorian and Montubio ethnic groups who attain a lower level of education than the mestizo ethnicity and in the supply of quality education.

In terms of years of schooling, the gap between urban and rural areas is quite wide, according to the 2010 census (INEC, 2010) the national average in years of schooling is 9.6 years, with fewer years in rural areas with 7.2 years. The education strategy focused on strengthening the Millennium Educational Units. Between 2007 and 2015, the strategy consisted of geographically concentrating the educational infrastructure, closing small schools that were further away and had fewer students in rural areas. In practice, this meant additional difficulties of transportation access for the most distant communities. With respect to the Millennium Educational Units (MEUs), it is true that the offer with a very complete infrastructure was geographically deconcentrated, however, children in the most remote communities faced a lack of means of transportation to access the public-school offer.

The other significant gap with respect to the reality of the country is poverty, if we consider the measurement of Unsatisfied Basic Needs (UBN), the 2010 population census catalogs 41.8% of the population as poor. Of these 41,8%, the main concentration was located in the rural area with 72.2% of the population in that year. In the 2010s, important advances were made in health and education indicators; however, the poverty indicator has not improved. The Rural Atlas (2017, p.124) points out that according to the survey of living conditions (ECV, 2014), the rural area presents 47.3% of poverty. The same source notes that according to the same living condition survey, from 2006 to 2014, the Gini coefficient went from 0.456 to 0.408.

Currently, a Social Registry of the priority attention population is maintained, covering 7,680,000 people (2,200,000 families) (Atlas 2017, p. 124), of this social registry population, 48.9% non-vulnerable, 29.3% valued as vulnerable, of these, 61% inhabit urban areas and 39% rural areas. Finally, 21.8% are extremely vulnerable; of this percentage, 55% correspond to rural population. The dimensions studied that show these high percentages are housing, education, employment and access to basic services. The Social Registry System is in charge of the MIES (Ministry of Economic and Social Inclusion), which places the Coast and the East of the country as the geographical areas most affected by poverty.

The National Territorial Strategy (NTS) (Development Plan 2017-2021) mentions a multidimensional poverty with greater severity in the East, a region with a significant

concentration of indigenous people. NTS indicates that other provinces: Chimborazo, Bolivar, and Cotopaxi, have high values of multidimensional poverty, higher than the national average. An index that considers four dimensions: education; health, water and food; work and social security; and finally, habitat, housing and healthy environment. Most of these dimensions have variables that are included in the analysis of this thesis for each canton.

E. The place of small cities in this dynamic

When referring to the term city, the distinction made above between rural and urban space is not very accurate. In Ecuador, INEC statistics define the urban population as those who live in cantonal capitals, regardless of population size. Thus, peri-urban areas near the metropolitan cities of Quito and Guayaquil are considered rural areas even if their population exceeds 15,000 people and the population living in the urban sector has a high level of services.

On the contrary, there are more than 180 cantonal capitals with populations of less than 10,000 people, including El Pan in Azuay Province, which has a population of less than 400 people according to the 2022 census. This means that, for the statistical criterion, functionality is more important than population size, because it is assumed that all cantonal capitals will fulfill an assortment of competencies and functions through their local government, and that certain services, such as judicial and registry services, will be decentralized in these capitals.

In this context, the city is the cantonal capital. In practice, this creates significant ambiguity because population dynamics frequently exceed the historical administrative criterion that led to a given population being classified as a city. Perhaps this is why, in the last two National Territorial Strategies (NTS) included in the national development plans for the years 2017-2021 and 2021-2025, the term city is avoided and the documents talk about human settlements system.

According to these two planning documents, human settlements with more than 15,000 inhabitants should play articulation roles with their influence territories. The two strategies distinguish the roles of Quito and Guayaquil as metropolitan articulators, intermediate cities with populations between 100,000 and 1,000,000 as national articulators, populations between 50,000 and 100,000 as regional articulators, populations between 15,000 and 50,000 as small cities or local articulators, and towns with less than 15,000 as smaller towns (SENPLADES, 2021, P 25). This city hierarchy intersects with what the Opportunity Creation Plan refers to as functionality, which is divided into five categories ranging from very high functionality to no functionality. It is assumed that human settlements with low or no functionality will cause population mobilization to other nuclei.

According to the Rural Atlas, the urban-rural classifications are not just population categories, but also administrative ones. In Ecuador, space that does not correspond to a cantonal capital is considered rural; yet, statistically, these divisions are not as clear. Some urban areas located in the cantons can be called rural; this is the case in three of the four cantons examined here: Jama, Montalvo, and Cotacachi are more rural even they have also urban communities. Nonetheless, Baños has a more urban-like functioning while having a lesser population than Montalvo or Cotacachi. On the other hand, there are rural parishes near large urban agglomerations such as Conocoto or Calderon that are statistically rural but are part of Quito peri-urban area.

The intersection of both factors: functionality and hierarchy linked to population size results in a distinction of population centers, implying differentiated territorial strategies. For the purposes of this thesis, the aforementioned classifications have the difficulty of not explicitly considering the roles of settlements considered small cities, despite their functionality being high, medium, or low.

The classifications described above are normative in nature, that is, they serve as guidelines in national territorial plans and strategies. In the field, it is not always observed that the city meets the expected functionalities. There are small human settlements with high functionality and large population centers with medium or low functionality (for example, the cities of Esmeraldas and La Libertad, both with more than 100,000 inhabitants, have a low or even negative degree of population attraction). Smaller cities can have a significant impact on the development of their surrounding areas, which is linked to specific organizational or economic processes.

According to Deler (2007), quoted in Barrera (2016), the national space can be analyzed as a combination of three subspaces: "the urban space with a dominant role in the macro organization, occupying a "central" position, around which are distributed the other two non-urban subspaces (rural, mining, jungle areas...) that form a peripheral set where two "aureoles" or subspaces can be distinguished." Deler differentiates subspaces based on their degree of integration into the national spatial system, thereby distinguishing a "active periphery" from spaces with relative isolation.

Because Ecuador has many human settlements or cantonal capitals, which are expected to have medium or high functionalities due to their political and administrative role, ignoring their importance or dismissing them as having little or no functionality in the NTS ends up widening the poverty and exclusion gaps between territories. This encouraged us to include the small city's role in this study.

Expecting cantonal local governments to perform the same functions as stated in the Ecuadorian Constitution and COOTAD becomes an impediment to effective decentralization in practice. Small municipalities, or authorities of small cities, face greater challenges in expanding or covering basic services for their populations, or even meeting their own operational needs, leading them to be regarded as inefficient

institutions. Nonetheless, some municipalities are able to channel resources from outside sources to meet these needs.

1.1.5 The choice of the four cantons

The four cantons I have chosen are Baños, Cotacachi located in the highlands and Jama, Montalvo located in the coast.

Canton Baños is located in the province of Tungurahua, the province has nine cantons, is one of the smallest in size and is located in the middle highlands. Several cantons are noted for their fruit output. There has been a movement of modernization of industries, particularly metallurgy, in this area. Tungurahua is seen as an institutional paradigm of governance, with widespread participation of indigenous peoples, women, organizations, and public actors.

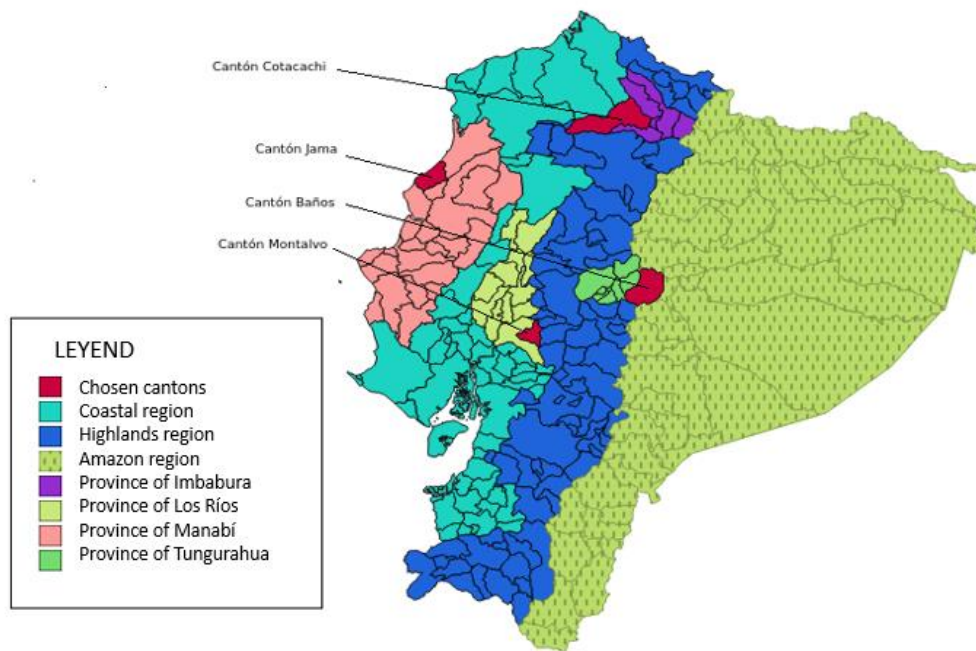
Canton Jama is located in the province of Manabi, it has 22 cantons, this is one of the largest provinces in the country, located on the central coast and next to the Pacific Ocean, and specializing in the export of fisheries goods. It is vital to emphasize the significance of Manta's port and Chone, Portoviejo and Manta cities. Manabi is the third most populous province in the country and the second with more cantons on its territory. Only in Manabi was a murdered mayor elected in 2023.

Canton Montalvo is located in Los Rios province, in the coast. It has 13 cantons, is a landlocked region with great agricultural production due to the existence of the Guayas Basin, which, due to the sediments it transports, makes this region extremely productive. Babahoyo and Quevedo are the two prominent urban cities of this province.

Cotacachi canton is in the province of Imbabura, which has six cantons. The province is located in the northern highlands and shares some territory with the coast. It is well-known for the existence of a significant indigenous Quichua community in the towns of Otavalo, Cotacachi, and Antonio Ante.

In figure 18 the four cantons are shown in red. All the cantons of the country are represented.

Figure 18 Map of Ecuador regions and cantons.



Source: IGM, 2010

In the Coastal region (light blue on the map), Canton Jama is located by the sea in the province of Manabí (pink on the map), and Canton Montalvo, in the province of Los Ríos (light green on the map), located in the foothills of the mountain range.

In the Sierra region (blue on the map), we can see the cantons Cotacachi, part of the province of Imbabura (violet on the map) and the canton Baños, in the province of Tungurahua (electric green on the map). Cotacachi has an area corresponding to the coast, and Baños has an area corresponding to the Amazon region.

Each canton's characteristics are explained in further detail below.

A. Reasons and motivations

There is a framework of the studies carried out in Latin America that highlight the importance of small territories and the strong interconnection that occurs at the urban-rural level in small territories. There is also a context of high concentration of wealth and population in only two Ecuadorian cantons: "bicephaly". This research subject emerged with the perspective of studying the territorial dynamics of small cantons in a comparative way, identifying factors that promote these dynamics, and positioning - in the Ecuadorian scientific discussion - the existence of territorial gaps and dynamics that do not contribute to territorial development, on the contrary, finding lessons from more virtuous dynamics that help to build the territories.

Among other data, the importance of the cantons considered small, with up to 50,000 inhabitants, comes from the fact that they are home to 22.03% of the total national population considering the 2010 census. In this group there are 164 Ecuadorian cantons, which represents 74.2% of the total number of cantons. This percentage consider the census conducted in Ecuador in 2010.

The four selected cantons are small according to the different frameworks exposed by the different National Territorial Strategy (NTS); their population fluctuates between 20,000 to 50,000 inhabitants, even if we consider the INEC's 2020 population projection. The cantons with this population range represent 30.91% of the cantons in the country, the highest percentage of cantons or territories among the population ranges for the country. A measurement that, although arbitrary, is consistent with the information of the NTS of the last four national development plans.

For the calculation of population growth rates, the research considers census information from 2001 and the comparison with 2010 and preliminary data of 2022, with the idea of identifying and differentiating dynamics between those cantons with lower population growth rates in relation to the national average and those with higher growth than the national average.

The four selected cantons appear in table 8:

Table 8 Population and Growth inter census, 4 cantons

Canton	Number of inhabitants 2010	population of growth rate (2001-2010)	Number of inhabitants 2022	population of growth rate (2010-2022)
Cotacachi	40,036	0.81	53,001*	2,33
Jama	23,253	1.54	16,588	-2,81
Baños	20,018	2.41	21,908	0,75
Montalvo	24,164	2.06	28,351	1,33
Country	14,483,499	1.95	16,938,986	1,3

*Includes the population of Las Golondrinas annexed in 2016.

Source: INEC, 2010, census

There are 221 cantons in Ecuador (see table 9 below). From this universe, we chose four of them: two from the coastal region (Jama and Montalvo and two from the highlands (Cotacachi and Baños).

Table 9 Cantons by groups

Groups by population		Groups by population growth between 2001 y 2010						Total			
		Population in the census 2010			Number of cantons			Absolutes		Percentages	
From	To	Growth less than national average (1)	Greater than average rate, Less than 3% (2)	Greater than 3% (3)	1	2	3	Population	Cantons	Populati on	Cantons
1,000,000		2,350,915	2,239,191		1	1		4,590,106	2	31.82	0.91
100,001	505,585	2,211,514	1,595,608	478,665	11	6	3	4,285,787	20	29.71	9.09
50,001	100,000	1,140,895	672,313	557,142	17	9	8	2,370,350	34	16.43	15.45
20,001	50,000	1,336,419	463,934	402,905	42	15	11	2,203,258	68	15.28	30.91
10,001	20,000	442,663	78,972	146,420	31	5	10	668,055	46	4.63	20.91
1,823	10,000	241,720	46,596	17,764	39	8	3	306,080	50	2.12	22.73
Total result		7,724,126	5,096,614	1,602,896	141	44	35	14,423,636	220	100	100.00

Note: the Quinsaloma canton, in the province of Los Ríos, was not considered in the table. Quinsaloma is a recently created canton, it belongs to the province of Los Ríos, it was previously included in the population of Ventanas.

Source: 2001 and 2010 INEC censuses, prepared by Rene Larenas.

The East region was not considered in the study because its socio-economic dynamics is linked to oil and mining exploitation, which explains its generally increasing population¹⁶.

B. Location and general data of the four cantons

The research presents background information on the four small cantons located between the coast and the highlands of the country, see table 10. Each canton's information is shown spatially, as well as its connections to neighboring areas.

¹⁶ Amazon cantons with populations ranging from 20,000 to 50,000 people (Except Zamora and La Joya de los Sachas in Sucumbios) experienced a higher growth than the national average. Since several of them exceeding 3%, much higher than the national average of 1.95%, they are important colonization areas, although they deepen relations of exploitation of resources from natural comparative advantages, an object of study in itself. Working in the Amazon and making this same comparison would be an interesting subject for further research: a debt to one of the most beautiful, amazing and prolific regions of the country.

Table 10 General data of the studied cantons

Canton	Year of cantonization	of Extension in Km2	Population projection 2020	Population 2022
Baños	1944	1,065	25,043	21,908
Cotacachi	1861	1,691	44,203	53,001
Jama	1998	578	26,116	16,588
Montalvo	1984	362	28,720	28,351

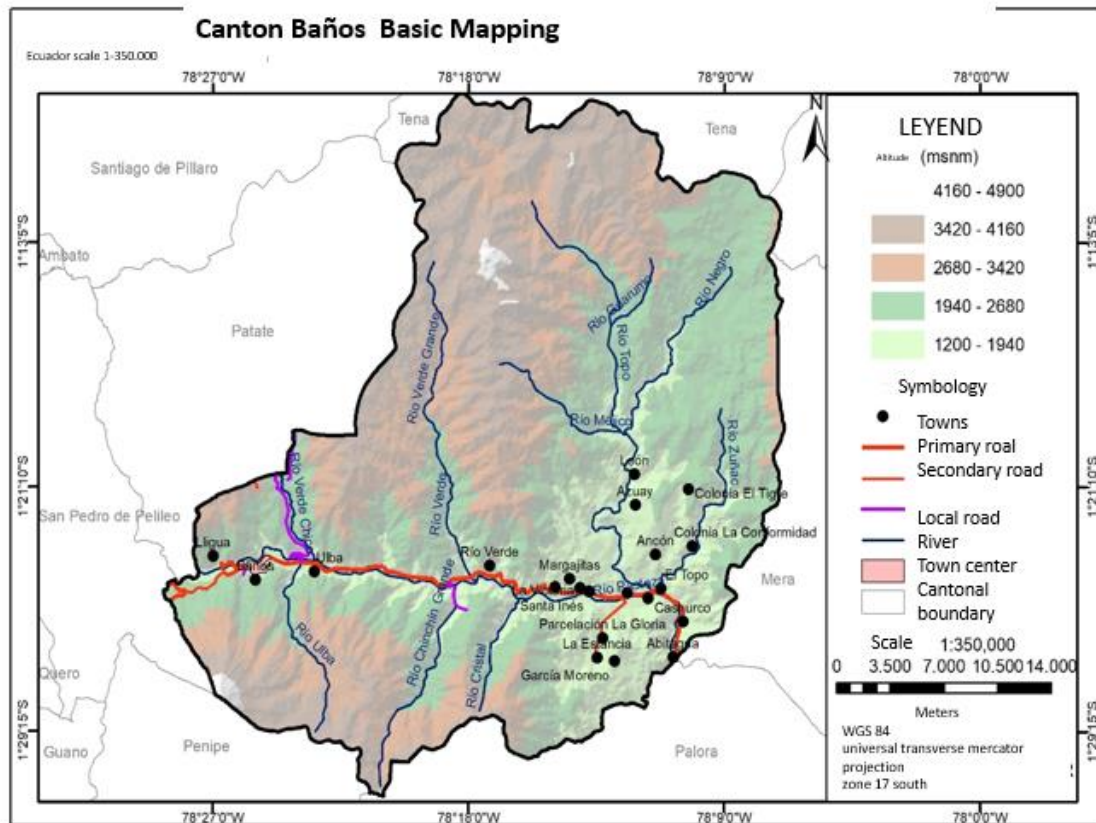
Source: Cantonal PDYOT, information from cantonal archives, INEC 2020-2022.

Baños canton

Baños is a canton in the province of Tungurahua, located in the central highlands of Ecuador, with an area of 1065 km². The city of Baños is located in the foothills of the Tungurahua volcano, and part of the canton extends into the Amazon basin. Baños was born as a canton in 1944.

A remarkable fact is the geographical location of the canton, in the center of the country, and with a notable natural attraction and proximity to the natural regions: coast, highlands and east. Baños has two protected areas that compose a high percentage of the territory's area: Sangay National Park and Llanganates National Park. This geographical configuration is important because it is part of the comparative advantage that Baños enjoys for its natural attractions and constitute the basis for the main economic activity, tourism, see figure 19.

Figure 19 Canton Baños, basic mapping



Source: IGM, 2011

In addition to these natural factors, Baños is part of one of the provinces with a road axis that links the three regions (Coast, Highlands, and East) and favors the commercial connection with the cities of Pelileo and Ambato. The former is of strategic importance in terms of the textile industry, while the latter is of regional and national importance in terms of trade of agricultural products and manufacturing production in the metal-mechanical, textile, leather, and footwear subsectors. The city of Baños has a regional category due to the existing connection with other provinces such as Chimborazo in the highlands and Pastaza in the east and the existence of public, private, financial, cultural, and recreational services provided by the dynamics of tourism and the transportation sector.

The population growth rate of Baños, between the 2001 and 2010 censuses, is higher than the national growth rate, i.e., there are factors considered population attractors that have led to significant in-migration, as is shown in the following chapters. The population is concentrated in the cantonal capital and in the neighboring parish of Ulba, while the parishes of Río Verde and Río Negro have a higher level of population dispersion. The only parish that loses population is Lligua, due to its location, next to the population center, with access roads, but without connection to the main roads that link the canton with the center of the country.

Jama canton

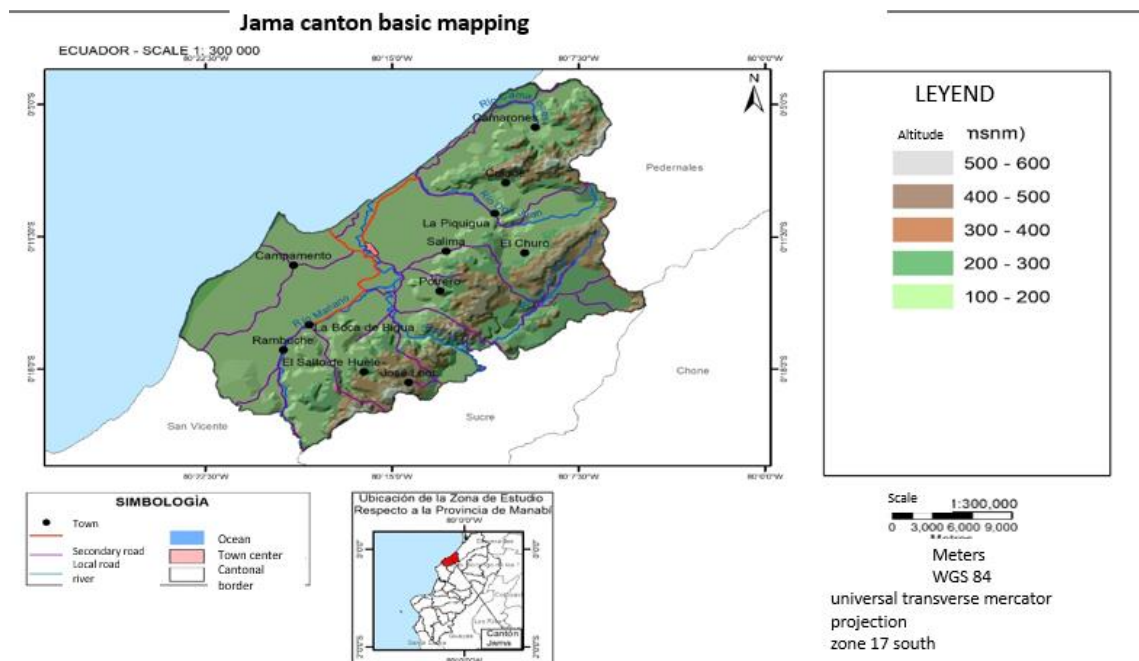
Jama is a canton of the province of Manabi, with an area of 578 kms², which is located on the coast of Ecuador. It has a single parish (the city of Jama), and 52 rural communities of varying sizes, the population of El Matal, Don Juan, Salima, 20 de Marzo are significant. It was created as a canton in 1998, see figure 20.

The rural area contains an important ecological protection zone: the Jama Coaque reserve, and a private reserve, the "Lalo Loor" forest.

Jama is part of the Spondylus Route (Pan-American road E15), a major coastal tourist route, scenic road that runs through the country from north to south and connects the provinces of Esmeraldas, Manabí, and Santa Elena, seeking to promote tourism, artisanal, and fishing activities. In the case of Jama, this road surrounds the city, it does not pass through, influencing in some way the flow of tourism that travels to the beaches of the cantonal capital. The E15 road connects Jama with Pedernales to the north and with the cantons of San Vicente and Bahía to the south. Both are potential regional beach tourism centers.

Jama has a road network of 276 km, 132 km are ballasted roads (PDyOT, 2016), of which 50% are passable only in summer.

Figure 20 Jama Canton



Source: IGM 2011

The population of the cantonal capital comprises 6,090 inhabitants: 26.19% of the total population of the canton, 23,253 inhabitants (INEC, 2010), which implies that the difference is in the rural area: 17,163 inhabitants with a projection at 26,116 inhabitants in 2020. The population growth rate of the canton is lower than the average rate of the country. Several administrative services have been located in the neighboring canton of Pedernales, which shows a greater commercial dynamic than the urban area of Jama.

Montalvo canton

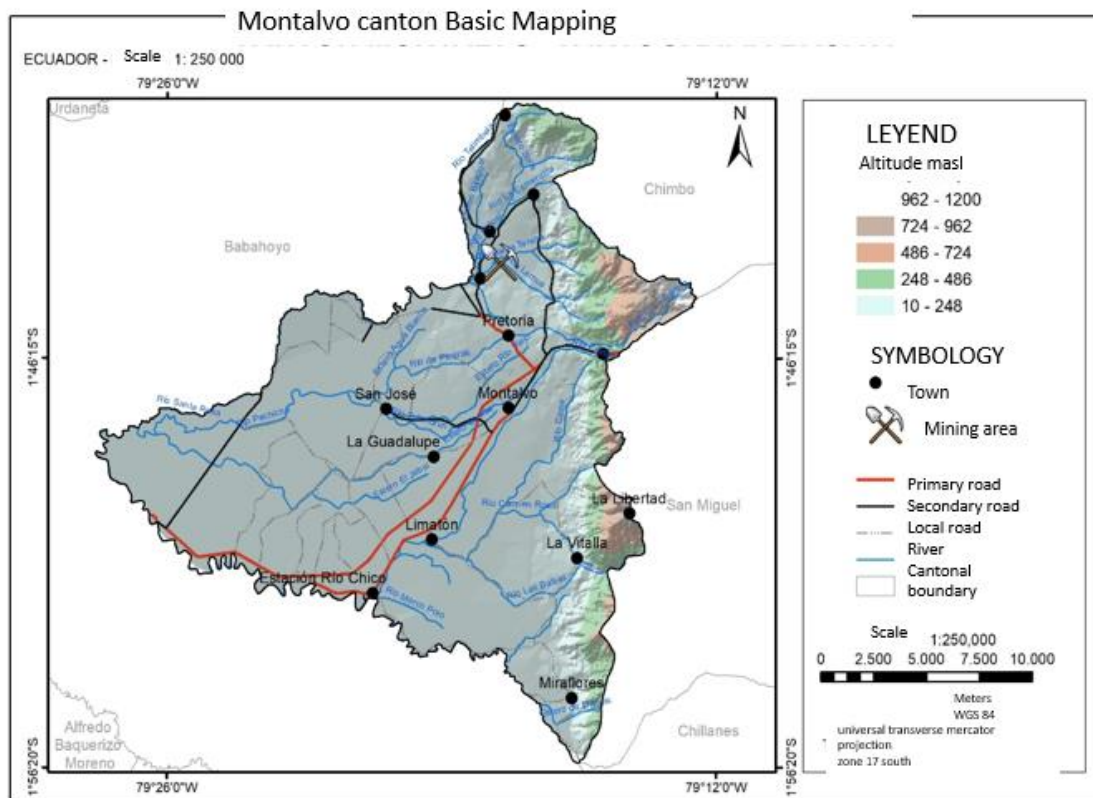
In geographic terms, Montalvo is located in the province of Los Ríos, in the foothills of the western mountain range of the Andes. It covers 362 km² and is situated at heights ranging from 60 to 400 meters above sea level (GAD Montalvo, 2015-2020 p 24), according to the diagnosis of its Strategic Plan; it has a "Tropical Monsoon with an annual rainfall of 1000 to 1500 mm" climate, see figure 21.

The ICAM (2015) indicates that it has a mountainous relief of highlands and foothills passing through Andean foothills with an alluvial fan and the existence of slopes and a flat coastal relief with an alluvial plain, foothills and slopes that comprise the geographical area favorable to its productive potential, it is bordered by both coastal and highland cantons. It has an urban parish, which is its cantonal capital, and a rural parish: La Esmeralda, several enclosures that configures an eminently rural location.

In biophysical terms, the diagnosis of Montalvo 2015-2020 points out that from the year 2000 there is evidence of a considerable loss of native forest, 44.85% in ha until 2008 (GAD Montalvo, 2015-2020 p 22), with the consequent detriment in vegetation cover and species of flora and fauna. Meanwhile, the number of hectares dedicated to agriculture is growing. Among the problems highlighted in development and territorial planning (PDOT) we can mention the exploitation of stone materials in riverbeds, water pollution due to poor wastewater management, contamination by open garbage and contamination by agrochemicals, (GAD Montalvo, 2015-2020 p 30).

From a political perspective, its cantonization took place in 1984, so it is a recently created canton, and it presents potential for institutional strengthening.

Figure 21 Montalvo Canton



Source: IGM 2011

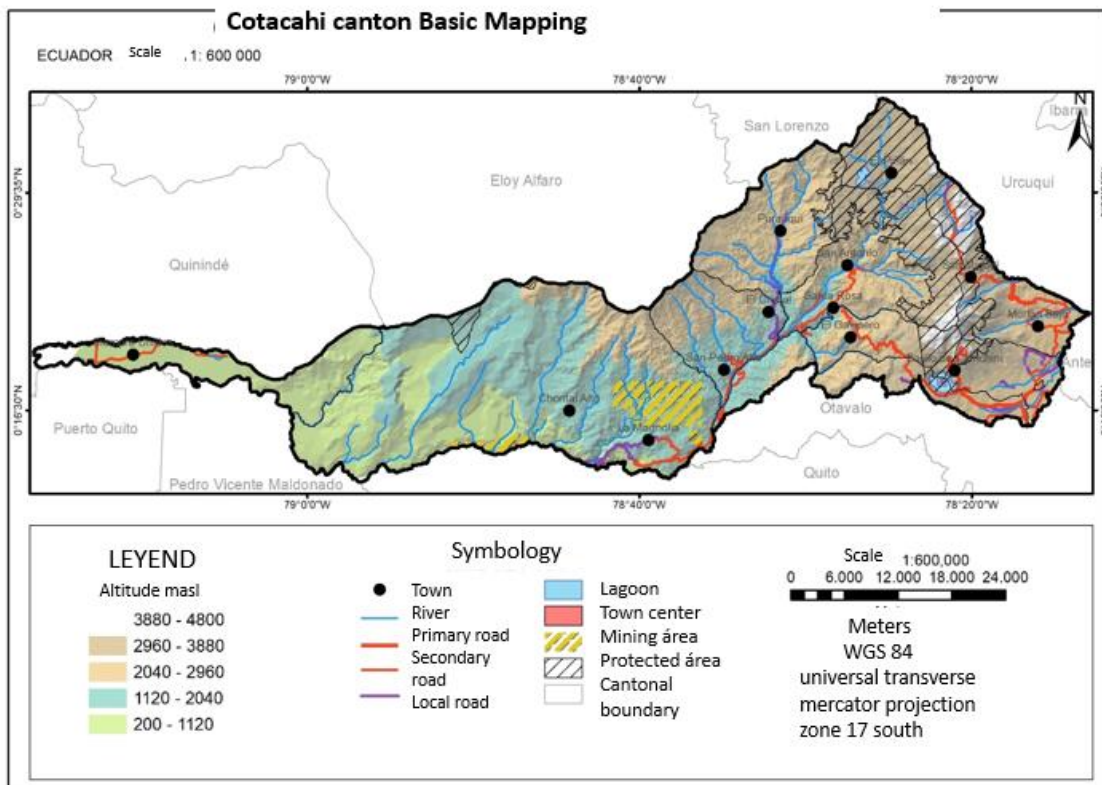
The E491 road crosses the canton and connects a sector of the highlands with the coast, which could imply an interesting potential for trade or tourism. The town is very close to the provincial capital: Babahoyo, the administrative and financial center of the province and an important commercial and financial center in the province of Los Rios.

The canton of Montalvo has an important production linked to agribusiness: rice and hard corn, the latter a key input for the poultry industry. The population growth rate of the canton is above the average rate of the country. The productive dynamics of the canton revolves around agriculture, providing inputs for the agro-industrial sector.

Cotacachi canton

Cotacachi is located in the province of Imbabura. Bordered to the north by the canton of Urququi and the province of Carchi, to the south by the canton of Otavalo and the province of Pichincha, to the east by Urququi and Antonio Ante, and to the west by the Golondrinas and the province of Esmeraldas. Cotacachi is one of the seven largest cantons in the country that extends to the mountains and to the coast of Ecuador with 1690.84 km² (PDyOT 2015-2035), see figure 22.

Figure 22 Cotacachi canton



Source: IGM 2011

The cantonization of the canton Santa Ana of Cotacachi took place on July 6, 1861. Previously, in colonial times -1544- Fray Pedro de la Peña founded Cotacachi, the territory was legally detached from what constituted the jurisdiction of the canton Otavalo (Biblioteca Cotacachi). Of the four cantons under study, it is the canton with the longest history of creation and the largest territory. An extension of land was recently added by resolving a boundary conflict with the province of Esmeraldas (sector of "Las Golondrinas").

An important fact of Cotacachi's geographic location and spatial configuration is its tourism potential due to its natural and lake attractions. The canton's territory is home to the Cotacachi Cayapas Ecological Reserve (RECC), one of the areas with the richest flora and fauna in Ecuador, according to the PDyOT (2015) due to the variety of forest ecosystems and aquatic ecosystems such as the Santiago River, the Cayapas, estuaries, lagoons (P.24). The Ministry of Tourism designated Cotacachi as a Magical Town for having met several conditions in tourism potentialities. The Ministry of Tourism calls for bids every two years for the development of territories with tourism advantages, as is the case of the canton. Several cantons have benefited from this contest and are being promoted as magical towns as part of a national policy. The strategy comes from lessons

learnt in Mexico and seeks to enhance the value of tourism products and services and promote employment inside the canton.

The reserve is located in the Andean Choco. It is one of the most important areas for biodiversity conservation, and has 11 life zones, which is the highest number of protected areas in the country. The canton is one of the most megadiverse in the country, a diversity that includes all types of climatic floors: tropical rainforest, very humid tropical forest, very humid premontane forest, premontane rainforest, low montane rainforest, very humid low montane forest, montane rainforest, very humid subalpine forest, and subalpine rainforest. (P.24). Undoubtedly, this is not only one of the largest cantons in the country in terms of extension, but also one of the largest in terms of biological diversity. 78 endemic species, registered in the red book, inhabit the RECC¹⁷, the highest number of endemic species in the entire national system of protected areas (p.25-28) and considered one of the most biodiverse in the world. The population growth rate of the canton is lower than the average rate of the country.

Conclusion of context section

To sum up, the existing gaps between urban and rural areas, factors linked to historical landmarks and the level of institutional development and path dependence (Roth, 2010) have led to this profound difference between rural and urban areas in Ecuador, which is reflected in differentiated indicators of poverty and inequality. National Territorial Strategy and recent academic studies seek to categorize small territories by locating strategic dimensions for their study. On the other hand, Ecuador has not given adequate attention on the importance of small territories and their dynamic role within the national planning schemes.

The data on rural and urban population illustrate the migration to cities with high population concentration and intermediate cities, in search of a better economic and social situation. The phenomenon of rural-urban migration and specifically, the event of foreign migration is the result of a series of economic and social imbalances that have affected the country and even more those small cantons that are losing economic dynamism.

There are few studies on the socio-economic situation, systems and dynamics of small territories in Ecuador. For this research, four cantons were chosen as the object of analysis: Cotacachi and Baños in the highlands, Montalvo and Jama in the coast. These four territories have different population, social, and economic dynamics, see table 11.

¹⁷ In the red book, the state of conservation is evaluated, and a category of threat is assigned to the identified species, more information at <https://bioweb.bio/floraweb/librorojo/home>

Table 11 Summary of information of the four cantons

Canton	Cotacachi	Baños	Montalvo	Jama
Population 2010	40,036	20,018	24,164	23,196
Population 2022	53,001	21,908	28,354	16,588
Region	Highlands	Highlands	Coast	Coast
Cantonization year	1861	1944	1984	1988
Population growth rates 2001-2010	0.81	1.54	2.41	2.06
Population growth rates 2010-2022	2.33	1.33	0.75	-2,81

Source: INEC 2010-2022

1.2 Theoretical frame

The study focuses on the elements that drive territorial development dynamics. From unidisciplinary perspectives, theories have been created in several fields to explain this development. In recent years, systems and complexity theory have been presented as a vehicle for interdisciplinary integration, allowing for the recovery of elements from other theories required to comprehend the terrain. As a result, this part opens with a review of complexity theory as well as the notions of territory, space, region, reterritorialization, deterritorialization, and dynamics.

In order to identify the elements that explain the inequalities in territorial development dynamics, a study of theories in the disciplines of population, economics, and development, the role of the small city, social capital, and institutionality is conducted. This thesis is handled from a logical or Popperian viewpoint, but rather to determine the relationship of the elements or the weight that the factor has in a certain geographical context.

1.2.1 Systems and Complexity

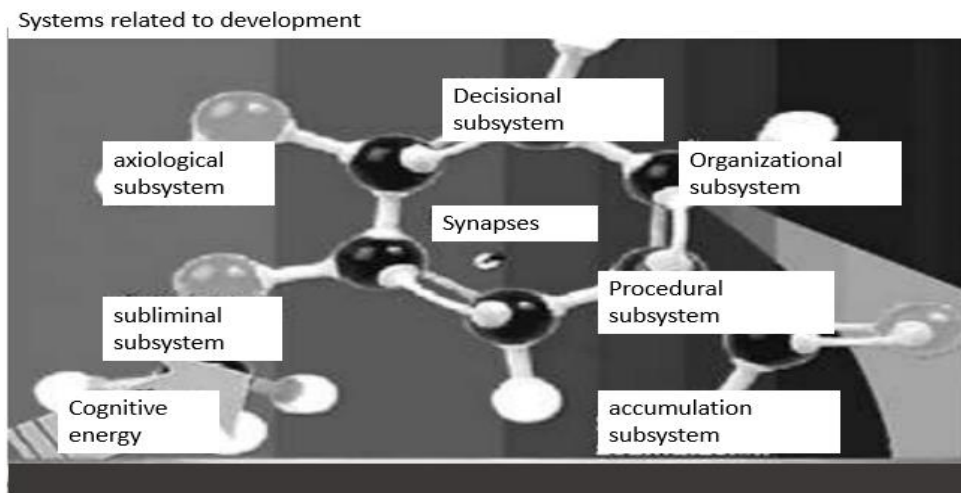
Territorial development involves different dimensions that extend beyond the addition of sources of production, the creation of public policy or the identification of areas for improvement in the performance of governmental duties or competencies or improvements in infrastructure. Territorial development is strongly associated with processes of transformation and structural and multifactorial change in the territory, which include the management, interrelationship, and linkage of territorial actors acting on the basis of common objectives and goals from a systemic and integral perspective.

Sergio Boisier (2003:5) quoted in Mancheno, Contreras, and Guerrero (2018) states that: "linearity, proportionality, certainty, empiricism, and above all Cartesian disjunction, the basis of the analytical method prevents learning social reality in its complexity". Then emphasizes that to understand territories it is necessary to work from a systemic perspective, connections and ties that are permanently changing in territorial systems. Dynamics, complexity, which adjust and readjust in a varying, contextual, and diverse temporal and spatial dimension.

Villavicencio (1999), also quoted in Mancheno, Contreras, and Guerrero (2018) indicates something similar, he conceives development also on a system basis that changes and evolves, that "oscillates between order and chaos" and where the components of the system organize in relation to their own capacity. This vision of a system leads us to think of the complexity and interrelation of economic, social, cultural, environmental, and institutional factors that are interwoven.

Boisier (2003, 2004a, 2004b) asserts that the understanding of development requires a complexity and systemic approach; moreover, he attributes an axiological character to development. Development goes beyond the ability to operate in a single dimension and demands a more holistic and transdisciplinary approach involving quantitative and qualitative systems. The term quantitative includes data about growth, savings, income, employment, redistribution, while qualitative approach refers to institutions, organizations, process, administration, information and knowledge management, cultural and social capital, know-how, identity, tacit knowledge, networks, and values that necessarily involve territorial and/or exogenous actors. The purpose of including both approaches is to take a broad and networked view and introduce elements of complexity in territorial development analyses. The link between the subsystems that comprise a territorial system is graphed in figure 23. These connections are related to the synapse analogy, which involves mutual nutrition between the nodes that are coupled, resulting in reciprocal impacts (which can be beneficial or negative).

Figure 23 Diagram of complexity of territorial development by Boisier (2003)



Source: Boisier (2003)

The diverse dimensions of territorial development need the intersection of several theoretical and methodological constructions, as well as treating the territorial issue from several disciplines, absorbing its foundations, and contextualizing the facts. "Quanto mais complexa se torna a realidade, mas a ciência se especializa; por outro lado, quanto mais aprofundada e específica for a análise disciplinar, menor é seu poder explicativo da realidade concreta e efetiva do desenvolvimento local-regional". "The more complex reality becomes, the more specialized science becomes; on the other hand, the more in-depth and specific the discipline study, the less its explanatory ability of the concrete and effective reality of local-regional development. "Becker, 2001a, p 12 quoted in (Becker and Wittman, 2010).

To promote territorial development, it is necessary to work together with territorial actors in the creation of their development strategies from the perspectives of integrality, complexity, and dynamism, as well as improving their planning systems.

Based on this reasoning, territories generate socioeconomic dynamics related to space-time that include factors of mobility, growth, city functions, cultural processes, institutionalization, and diverse contexts that play a key role in the direction of the territory development. In this context, small cantons face more complex territorial development challenges, such as significant infrastructural gaps, breaches in obtaining basic services, and greater levels of poverty than larger territories that, find state support, and concentrate wealth.

1.2.1.1 - Territory, space, dynamics, urban-rural linkages

The territory is surrounded by complexities; the term territory includes more than just the notion of space, physical or geographical limits; it connects the natural physical environment with the organized or humanized one, as well as the people who inhabit it. According to Vargas (2012: 3), the territory would then be the center of representations of complexity in all its amplitude and therefore it should be examined holistically.

Territory is a social construction of complex dimensions: social, political, cultural, economic, institutional, environmental, which translates into forces and energies of construction or deconstruction. Territories mark differentiated trajectories, concentrated, or dispersed, depending on the energies that construct a dynamic of determined space-territory, complex, in permanent change and transformation (Tomadoni, 2007; Santos, 2000; Pecqueur, 2013; Dallabrida and Becker, 2010).

The term territory is polysemic; several social sciences have appropriated its meaning; geography, sociology, economics, and anthropology, all conceive the term differently and create diverse conceptual representations that are adapted to their respective fields. For instance, the boundaries, reliefs, continent, potentialities, and constraints of geographical type will be crucial for geography, for critical geography the expansion of the geographical sphere to the social sphere and for the economy the variables of growth, income, employment, resources, and equity. For social sciences, the territory is the representation of economic, social, and cultural relations that articulate, affect and transform space; they are the physical representations of a constructed and appropriated space.

According to Milton Santos (2000), it is critical to transcend the material notion of territory: to move beyond its location, distances, container, or continent, which would be a merely geographic view. It is required to examine and overcome the geographical limits of territory "used, the territory utilized, the use of the territory is a category" rather than the territory itself (p.87). Santos would define this idea as the expansion of area utilized with a political term such as country, province, canton, parish, or other administrative unit in unitary states, or region and state in federated states.

Actors build the space, for Martinez (2012: 12-19), this social field is a space where social actors are located to implement strategies raised by them, strategies that can be cooperative or competitive. When referring to territory as a social construction, Martinez considers a "relational" dimension of the actors to maintain their social position; this idea would be closer to that of "force fields" developed by Bourdieu (1989). In this vision, the relationship is not neutral, it responds to power relations that are permanently reconfigured to maintain such schemes.

Another Latin American author, Abramovay (2006), refers to the territory as the arena

in which social, economic, power, trust, and cooperation relations take place, and refers to Bourdieu's concept of fields when he emphasizes inequality and dominance saturated by power maintenance and its link to the standard of living.

Martinez (2012:14), on the other hand, indicates that working in local or regional development processes involves defining all the characteristics that comprise the territory. He emphasizes the dynamics of social construction, which provide a challenge to the inclusion of social actors who have not previously been included in territorial building. He also highlights the role played by organizations and their degree of development in the creation, identity, and valuation of the territory, in other words, its social capital.

The author also identifies with Bourdieu in terms of the concept of social field; in this line, the actors seek to maintain an acquired position, a space where social actors are located to implement development strategies that can be cooperative or competitive and that aid in the social construction of the territory from the standpoint of maintaining the social level. From the author's perspective, territorial social capital has a relational representation.

For Lapeze:

Territories are characterized by their history and culture, their environment, their know-how and transmission mechanisms. Their organization and social cohesion, as well as by social values that constitute the columns of the emergence of new resources and their valorization in view of an integration of the production of wealth and well-being in a globalized economic system (...) art and culture in general are essential in the construction of territories (Lapeze, 2007, p. 11).

Territorial constitution and evolution depend on the actions of the actors who form an intentional process of territorial building. These actions are influenced by a variety of factors, including interests, institutional logics, spatial and social dynamics, social and individual history. These factors will generate a decisional system that will mark the trajectory of the territory's construction (Gumuchian, 2007).

Territory is distinguished from space, despite the interconnection between the two; territory becomes a process of production of space, space is transformed, modified, structured, marked by relationships between society, networks, and flows that are installed in it and exert an action on it. This process requires time, intentionality, decision, the trajectory of milestones that mark differentiated histories in territory. This thinking converges with that of the authors Santos, Dallabrida and Becker who point out in the significance of the territory building, the future of the territories and their actors, who agencies the transformations.

Cooperation, cohesion, competitiveness, conflict, dominance, apathy, and opportunism are examples of relationships between actors with differing political weight and unequal access and control over production factors. The latter is critical in terms of

real participation and decision-making. According to Martinez (2012: 1-15), the relational perspective should be analyzed in two directions, and allows for the promotion of change processes, productive transformation, and innovation, or on the opposite, the maintenance of negative dynamics that lead to stagnation, inertia, or loss of productivity and competitiveness. Relational capital, according to Martinez, would provide the foundation for the development of social abilities that extend beyond the economic arena. Because the relational field is dynamic, relationships that are collaborative or competitive one moment might become conflictive or passive the next, depending on the economic, social, and political evolution of the territory.

The territory has an intrinsic dynamic and changing perspective, thus new changes give rise to fresh power connections, the development of new actors or organizations, or new spatial contexts of the interaction. This creates additional weights and positions in the game of relationships; it also opens the door to changes in relationships and new power balances, which may lead to an improvement or innovation in the territory's construction.

For Santos (2000), it is also necessary to overcome the idea of the "banal space" that has a solely economic and flow look that gives a preeminence to the enterprises. Like other authors, such as Perroux, he draws attention to the relationship of actors other than the business sector, which constitute the basis of this banal space. Institutions, government, civil society, local organizations are various categories of actors with distinct connection goals that overcome the idea of the particular space or the abstract space of economics (p.87).

It is vital, for this author, to work in terms of the territory's historical dimension, not from the perspective of periods but more fundamentally, from what exchange signify in order to understand the space in a globalized world and economic openness. He recognizes three historical moments in the case of Latin America: The first refers to a history of isolated communities, in which the term is positioned: territoriality, an Andean sense of Pachamama, belonging to that which belongs. It is a distinct view of the idea of property, of territoriality comes the idea of identity, belonging, limits, dominion, sovereignty, and region "absolute identity among all the components that constitute the community, including the territory" (Santos, 2000, p.89).

The second phase is that of conquest, in which territory was assimilated to the concept of nation: the nation-state, the territorial state, the absolute idea established, affirmed by the State, the affirmation and confirmation of citizenship and rights. Territory in this phase is the political name for a country's space within a relationship of nation-states.

Lastly, the third moment for Santos is the current one of international trade, globalization, and total internationalization, in which identity is debated and rethought.

When considering social structures, relations are given in an unequal exchange and

distribution, in networks of social links that are woven around social domination and that reflect the existing economic inequalities. It is the territory of the chiefdoms "cacicazgos," which control economic and political power and generate accumulation dynamics in the territory; the territory is viewed as a continent, as part of a transnational network of interests and forces.

From a broader social perspective, territory is formed in a symbolic construction of intangible belonging and proximity, reciprocity, trust, and solidarity. A topophilia that links individuals to the location and provides a powerful feeling of appropriation, endearing, symbolic that gives meaning to space, "the space of representations," as quoted in Mancheno, Contreras, Guerrero (2018 p. 5). In this perspective, territory and space are inseparable; making it difficult to study one without the other, and the relationship becomes more symbolic and meaningful as a result.

Similarly, Dallabrida and Becker (2010) highlight the etymological roots of the term territory, which originates from the Latin: terra and torium, which means that the land belongs to someone (p 177). It is not a patrimonial property in itself, but the appropriation of the land, a territorialized, appropriated space, such as the Pachamama for the indigenous population. It is not that the land belongs to them, but that they belong to the land. Migrants and their loving return to their homeland exemplify this profound sense of connection on religious holidays or key occasions during the year.

1.2.1.2. - Territorialization, Deterritorialization, Reterritorialization

Santos' concept of resource territory and shelter territory helps us to recognize a duality in the concept of what territory means for us and for others. Initially, a space of reciprocity and solidarity, which gives one's identity, as seen through senses and emotions (the shelter), then a transition, and last, what we have now, a logic that transcends the borders of the place, its sovereignty, and moves to a decisional and political logic of transnational line, a deconstruction of the territory (a resource).

Santos investigates his own country: Brazil and highlights the suffering of municipalities left to their destiny because national concerns differ, in which the strategy is not to support municipalities in such condition, but to effectively integrate themselves into international trade in the context of globalization, which means deterritorialization and the numerous losses that this path involves.

The third phase requires more discussion since it explains deterritorialization, space is found in a field of forces (Bourdieu, 1989, p 27), (Abramovay, 2006). At this point in the third act, everything changes so quickly, and the family becomes unstable. The familial link or the place of values is gone, and geographical and administrative

boundaries are crossed. According to Santos, it is the national state's viewpoint of international connection, in the international place where the word "deterritorialization" is defined. According to Raffestin (2018), deterritorialization involves leaving the territory; it is a crisis caused by the suppression of borders and limits. There comes a new and distinct reconfiguration, a territorialization "Is the territory of the international economy" (Santos, 2000. P.89).

This third moment allows for an analysis of what Santos refers to as i) "the dialectical movement between territory and world; ii) the dialectic between place and world; iii) the dialectic between place and territory; and iv) the dialectic between territory and social process, as well as a new one: the dialectic between place and space" (2000, p 92).

The dialectic between "territory and world" views the territory from the functional perspective of international commerce circuits or flows, or major national or multinational corporations that mark the territory's trajectory. According to Santos, economic interest in the territory involves the organization of production and the provision of infrastructure, connection, and other services that benefit a few businesses or enclaves outside the territory. Santos associates this dialectic with the concept of deterritorialization.

The "place-world" dialectic implies a two-way interaction in which the world influences the place, and the place influences the globe. The effect of the everyday, of values, of culture, of one's own identity; the interaction indicates a new way of looking at the world from the place, from the local, from the space in which one lives day to day.

The dialectic of "place-territory" is important to study because the territory changes the system of places; the territory is dynamic, and this fluidity causes significant changes in the place, in the space. From this perspective, Santos is referring to the used territory or the continent – the geographical approach of the territory -.

Raffestin (2018) describes a process of territorialization, deterritorialization, and reterritorialization, the first of which is configured as an unstable equilibrium in space-time, territoriality exists when a series of codified relationships are fulfilled, but which can change in the face of system variations. According to Dallabrida and Becker (2020), territorialization is the "process of appropriation of space through governmental or private sector action" (p. 178). Deterritorialization happens through the expropriation of population to make way for economic interests such as external production interests, capital and international commerce, agribusiness, real estate interests, or non-renewable resource exploitation. With deterritorialization producers are forced to sell their land, surrounded by necessity, their land is bought by bigger producers. Even public investment in infrastructure affects the dynamism of that locality. These processes are triggered by external forces or forces exogenous to the territory.

Reterritorialization, on the contrary, implies the inverse process, the settlement in the

space of the deterritorialized, the reappropriation of the place of those who were dispossessed or did not have access, the homeless, and the landless who gain access to the resource, a process of reconquest of the place, a process of territorial reconstruction.

According to these writers, territorialization, deterritorialization, and reterritorialization are notions based on the concept of territory and its complex and linked dynamics. In all cases, they involve appropriation or reappropriation representations, adjustments, changes, path dependence, and decision making by public, private, and social actors in a governance framework.

The territorialization of space implies an appropriation derived from the re-ordering of the territory, which involves the creation of new forms of re-territorialization that follow one another in time in a dynamic manner: territorialization of actors in combination with de-territorialization of other actors in a dynamic movement. Territoriality is represented by topophilia and full awareness of belonging to the territory and the identity of being a part of that territory, implying a symbolic expression of territorial appropriation and re-territorialization.

Territorialization, deterritorialization, and re-territorialization are defined in Martinez (2012) view by analyzing the degrees of participation: active, façade, or non-participation (Arnstein, 1969) in the appropriation of the territory, in the feeling of ownership on which Santos emphasizes. According to Martinez, when there is strong social capital in the territories, there is a possibility of processes of re-territorialization due to more active and effective participation that can reach higher levels of social capital, reaching the level of political incidence that is built through a greater formalization in the institutionality of social capital.

Santos developed the dialectic between “territory and social processes” from the point of view of the division of labor, he describes two types of organization: the first one linked to globalization, a vertical division, integrated to the international market and the hierarchy that comes from outside, where the trajectories and decisions that will influence the territory are dictated. The second one refers to actors within the territory that are linked horizontally, demonstrating plasticity and the capacity to create and recreate new scenarios that benefit the territory and oppose a commanding and hierarchical international system, which Santos refers to in quotation marks as a "world."

Santos abstracts two production systems, the first is a local production system which the author describes as a bottom-up process in which the important relationships are neighborhood, reciprocity, and solidarity, with historical social processes whose foundation is the proximity with the neighbor. The second, on the other hand, relates to a global production system, a top-down, hierarchical work in which the time of production, profitability, and efficiency of the global creation of value has an influence on space and has a negative impact on the social construction of the territory. Top-down money hierarchy dominates in this environment; this is economic violence. Santos refers

to it as "the link between location and territory as a national state".

That locality mentioned by Santos is not one that is added to another to produce a national whole; the local is made up of different daily lives, different representations, with a specific society and different historical milestones, and thus with differentiated social constructions, which forces one to think about the world from local territorial perspective. Not only should we consider the location in front of the world, but also the local in the world, which includes individuals, businesses, associations, civil society, local government, and other actors who establish local strength and territory.

It is feasible to differentiate construction strategies in diverse territories analyzing the actors and how do they participate in the territory, their individual or collective action and their social capital (Gumuchian, 2007: 1-10). Those that develop their potential, constituting their own local dynamics, those that just take use of the chances afforded by global markets, without necessarily producing or encouraging territory development, and ultimately, those who achieve neither and tend to disappear (Becker, 2010: 37).

1.2.1.3. – The connection between Space and Territory

According to Tomadoni (2007, p55), it is difficult to examine the territory without considering space. The space-time relationship is a geographical dimension of movement and energy that is connected to temporal dynamics. They are inseparable because they are socially constructed in a dynamic way, which also implies, as Wallerstein pointed out, a critical geography approach of complexity, implying that there are no innocent representations of social relations, but that these relations are permeated by codes, norms, cultures, positions, and power that are not static and are constantly modified in time. Time and space are inextricably linked.

Space is a dynamic process that cannot be understood in a static manner (Tomadoni, 2007). Its dynamic incorporates the spatiality, historicity, and sociality dimensions highlighted by Soja (1999) quoted in Tomadoni (2007). The concrete representation of space is the territory, which is a relational notion composed of forms, limitations, geography, and contents or representations (Pecqueur, 2013). The existing conditions of space are determined by temporal decisions, and path dependence has a significant impact on the present and future decisions of territorial actors, as well as the condition of space and its potentialities (Roth, 2010).

According to Vargas (2012), who quotes Fremont (1976), Brunet, Ferras, and Théry (1992), territory and space are almost synonymous, and spatial reference is essential for understanding territorial dynamics. This author believes that the existence of a social and experiential space, enriched with cultural values peculiar to each territory, is the basis of identity and membership to the social group. The unique, distinct identity is part of the territory's heritage assets and may become assets when identified and valued. The

value encapsulates the essence of the territory, as well as what distinguishes it. We are talking about the territory's content, not its geographic location.

According to the author, the territory contains the geographic space; the territory is seen as a system of social evolution in which the space reflects the system's conditions and relationships. The territory becomes a structured, ordered place as a result of social relations (Vargas, 2012). In this perspective, space is more than just a physical or geographical component; it is the expression of the interaction between the people who live, construct, and react to it. Space also reflects an evolution or population dynamic that causes stress on the biophysical resource and other resources.

Space displays various dimensions: the material relational link, the temporal dimension of change and development, and the structure and order indicated by society. In other words, the physical spatial element is reinforced by time and territorial structure. Finally, the landscape is the expression of the state of balanced or unequal relationships between actors and natural conditions, transformation processes, productive systems, demographic and social structures from an integrated and systemic perspective (Vargas, 2012). The link is between the biophysical basis and the society that inhabits, interacts with, and appropriates it.

The application of systems theory has been extremely beneficial in visualizing the challenges and potential environmental solutions in the territories. An eco-systemic approach can help to explain the interdependence and linkage of geosystems with socioeconomic and anthropic systems, all of which are viewed as spatial and temporal elements of a whole or a system that shapes a given space in terms of flow and exchange, with associated and interdependent phenomena (Vargas, 2012).

In this study, a phenomenon that exemplifies this relationship is that of monocultures, which are linked to enclaves and agribusiness. African palm crops, flowers, hard corn, rice, and other crops generate significant economic growth and productive chains favorable to increased employment; however, they can have an adverse effect on the biophysical system and are not remediable. Overexploitation, in this case, diminishes the soil's nutrient regeneration capacity, placing pressure on all ecosystems and protected areas. In this case, space is a representation of power relationships.

The indissoluble linkage between space, history, and society aids in the understanding of complex socio-spatial processes related to production, economics, and the evolution of social actors. Tomadoni (2007) also associates space with dynamics, that is, space under construction and reconstruction, in a process of constantly remaking forms; in this sense, the author indicates that space is a social construction, the product of historical trajectories and milestones that permanently construct space. In the social, economic, ethical, political, scientific, and technical spheres, social processes in space account for the territory's various complex characteristics (p.55).

In this approach, production processes are integrated and linked to the social structure of the territory. Defining a specific way of appropriating and modifying the landscape and environment, including the satisfaction of human needs across space and time. Of course, defining space is a challenging task, but according to Santos (1986), as quoted in Dallabrida and Becker (2010, p 179), the space of interest is "human space, which contains or is contained by all those multiples of space (...) what happens in a place depends on the totality of places that construct the space".

According to Santos, space is the range of interactions that emerge via forms that manifest themselves in history, in past and current processes, and social relations that manifest themselves through functions. Santos coincides with Bourdieu when he says, "Therefore, space is a genuine field of forces with unequal acceleration. As a result, spatial development is not the same everywhere" as quoted in (Dallabrida and Becker, 2010, pp 179-180).

According to Tomadoni, social process reproduces social relations that transcend the economic field and are based on representations of identity, belonging, symbolic, axiological, and a qualitative field. According to Tomadoni (2007, p. 56), "the reproduction of these terms promotes social interactions, which (...) give birth to the construction of a territory in a particular time and place."

This gives rise to spatial disparities in which labor and production relations coexist in various contexts of social structure articulation. Many social and territorial forms might coexist in the same nation, depending on the historical structuring that has defined the relationship of actors in both production and cultural relationships, identity and belonging regarding place or space. At last, as noted by Santos, quoted in Tomadoni (2007), the territory is neither an object nor a static factor, it is a series of complex interactions expressed by the manner of co-inhabiting in space and the form of use of the territory that it represents.

1.2.1.4. - Territorial dynamics

Several factors encourage territorial dynamics and there are several strategies as well, in which territorial actors work and organize themselves to operate in territorial planning and local and regional development processes (Dallabrida and Becker, 2010). Spatial planning is the geographical representation of the territory's economic, social, cultural, and ecological dimensions, and as such has an integrative and multidisciplinary scope, pursuing the sustainable development of territories (European Charter, 1983) (Gómez Orea, 1993). Territorial planning is the instrument that represents the efforts of the actors and the dynamics intended to achieve the territorial development objectives.

The challenge for territory is to guarantee that the energy and social vitality of local government, in collaboration with organizations and formal or informal associations, becomes a force with political influence to redistribute benefits equitably and move specific assets (Pecqueur, 2013). In other words, if reterritorialization involves transforming power relations and reconstructing territories in order to produce equitable relationships across all territorial dimensions: - economic, political, social, institutional, and environmental -territorial dynamics must encourage territorial development.

Territorial socioeconomic dynamics, cooperation, involvement, and social capital transform space-time, generate and deepen external and internal articulations and linkages, capitalizing symbolic and cultural representations, and putting them in value (Mancheno, Contreras, Guerrero, 2018), resulting in new forms of territorial construction.

Lapeze (2007) links dynamism with innovation and considers Alfred Marshall and Josef Schumpeter as two essential strategists when organizing the dynamics of economic systems and organizing territorial movements that conduct to improvements in the economic dimension (p. 11). Marshallian industrial districts are structured in a system of movement and dynamism, in a continuous learning resulting from the interaction between firms, institutions, and society. These relationships foster new learning settings (Courlet, 2007, p.30). For Schumpeter, the driving force of these dynamics is innovation, creative disruption, and change, which makes us conceive of territorial creativity, transformations and discontinuities as fundamental parts of territorial dynamics. Pecqueur (2014) particularly values the inventiveness and dynamism of local actors, who may create specific assets from resources that are hidden in the territory and are able to develop due to their potential for invention and creation.

This research proposes to examine small cantons and the factors that help explain different territorial dynamics in order to achieve territorial development. The demographic and economic factors, the city's role in supporting regional dynamics, and the cantons' social capital are examined.

1.2.1.5. - Linkages with adjacent territories-regions

The region is the territory's aggregate level. The cantons of this study are too small to be observed without linkage to other territories that comprise regions. Furthermore, resolving territorial challenges necessitates the activation of multilevel governance or a coalition of actors from multiple territories or levels of government.

The study of the territory through the links and interconnections formed by the actors who live there, leads to identifying the dynamism of the economy and society and their

ability for construction or reconstruction of the territory, and to a regional view of territorial development. Regions are also social systems that are evolving and constantly under construction.

According to Santos (1997), the region is a space of certain societal functions at a given period, "a subspace of the entire national space" (Santos, 1997), as quoted in Dallabrida and Becker (2014 p. 177). According to Santos (1997 s p), the region consists of a social, political, economic, social, and cultural organization that is linked to the world. It also represents a place with defined geographical boundaries, a specification of the spatial totality. A functional and spatial articulation. The region is a geographical dimension of social specificities, components that connect and differentiate the area, forming a spatiotemporal whole (Gómez, 1995), as quoted in Dallabrida and Becker (2014 p. 177). According to the authors, establishing a region involves dividing the space based on organizing factors or explicit criteria that change depending on the region and the elements that organize it. There is also a specific productive profile, as well as a history that preserves it, and relationships between successful and less prosperous territories conceived as polycentrism, so different territories can complement one another and create diverse forms of interactions.

Referring to Boisier, Tomadoni (2007) raises territorial scales in reference to regions, which may contain continuous or discontinuous territories, a space built over time and based on historical milestones. The region would be a concrete territory of larger dimensions that houses the territories that comprise the region (p. 61). The region is a "geographic entity" that contiguously or discontinuously agglutinates delimited and specified territory. What makes a region, according to both writers, is the organizing element that defines it and acts as a guide to the geographical connection that shapes it.

Silva Lira (2005) urges us to consider the possibilities of subnational territories in a globalizing context, quoting Sergio Boisier, who emphasizes the greater complexity that territories must assume in order to capitalize on opportunities in a more connected world that requires more strategic approaches leading to development. He refers to a new virtual geography that encourages new territorial organization modalities. Regions derived from a systemic logic based on relationships, where size is a secondary characteristic and the main subject is the connection, the networks, and where a reevaluation of the little becomes more dynamic and capable of generating changes and assertive responses to changing contexts.

Boisier quoted in Silva Lira (2005) highlights the notion of pivotal region, which is a center of a pyramid structure around which associative regions including nearby territories are built. Virtual regions are also defined; these do not require spatially contiguous adjacent territories. The concept of quasi-enterprise is assigned in virtual regions due to the strategic management ability necessary in a worldwide environment, as well as quasi-state, due to the political dimension of financial, political, and administrative autonomy: decentralizing.

Boisier refers to the region's social construction and function. Socially constructing a region "involves empowering its capacity for self-organization (...) capable of mobilizing for collective political projects, that is, capable of becoming the subject of its own development as well as the development of other territories with which it is associated" (Boisier, 1996), as quoted in Dallabrida and Becker (2014 p. 180).

Tomadoni also mentions Sergio Boisier and the importance of the three types of regions: pivotal, associative, and virtual. The first are grouped in a complex manner from the perspective of administrative political division based on historical milestones that define the region's significance. The second, arranged by their own choice and decision based on shared dynamics and realities of proximity and connection. The third is founded on formal or informal institutional agreements between two or more pivotal or associated zones, each of which has a discontinuous spatiality and an agreed-upon temporality.

For the author, the virtual region extends beyond the associative or pivotal regions, with their formal or informal contractual status. Their management and decision-making capacity will be determined by the contents of the continent, as well as the functionality with which the network of regions with common objectives operates. According to the author, this regional architecture responds to interconnected industrial and urban interests, with competitiveness serving as the region's economic engine in a globalizing context.

Is it conceivable, however, for virtual regions to be linked to territorial challenges such as food security or cocoa production mentioned above. With completely different goals than the Brazilian scenario, but with the prospect of developing a region based on a common element, which in this case is the resolution of a public problem or the valuation of exportable resources. It is possible to create a virtual area based on the sectorial or problematic basis mentioned above.

Raffestin (2018) associates the region with the territorialization, deterritorialization, and reterritorialization processes. According to him, the region is an unstable system in which space responds to time and, informational changes influence structural changes and the emergence of new environments. Raffestin's evolution is linked to Tomadoni's concept of space-time. Territories and space are analyzed together in the proposed regions, as elements of a social and economic system that is continually formed and reconstructed.

Jane Jacobs's research focuses on the local level, on the city and its connection to the region (Jacobs, 1975). The region is a distinct subnational territory characterized by a dynamic flow of commodities, services, and people. The dynamics are determined by the presence or absence of vital variables for the region's sustainability, which include the urban market, the city's technology and innovative capability, the city connection to labor sources, and the city economic capital. These components have various degrees of effect on regional and rural areas, resulting in interactions with surrounding and non-

neighboring areas (Jacobs, 1975). The problem is critical when examining the link between urban and rural areas, as well as the roles of cities as cultural, economic, social, cohesive, and political centers of a region.

Although this territorial division was mentioned in the 2008 Constitution of Ecuador, no political-administrative regions have been formed as a level of government in the country. The topic is whether the province may be constituted as a region for cantonal territories, and what function the province would play as a territory that connects contiguous territories, like associative regions. The next question is whether Ecuador could form virtual regions based on a collaborative logic rather than the transnational industrial productive logic seen above, but in the interest of solving common public problems or improving the competitive position of sustainable national and exportable products or agro-industries for national consumption and export.

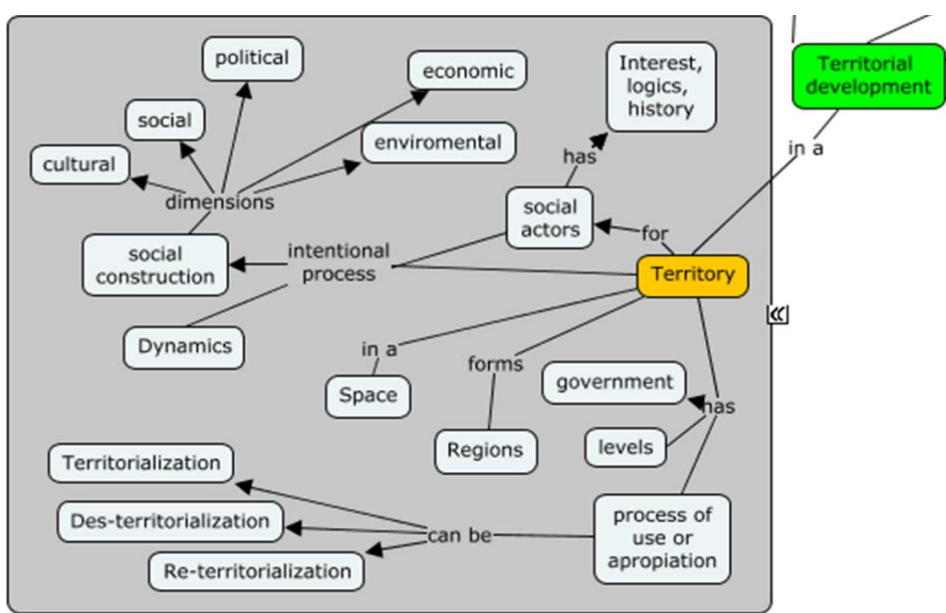
Cities play a dual role in the regions, offering key social, economic, and cultural goods and services for regional development as well as economic and social articulation of the rural and urban. The city is defined as the urban area in any subnational political administrative division that concentrates population, i.e., there are metropolitan cities (Quito-Guayaquil, Cuenca), intermediate cities (Ambato, Loja), and smaller cities (Pimampiro, El Angel). "The city is the population that creates its economic growth from its own local economy," according to Jacobs (1975: 284).

In summary, the conceptual framework of this section provides an account of territories, space, region, and their complexities, as well as dynamic and integral processes in which territorial relations are developed, and the identification of space-time as the key to spatial and territorial socioeconomic dynamics, as seen in figure 24.

The creation of regions sheds light on the perspective of relationships framed in the realities of the territories, as well as the possibility of establishing polycenters that pursue equity between more and less dynamic territories, attempting to overcome the administrative territory's limited vision and giving primacy to the territory and its multiple commercial and systemic relationships.

Therefore, the idea of deterritorialization and reterritorialization makes sense because territorial actors engage with and contribute to the development of the territory with which they identify and belong. Topophilia relationships are cultural keys to constructing shared views of territorial development as a continuous process.

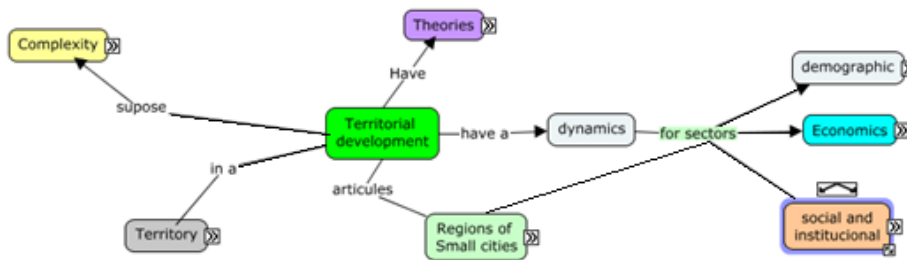
Figure 24 Map of concepts: territory



Source: Author

The central concept for the understanding of the thesis is the concept of territory. This is seen as a process of use and appropriation of space by a community of social actors, whose dynamics and interactions generate intentional processes of social construction. These actors have their own interests, logics, and histories, so it is possible to see the social construction process as a negotiation scenario, depending on the power structures in that society, its forms of governance, and the organization of the respective State, among other factors. The social construction of the territory acts in several spheres, highlighting the cultural, social, political, economic, and environmental dimensions. The dynamics of appropriation of territory by a community is the "territorialization" of space; in certain cases, there are opposing dynamics (de-territorialization), or re-conquest (re-territorialization).

Figure 25 Map of concepts of the thesis



Source: Author

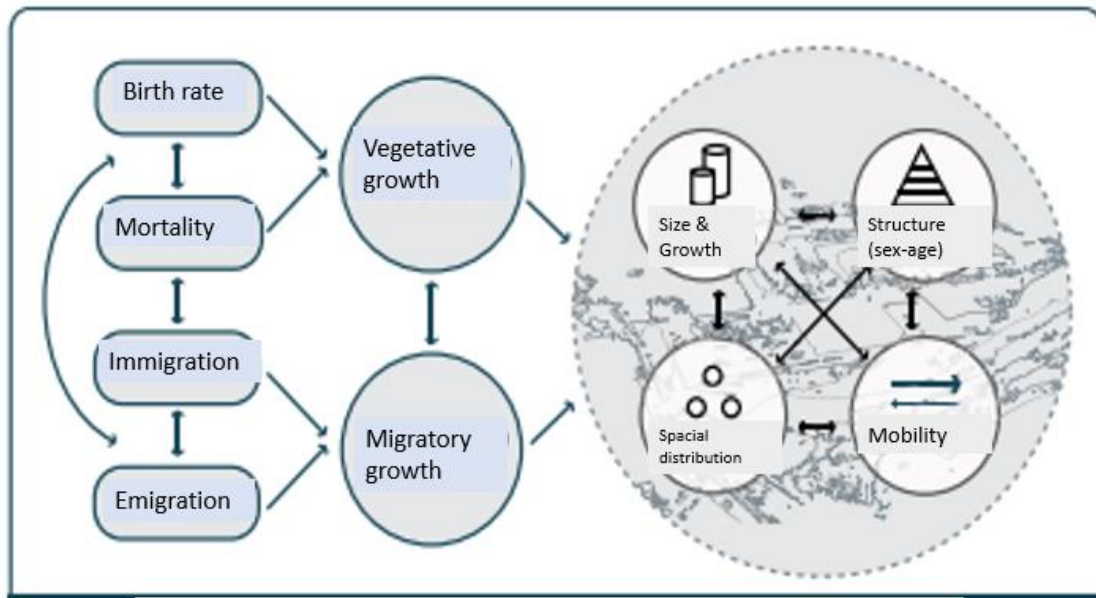
The axis for the conceptual analysis of this thesis is the territorial development perspective, see figure 25. This perspective assumes a systemic vision of the territory, framed in the theory of complexity. The territory is understood as a dynamic social construction, whose actors make decisions and adjust their actions to the environmental, economic, and cultural conditions existing in that space. The interactions between territories are recognized, highlighting the role of cities as aggregators of value and service providers for their surrounding territory, in a network of human settlements at various levels. For the analysis of dynamics, some sectors or subsystems are considered: demographic dynamics, social, cultural, and institutional dynamics, and economic dynamics. In relation to the latter, the theoretical frame reviews the main orthodox and heterodox theories of development.

1.2.2 Population dynamics: a few basic concepts

Demography is the study of the essential processes that influence the composition and growth of populations, and it gives rise to analysis from various perspectives, including anthropology, sociology, and economics. Population dynamics are intricately linked to various economic, social, and cultural aspects that intersect in the territories. As a result, some fundamental ideas must be established to conduct analyses that combine population dynamics with economic and social dynamics.

The processes of population dynamics are described in their most basic form in data on inflows (birth and immigration) and outflows (mortality and emigration), see figure 26, which give rise to the "basic demographic equation," which is linked to natural growth and the migrator balance. Additionally, the population is structured in many ways, considering birth and death rates, highlighting age and gender hierarchies, which are depicted in population pyramids and give rise to relationships such as dependent ratios.

Figure 26 Central concepts of population dynamics



Source: U. Externado de Colombia (2009)

Birth rates are connected to the social and cultural processes of household formation and dissolution, and fertility rates are significantly related to educational level. Mortality rates are linked to economic and social factors, particularly access to health care. On the other side, mobility and migration dynamics are linked to resource availability, particularly employment, but also to political and cultural factors (Externado University, 2009).

1.2.2.1 - Demography transition theory

Since the studies of Robert Malthus, Adam Smith, and David Ricardo, the relationship between population and development has been a significant issue in economic doctrine. The concern was focused on two interconnected issues: how a greater or smaller population allows for -or does not allow for- appropriate income production and distribution. The classic demographic and economic viewpoints were linked, but they were eventually distinguished as almost separate disciplines. In spite of the fact that Malthus's prediction that population increase was incompatible with food supply possibilities was proven erroneous, it had a significant impact on policy decisions in various countries.

Smith, on the other hand, believed that the "invisible hand" of the market might impact population regulation. People have the liberty to decide how many children to have

(there would be a propensity to have enough children for resource reproduction) and decide where to live (people would seek by migration the best places to live and produce). According to Ricardo, the number of the working population varies as a function of the gap between the market wage and a "stationary" rate that will be the "natural price of labor." These early approaches to the relationship between demographic and economic dynamics can generally be considered incorrect, as the Malthus, Smith, or Ricardo hypotheses have not been demonstrated to be true, especially given the ability of developed countries to provide a greater volume of consumer goods and services (Kuznets, 1974). (Manzano and Velasquez, 2018).

According to the economist Julian Simon, population expansion has long-term benefits. He developed the "Simon Abundance Index" to measure the correlation between population increase and the abundance of 50 different commodities, such as food, energy, materials, minerals, and metals. Even though the population increased by 77.6% between 1980 and 2021, the availability of resources per person was multiplied by 448.5%, proving that population expansion does not imply a shortage of resources. This is because, in the author's opinion:

There is no physical or economic reason why human ingenuity and enterprise cannot continue forever to respond to impending scarcity, and (a) existing problems with new expedients, which, after a period of adjustment, leave us better off than before the problem arose. (Simon, 1986. P 217)

Beginning in the 1970s, and particularly with Becker's work, an effort was made to combine the analysis of growth and population dynamics. Particularly, Becker proposes his hypotheses on the economic determinants of household fertility and the birth rate, with the idea of maximizing a family's utility, and give children the opportunity to receive a sufficient level of education. Demographic trends develop across numerous generations, the research in this discipline is focused on examinations of growth over extended periods. Doepke stands out as a writer in this subject, as he emphasizes the connection between the population's average educational level and the decline in fertility and almost simultaneous gains in production (Posadas, 2013).

In Europe, the change in demographic patterns is attributed to modernization and industrialization. The change took place in four moments: a "Malthusian" moment of population growth; a "demographic take-off" associated with the industrial revolution, with an increase in population growth rates and per capita product; a certain decline in the population rate, in what demographers call "demographic transition"; and a current phase, where stagnation and decrease are frequently observed. The demographic transition is the transition from a population characterized by high mortality and birth rates to a population with lower mortality and birth rates. This process is generally observed when living conditions improve, particularly in terms of access to health, education and economic resources. The demographic transition leads to an increase in the population, then a stabilization or even a decrease of it in the long term. This

phenomenon can have implications on many aspects of society, such as the economy, public policies and the environment.

The Demographic Transition Theory (DTT) is an effort to connect population dynamics with the modernization process that followed the industrial revolution. It was initially elaborated in a 1945 by Notestein that examined data on the development of Western European, North American, Canadian, and New Zealand countries during a three-hundred-year period. Historically, when aspects of modernity are brought into society, there is a break with traditional demographic dynamics (high fertility in families, big families, high child mortality, short life expectancy), which results in a quick drop in mortality. According to this theory, nations tend to converge in terms of income, technology, and standard of living. These changes are not evident in the case of Latin America since there are regions with varying levels of development that are not always imbued with modernity (Manzano and Velásquez, 2018; Polèse, 2008).

The demographic transition is an ongoing trend that has been in progress for more than three centuries and is gradually spreading to all peoples on the earth. The growth in life expectancy, the drop in fertility, the establishment of nuclear and heterogeneous families, and a decline in mortality are all examples given by Vega (2007). But, to paraphrase Blangiardo, "a prolonged demographic transition results in the death of society, or in huge expenses that make it undesirable" (Blangiardo, 1990, quoted in Vega, 2007, 5).

Although the DTT has been criticized for its errors and inconsistencies, particularly in respect to the "baby boom" that was thought to represent the biggest demographic expansion in the 1970s, it has generally been used as the foundation for many governmental programs. Vega lists five elements in connection to how public policies relate to these problems:

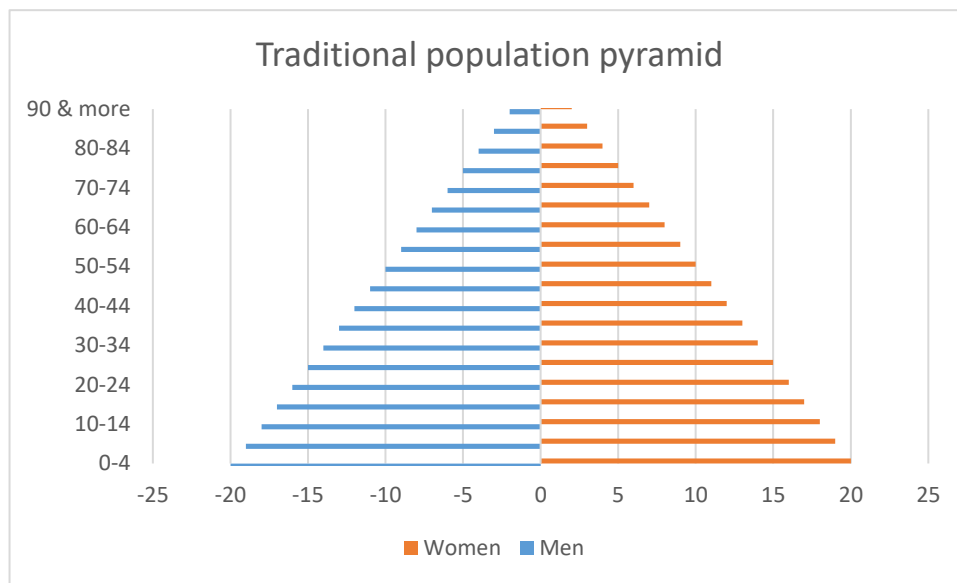
- a) the development strategy in consideration of employment, employment stability, and the lowering of inequality
- b) the inclusion of women in the workforce
- c) the progress of urbanization and the balanced habitation of the territory
- d) the specific policy for sex education and responsible parenting
- e) the social protection and integration policies, particularly in respect to the social security rights coverage given the rise in longevity (Vega, 2007). Health access policies should be added to this.

1.2.2.2 - The demographic bonus

Population pyramids changed because of the decline in birth and death rates. Three hypothetical models are considered in the theoretical process:

According to the conventional pyramid, there should be many births and many deaths. This suggests that there are a lot of children and young adults and few elderly people. This is how the population pyramid would appear (theoretically), figure 27.

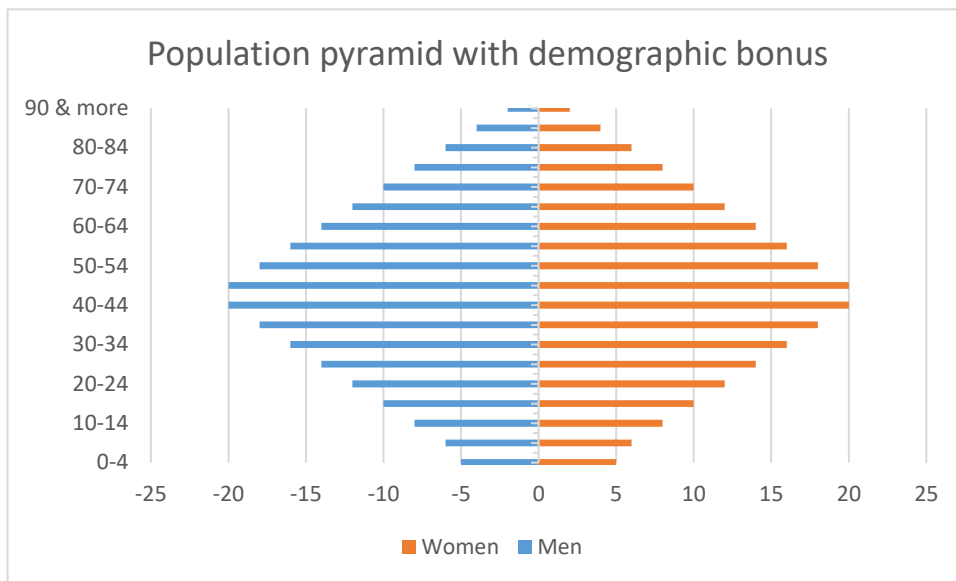
Figure 27 Population pyramids: Traditional



Source: Author

As the number of individuals who are economically dependent (such as children and the elderly) is significantly lower than that of those who are in working age, there is a rise in the working age population because of the declining birth rate, a period known as the "demographic bonus." The pyramid turns into a rhombus, see figure 28.

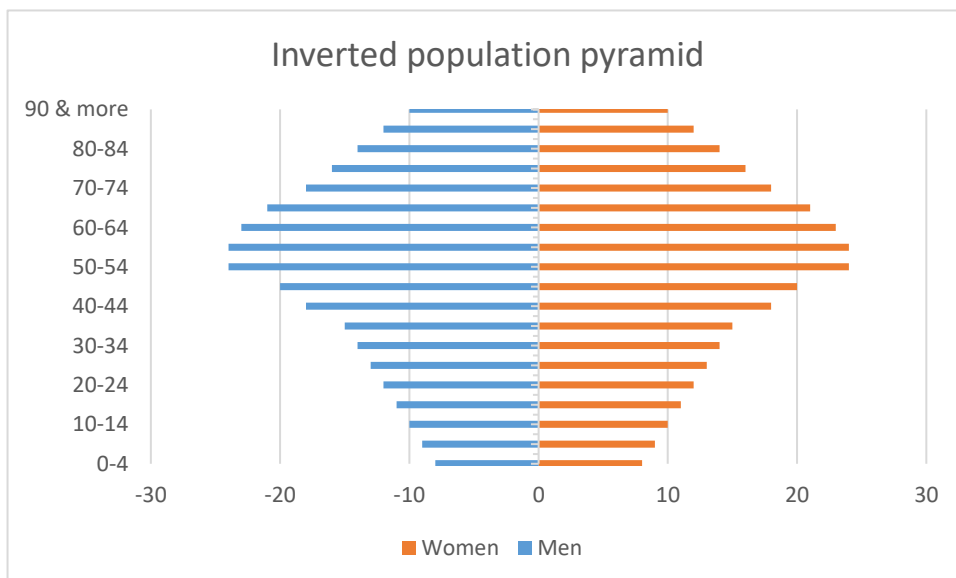
Figure 28 Population pyramids: Demographic Bonus



Source: Author

The older population is growing because of medical advancements and lifestyle changes. The outcome over many years would be an inverted pyramid, where the elderly population has a higher weight, if there has not been a growth in the birth rate. The pyramid would resemble the figure 29:

Figure 29 Population pyramids: Inverted



Source: Author

Although there are negative birth rates, this form would be present in certain wealthy highland nations that are also starting to lose population.

The term "demographic bonus" was established since it is believed that the balance of ages creates opportunities for growth (Pinto, 2016). It is believed that an increase in the working-age population would result in a quicker growth in per capita income since individuals are more likely to be producers than consumers or dependents. Yet, the demographic bonus's advantages may not materialize, for instance, if the market is unable to integrate the additional workers (Saad, 2012).

1.2.2.3 - Urban-rural migration, the process of urbanization

The globe, which has transitioned from having a predominately rural population to a predominately urban population, is experiencing a constant movement of migration and settlement towards urban areas.

According to Polèse (1998), economic development and urbanization are linked. This linkage, which becomes a rule for countries, applies also at the subnational level and with intermediary cities. Economic development, according to the author, is characterized by advances in living standards in terms of work opportunities, basic infrastructure, health conditions and education, all of which are centered in urban areas. In other words, employment and access to basic services may be the primary factors attracting more densely populated areas, facilitating the provision of some of these services, particularly those involving systems such as water, electricity, and sanitation, as well as those facilitated by economies of scale, such as health and education.

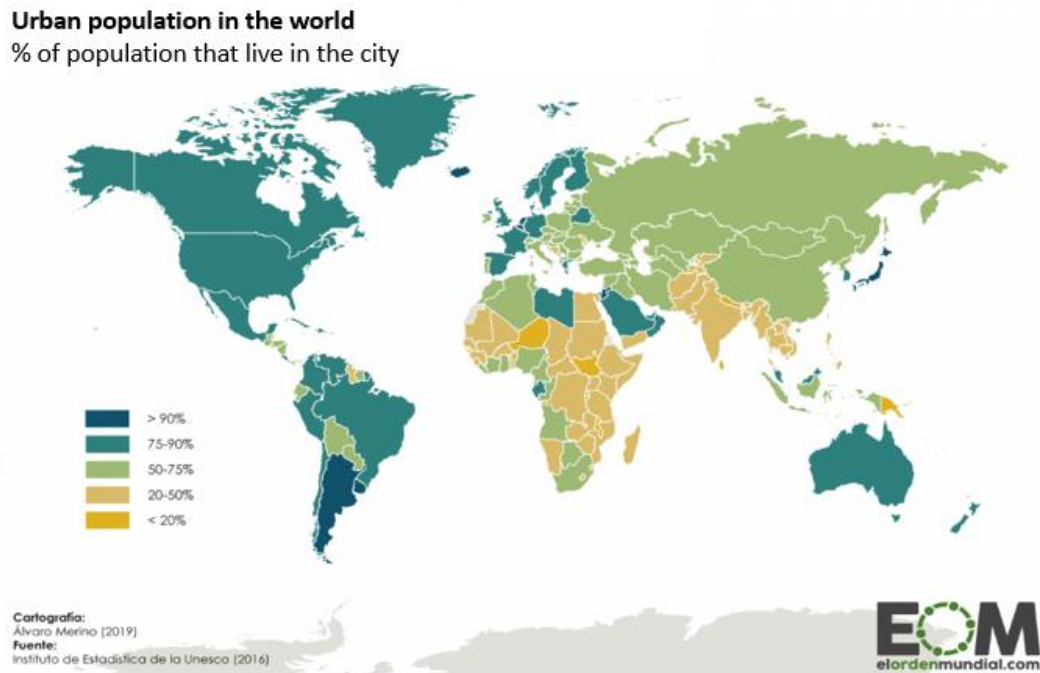
The idea points to causes of exode and attraction of territories, as described in Ravestein's original study more than a century ago (Ravestein, 1885), or to the productive efficiency provided by concentration, this relationship appears to be constructively useful (Henderson, 2001). It is assumed that when rural to urban migration occurs labor force related to primary sectors - prevalent in the rural sector, such as agriculture or mining - will become part of more dynamic sectors with higher yields and greater specialization. People relocate if they get more utility by doing so. Current study indicates that utility is not always optimum, and that social losses are common. Schüdeln's study in Germany, which measured people "social mobility," is one example (2014).

The reasons for migration are not solely economic. Although cities with greater earnings obviously draw more people, additional variables such as climate change, family networks, access to education, and diversification of livelihoods are mentioned in the research.

Worldwide, cities accounted for 55% of the world's population in 2016, and the following illustration show that population is expected to rise to 70% by 2050, see figure 30.

When we look at urbanization rates by nation, we see that the Americas and Europe have the greatest rates, while Asia and Africa have the lowest. However, because this rule includes many exceptions, each country must be examined separately.

Figure 30 Urban population



Source: UNESCO (2016)

In terms of population distribution, distinctions between rural-urban are not always evident because the definitions for what is urban varies. For global statistics, the limit is set at 2,500 inhabitants to classify a conglomeration as urban.

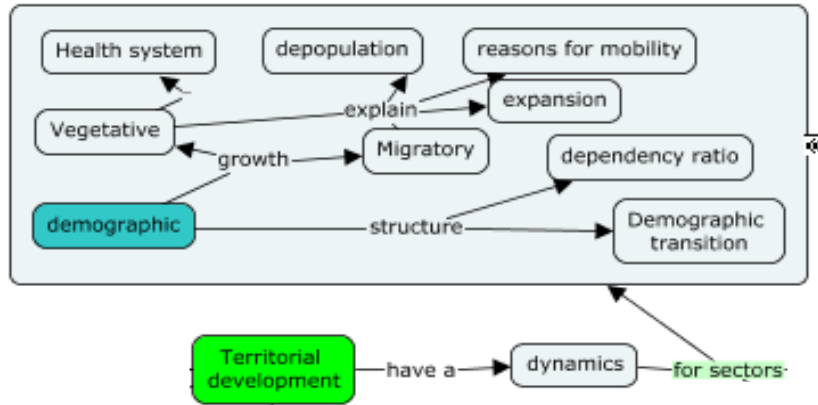
Furthermore, there are small states - by criteria of population or territory - (islands and city-states) with their entire population concentrated in an urban conglomerate (e.g., Qatar, San Marino, Malta, Singapore, Hong Kong, Monaco, Vaticano, among others).

A few nations, like Andorra, the Czech Republic, and Belize, have seen ruralization, indicating that their rural population has expanded. Therefore, the term city refers to a wide range of human settlements, including megacities, city-states, and cities and towns.

It is widely assumed that the global trend toward urbanization, and hence the loss of the rural population, is a non-reversible phenomenon.

The attraction of cities contrasts with the fragility of "marginal urban" areas. According to UN HABITAT data from 2017, 75% of the world's cities had higher levels of inequality than two decades earlier.

Figure 31 Map of concepts: demographic



Source: Author

The demographic dynamics of a territory is linked to two forms of growth: natural or vegetative growth, given by the birth and fertility rates of families, and migratory growth. Vegetative growth is linked to the possibilities of access to education, work, the health system, and to specific cultural features. Migratory growth is related to labor attractiveness, possibilities of monetary income, and attractiveness in terms of standard of living. Demographic dynamics are expressed in changes in the population structure, where the weight of dependent populations (children, elderly) in relation to people of income-earning age, and the possibilities of human capital to access livelihoods, stand out. In this sense, the implications of the demographic transition theory are important in Ecuador, see figure 31.

1.2.3 Theoretical Introduction to Economy and Territorial Development

1.2.3.1. - Orthodox development approaches

Among the theories of development, particularly those of regional development, the neoclassical Robert Solow proposed in the 1950s a model of economic growth that examines the uniformization of living patterns over the world. His fundamental premise was the concept of convergence, which holds that poor nations may expand faster if capital investment grows, resulting in higher output (Globo libros, 2013: 224).

According to Solow, capital has decreasing returns, and capital invested in rich nations results in decreased levels of productivity. The premise is that every country on the planet has access to the same technology. Notwithstanding the inaccuracy of this notion, beta and sigma convergences were used to describe the regionalization process, which aimed to foster economic and social integration and reduce regional imbalances (Toral Arto, 2001: 5-12). Silva Lira continues to use this methodology to develop a typology of subnational territories with the goal of locating a starting point from which local authorities can generate more competitive public policies. Silva Lira proposes generating public policy from the "bottom up", a kind of diagnosis of the initial situation in terms of economic growth and its growth rate (Silva Lira, 2005).

According to Vázquez Barquero (2007), after World War II, in the 1950s and 1960s, a unified approach centered on Abramovitz (1952), Arrow (1962), Kuznets (1966), Lewis (1955), and Solow (1956) prevailed. In this vision, economic growth is visualized as synonymous to development and seeks to increase employment and reduce poverty. Although later reflections place growth as a requirement for development, economists such as Stiglitz point out that not all growth necessarily leads to development (Stiglitz, 2002a, 2002b). He maintains a critical view of the type and quality of growth that can be experienced in developing countries that does not aim to sustainability.

Growth is the result of productive variables located inside the territory, according to Paul Romer and Robert Lucas's endogenous growth hypothesis, a theory that was highlighted since the 1980s. The importance of labor productivity has been underlined.

When investments in capital (...), such as human capital, generate increasing returns due to the diffusion of innovations and knowledge among companies and the creation of external economies, decreasing returns are only one of the possible outcomes of the capital accumulation process (Vázquez Barquero, 2007: 186).

Based on the study of cities, Jane Jacobs's research indicates the importance of

generating local self-sufficiency for the sustainability of cities from an urban standpoint. Regions become sustainable in this perspective if they stop relying on imports from other regions, strengthening their local and diverse production schemes, thus favoring a production less linked to productive specialization, and becoming more diversified. Her studies were revisited by Romer (1994).

The endogenous development hypothesis (Romer 1994) was prevalent in the 1990s, taking into consideration characteristics such as education quality, infrastructure, and innovation. According to this theory, local actors should guide structural change and local production reconversion, while improving the area's welfare in three dimensions: economic, social-cultural, and institutional-political. For this vision, it was vital to strengthen local capacities at all levels of government, business, and society, to make decisions locally.

This paradigm contrasts with Becker and Mincer's neoclassical human capital theories, which lead the discussion toward the idea of profit. However, strengthening individual abilities at the subnational level is an important approach for bottom-up decision-making processes now.

Growth theories based mostly on capital were questioned as development proposals because of the low outcomes generated by foreign aid programs like North-South relations that were ineffective because it focuses only on the economic dimension of development (Vázquez Barquero, 2007: 186). The evidence sparked several discussions regarding the role of development cooperation and the need for international cooperation participants to move from vertical to horizontal partnerships. (From Donors – recipients to partners relations). South-south collaboration and, cooperative linkages centered on the search for solutions to public problems were privileged. Policy concerns and public action from below: bottom-up, based on fiscal, political, and administrative decentralization principles were the new viewpoints. The contents of the Paris Agreement, as well as the agendas of Accra and Addis Abeba in the twenties, reflect this critical viewpoint and the need for horizontal links among development cooperation participants. Governance (Kooiman, 2005), engagement quality, and decision-making addressing local development activities and goals were discussed. (Gallicchio, 2010).

1.2.3.2. - Heterodox theories of development

The ideas of Sustainable Human Development emerged in the 1980s as a result of Amartya Sen's famine research and Martha Nussbaum's capacity development studies, (Nussbaum, 2003). The quantifications of Pakistani minister Mabub Ul Haq were also significant in this theory because the approach is aimed at generating processes of growth and development of capabilities and potential with a view to future sustainability,

i.e., respect for the resources of future generations. Thanks to this debate, the creation of the human development index and the comparison of nations enabled to broaden the focus of development beyond the only idea of growth or the fulfillment of Streeten's Basic Needs Theory.

Although not as influential as Sen's or Nussbaum's theories, the appearance of the Human Scale Development approach from a local scale perspective was innovative in the 1980s and 1990s. The lecture by Max Neef (1993) underlines the need of addressing the human scale in development approaches, which demands a multidisciplinary and transdisciplinary approach. This point of view has a tremendous influence on development activities, especially women's empowerment, with the objective of enhancing self-esteem and local mobilization potential. Unlike the classical theory, which holds that needs are infinite, this Chilean thinker argues that needs are restricted and known, and that satisfiers vary by culture and are separate from commodities. In the face of endless output, this thought (few needs) underlines the request to search for more severe environmental sustainability solutions.

The Territorial Development school arises in the 1980s with thoughts on the importance of territorial development through the agency of local actors, organizations for development and territorial actors with the ability to engage in Public Action (Campagne, Pecqueur, 2014). In the 1980s and 1990s, a core recommendation for development programs was the need to enhance local associations.

“The empirical research of Local Production Systems begins in developing countries. Territories, according to this viewpoint, play a key part in development processes and are considered as a long and ongoing process” (Courlet, 2007:14).

Development is more a social than an economic or technological challenge. When studying the territory, the vision of a dynamic social construction process arises. (Santos, 1999, 2000; Tomadoni, 2007). The territory becomes a privileged component of development because it incorporates and intertwines cultural, historical, social, geographical, environmental, and economic factors. They serve as the foundation for a particular type of production organization as well as a constant connection between the economic and social dimensions. (Courlet, Garofoli, 1995, cited in Courlet, 2007: 15).

An endogenous development model ensures the autonomy of the local economic system's transformation process by emphasizing the central role of local social actors' decision-making and their capacity to control and internalize knowledge and information coming from outside, and generally assuming self-sustaining development characteristics. (Garofoli 1995 quoted in Courlet, 2007, 95).

The fundamental component to the approach, as previously said, is the local decision-making process; therefore, efforts to improve decision-making abilities from the bottom-up level are critical and relevant given the concepts of subsidiarity and local participation. The regional theory of endogenous local development differs from

endogenous growth models because it includes production growth into territorial social and institutional organization, focusing on growth and structural change from a territorial rather than functional perspective. It "understands the relationship of development processes and influences with these economic dynamics" (Vázquez Barquero, 2007: 187).

Ricardo Abramovay, Antonio Vázquez Barquero, and Francisco Alburquerque emphasize local economic development as a concept of "growth and structural change that uses the development potential existing in the territory and leads to an increase in the welfare of the population of a locality or region" (Vázquez Barquero, 2000: 21). The concept highlights the importance of changing the production matrix, productive reconversion, and value addition with quality and capacity to satisfy segmented and changing demands for higher quality. The major purpose is to raise people's standard of living.

Local economic development attempts to generate public strategies from the territory on multiple dimensions: economic, social, environmental, and political-institutional from an integrated and systemic perspective. In this vision, local governments lead the establishment of a common vision of territorial actors. Local authorities have public duties and competencies while civil society has an active involvement and a vital role in the formulation of public action in the territory. Both actors are vital to achieve goals and strategies in the pursuit of bottom-up development of the territory (Vázquez Barquero, 2007: 187).

The regional economic Basis Theory was developed in the 1960s and 1970s, considers the growth of the region as dependent on the fundamental economic sectors, which interact and impact over another set of non-basic sectors. Exports of fundamental sectors to other regions drive regional growth (Richardson, 1978), quoted in (Tello, 2008: 102).

According to regional economic base theory, two sorts of variables drive the growth of the fundamental export sector: "internal factors," which include: a) geographical space and resource endowment considerations. b) The region's geographical location, the demand for the goods and services provided by it, the production of final goods and services and inputs necessary for such production, and the geographical distance between the two. c) Factors related to the competitive advantage of the fundamental sector's location. d) Firm inflow and outflow. e) The existence and use of economies of scale, agglomeration, and externalities, among other factors (North, 1990; Mayo Flynn 1989; Krugman 1991; Porter 1995), quoted in Tello (2008: 102). Meanwhile, "external factors" are those that influence the growth of other regions that require the region's base production as well as the development of export markets.

The economic base theory focuses on external revenues that flows inside the cities. Local economy is composed of two sectors: sectors that capture income from abroad and income produced by local demand. (Talandier, Davezies, 2009, p 67), (Talandier &

Donsimoni, 2022, p.11). It refers to fluxes, “the mechanisms by which wealth circulates” that means focuses on flows of income produced inside the territory or attracted by the territory as well as income that is generated in exports markets.

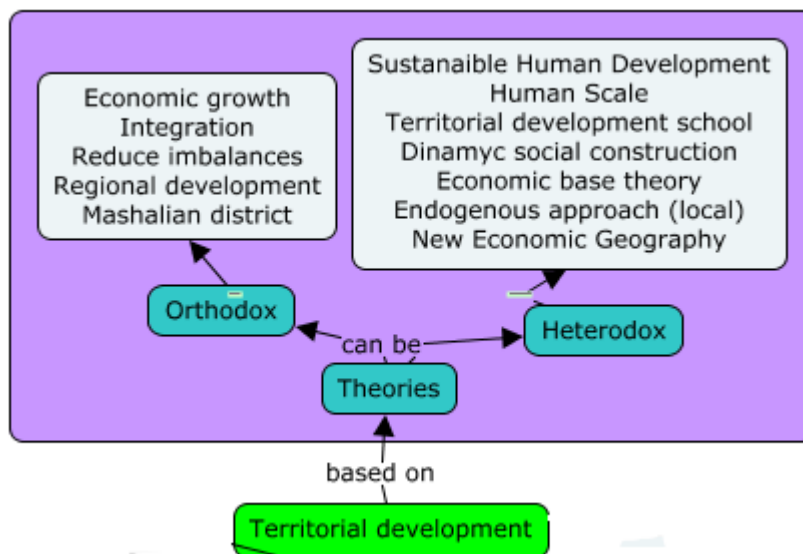
The approach refers to diverse sources for the revenues:

- a) Income from the sales of goods and services outside the territory: exports
- b) Income from the public base, this refers to salaries paid by the state
- c) Income from social base, social securities, disability payments among others
- d) Income from the residential base, this refers to external revenues due to the presence of tourists or migrants, retirees, among others (Talandier, Davezies, 2009, p 67).

According to the approach, the flow of internal revenues come from consumers instead of clusters or local productive systems.

In addition, endogenous development visions are classified into four categories, according to Vázquez Barquero: self-centered, autonomous, populist, and participative. He also acknowledges the importance of Amartya Sen's or Martha Nussbaum's sustainable human development approach, which proposes, in addition to a multidimensional vision of development strategies, the role of institutional factors, values, and intangible elements as explanatory elements of local human development, elements collected in UNDP's annual human development reports. These studies are divided into regions in various countries to help accomplish the Sustainable Development Goals, the approach values the economic dimension.

Figure 32 Map of concepts: economic theories



Source: Author

The analysis of territorial development, from the point of view of economics, has some perspectives and theories that attempt to explain and model it. Mainly Orthodox and heterodox currents are distinguished, see figure 32. In this approach for the thesis, we highlight some of these theories, such as Marshallian districts, new economic geography (Krugman) sustainable development theory, and territorial development schools, because of their instrumentality and applicability.

1.2.3.3. - Economic and Territorial approaches

The pages that follow examine various theoretical issues that provides relevant analytical frameworks about economy and territory. Finally, approaches to agrarian structures are close to the productive structure of Ecuador.

1 - Marshallian industrial district/ the need to develop local productive systems

Local Productive Systems (SPL) are an economic component of territorial development. Although no evidence of local productive systems associated to clusters or localized agri-food systems was found in this study of four small cantons, this approach should be researched in the future perspective of local productive system development. Clusters imply the interaction and linkage of business actors with other organizations in the region; also, support for clusters is now encouraged at the level of Ecuadorian governmental economic strategy through the Ministry of Industry.

It should be mentioned that understanding the benefits generated by business groupings in a particular geographical location is a key component of regional development theories. Alfred Marshall studies on Industrial Districts in the late nineteenth and early twentieth centuries (1890-1924), as well as Giacomo Becattini (2004) revision of Marshallian theory, illustrate that the spatial agglomeration of small businesses can generate economies of scale within territories through joint exchange. The condition for achieving economies of scale is that the number of firms is large enough to cause them. And the interaction is dynamic enough to allow them to collaborate and compete, resulting in economies that encourage the intersectoral dynamics of the territories.

Three issues are crucial in Marshallian theory: a) The concentration of businesses in one location creates a larger market for specialized workers in the sector or chains generated by the agglomeration. b) The industries located in the geographical area can absorb the production of inputs that are not traded internationally, and c) The firms grouped in the geographical area can generate significant technological changes due to the innovative environment fostered in the territories and the information that circulates

among the firms. The conditions foster a spatial knowledge process that promotes business innovation. On the territory, competition and collaboration, as well as shared knowledge created by these systems, promote the economic impulse of other sectors of the territorial economy.

In his studies, Marshall observes that the size of firms in English industrial districts that are not necessarily linked to the urban areas is smaller than that observed by Adam Smith in classic vertically integrated businesses. The location of the firms is diffuse, and their agglomeration represents an advantage for the group of companies and the territory. The greater the density, the more linkages there were, resulting in a model that is different from the classical firm paradigm. Marshall's Economic Nation notion stems from his studies of industrial clusters or districts and the social connections that arise inside them, establishing a geographical and productive system with cultural consistency. After several years of research, the concept of Economic Nation evolved toward a representation of a human group that is cohesive through extra-economic relations that may be of conflict, collaboration, cohesion, or competition, (Becattini , 2004). This latter idea is an overview of territorial thought in the nineteenth and early twentieth century. In the industrial district, social connections transcend physical boundaries and have an impact on economic relationships.

The industrial district approach of the Italian school emphasizes the concept of firm cohesiveness and linkage:

It includes observing the industrial district from a socio-territorial perspective, which is defined by the active presence of a community of people in a specific geographical and historical location. (...) There is perfect osmosis between the local community and the region's businesses. (Becattini, 1992, pp. 36-37 quoted in Courlet, 2007: 40).

The Italian industrial district and flexible production organization, according to Garofoli, both come from a spontaneous, unforced development model based on diffuse family business organization capabilities in a bottom-up process (Becattini, 1979, 1987, 1989, 1999; Brusco, 1989; Fua, 1983; Garofoli, 1983, 1989, 1991, all quoted in Garofoli, 2007:93). The Italian specialty denotes a prominent level of knowledge of the production process as well as the ability to respond to changes in demand quickly and innovatively. Markusen, on the other hand, was inspired by Marshall's study and explored industrial areas as well as the many and favorable business relationships formed in firms both within and outside the Economic Nation. Markusen classifies and schematizes the many geographical linkages that this production system may employ, such as Italian districts, centered districts, and platform or satellite districts.

According to Marshall, technological advancement is the result of routines formed in district production processes, a product of extra-economic interaction that is an endosomatic, intrinsic process achieved through the development of internal conglomerate innovation capacities. This stimulates the exploration of alternative industrialization strategies, such as enhancing cohesion mechanisms or social and

economic cooperation, as opposed to theories of industrialization described by geographical position or transportation costs. In this view, innovations are not just the legacy of the producing sector or services, but also of other non-economic components; the author is referring to socially transcendent inventions.

According to Pecqueur (2014: 39), the Granovetter-examined strong or weak social network, or the kind and quality of information that travels among economic and social agents - as a result of Marshallian industrial district economic activity - leads to the production of added value. It is difficult to conceive the production processes without addressing the production factors created by the actors at certain periods and situations in a continuous and dynamic process. The practice of Italian and Marshallian industrial districts emphasizes the importance of mobilizing cognitive and innovation resources defined by specific territorial history. In territory history, path dependence, and territorial actors' initiatives, as well as the specific mode of institutional organization of territories are essential for development. In other words, organizations are concerned with the long-term development of specific resources that are part of the territorial legacy and contribute to the territorial construction.

Innovative and knowledge-based territorial environments depend on the business network, its capacity to collaborate and compete, to learn together in networks, and on the institutional links that are developed. They rely on institutions as well as local and national governments to preserve and expand this environment, as well as to create innovation ecosystems and promote local growth. In other words, the economic dimension of territorial identity is linked to the social, cultural, and institutional elements in these increasingly interconnected production systems.

The Marshallian industrial district, the Italian districts with flexible specialization, Localized Agri-Food Systems, Clusters, or industrial agglomerations are systems that require the interdependence of businesses, entrepreneurs interacting with one another, competing, and collaborating, and interacting with other territorial organizations in regional areas. These relationships are the basis for the creation of innovative environments and tacit and explicit territorial knowledge that supports the cluster strengthening.

The production chain, defined as "the collection of operations required to turn raw materials into finished goods and sell them, with the resultant value generated in each step," is the production system most closely related to the reality of small cantons, particularly in Ecuador (Tello 2008). Direct or indirect actors in the chain are linked together, developing the activities of the chain of products or services: going through all linkages from inputs to consumption. The major issue with chains is the opportunity they present for small producers to acquire capacities that seek quality and productive distinctiveness through associativity.

Given the linkages: "value chains" require the coordination of actors from production,

processing, marketing, and intermediaries to maintain a consistent quality standard across all links. However, producers in rural areas acquire, produce, and sell more autonomously, and associativity poses various issues such as leadership, participation, solidarity, and principles that transcend economic boundaries.

2. – Entrepreneurship and business

While discussing his Principles of Economics with his wife - Mary Paley, also an economist, about whom little is said - Alfred Marshall created an important chapter on the business and the district theory. The author emphasizes the importance of localized industry and the benefits of having a sufficient density of linked and complementary firms that have a dynamic interaction. Paley and Marshall also analyze the availability of a market for specialized labor and technical personnel at a lower cost. In a dynamic productive environment, organizations with higher geographic density and the capacity to interact among themselves have an advantage over firms that may be considered isolated (Marshall, 1957).

Marshall highlights that the complementary nature of businesses, the interaction, is what allows them to profit from lower labor costs in the labor market. Local involvement and synergies of enterprises with other cities, in turn, promote their growth. He speaks about a network that is integrated across sectors and sectoral chains (production, transformation, commerce transportation) as well as with the institutions and services that support them, dispelling the notion of isolation.

Schumpeter, for his part, focuses on the role of the inventive entrepreneur, "to reform or revolutionize the system of production by exploiting an invention, or, more generally, an untested technological capability to manufacture a new commodity or an old commodity by new means" (Schumpeter, 1983, p. 181). The enterprises that Schumpeter studies are big scale industries: railways, automobiles, steel, and electric power. The industries scale constitutes a restricted scope of possibilities for creating a group of firms with capacity to investigate and innovate. Indeed, here is a difficulty for increasing creativity within specialized functions of the innovative entrepreneur in the entrepreneurial sector.

According to Keynes, " Speculation of entrepreneurship will always triumph over commerce" (Keynes, 1943, p.166), giving birth to the function of the entrepreneur possessed with an animal spirit or "animal vitality," (p.169). The entrepreneur requires predicting future changes to compete, as well as a low aversion to and cold anticipating of future risk. The author also considers that effective business investments benefit the entire society. Again, firm size is crucial; even for financial consolidation or access to the financial market through stock market investments, firm size is significant, a topic that the author and the post-Keynesian school have carefully researched.

This study relies on INEC data to investigate the enterprises in the area. This institution defines an enterprise as "an organization that performs economic activity in one or more locations, with autonomy in marketing, finance, and investment decisions." While the INEGI 2011 quoted in INEC (2020) defines establishments as:

Only one productive activity is considered as the main economic activity. Economic unit that combines actions and resources in a single permanent physical location under the control of a single owner or controlling entity to conduct activities of production of goods, purchase and sale of goods, or provision of services with or without profit (INEC 2020).

Entrepreneurship involves either launching a new firm or expanding an existing one. The entrepreneur is the person that invests in the company and creates new products (Vásquez, 2017). To create new or substantive changes to what has already been created, requires an entrepreneurial capital, which Flor (2017, p. 35) sees as another factor of production, a different capacity of creating, organizing, and structuring the new investment. Flor (2017) defines entrepreneurial capital as the ability of a national or subnational territory to establish new businesses or entrepreneurial activities that will contribute to future economic growth, which is also linked to the economic dimensions of Local and Endogenous Economic Development (Vásquez Barquero, 2007). This is a key factor to consider when creating territorial business networks that consider know-how and the potential to build productive linkages or enhanced communication via clusters or industrial conglomerates.

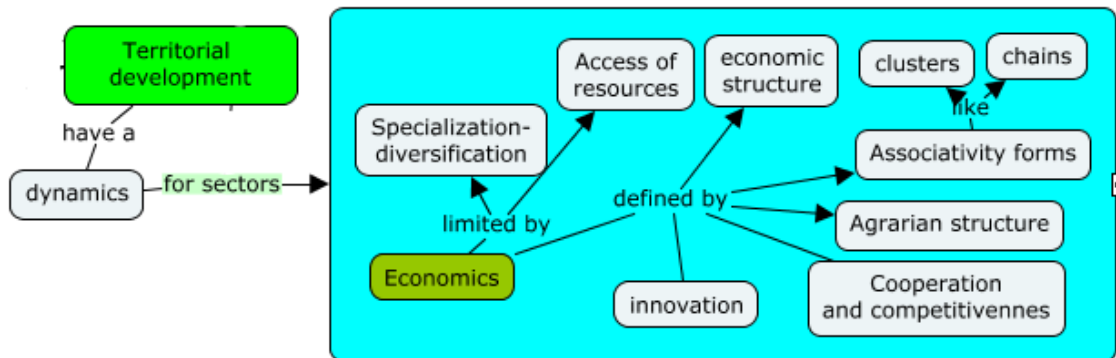
This brings the scenery of company formation in South America and Ecuador. Flor (2017, p 40) claims that "many small enterprises are developed in Latin America, but with scarce innovation" under the Schumpeter categories of innovation: product, process, marketing, or organizational. He also underlines the inherent difficulties of researching this sector in Latin America. According to Kantis (2012) and Kantis and Menéndez (2012), as quoted in Flor (2017), culture and the educational system are factors that influence over the possibility of producing entrepreneurship and the creation of the future entrepreneur. The author's findings are consistent with the IDB's research on regional systems in Latin America (2011). In terms of innovation patterns, there is a lack of investment in research and technology, as well as money for business investment. The researchers indicate a weak entrepreneurship ecosystem, with failures in the components included inside the system: finance, angel capital, R&D, mentorship, and capacity building, among other criteria. IDB emphasize that foreign machinery acquisition is the foundation and path of corporate innovation in Latin America.

These ideas are supported by statistics from the GEM research on entrepreneurship in several Latin American countries. It contends that the macro-entrepreneurial environment in these countries is insufficient "not only for the needs of business development, but also for their long-term growth and sustainability" (ESPAE, 2020, p14). Weaknesses include financing, favorable policies, education, government initiatives, research and development, the market, soft abilities, physical infrastructure, and social and cultural norms. Ecuador has a high rate of business development (the

highest in Latin America, with an EER of 36.2%), but also a high incidence of venture failure.

Finally, 846,265 firms and 1,035,875 establishments were registered in Ecuador, according to INEC's Business Directory 2020, based on companies and establishments registered with the Internal Revenue Service (SRI). The number of active companies fell by 4.5% between 2019 and 2020, with micro-enterprises accounting for 3.2% of the fall. Most of the enterprises are involved in services and trade, followed by agriculture and manufacturing. In 2020, 91.88% of organizations were microenterprises, which had 1 to 9 employees and sold less than USD 100,000 per year. 6.1% are categorized as small, with 10 to 20 workers and annual revenues of up to USD 100,000 (INEC, 2021). In other words, 97.98% of Ecuadorian organizations are of a scale that is adverse to innovation processes, both in terms of sales volume and size, jeopardizing the future financial sustainability of micro and small businesses.

Figure 33 Map of concepts: Economic dynamics



Source: Author

The economic dynamics of the territory is linked to environmental and productivity conditions, to the economic structure of production and the companies that are part of that society, and to the limitations of access to production resources. This theoretical frame analyzes the economic implications of the forms of associativity present in the territories, and whether the culture in the territory promotes cooperation and/or competitiveness, see figure 33. Since these are small cantons, the issue of agrarian structure and the changes that have been taking place in rural areas due to the introduction of modern technologies and innovations, as well as integration into national and global markets, become relevant.

3 - Geographic location factors / for an attractive territory

In the 1990s, the studies of New Economic Geography and Economies of Scale emerged. Location and space models, according to Paul Krugman (1995), as quoted in (Tello 2008: 108), consider the concentration of cities and markets; the observation that the manufacturing sector is concentrated in few regions of a country prompts Krugman to consider two location factors. On the one side, there is the fundamental geographical area endowment component. (Population size, resources, infrastructure).

On the other side, issues arising from agent behavior and technology. This includes a) the propensity to consume manufactured goods, b) the intensity of human resource use in the manufacturing sector, c) manufacturing industry economies of scale, d) transportation costs, e) the magnitude of backward and forward linkages in industrial sector chains, and f) industrial sector monetary economies. The factors deal with a preference for more urbanized and better-equipped locations as industrial location features.

According to Krugman, these two sets of factors explain why companies locate in specific urban locations, which are essentially influenced by economies of scale, infrastructure, and transportation costs. The aspects of New Economic Geography are used to explain inequalities in economic growth across various regions of a country. Some regions are more competitive than others in the factors they have built. These features indicate the inequality between places with stronger mobility and connection networks compared with others, locations with limited access to roads or connectivity, dispersed, isolated areas with restricted production facilities and few paths to progress.

The city, its size, purpose, and functioning play a strategic role in the location factors and features that enable territorial competitiveness. The city is the center of interactions of its economic and social forces. Mobility patterns are the primary factor reflecting services and infrastructure coverage. The city is the center of administrative or economic operations. There are important roles of intermediate and small cities in the dynamization of subnational regional economies (Jacobs, 1975; Polesse, 1998; Berdegue and Proctor 2014). The intermediate and small cities, in this perspective, serve as a stimulant for territorial expansion and growth, especially because they serve as centers of continual interaction between urban and rural regions.

4 - Competitiveness/ for a territorial anchoring of firms

In the 1990s, researchers such as Michael Porter (1995), or in the Andean zone Mario Tello (2008: 118-124) and UNDP, underlined the importance of competitiveness as a comparative word that allows for the recognition of changes in productivity. On the other

hand, the Global Competitiveness Report analyzes competitiveness as a result of countries efforts in several dimensions and indicators: social, political, financial, economic, as another attempt to place country competitiveness on the public policy agenda.

The concept of competitiveness is exceedingly diverse and wide; it changes according to the parameters studied in the evaluation; Manuel Chiriboga, an Ecuadorian regional specialist, defines it as:

A comparative concept based on the dynamic ability of a geographically located agri-food chain, industrial cluster, or artisanal, tourism, service, or productive economic activity in general to retain, extend, and strengthen its engagement in local and worldwide markets. Hugo Chavarria et al 2002 define competitiveness as the production, distribution, and sale of goods and services at the appropriate time, location, and form, with the goal of helping society. (Chiriboga, 2011a, p.11).

The concept allows us to recognize the benefits of interconnected productive systems, such as business clusters, productive chains, localized productive systems in promoting innovation, quality, and territorial competitiveness, as well as other distinguishing factors that give some territories a competitive advantage over others. These ideas have resulted in a national and regional economic competitiveness strategies and agendas for both emerging and developed countries. Porter investigates competitiveness and its application in a regional context. Several of the principles presented above correspond to elements that characterize a region's competitiveness, such as geography, the condition of production components, and the participation of public actors in the creation of productive infrastructure.

Porter outlines a model of territorial competitiveness. The model considers location factors related to natural and human resources (comparative advantages) or other resources created with intentionality such as labor technification or innovation factors that lead to productivity improvements (Competitive advantages). Internal and external factors related to the macro and meso level of the regions, factors related to the business organizations in which they compete, linkages between companies and support industries (defined as clusters by Porter), and the actions of public, private, and social agents acting in the geographical area, all play a role in competitiveness.

The Meyer Staimer scheme represent territorial competitiveness with a hexagon of social, business, environmental, and institutional factors that work together to promote competitiveness. The systemic competitiveness scheme is supported by micro, meso, and macro institutional and international factors that determine territorial competitiveness. (Tello, 2008).

In Ecuador, these sectoral and territorial study suggestions and methodology served as the basis for provincial competitiveness agendas. The factors that are included in subnational competitiveness agendas are markets for products and services, the

environment, ecosystems, and human capital. The other subnational competitiveness measure is the current province competitiveness index, published in 2018, includes "87 indicators corresponding to public and private administration." (Ministry of Production, sf). In this document, the four provinces that host the cantons featured in this study behave differently. Tungurahua province, which includes canton Baños, has a good rating; Manabi province, which includes Jama, and Imbabura province, which includes Cotacachi, have a medium index; and Los Rios province, which includes Montalvo, has a very low score. The objective of competitiveness in the territories is finally included in Development and Land management Plans that are updated every 4 years and the term is incorporated into policies to strengthen business networks or local production. Regional planning embodies public policy and public action, with national or subnational public policy objectives expressed in actions and strategies conducted in these plans.

5 - Generic and specific resources and assets/ Institutions and social capital to build a specific asset

Pecqueur (2013) investigates several topics of the territorial development theory, starting with the territory. He distinguishes between given or geographically limited territory and constructed territory; the former is associated with the concept of political-administrative space delimitation, comparable to the continent developed by Milton Santos when analyzing territories, whereas the latter refers to resource creation by territorial actors.

Asset creation, according to Pecqueur, is based on the institutional capacity, social networks, and existing social capital in the territories. The process of transforming generic resources into specific assets requires territorial actors developing intentional strategies for quality improvement and differentiation of products and services produced from their resources, resulting in a structural change in territorial productive systems and their relationships with the socio-cultural, economic, and environmental dimensions. (Pecqueur, 2014). (Campagne and Pecqueur, 2014).

Specific assets have characteristics that are unique to the location where they are generated and are not easily repeatable; they need the actors' ongoing capacity for innovation.

Concepts associated with the neo institutionalist school incorporate cultural and institutional bases to the territorial development processes. "These formal or informal norms and institutions have evolved as the production system, culture, and society itself have progressed" (North, 1990, quoted in Vázquez Barquero, 2007, p. 196). The nature and maturity of existing institutions, according to Neo institutionalism, will have an

impact on the dynamism of economic activity and the interaction required in innovation and knowledge systems.

Pecqueur examines the potential of territorial stakeholders to generate assets that contribute to territorial development in an institutionalized environment of innovation by valorizing resources and giving them a unique value.

The territorial development proposal, which is based on a flexible and adaptable model that considers the reality of territories (Pecqueur 2013; Campagne and Pecqueur, 2014), refers to the ability of territorial stakeholders (public, private, and social) to mobilize and build the development of the territory, considering all its complexities. The organization has the potential to transform generic territorial resources into specific assets that improve the quality of life of territorial actors. Mobilization happens through governance structures, public action, and public policy. It requires social capital capable of sustaining such revolutionary processes in the territories.

Campagne and Pecqueur (2014) examine the meaning of valorization. That is to provide a territorial value to goods and services and generating incomes for the territorial participants engaged in this production. They refer to production of goods and services that are not market-driven and have a relationship to a higher axiological and cognitive realm represented by culture (Pecqueur, 2014), (Boisier, 2003). Robert Putnam, in his historical-sociological study of Italy, would also refer to territorial identity, solidarity, and civic commitment, the latter of which is an essential territorial asset.

Valorization can be applied to any territorial resource that has been expressly inventoried for this purpose as part of a manufacturing process. Agricultural, artisanal, patrimonial, and landscape resources diverge from the utilitarian logic of using resources to obtain profit (Silva Lira, 2005). Value is added to these goods or services, allowing them to be exchanged in more favorable conditions in marketplaces. Valorization distances from the perspective of producing generic goods whose only reference is the price.

This consideration gives rise to the discussion over geographical disparities in territorial development construction; advantageous rural zones or spaces, problematic rural zones or spaces, and intermediate rural zones or spaces (Campagne & Pequeur, 2014, p.29, 51). The three have distinct development opportunities, as well as distinct resource consumption, which determines the regions' greater or lesser degrees of dynamism.

It is also difficult to evaluate rural landscapes without considering their relationship to urban space and the small or intermediate cities to which they are linked. Demazière (2017) highlights the importance of small cities for territorial development by examining their specific patrimonies linked also to connectivity, functionality, and demographic factors.

6 – Theoretical Approaches of Agrarian structure

In terms of urban and rural development perspectives, Alain De Janvry offers three theoretical approaches that describe rural trajectories to development (De Janvry, 2002), quoted by Szirmay (2015): The modernization approach, the incorporation approach, and the transactionalist approach. The first examines the process of transforming a traditional community into a modern community as it is influenced by economic and technological development. Emphasizing cultural weight as an obstacle to development, identifying bottlenecks in marketing, technological development, increasing cash crops, and agricultural wage labor.

The second theoretical approach includes history into the modernization process and focuses on the consequences of the capitalist market economy on non-capitalist agrarian communities. Inclusion is defined as the different ways in which both civilizations are related, and in this approach, the changes that occur in traditional communities prior to the entry of the capitalist economy are represented.

Finally, the transactionalist approach focuses on the many ways in which individuals respond to development's issues. This approach emphasizes the ability of rural actors to make decisions and the agency capacity of the poorest rural actors to conduct change toward development; they constitute active responses to market challenges, entrepreneurship, networking, associativity, and resilience, all of which are elements present in this group of approaches.

Farmers play a significant role in this viewpoint; they use their source of income to seek other sorts of work outside of agriculture, such as commerce, services, or handicraft manufacture. This pluriactivity increases dynamics in small or intermediate cities, suggesting that it is feasible to live in one place while working in another, or to engage businesses that are not linked to agriculture in small cities (Berdegué and Proctor, 2014).

To comprehend the relevance of the rural area, it is necessary to define and characterize the agricultural system. In general, this social structure illustrates the existing linkages among social actors involved in the agricultural production process, as well as their access and control over means of production. Land, labor, and access to services are factors of special consideration (Arroyo, 1990; Figueroa, 1999; Silva Lira, 2005; Carrion and Herrera, 2012). The first, land, is a restricted and concentrated mean of production; the second, an abundant mean of production with poor technification - particularly in peasant family production - is also a limited mean of production; the third demonstrates significant access disparities.

When discussing access to and control over finite means of production and social

interactions, we must include not only economic factors but also political, social, cultural, and power dimensions. They form a range of interactions, including the pursuit of domination and the status quo, as well as the establishment of interest relations centered on land ownership, a debate that keeps taking place throughout South America

On the one hand, the agrarian structure reflects power structures and unequal social relations of production; on the other hand, the labor force is viewed as a means of production based on the type and size of the productive unit, which is consolidated over time through power relations, reaffirming the historical category of the agrarian structure. This changing social dynamic requires a differentiation of actors such as "producer and rural laborer." The former is defined as "a natural or legal person in charge of a productive unit, whatever its form of tenancy (...)," whereas the latter is defined as "that person who directly participates in this process," whose skills are made available to produce a product and "might be a member of the family or a paid laborer, permanent or temporary." (Arroyo, 1990, p 143).

Arroyo (1990) classifies production in agriculture into the following typologies: Smallholder is described as an agricultural production unit with any type of tenancy: lease, legal possession or not, shortage of natural resources and capital, family work force with low-wage labor. This group also has low productivity and restricted access to technology and other productive services, making capitalization of the productive unit inefficient. (FAO, 2015).

The Capitalized Family is the second form of productive unit, with several types of land tenancy and the ability for market insertion, family and paid labor, and access to resources and means of production. They are more productive than the previous category, but they do not make money from the agribusiness sector. Finally, the third category consists of entrepreneurial agricultural producing units of any tenure. This category has access to manufacturing technology, natural resources, and hired labor. The landowner is an entrepreneur who controls the structure of the production unit; this production enables for the growth of profitability, allowing for more capitalization than the other two types (Arroyo, 1990, p. 145). This classification also refers to Ecuador's reality.

The production and distribution networks include suppliers, contractors, agricultural technicians, collectors, intermediaries, sellers, decentralized governments, and financial institutions. (Arroyo, 1990). (Demenus and Crespo, 2011).

Peasant production, according to Figueroa (1999), is essentially agricultural, using the labor of the peasant family; labor contracting is permissible, but family effort is required. The third component is family income; the sale of agricultural items is the primary source of income for the family unit. Finally, low productivity implies a lack of surplus or capitalization capability, resulting in subsistence agriculture.

According to Figueroa, medium and large-scale agribusiness operates in a capitalist framework, making decisions based on profitability and uncertainty. This unit's workforce is mostly paid, with a high level of productivity that allows for the formation of surpluses and capitalization; it attempts to maximize profit while taking on greater risk than the peasant unit does.

On the other hand, the Rural Atlas (IGM, 2017, p. 130) analyze distinct kinds of territories based on economic, social, geographic, and physical characteristics, there are six groups:

a) Dynamic productive areas with increased interchange and rural-urban connectivity, family or company production systems, and a high level of technology, as well as a major human effect in natural environment change (p. 132).

b) Rural areas with little diversity, existence of urbanization indicators, "middle levels of people working in the agricultural sector, preponderance of family agriculture, and some areas of entrepreneurial agriculture" (p. 132).

c) Consolidated areas with a high concentration of peasant family agricultural experience. Productive diversification, as well as the presence of commercial agribusiness connected to exports, specialized items, and closer linkages with surrounding cities.

d) Subsistence agriculture in locations with limited productive potential, population decrease, with agricultural activities employing the majority of the absolute population, subsistence systems and local market production. Land exploitation has an influence on environmental conditions (p.175).

e) Frontier and marginal areas with a dispersed population, a native population, slightly modified ecosystems, distance from cities, and a large population connected to agricultural activities for self-consumption.

f) Conservation and tourism zones, which contain unique natural resources and ecotourism activities, as well as areas where goods and services are produced for local use. The Atlas exhibits this pattern with the Galapagos Islands.

The size of the productive unit fluctuates according to geography and "environmental wealth" (p. 150), indicating that the agricultural organization is polarized. While there are a considerable number of smallholders with less than 10 ha (76% of the UPAS), they have a little quantity of land (11%). Small producers with less than 5 ha account for 64.4% of UPAs and 6.3% of land ownership (Carrion and Herrera, 2012, p.150).

Owners of more than 200 ha hold 29% of the land and account for 0.1% of UPAs, this fact demonstrates an inequitable allocation of resources.

Subsistence agriculture (peasant family farming) is distinct from business and

traditional agriculture. The technical differences between business and the other two typologies are stressed, highlighting the limited availability of subsistence family farming to land, water, technology, and financial resources (Carrion and Herrera, 2012). Emphasis is placed on the importance of subsistence and traditional agriculture in food production and resource management. It highlights inequity in land resource distribution and concentration, as well as the need to comprehend the multidimensionality of the peasant family economy.

The Ecuadorian agrarian structure is currently divided into two polarized groups, according to Berry, Kay, Martinez & North (2014): smallholder farmers who benefited from the distribution of large properties with the Agrarian Reform in the 1960s and 1980s, and "latifundistas," or large landowners who are now agricultural entrepreneurs.

"In fact, one of the arguments for implementing agricultural reforms in many modalities was that the peasants or small family farming made a more sensible and intense use of the land factor" (Dirven, 2008, p 53). Access to land is one of the major axes of agrarian reform and rural development; most academics believe that Agrarian Reform was not designed as a whole, but that various procedures were introduced to improve access to land for small producers, i.e., a restricted solution to the whole agrarian problem.

Latin American agrarian reforms intended to increase access to land, but they did not result in significant changes in agricultural structure or land concentration. (Urioste and Kay, 2006 quoted in Kay, 2007; Dirven, 2008). Ecuador has failed to reduce land concentration levels despite having at least two substantial agricultural reform processes: 1962-1963 and 1974. These changes did not result in a significant modification in the national rural region's power relations, but rather in access to resources with an unfavorable condition for peasants.

Experts in Latin American agrarian reform recognize that the reality continues to be inequitable in terms of distribution of land over the years. (Kay, 2007; Berry, Kay, Martinez, North, 2014; Szirmay, 2015). On the one hand, there are large extensions owned by large landowners who have evolved into agricultural entrepreneurs over time; on the other hand, there are small extensions of land for small smallholders, extensions that have become increasingly atomized and face particularly adverse conditions for reproduction and productivity improvements, as well as access to productive services under favorable conditions¹⁸.

Berry, Kay, Martinez, and North, (2014) evaluate the success of agricultural reform in Latin American countries. They indicate that the current agrarian reality in Latin

¹⁸ IERAC and the Catholic Church launched land purchase plans to stimulate agricultural reform, the most effective of which was the FEPP (Fondo Ecuatoriano Populorum Progressio) land program.

America is one of remarkable land concentration, with features of transnational accumulation, regional or national businesses linked to agribusiness and global chains, which are installed in the territories and produce what Kay refers to as: Flexcrops¹⁹ (p. 7). Each actor in a production chain, including suppliers, inputs, marketing, and distribution, becomes a component of a planned and structured agro-industrial holding system, which is a functionalized accumulation system. According to this expert, global chains do not give viable alternatives or major commercial opportunities for small businesses.

Martinez (2013, p. 76) also criticizes enclave economies²⁰, agricultural output linked to internal or external demand gives a more connected economic dynamic of growth that moves away from what the author calls “social rootedness” as also did Polanyi or Granovetter. This sort of economy attempts to exploit territorial resources without supporting neither social progress nor internal accumulation. The same author uses the term deterritorialization processes to demonstrate this extraction-accumulation link. Pecqueur would relate to the exploitation of generic resources that are not converted into specific resources and assets, do not increase territorial social capital, and do not, of course, contribute to territorial development (Martinez, 2013, p. 76).

Two theoretical approaches examine Latin American geographical reality, particularly Ecuador. The first is associated to Agrarians, who explain the causes of small producer exclusion in a structural and historical context, linking the concentration of means of production to the ineffectiveness of Agrarian Reform in increasing rural equality. On the other hand, there are NGOs and rural scholars who bet on the New Rurality and the opportunities presented by productive linkages and various associativity schemes for small producers who intervene and add value in productive chains.

Many studies confirm the empirical possibilities of improving rural development pathways through the collaboration of small producers in agribusiness. Figueroa (1996) studies the interaction between small agriculture and agribusiness in Peru. Wage earners could adopt technological change processes in their small parcels of land, as demonstrated by the author for crops such as malting barley or asparagus, implying that the success or failure of these experiments was determined by the type and quality of the

¹⁹ Flexcrops features multiple-ness and flexible-ness along all the linkages of a value global chain and involve a complex and dynamic mix of interests. “Flexibility arises from multiple relationships among various crops, components and uses” (Borras et al, 2016)

²⁰ The economic dynamics of the enclave economy, according to Pierrri, quoted in Martinez (2013, p. 76), are dependent on foreign firms or enterprises affiliated with these corporate groupings. This results in modifications to the production system as well as a significant reliance on foreign technologies, which expressly seeks economic profit in regions other than those where money is generated through resource exploitation. Martinez has looked at the flower and broccoli markets for instances of disparity and deterritorialization.

relationship between agroindustry and small agriculture. These prerequisites rely primarily on the aptitude and negotiating skills of small producers.

In Ecuador, latifundio extensions were granted to farm employees in productive units without having an important impact on resource concentration. Alan de Janvry (2001), as quoted in Szirmay (2015), analyzed the Catholic Church's experiences in the 2000s through the NGO (FEPP) (Ecuadorian Fund Populorum Progressio) land purchase initiative. Based on his research and the Organization's experience, he finds that when improvements in land reform were promoted through technical assistance, access to funding, and productive services, it was possible to cultivate fields more efficiently than large scale farming.

These were also the early times of new, more sustainable farming methods like agri-food systems and permaculture. De Janvry considers that the Agrarian Reform, as opposed to the Land Reform, had a more integrated nature and more equitable goals that could be fulfilled in specific conditions and locations. The author regards the implementation of a more comprehensive reform that is contextualized to the circumstances of small producers as advantageous. Again, the development of associative systems that enabled the use of these agricultural transformation experiences is crucial.

Many experts, notably Chayanov, Shanin, and Ellis, have studied the unique characteristics of the peasant economy. There are considerable differences between commercial agricultural output aimed at the market and self-consumption by small farmers. Family work and obtaining income outside of productive units, difficulties in accessing production services, low capacity to access and control means of production, low capacity for market integration, and high reliance on prices are just a few of the characteristics that make this economic group particularly vulnerable to market imperfections and the achievement of financial and social sustainability (Szirmay, 2015).

Peasant family specialists use these characterizations to describe an inequitable and concentrated agricultural system. This gives capitalist agriculture an advantage since it can access markets, but a subsistence economy cannot provide the conditions for integrating productive chains with equity.

De Janvry reviews the peasantry and peasant agriculture as critical components of this system. The study of the peasant economy illustrates the reality of poverty and inequality in developing countries, particularly in Latin American countries, as well as the importance of this peasant production to ensure the availability of food for cities (Szirmai, 2015, p. 430). This peasant economy promotes at least two dimensions of food security: food availability and access through obtaining income, making important to work with peasant production in a sustainable way.

Inequity in access to the means of production for small farmers has consequences for deeper poverty concerns such as food insecurity and its related features. Malnutrition disproportionately affects the poorest individuals and has become a major public health concern in Ecuador and other Latin American countries (Enriquez, 2015). This causes alarming levels of chronic malnutrition and obesity in children and allows for the visualization of past structural imbalances in rural communities.

As a result, on the one hand, Agrarians have investigated the causes of inequity in the agricultural system and the significance of the Agrarian Reform. Studies of the New Rurality, on the other hand, include two theoretical frameworks that may complement one another in analyzing territorial development by focusing on the efficiency of productive systems and achieving economies of scale through entrepreneur networks.

The productive reconversion of the territory is closer to the second theoretical basis: New Rurality, which is connected to production systems. However, it is impossible to ignore the agrarian system approach since it involves the study of inequality and limits to small farmers in the access to means of production, land, water, technology, capital, and inputs. Only integral solutions will help to solve the territory challenges in its way to development.

New rurality visualizes the possibilities of small farmers to enter niche markets via agrifood systems implemented through regional, national, and export production chains. Localized agricultural system, inclusive businesses, short circuits, proto clusters, chains, which promote associativity and interdependence among actors are available alternatives for small production. Manuel Chiriboga had studied several examples of regional and national chains, inclusive firms, or other associative schemes as viable options within the economic component of territorial economic development in Ecuador. The examples include associations that generate competitive advantages in regional national or international markets (Chiriboga, 2011a; Stoian and Gottret, 2011).

Territorial development specialists, such as Campagne and Pecqueur (2014) also consider the significance of agricultural activity and its potential to generate income in the rural spaces. There is not a universal or standard definition of rural spaces, depends on the reality of each area. Fishing zones, biodiversity zones, and a variety of income-generating activities are all available in rural areas.

Territorial productive systems are important to build the economic dimension of territorial development that requires distinctive territorial production that preserves territorial identity and a spatial geographical context. The actors create territories in space, value their resources, and transform them into assets; the space-time link proposed by Tomadoni (2007) makes sense because the creation implies a temporal dynamic process.

1.2.4 A theoretical introduction to the role of small cities

1.2.4.1 - The contribution of cities to the economic dimension

In terms of the functions of cities - their development and planning - this research starts analyzing Jane Jacobs's studies, which were published between 1950 and 1970 and were initially neglected by regional development theorists. Jacobs focuses on the urban sphere of cities, visualizing their role and functionality in the context of regional and endogenous development dynamization. Her work has received attention since the 1990s because it shed light on the function of cities as articulators of social cohesiveness, commitment, and dynamism, as producers of public and private services, and as centers of commercial and extra-economic links. Intentional planning and dynamization of the city, neighborhood internal life, space appropriation, and cohesiveness and integration can all be components that dynamize territory (Jacobs, 2013).

According to Jacobs, city development depends on the existence of fixed assets as well as the ability to generate production domestically, at the regional level, without relying on imports. Cities must create productive capacity to generate more domestic consumption of goods that are produced in the region. Cities have the conditions to produce industrial or artisanal items with added value, not only raw materials. According to Jacobs, a region's prosperity is determined by the virtuous circle of production-labor employed and self-sustaining regional consumption. The less dependent the territory is on the outside world, the greater its potential for growth. In other words, the stronger the urban-rural cohesiveness, the greater the dynamism that reproduces and enlarges the city and benefits its surroundings (Jacobs, 2013).

Jacobs consider that strengthening endogenous entrepreneurial potential to foster development is an alternative strategy to foreign investment or enterprises created by governmental initiative or public funds. According to the author, the external investment strategy is concerned only with economies of scale and if they are not built, can migrate to other places, leaving the region without the ability to generate jobs, which is studied as Enclave Economies (Martinez, 2013). Her visual notion of a "branch or economic sector without roots" expresses her frustration with a governmental strategy that forces foreign investment and ignores the potential of local resources, as well as the multiplier impact that small businesses based in cities may produce. Her ideas are close to the theory of endogenous development, which considers taking advantage of local resources and potentialities to achieve population welfare. Robert Lucas defended this work in an article published in 1988. According to Lucas, Jacobs gives a good explanation about regional development based on the sustainable use of resources within the regions (Schwartz, 2009: 1-14).

In terms of improving regional productive systems, the ability of networks and organizations to create knowledge internally is crucial to attaining innovation and increasing quality, as examined by Alfred Marshall and Maria Paley Marshall. Chambers or associations play an important role in the dissemination of knowledge and innovation. The possibility of strengthening these networks or circuits (social capital) is critical for Jacobs. The building of social networks in the city neighborhoods is required to develop the city. Networks that communicate continuously, day and night, keep the city vibrant and flourishing. On the other hand, communities that actively separate themselves have a detrimental influence not only on economic dynamism but also on social relations and the economic and social life and vitality of cities.

The functionality of small or intermediate cities as development articulators gives a more comprehensive picture in the examination of regional development. These cities and their functions can have a significant impact on the quality of life of the population of the region. The importance of cities, small or intermediate, is not measured only in terms of population or size, but in the ability to reach territories articulation, cohesion, trade, dynamism. Cities must be able to adapt to increasingly competitive dynamics as well as social cohesion dynamics that foster social capital creation.

Jacobs also had the vision of promoting productive diversification as opposed to specialization. Jacobs envisions diverse economies that complement one another, resulting in an increased economic development and dynamism (Jacobs, 1975). The National Bureau of Economic Research in Cambridge, Massachusetts, conducted a study on employment growth between 1956 and 1987 for 170 metropolitan areas and six major industries regarding dynamic externalities and knowledge caused by industrial agglomerations. The study indicates that concentration of enterprises in a particular industry or industrial sector, ensures dynamic externalities, as was demonstrated by Marshall, Jacobs, and Porter,

The study illustrated that Jacobs's theoretical proposal on productive diversification generates greater dynamic externalities and extended knowledge in a non-monopolistic market situation, resulting in the construction of learning and innovative environments, as indicated by the Marshallian theory of Industrial Districts (Marshall, 1890; Schwartz, 2009: 1-14; Pecqueur, 2013), situations that lead to more dynamic cities and stronger social networks.

A - The small city and its connections to the surrounding region

The interconnection and interdependence linkages with rural areas and small regional localities reveal the significance of small cities in the creation of local dynamics. Despite their significance, academic studies are focused on the functionality of big and

intermediate cities. There are few studies on small cities and their significant role in economic connectivity and social cohesiveness.

The classification of cities into small and intermediate is not an international standard; it varies by country and even by period of study. What is undeniable is that cities perform one or more functions, play several roles, and constitute a transcendental link between urban and rural areas. Regional cities have an influence on population movement as well as availability and accessibility of services. In Ecuador, for instance, in national development plans, cities are organized in a hierarchy²¹ and large and intermediate cities play a key role in national development, while small cities appear to be solely concerned with food production. Although the Ecuadorian classification does not precisely capture population disparities across categories, it relates to the functioning and productive specialization of urban settlements.

A small city can perform the functions of an intermediate city if it is located in an underpopulated or sparsely urbanized region, as well as if the public management is more dynamic or if economic activities result in greater diversification and activation of its local resources and potential. On the other hand, if the intermediate city is adjacent to a metropolis, it might be thought of as a pole or satellite of that metropolis (Demazière, 2014). Intermediary cities differ from one another based on their development trajectory, historical landmarks, geographic position, population density, and specialization or diversification, all of which result in a diversified and heterogeneous function (Demazière, 2014).

B - Intermediate city

The definition of an intermediate city is dependent on the national socioeconomic context, and its classification is not generalizable even within a specific temporality. Brunet (1997), cited in Demazière (2014), for example, refers to the intermediary city as an unidentified real object. In some analyses, the city is defined by the space covered

²¹ Senplades creates a human settlement hierarchy comprising six categories:

1. **Metropolises** having the purpose of connecting the country to the rest of the world and offering specialized services to the national population. 2. **Regional**, with a role in construction, public administration, and defense. 4. **Subregional**, with a role in distribution, transportation, and storage of manufactured and primary products. 5. **Local**, with the function of stockpiling and distribution of food and raw materials. 6. **Minor**, with the function of food and raw material production and, in some cases, recreational tourism; (PNBV, 2013: 359).

and the interactions of its economic and social agents; in others, the coverage of services, mobility patterns, population density, its size and boundaries, or the administrative or economic functions performed, as well as its connection to other population centers, are defining factors. Even feelings of connection to a characteristic of the city or legacy, or a shared identity are considered (CAF, 2017, 35-36).

When it comes to classifying these "inscrutable" realities, we run into problems due to the ambiguity of the definition of intermediary cities. The most widely used criterion is tied to population size ratios, such as Zift's (1949) "rank-size" rule, which indicates a size ratio in city systems where each rank of cities has nearly twice the population of its lower rank. This discovery is related to various economic geography theories, such as Reilli's (1931) gravity assumption, Christaller's (1966) Central Place Theory, and Hägerstran's (1966) diffusion of innovations, quoted in Sanchez (2016, p. 5); and CAF, (2017, p. 50). It should be noted as well that not all theories apply to all cities; for example, the Central Place Theory may be true for North America, not for medium-sized European cities, as pointed by Demazière et al (2014).

Because of the dynamics and the impact they may produce in the territory, medium-sized cities are a reality and an object of scientific study. According to Demazière et al. (2014), medium-sized cities in any country play a role in the dynamization of subnational areas and connect spaces in the economic, social, and cultural dimensions. Those are significant roles in addition to the capital city and major cities.

Regions form a network of cities of varying sizes, whose functionalities are determined not only by their size but also by the interactions with one another. The zones of influence and inter-relationships that each territory establishes with its neighbors may be recognized. The predominant economic model of the country will affect the models of interaction between cities, their growth and dynamism, as demonstrated by Sánchez (2016) with respect to Mexico, when describing the changes in that country city system from the "primary export" stage (with slow urbanization and rural dominance) to the Import Substitution Model (of accelerated urbanization). The current model, of commercial openness shows moderate and diverse urbanization. Depending on the historical trajectory they follow, city systems create dynamics, urban growth trends, and patterns of convergence or inequality.

It is possible to speak of intermediary cities within these broad categories. In contrast to the "global megacities" and local realities, there is a universe of areas with medium-sized cities with distinct roles from the two categories stated above. In terms of functions, the intermediate city may be defined as an urban conglomeration with a significant interaction with peri-urban and rural places (Demazière, 2014). According to the author, scientific and geographical studies have been concentrated on the metropolitan or major city, a reference framework that does not correspond to the reality of intermediate or small cities (Demazière, 2017).

This indicates that the city and its zone of influence are the space-objects of analysis, as are the physical, topographical, social, cultural, and economic links of the city, which leads the author to incorporate the idea of region. The usefulness of cities is valued in relation to the city linkages with other local or distant territories, i.e., in a larger territorial space.

Jane Jacobs focuses on the city and its relationship to the region. The region is a specific subnational area with a dynamic of exchange of goods, services, and people. The dynamics are dependent on the presence or absence of essential factors that make the region sustainable, such as the urban market, technology, and innovative capacity in a broad sense. Other relationships like the city linkage with sources of labor and economic capital, and the presence of horizontal relations and networks were also reviewed. These components have varying degrees of effect on regional and rural areas, resulting in interactions with neighboring and non-neighboring locations (Jacobs, 1975).

Her research highlights the role of cities as articulators of development between rural and urban regions, as producers of public and private services, and as centers of economic and commercial movement (Jacobs, 1975: s/p). The author illustrates the interaction between urban and rural regions, as well as the functions of cities as territories with cultural, economic, social, historical, and political significance in a region.

According to current CAF research on urban expansion, "In Latin America, there does not appear to be a primacy of major cities. The trend, on the other hand, suggests that the region's intermediate cities are expanding. Nonetheless, these comments should be qualified and understood just as suggestive " (CAF, 2017, p.54). According to this study, the growth rates of intermediate cities in numerous Latin American nations exceeds the growth rates of big cities. Nevertheless, CAF classification for Latin America is solely based on population: small cities with fewer than 500,000 residents, intermediate cities with 500,000 to 3,000,000 inhabitants, and metropolises or megacities with more than 3,000,000 inhabitants. A categorization that is too wide.

In the context of Ecuador, CAF (2017) research shows that in 2000, the country had the least inhabited cities on average (cities with more than 100,000 residents). The trend is repeated in 2010, with Ecuador having fewer populous cities than the average (cities with more than 100,000 residents), and the average population falling in four Latin American countries: Venezuela, Ecuador, Peru, and Mexico.

In terms of population, if several French communes are considered, the intermediate city has a population of 20,000 to 100,000 inhabitants; however, another categorization (DATAR) suggests a higher number: 30,000 to 200,000 inhabitants (Demazière, 2014), a broader consideration than the one exposed by CAF.

In terms of interdependence, the intermediate city may be analyzed through its link to

the rural environment and the numerous connections it generates, i.e., supply, access to services, health, education, purchase of inputs, sale of products, and extra-economic relations. Relationships turn around the city connection to other cities of similar or greater size, and the spaces with which it develops flows (Aubert, Larmagnac and Emmanuelle, 2012).

Urbanized places have also a specific significance in local history and cultural identity. They may exhibit closer relations and flows than large cities. A lower exposure to international flows, and a greater social construction linked to tangible and intangible local heritage (built, cultural, and social patrimony) with great opportunities for valuing local resources (Demazière, 2014). These are proximity relations that capitalize on territorial advantages and potentialities (Courlet & Pecqueur, 1994). This perspective is more concerned with the social dimension of cities than with the centralities and functions of cities. In other words, from this viewpoint, the intermediate city serves to reunify and create social and human capital and social diversity, (Aubert, Larmagnac and Emmanuelle, 2012).

If less individualistic or segregationist values prevail, the dimension of the intermediate city might support structure and social integration, while generating in the citizens a powerful sense of identity and belonging to the space (Aubert, Larmagnac and Emmanuele, 2012). It is necessary to develop a process of active involvement in public and collective action to solve public concerns.

Martinez (2017) emphasizes that proximity is not only physical or geographical, but also involves the social and organized relationship of the territory. Factors that alone do not explain the virtuous dynamics of cities. Additionally, citizens have the capacity to mobilize and lead energy in an organized manner toward the achievement of common goals.

On the other hand, the economic dimension of the intermediate city will be determined by criteria such as its place in the urban hierarchy, i.e., size, and function (Aubert, Larmagnac and Emmanuelle, 2012). In terms of local production systems, the placement of firms and business services (financial, technical, and training) will also be determined by their position in the hierarchy. This reveals the existing disparities between cities and their position in the urban hierarchy (Demazière). Commercial, industrial, residential activities, public activities, health and education services, equipment manufacture are among the services that the intermediate city offers. Human transportation is crucial in intermediate cities, and it is assisted by the rural-urban connectivity.

The establishment of networks, clusters, or more complex production and research systems, as well as the potential of placing university training centers, are all possibilities that may be formed in intermediate cities with better infrastructure and hard or soft geographic location considerations. Although their economic systems may be comparable, these elements determine varied trajectories across cities or differential

degrees of development based on their historical paths (Demazière, 2014).

Intermediary city systems are relatively specialized, and their development trajectory is determined by their competitive advantages as well as existing social networks, i.e., the social capital developed, which can create resources (Aubert, Larmagnac and Emmanuelle, 2012).

Finally, Talandier (2014) examines the intermediate city ability to generate wealth, based on the ability to generate production-income and consumption. A notion that is close to Jacobs's in terms of creating a circular dynamic and more endogenous investment in the territory. Talandier concludes that small cities with fewer than 20,000 inhabitants are privileged areas for consumption in France, combining elements such as proximity and accessibility, which are also highlighted by Martinez (2017) and Pecqueur (2014). Talandier (2014) indicates the need for more precise field studies, given that population is not the only factor to be considered for this analysis.

C - Cities as spaces of inequality

Demazière (2014) reveals existing gaps between large cities and intermediate and small cities in terms of mobility infrastructure, flows of people, goods and services, information, capital, waste treatment, and water, as well as the intermediate city weaknesses, fragility, and delays when compared to large cities. The characterization of flows allows him to consider the dimension of space and time in which these inequalities are deepening, which is especially evident in small cities compared to large ones.

Aydalot (1980) studied the geographic space inequality, illustrating that differential endowments in terms of resources, techniques, and knowledge represent inequitable interactions between the various social forces that reside there. A dominated place exhibits societal processes that impose dominating pressures that result in inequality. Socioeconomic displacements in location are neither neutral nor contradictory; they repeat the system and social structure logic of accumulation (Aydalot, 1980, p. 23).

According to Aydalot (1980), the reality of mobility reflects the system inequities; human mobility is a critical strategy for overcoming hierarchical relations between center and periphery, which can also be observed at a scalar level: between less developed and more developed countries, between center and periphery, capital and province, metropolitan city and intermediate and small city, city, and countryside.

1.2.4.2 – The role of small cities

A - Small city

There is no explicit consensus on the size of the small city; Berdegué and Proctor concur that it depends on the country; In France, researchers indicate that a size of fewer than 20,000 persons is envisioned; for ECLAC and GIZ (2017, p.136), small cities do not surpass 50,000 inhabitants between 1998 and 2013.

According to the UCLG study (2016), despite their population importance in both developed countries, such as France, and developing countries, studies on small cities are scarce. This lack of attention to this important object of research has been reduced to analyze it from the perspective of the hierarchy of cities or system of cities. This fact has limited the analysis to urban-rural or sectoral functionality by emphasizing agriculture production. This lack implies not considering local productive chains that generates employment, local consumption, the natural environment of which they are a part, affordable prices, local solidarity, social networks, or historical and heritage treasures (Kwiatek-Soltys, Wiedermann, Mainet, Edouard, 2014) (Demazière, 2017).

These reflections go beyond the study of the small city in terms of its population and functionality and places the social, cultural, and patrimonial dimension at an advanced level of study. Profound studies consider the type of local and multilevel governance that exists, as well as the capacity of territorial groups to build that dynamism of the city in its urban-rural interconnection. Additionally, the city's permanent social and cultural construction and attractiveness in the territory and in the region. Cities own geography, built space, natural attractions that are part of their space, accessibility, urban planning and cultural heritage, social conditions, infrastructure that translates into better services for residents, tourists, and local businesses. Also, cultural management and local cultural assets can all be indicators of their attractiveness.

Small cities are heterogeneous in their ability to attract people and give employment opportunities; some expand faster than the national average, while others lose population to larger cities or intermediate cities. In developed countries, there has been a phenomenon known as counter urbanization, or the return to small cities, which has not yet occurred in Latin America (ECLAC and GIZ, 2017). According to this study, many communities with fewer than 100,000 people - categorized as small cities - experience net emigration, or are expellers, a problem that, as previously said, is dependent on the economic and historical trajectories pursued.

According to ECLAC and GIZ (2017), small cities with less than 100,000 residents have had a stable trajectory in the previous 20 years and a declining behavior in terms

of urban population. According to these institutions, small cities have been losing relevance within the city system since 1950 because of regional movement towards intermediate and big cities. Cities with less than 20,000 inhabitants exhibit a falling tendency, whereas those with 20,000 to 50,000 inhabitants stay reasonably stable, as seen in the table 12 below. Another statistic in the table is the population importance of small cities with less than 50,000 residents, which account for 23.8% or 21.7% of the urban population in the mapped countries.

Table 12 Distribution of urban population, selected Latin American countries, in percentages

Latin American countries	1950	1960	1970	1980	1990	2000	2010
More than 1,000,000	30.4	33.2	37.6	41.5	41.6	42.7	44.5
from 500,000 to 999,999	3.9	8.5	8.3	7.7	9.9	9.4	9.1
from 100,000 to 499,999	18.4	16.4	17.1	16.9	16.5	16.8	16.9
from 50,000 to 99,999	7	6.8	6.6	6.1	7.2	6.9	6.5
from 20,000 to 49,999	9.8	9.4	8.6	9	8.9	9	9.3
from 2,000 to 19,999	24.6	20.6	18.4	18.4	15.6	14.9	12.4
Subtotal	94.1	94.9	96.6	99.6	99.7	99.7	98.7
Total urban population:	100	100	100	100	100	100	100
Countries with available censuses: Argentina, Bolivia, Brasil, Costa Rica, Cuba, Ecuador, Mexico, Panama, Dominican Republic, Uruguay, Venezuela							
Source: CEPAL & GIZ, (2017)							

The provision of attractions that complement their advantages, as well as investment in education and the creation of job opportunities for the local people, are among the initiatives advocated by ECLAC and GIZ (2017) to reverse the trend of net emigration. Finally, the creation or reactivation of technical and university training centers to encourage young people to remain in and invest in small cities are other incentives to attract the youth.

ECLAC and GIZ (2017) study also illustrates the importance that small cities may have if natural or anthropogenic disasters occur in large cities, events that force a population migration to the former. The study emphasizes that Latin America and the Caribbean are surrounded by natural or anthropogenic hazards, necessitating work on risk management and resilience in urban agglomerations as well as small and intermediate cities.

From the viewpoint of valuing territorial resources, there is a constant creative tension among city actors to recover local knowledge, patrimonialize, and manage tangible and intangible cultural treasures, while establishing a favorable environment for territorial growth, and improving the function of cities and their role in the region. According to Mainet and Edouard (2014), the components of small city attraction entail numerous

interrelated activities and strategies promoted by local actors. The related dimensions are social, cultural, economic, and environmental, also a combination of policies and public action.

If increasing the quality of life is important to attract new residents, it is also vital to generate work possibilities while upgrading the built of natural historical assets of the territory and developing a regional connection. These are regional strategic goals for achieving population well-being and being an effective link between urban and rural regions to eliminate inequities between the two (Monod, Castelbajac, 2008).

Finally, to contextualize the present research, from 2009, government plans in Ecuador have classified the city system based only on its functioning. According to the National Territorial Strategy (ETN) of the National Plan for Good Living 2009-2013, human settlements between 20,000 and 50,000 inhabitants are classified as support cities with population relationships and a function as centers of collection and local commerce. In the National Plan for Good Living 2013-2017. There is no clear indication about cities classification, small cities are classified as local or minor settlements in this plan.

The 2017-2021 Plan does not include the population number of cities, but rather categorizes them based on their productive function and potential. It employs a multidimensional prosperity index that reaches provincial capitals. The current plan 2021-2025 does not determine the functionality of small cities.

B - Specialization or diversification, two possible routes

Small cities are extremely different due to the features of their territory, morphology, and historical trajectories, making generalization impossible. Small cities engage with one another in terms of their production matrix, and their demographic patterns, which vary based on their ability to attract. Some small cities manage to grow, diversify, and attract population, while others do not. There are small cities that remain in primary agricultural productive specialization, with little value added, and are expulsive due to the inability to retain young population or generate more technified productive systems; the last are deficient both in terms of employment generation and in terms of training supply.

Demazière et al (2014, p 35) argues that a city is specialized when a considerable share of its workforce is employed in certain economic activities. Specialization might be a factor of population attraction and a driver of local development.

On the contrary, researchers argue that specialization in specific sectors of the economy might be an impediment to the growth of other territorial economic activity. Demazière, in a paper from 2012 and Jacobs (1975) follows this line of reasoning.

For Demazière (2012) - in his pro-diversification perspective - specialization poses a danger in the event of external shocks or extreme changes in the territorial economy, such as natural or anthropogenic disasters. According to the second author, Jacobs, the development of cities is dependent on their ability to generate sectoral autonomy, which necessitates a diversification of activities to reduce dependence on regional imports, making the city more economically sustainable and a greater generator of direct and indirect employment diversity.

In relation to this topic, Jacobs (1975, p. 144) states: "I rather defend a theory of epigenesis of cities: the idea that the city grows by a process of diversification and gradual differentiation of its economy," she speaks of cities exporting capacity and how this generates a multiplying effect that creates more space in the structure of the city economy. According to Jacobs, the new space developed in cities refers to the new spaces created by the multiplication of labor resulting from the diversifying exporting ability of a developing economy (Jacobs, 1975, p.155). According to the author, an indication of the city expansion can be seen when the construction sector grows, which requires a comparative study of the increase of this sector in cities over time. In addition to the growth of the city service sector, the economy expands due to the growth of the financial, legal, and commercial sectors.

According to Krugman (1991), quoted in Demarzière et al. (2014, p35), the diversity of local activities favors the existence of a pool of workers with diverse skills and abilities, which attracts a broader range of consumers and creates the possibility of weaving networks between producers of different goods and services, dynamizing the activities of the territories. This point of view is shared by Pecqueur, who emphasizes the necessity of building unique assets - such as specialized worker training - for territorial development, and by Porter, who believes that a specialized job offer gives competitive advantages for the territory.

Finally, Xiao and Drucker (2013) investigate the differences between more or less diverse economies in the face of natural and anthropogenic disaster risks, concluding that more diversified economies have stronger post-disaster resilience.

C - Actions to strengthen the regional relationship of small cities

In terms of population, one set of cities experiences population increase while others stagnate or suffer from population turnover. In small cities, there is a clear distinction

between the two possibilities, which is explained by soft and hard factors that contribute in diverse ways to their development.

The UCLG report (2016, p. 292) mentions several actions that can be implemented in small cities and may contribute to regional development. The first is related to the close relationship of small city with the rural environment; in this sense, the small city is a market for agricultural production in rural areas. Access to markets facilitates buying and selling and obtaining income. This element considers the distance from the market to rural regions, as well as marketing facilities and infrastructure connected with the small cities: physical space, highways and roads in excellent shape, and equipment for general service supply. There are also proximity aspects, not just geographical but also cultural, and closeness between producers and customers (Martinez, 2017).

The second element is related to the capacity of the small city to provide public and private inputs and services for the rural area. To reduce transaction costs and mobility costs to other nearby more dynamic cities, which includes both production services: financial and technical assistance related to the production of goods and services, as well as social services related to health, education, culture, and recreation.

Finally, in addition to agricultural activities, a variety of non-agricultural sectors associated to tertiary sectors such as services and commerce are created and concentrated in the small city. The range of economic activity varies according to the characteristics of each small city. The more diverse that territory economy is, the more additional activities will energize the economy and social network of the cities. This also implies that a tight network of companies of all sizes will be created: micro, small, medium (Jacobs, 1975). Various social or economic groupings will support this dynamization, if the networks that are built between companies in small cities are densified (Velázquez-Duran and Rosales-Ortega, 2010).

In this perspective of economic diversification and the strengthening of the social tissue; through the extra-economic networks that can be created, the small city can absorb part of the demand for employment, reducing migration to more populated centers, which again confirms the importance of improving the capacities of these cities to attract population and reduce the pressure towards other intermediate or larger cities.

Small cities show different scenarios with various possibilities of productive and economic representation. On the one hand, when the rural area is more linked to commercial agricultural production with a greater foreign agro-industrial relationship, which does not stimulate small human settlement and production is transported directly to other larger territories without passing through local centers, then the local economy suffers. On the other hand, when local production is commercialized or some links in the chain are made in the nearest population center, agricultural income of agricultural workers increases. There are a variety of options for this articulation. Articulating goes beyond the study of the urban-rural connection and is dependent on the road network

and amenities that small cities have, as well as the social, economic, and institutional network that exist in the small city.

Although the agricultural sector is critical to the economies of small cities, the diversification of economic activities in the tertiary sector has an impact on their dynamism. Other activities, such as tourism, heritage preservation of local attractions or cultural assets, sale of environmental services, among others, become drivers of employment and income. This ensures that productive activities complement one another and, in some cases, form linkages or industrial agglomerations that create territorial economies of scale. According to the UCLG research, (2016), this will only be available in dynamic cities with large social networks. Jacobs (2013) says that in poor or middle-income countries, the low institutional framework has not been able to consolidate this form of cluster economies in the inner cities. Other researchers also reflect on the implications of institutional weakness for territorial development in developing countries. (Pecqueur, 2013).

If small cities are located near larger or metropolitan cities, the urbanization trend may harm them by affecting the price of land, its rural productive function, or access to natural resources such as water or land. This results in a process of land sales, migration, peri-urbanization and leaving essential functions such as food production or the loss of heritage spaces that could energize these cities. In this scenario, the small city ends up functionalizing itself to the big city. In other circumstances, the residents of the small city may leave the country, providing another source of money for the family but affecting their family ties.

The small city also serves as a territorial governance space in constant flux and reconstruction, due to the urban-rural interaction and the link between small cities and the region. In terms of services given at the urban and rural levels, there is a conflict between local government aims and the demands of small cities. Mayors, for example, are not just city mayors, but also canton mayors in areas that are both urban-rural. Governance relations in the small city begin in the neighborhoods and escalate to higher levels towards broader governance relations or different levels of government. Governance presents challenges for small cities, from a bottom-up perspective of community relations, closer to rurality, with city neighborhoods, both with specific needs (Moulaert, Parra, Swyngedouw, 2014).

The articulation of actors with different levels of government, including parish, municipal, and provincial levels, requires a continuous capacity and governance coordination between public levels as well as generating collective action rooted in the identity of population to their territory, with the aim of achieving social innovations that improve their living standards.

The urban-rural development perspective requires articulating the urban collective action represented by neighborhoods and organizations based in the urban space:

chambers, foundations, with the rural collective action represented by productive associations, communities, and social organizations that seek their benefit and the benefit of territories. Diversity and dynamism between urban-rural links build a creative tension when analyzing the role of the small cities and their levels of governance and multiple territorial linkages.

At last, small cities are the closest human settlements to rural regions where natural assets or territorial protected areas are situated and, due to the concept of subsidiarity, local governments and residents will be the most active in the protection and long-term management of these resources. This helps to develop concrete actions for the sustainability of these natural resources and to promote productive initiatives with a sustainable use, such as sustainable rural tourism, or agroecology or organic certifications that contribute to the environmental management of these heritages and their consequent enhancement (UCLG, 2016); (Pecqueur, 2013).

1.2.4.3- Urban-rural relations

The first step is to recognize that Latin America and Ecuador have experienced a significant reduction in rural population, falling from 70% in 1950 to less than 30% in 2010. (Berdegue and Proctor, 2014). Although big cities are rapidly populating, population centers or small and intermediate cities receive the mobilization of the rural population, and peri-urban regions of small cities are rapidly populating as well.

According to the research of Berdegue and Proctor (2014 p.3), with United Nations statistics from the same year, 46% of the world's residents live in rural regions, while one billion seven hundred million people live in towns and small and medium-sized cities of up to 300,000 inhabitants. According to the study, 23% of the world population lives in towns of up to 2,000 people. The goal is to recognize these small-town dynamics and their links to the countryside and other adjacent cities.

The authors note that rural transformation has similar characteristics in all countries. The first is the process of urbanization, which is more accelerated in Latin America than in developed countries (Polese and Barragan, 1998). These processes are a constant in South American countries, which are characterized by strong urban-rural inequalities in access to assets such as water and land. Important levels of inequity can obstruct local development (CGLU, 2016).

According to CGLU (2016), urban-rural inequalities are manifested in gaps of access to land, roads, and water, limiting citizens and agents from benefiting from local markets and affecting the creation of local demand. Poverty hinders local economic change and the city ability to serve as the nexus required by the urban-rural relationship. Poverty can

cause migration of population, either temporary or permanent.

Although while migration money might provide some benefits to local households, some negative factors are also present. National elites do not invest profits in small cities, migration income can contribute to polarization at the local level, and land prices are impacted.

The territory weaves relationships that are also illustrated by the diverse functionality that occurs between rural and urban places. Landscapes involve intermediate and small cities or small human settlements of different functionality, and rural spaces of diverse sizes. Regional studies reveal a more diversified urban-rural dynamic, meaning that the population economy will diversify away from being entirely dependent on agriculture revenue. The notion of territory extends beyond the agricultural sector to establish commercial, service, labor, and educational interdependence. Relationships generate diverse socioeconomic and cultural dynamics between the countryside and the city, giving the latter a key role in territorial development (Abramovay, 2006).

Small cities can dynamize local businesses in the area and provide the infrastructure for adding value to local production, these are places for creating jobs and progress toward the building of specialized assets (Pecqueur 2014). Progress is possible if public policy, which must invest in infrastructure, connectivity, and services, is joined by civic and social groups that may work on public problems and improve territorial development through public action. To that end, it is critical that local governments play a role that promotes territorial development and reflects the role that small and intermediate cities play in the dynamization of the territory.

Economic, social and cultural connections

Urbanization can potentialize rural areas. In the economic dimension, households seek to diversify their economic activities and earn income in nearby human settlements with which they maintain close relationships, engage in service and manufacturing activities, relocate to nearby cities or towns to work, and return to their place of residence daily. The rural culture responds also to the changes in urban-rural mobility that result from technology and digital media in cities. The urban and rural are extremely near, the intensity of the interaction grows greater, there is no longer the dichotomous, dual distinction that Lewis (1954) talked of, and the two worlds that used to be recognizable are not well differentiated now.

The significance of small and medium-sized cities will be based on the level of urban concentration (Berdegue and Proctor, 2014). According to these researchers, the expansion of small and intermediate cities will be determined by the pattern of urban concentration. With the bicephaly scheme in Ecuador, there will be more unequal and unbalanced city growth. On the other hand, if the concentration process is established in

a more equal manner in the formation of polycenters and from a more regional perspective, this will influence a more equitable growth of small and medium-sized cities that maintain an important functionality with rural spaces and a more equitable distribution between cities that are dynamic.

It is important to identify the function that these cities and small settlements represent for the territories. The interactions that occur between rural and urban spaces - and the way in which the settlements provide a service to the rural area - include input production and commercial service centers, commercial or storage links, political, cultural, and social links, or the possibility of providing financial and non-financial services. All these interactions and exchanges are beneficial to the urban-rural connection. They are more solid and numerous today than they were 50 years ago.

The link between urban and rural areas in small cantons, as well as their mutual dependency and interconnectedness, is a critical problem in the goal of territorial development. It aids in overcoming the traditional sectorial view of these spaces being exclusively linked to agricultural production and allows for the identification of a network of complexity and multiple systemic connections of territorial spaces (Morin, 2010; Abramovay, 2006). It manifests itself in the labor, commercial, educational, health, and technical-productive dimensions of the territories, as well as the social, institutional, political, and environmental dimensions of the territories.

Among these relationships:

The level and perspective of interaction of the actors, their relationship with productive activity, the role of cities as centers of knowledge exchange and innovation processes, the existence or non-existence of productive chains, and their relationship with local, national, and international markets. From a system viewpoint, existing social capital, and the roles of the national, local, and meso state. The interaction between the productive and environmental systems, the relationship with national and international markets, spaces for citizen participation and decision-making, or the management of public policy (Mancheno, Contreras, Guerrero, 2018: 3).

Urban-rural measurement and indicators provide a challenge to statistical systems, because of the rise of peri-urban regions that were formerly considered rural but are now clearly urbanized and are still considered rural. This is a clear characteristic of more populated cities, and small cities. The indicators that result from measurements do not consider the fluid interaction between rural and urban areas. That means that statistics are strictly governed by geographic or administrative parameters of the urban-rural division, without viewing that the theories of dual sectoral models that consider a strict separation between urban-rural, are getting distant (Lewis, 1954); (González Romero, 1985).

Berdegue and Proctor (2014) describe rural and urban spaces inside of a wide range of scenarios, ranging from deep and dispersed rural places with scarce services that are depopulated on the one hand, to large urban agglomerations that continue to concentrate

wealth and attract population on the other hand. In between, there is a different region known as "rural-urban territories with small cities" (p.6), which varies depending on the population and specific conditions of the countries and that presents a wide range of characteristics from Chile to China or from Patagonia to Alaska.

The reality or urban rural connections are also diverse in Ecuador. There are small cantons of less than 2,000 inhabitants in the country. These are examples of political-administrative territories created in the 1980s to respond to a sovereign need for national population and a state policy that seek to populate the frontiers in the provinces. The goal was to create living borders to strengthen national sovereignty. This idea of covering empty spaces or filling spaces for national security was a state need in the face of the possibility of war with the neighboring country: Peru. The strategy was used until the definitive peace treaty in 1999 between Presidents Alberto Fujimori of Peru and Jamil Mahuad of Ecuador, after the "Paquisha war".

These close and diverse connections in rural urban spaces and the territorial functionality of small cities represent a new way of thinking about the theory of territory and space in a geographic system of commercial, labor, service, and residential relations. Social and economic relations are articulated and represented by identity, a deep experience of belonging to places and territories, social cohesion, and governance. This represents a territorial base of stock and continuous flow of resources. Human resources that mobilize and raise various possibilities of building the territories, people that are close and interconnected and where there are elected authorities, institutions, and organizations, which are vital to building territoriality and create social life, and territorial development.

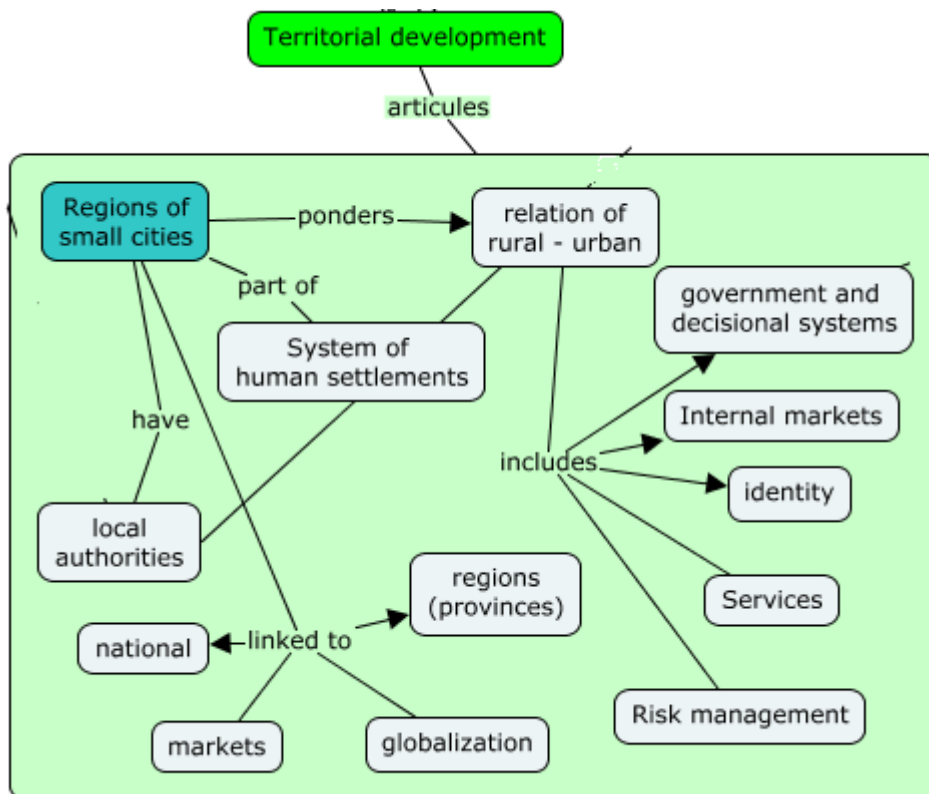
These are examples of the economic, social, and institutional interconnections that occur in these small territories: living in one place, working in another; going to school in the neighboring territory, contributing to the social capital of the place of residence; doing business in the neighboring place, working in other during the planting stage; going to the nearby place for food supplies, establishing informal and formal trust networks based on mobility; establishing marketing and information networks specifically to serve the neighboring village. Farmers who invest their profits in the neighboring village but obtain them where they live. Other characteristics of these relationships are: media with a more diffuse scope, public services that serve villagers from a regional - not administrative - perspective, the creation of new forms of governance and thus different governance and budget problems. To summarize briefly, the complexity of the theory and the territorial reality assume multiple forms (Berdegue and Proctor, 2014).

The exposed interconnections inspire thinking about bottom-up public policy from a more comprehensive, systemic, and connected perspective, in a regional perspective of exchange with small cities and rural spaces that also fulfill a function and linkages. Reality transcends the geography and administrative boundaries, which remains

anachronistic in the face of a broader complexity. Connections represent many dimensions and give rise to the need of considering interrelated territories and regions, as well as the population that lives in rural-urban areas and their needs. In other words, territory should be analyzed in its regional and dynamic dimensions (Mision Rural, 2014) as quoted in (Berdegue and Proctor, 2014).

Consequently, national, or territorial public policy must overcome their modest territorial vision that refers strictly to administrative and land limits. If public policy and public action are limited to the continent, to the administrative sphere, and do not take into account this social, cultural, and economic dynamism, the exercise of thinking about development becomes repetitive, and is summarized in schematic planning. Plans remains on the desk and relates repeatedly the realities of administrative spaces, some more dynamic, others without the capacity for transformation or development, where the activities that generates growth are related to public services. On the contrary, the potential of small territories that can exercise as regional dynamization centers must be increased. In the center of the argument, more dynamic territories practice regional planning that considers public policy and public action inside a more complex reality, figure 34.

Figure 34 Map of concepts: Regions of small cities



Source: Author

The development of territories implies a series of relationships between small or large communities that share the regions. The thesis will focus on the relationships that occur between the cities, in this case the cantonal capitals, with the rural territories that are part of the same canton. One can observe, among others, the influences and services provided by the city around decision making and governability, as a collection and market center, as an element of cultural identity for the canton, among other aspects. A second level in this analysis refers to the integration of the canton in the human settlements system of the region, province, or nation, and in some cases, even the relationships established with territories outside the State, in the context of globalization. This is where political relations between levels of government, market relations, and links related to migration phenomena can be identified.

1.2.5 Institutions and Organizations

1.2.5.1 - Institutions

Putnam's research in Italy establishes a significant correlation between social capital and societal institutionalism. The neo institutionalist school has prioritized the study of institutions and organizations, as well as their interactions with the development of society. According to North (2014), the emphasis is on the interactions of institutions and organizations, as well as the many means of formally or informally regulating their functioning in society.

Institutions are the formal or informal norms, rules, and standards that frame interpersonal relationships. The new institutional economics visualizes contractual relationships at both the political and economic levels, as well as the effects they have on society. North characterizes institutions as follows:

The Individuals recurrent interactions show patterns. They establish a context within which individuals can have some faith in the outcome determination (...). Customs and laws give individuals a set of incentives and disincentives. They include a method for contract enforcement, either directly via norms of conduct or through third-party management and monitoring (1990, p.1).

When actors engage with imperfect information, moral hazard, or other market imperfections, transaction costs establish inefficient relationships and property rights. Institutions, according to North (2014), are a combination of components that may either stimulate or restrict productivity development. Both scenarios benefit from institutional reform. Relational issues in imperfect markets, as well as the cultural behaviors of the participants, are institutional patterns that the author finds in many developing nations when analyzing their political and economic marketplaces.

Informal norms expressed through codes, conventions, actions, or conduct are more resilient and impermeable than legally stated policies. As a result, although formal norms, written regulations, or laws seek to address problems or improve behaviors, cultural restrictions and behaviors are more deeply embedded and explain the inefficient connections or historical milestones that define actions that did not contribute to social progress. This is what Pierson (2000) refers to as "path dependence," or route dependence as an explanation for many current actions.

Although institutions provide guidance in social interaction, the existence of opportunists is not suppressed by formal or informal rules. Regardless of the institutional evolution of society, the prospect of players seeking to gain above the costs of their interaction is considerable, which may affect future interactions or the building and strengthening of social capital. According to Gumuchian (2007), the actors in the territory, whether public, private, or social, generate relationships and networks whose quality is determined by the level of institutionalism in the territory; these are dynamic interactions that are reconfigured in the ongoing process of appropriation and construction of the territory.

North (2014) distinguishes between institutions and organizations; the former are the rules of the game in a society, norms that shape how human interaction and the incentives of such trade occur; institutions minimize uncertainty. The culture, customs, identity, or civic commitment of the territory, as well as the internal and external networks that have been formed and that bring advantages, are of the highest importance when assessing informal institutionalism (Putnam, Leonardi, and Nanetti (1993); (Granovetter, 1973). Organizations, on the contrary, are political, economic, social, and educational groupings, as well as associations of individuals who pursue similar goals via their shared identity.

This social interaction in the territories, characterized by the institutionality of a territorial identity, is what generates changes, evolution, and advances in organizations. North (2014) speaks of a coordinated interaction based on shared abilities and strategies when describing the trajectory of territorial development. The role of the public actor includes guiding interaction and social forces toward common goals such as poverty reduction, the resolution of economic and social problems, or the pursuit of territorial competitiveness (Silva Lira, 2008), as well as creating the necessary spaces to strengthen territorial social capital.

Organizations (public or private) face two constraints for public action: issues with individual action coordination and the need to make collective action operational, decreasing the probability of evasion (Hernandez, 2016 quoted in Guerrero 2018). Organizations contribute to the reduction of uncertainty in this paradigm (Guerrero, 2018, p. 3).

Elinor Ostrom, furthermore, analyzes social interaction in collective action, focusing on the relationship between private and social actors in arenas or action spaces where

participants interact, relate, and cooperate to solve problems or conflicts that may arise in the use of the commons (Ostrom 2005, quoted in López, 2010). It will always be possible to have rules or forms of organization of these interactions; the rules, community culture, environment, and context influence the structure of the space or arena of action; and the rules help in the resolution of conflicts related to the usage of common goods.

Ostrom (2015) refers to rules that the community agrees on and requires from its members, resulting in an interaction with minimal opportunity for opportunism and the presence of collective action for the long-term management of common goods. Members of the community can create "a binding contract to agree to a cooperative approach that they will forge" (Ostrom, 2015, p 56). The actors satisfy the conditions of the contract; otherwise, the group authority will impose a penalty. The opportunist is regulated by community-imposed norms and consequences, social rules designed to preserve order, stability, and to avoid opportunism in interaction.

Analyzing institutions in national and subnational territories entails visualizing the formal and informal norms and regulations that govern social connections in the territory. The ability of stakeholders to establish consolidated internal and external networks, as well as stable institutions and organizations, drives institutional change and has a good or negative impact on the development of territory.

Vázquez Barquero considers that the permanence of gaps within territories limits the institutional change essential for the inclusion of the middle classes and the poor population in change processes. This factor opposes to territorial development, and poverty reduction. (2007: 197).

Institutional change involves participation and decision making. However, the more often local decisions are made at the national level, the less capacity and decision-making possibilities are generated at the local level, negatively affecting subnational institutionality and development process.

The preceding paragraph defined the idea of the local, which accounts for a proximity link ruled by the Subsidiarity Principle. The doctrine of the Catholic Church that emphasizes the importance of resolving problems in the local, as near to the people as possible to the point at which they emerge. Higher levels of decision are subsidiary only if the level closest to where a problem arose is unable to manage it, either due to competence or incapacity. The notion of the local level is linked to active engagement and involvement of society, which is more viable in a regional than a national territory.

A - Governability

According to North (2014), developing, constructing, and enhancing organizations

entails assessing the governance structure, which is connected to the development of capabilities and learning that shape relationships and contribute to organizational improvements. Organizations are viewed as living and dynamic entities that change as a result of the institutional framework and, correspondingly, impact the institutional framework. Capabilities and learning are developed through high-quality formal and non-formal educational procedures, and they are influenced by the growth of social capital. Public bodies at the subnational level include local governments as well as public institutions in territories that are part of the national deconcentrated government.

The debate about governability began at the end of the 1960s, with the emergence of the "French May," when a group of students paralyzed the government. In the same year, 1968, the Tlatelolco massacre took place in Mexico, same causes but not the same consequences. In 1975, the "Trilateral Commission" issued a report highlighting the issues of governability caused by "an excess of democracy" in Western countries, as well as a very high demand for state action that surpassed the capacities of the "Welfare State" (Crozier, Huntington, Watanuki, 1975). In that study, governability is defined as a mix of political stability and government performance.

After that, the World Bank (1994) amended the word, connecting it to the capacity of the state to execute its tasks and ensure people's well-being and security. It is connected to the notion of the State as manager of the economy, and it encompasses concerns of information and openness. With the fall of the Berlin Wall and the fall of Russian socialism, the idea of the state was weakened in order to facilitate the spread of market forces. (Rial, 2015).

O'Donnell (1993) examines the link between governability and democracy in Latin America, concluding that representative and consolidated democracies have a higher degree of governability than states with limited participation and accountability, which he calls "delegative democracies", with "low intensity citizenship", or where authoritarian elements appear. Ungovernability would include - in addition to actual cultural characteristics in a society - corruption, violence, political division, and a lack of governmental efficacy (Huntington, 1968).

The debate over governability has reemerged in Latin America, owing to the institutional crisis that most countries are experiencing, which has resulted in violent popular uprisings (Ecuador, Chile, and Colombia in 2019), coups d'état (Bolivia, Peru), and a strong polarization of society that inhibits policy implementation (Argentina, Brazil).

B - Governance

In this view, there is a distinction between governability (the ability to govern a particular society with legitimacy and efficiency) and "governance," which primarily

represents the interaction within actors or between public actors with that society.

According to Martinez (2012), territorial governance processes are part of the dynamics of permanent social construction in which the fields of forces, working in the territory are redefined. Territorial governance is one of the many ways in which territorial actors can interact with one another. Kooiman (2003) defines public-private-social interactions as a synthesis of all types of activity, both between government levels and between society and government.

As North (2014) noted, social interdependence provides many possibilities and social transformations. There is a range of human relationships to be understood that result in varied scenarios in the results of the interaction, which adds complexity to institutionalization (Ostrom 2016). Interdependence becomes more dynamic, with several institutionalization possibilities, both formal and informal.

Kooiman (2003) suggests three key characteristics of territorial governance and the heterogeneity that comes with it. "Diversity", which reveals differences in the interlocution and in the interaction existing in the territories with respect to the type of actors, their resources, intentions, powers. The author refers to them as the entities that make up the system and how they differ from one another. The "complexity" that results from structures, levels of governance, and their interrelationships in various contexts, as well as the influence of these on the relationships that weave the parts of the system, and finally, the "dynamism," regularities and irregularities in the interrelationships, both within and between systems, in short, the interaction between actors is present in the three.

Kooiman distinguishes three kinds of governance that reflect the complexities of government interactions: self-governance, co-governance, and hierarchical governance. Self-governance entails sectors making choices on public or general matters without the intervention of a public actor; it is the possibility of self-organization of social and socio-political systems in response to a demand for natural governance that cannot be regulated from the outside. It refers to a socio-political organization that reflects the government limited or non-existent contact capacity with the various sectors of society; it suggests societal self-organization and self-reference.

Horizontal types of governance or co-governance imply "equality in the structure in which the participating organizations relate to each other" (Kooiman, 2003, p.65) In other words, co-governance entails a loss of autonomy for the entities which participate in this type of cooperation and develop mutual agreements with the government. These are more horizontal types of governance in relation to sociopolitical entities. One might imagine degrees of co-governance that, for example, match to Arnstein's participation ladder, from "testimonial" engagement of other actors (as in non-participation or basic consultation spaces) through examples of co-optation (which can also be problematic in

terms of caciquismo²²). Co-governance seeks a public-private and social collaboration with greater interdependence of the actors, which favors more institutionalized and higher-quality relationships (North, 2014). Above all, this implies that the interaction is in the best interests of the actors involved and there is a visualization of win-win in the relationship between public-private and social actors.

Finally, the hierarchical method of governance involves more formal contacts with the government, as well as a system of intervention in which the government exerts a more traditional relationship of control based on formal laws. When intervention is formalized through legal or administrative means, actors view the state through a more Weberian lens of hierarchy, control, and power, where "leaders control non-leaders" (Kooiman, 2003, p.70) and "hierarchy is especially positioned in terms of institutional mechanisms of redistribution" (p.70). At its most extreme, this kind of governance may entail the authoritarian imposition of government on society.

Adaptive forms of governance may also exist in response to varied environments in diversified, complex, or dynamic conditions. Depending on the social issues that a territory encounters, forms of co-governance might become self-governance or hierarchical governance, causing the three types of public-private-social interaction to merge.

Multilevel governance, on the contrary, entails cooperation and coordination among different levels of government: supranational, national, provincial, municipal, and parochial, with the understanding that territories address comprehensive development challenges and that, as a result, subnational governments conduct their development proposals beyond the administrative competencies assigned to each level of government (Guerrero, 2018). Multilevel governance, in this sense, is more concerned with intergovernmental interactions.

In the territories, the interdependence of actors must be seen beyond the principal-agent relationship, which is built from policy formulation at the center and implementation at the local level. This relationship is permeated by imperfect information (Silva and Meléndez, 2014) and moral hazard, the relationship usually occurs in the process of territorialization of public policy with the deconcentrating of the state.

On the contrary, during the decentralization process, power, competencies, and fiscal resources are transferred from the highest to the lowest levels of government. Interaction

²² Caciquismo is a hierarchical political practice of a traditional society in which the leader makes choices as the owner or cacique of the land. He has entire authority over the territory or town, and there are occasionally behaviors such as the transfer of favors or resources in return for political freedom, election manipulation, and, in extreme circumstances, the use of violence or intimidation. Corruption and a lack of transparency are additional factors.

and social participation are fostered by other forms of interaction depending on which form of governance is demonstrated with greater strength and can influence public policy. Government duties are changing from a collaborator in the principal-agent relationship for the territorialization of national public policy to a proponent and driver of local public policy implementation. The local government takes the initiative and initiates change processes in the territory, convening and guiding local social movements. The government executes policy in a more horizontal manner with territorial stakeholders under this kind of governance.

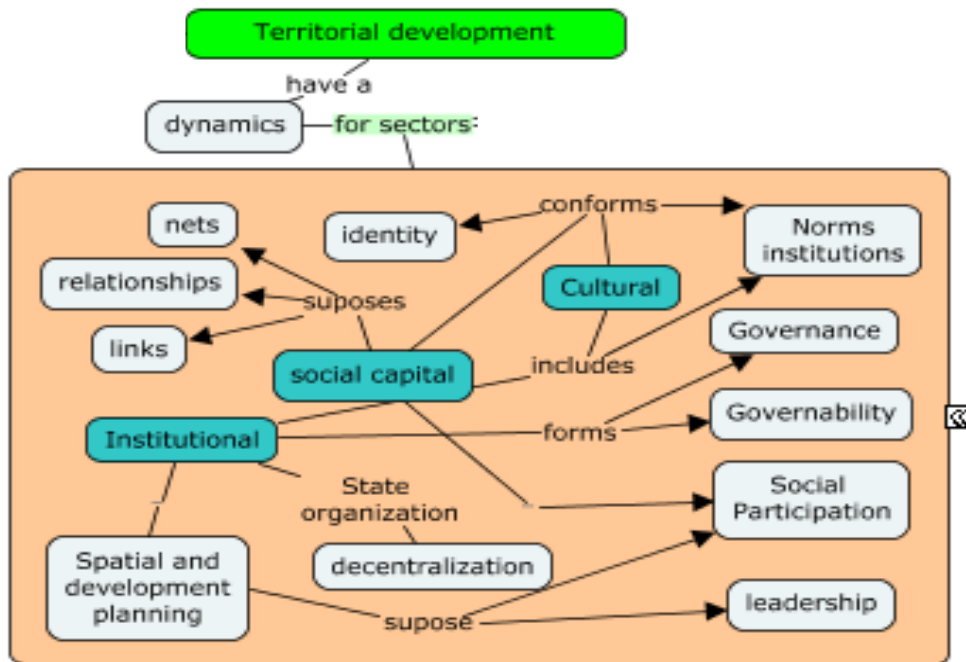
Closely related to governance, Ostrom (2015) (quoted in Guerrero 2018) proposes that citizen capacity for agency is dependent on the level of territorial institutionalization, cultural factors, local governability of common goods, and active social participation, all of which require adequate governability and a territorial co-governance.

According to Lapeze (2007), it is critical to have a governability framework that allows for the maintenance of public-private-social relations of cooperation. The fact involves decision-making by citizens, elected officials at the national and local levels, and technicians operating in territories, regarding the strategies and actions to be implemented to promote territorial development.

The production of unique resources in territories for the achievement of territorial development (Courlet, Pecqueur, 2013) is dependent on power relations, as well as local governance and governability, territorial organizations capacity for action, and social mobilization. The formal and informal institutional structures of the regions, historical and political history, and social capital are all highlighted. These factors are connected to local governability, or the capacity of the elected public actor to govern the territory and lead its forces toward shared goals, allowing the transition of territorial resources from generic to specific.

Finally, the existence of social capital in the territory can substitute other non-existent capitals even more when these strategies are supported by public policies that try to generate less concentration of wealth and more distribution (Martínez 2012 quoted in Guerrero, 2018: 2). Social capital requires time and relational capacity, two scarce but vital resources to generate active participation and decision making for implementing territorial development alternatives. Since social capital is a relational resource of individuals and communities that influences the socioeconomic dynamics of cantons, this study aims to assess the levels of social capital in small canton territory. Social capital is produced through interactions, but it may lead to maturation. Links could consist of internal and external networks, formal and informal organizations, be institutionalized in order to have a stronger influence and advocacy on territorial development.

Figure 35 Map of concepts: reform



Source: Author

The energy that originates from the capital of the networks that society forms in the territories has a significant role. In small cantons, social capital may or may not give birth to forms of collective action. Levels of social capital and their contribution to collective action and advocacy capacity are established in various ways depending on their trajectory, scope, and even motivations and non-economic foundations based on concrete values such as solidarity, reciprocity, sense of territorial belonging, and interests. The analysis of the four cantons demonstrates these disparities as well as the ability of these networks to generate certain territorial dynamic.

Territorial dynamics also depend on cultural and institutional conditions, which in turn can be modified by social construction processes. From the cultural point of view, we highlight institutions - norms (in the sense that North gives them), as a factor that can explain the direction and impulse of certain dynamics. Special relevance is given in this theoretical framework to the concept of social capital, understanding that the linkages and networks of relationships between people and territories strengthen the possibilities of improving living conditions. Institutions are also observed, understood as a fabric of organizations for the functioning of the public authority or the market (through formal or informal enterprises). In this field, the role of the local authority (the Municipality, presided by the mayor), the mechanisms of social participation, leadership, governability and governance are considered, see figure 35.

1.2.5.2 - Decentralization

South American nations are adopting measures to increase the capacity of subnational governments through decentralization from a perspective of institutional strengthening. Decentralization is a state reform process of transferring authority from the national to the subnational levels, which has three dimensions: fiscal, political, and administrative (Falletti, 2011). The process allows authorities elected in the territory - and thus legitimate representatives - to exercise local political authority. They play leading functions in the territory, both in terms of multi-scale governance and co-governance with the actors of the territory (Kooiman, 2003; Moulaert, F., & Parra, C., & Swyngedouw, E. 2014).

Landel & Pecqueur (2016) emphasize that local subnational actors are capable of solving territorial problems and of developing specific territorial assets, unique ones that have a differentiating advantage making decentralization an essential step for improving the meso-economic level that constitutes subnational territories. Despite the fact that the study focuses on decentralization in France, the authors underline the importance of the local territorial authority and local level as an appropriate development space.

Local governments lead the process of local development and territorial planning, which requires managerial competence amongst the government levels or multilevel governance, in addition to constitutional competencies. The capacity to exercise public policy is complemented by the capacity to actively involve and coordinate with local non-public actors to ensure that public policy is joined to public action in order to address public problems and build the territory (Pecqueur, 2013). Decentralization requires the movement of skills, resources, and authority from the central to subnational levels Falletti (2011:6).

Ecuador is defined as a plurinational, multicultural and decentralized state according to Art 1 of the 2008 National Constitution. Title III of COOTAD (Organic Code of Territorial Organization, Autonomy, and Decentralization) stipulates that each territorial level will have a decentralized government and mentions the exercise of competencies in the search for development and Good Living (Buen Vivir) (Art. 28).

In accordance with decentralization processes, the Constitution states that GADs (Decentralized autonomous governments) have political and administrative-financial autonomy. Solidarity and subsidiarity, intra-territorial equity, integration, and citizen participation are other fundamental elements for the decentralization process (Art. 238). It is said that the GAD regime is based on a system of mandatory and progressive competencies and would design strategies to adjust for imbalances to encourage development. Autonomy refers to the ability of subnational governments to set their own laws and policies that promote territorial development (Landel, Pecqueur, 2016).

Art. 157 of COOTAD discusses the subsidiarity concept, which is fundamental to decentralization, and suggests that the National Competence Council (CNC) might authorize the temporary and subsidiary intervention of the GAD's competencies until the problems that necessitate the intervention are resolved. Other causes may include the omission of the incumbent GAD exercise of one or more competencies - inefficiency in the exercise of the competencies or provision of the service that has been confirmed by the CNC - at the request of the GAD itself. Lastly, a proclaimed emergency allows a GAD to assume the competencies of another without the specific consent of CNC, merely with notice to the agency. The cantonal level has more powers than the other levels of government; however, all levels of government have planning powers as part of their commitment to local or national development.

1.2.5.3 - Social Capital

In addition to geographical, demographic, and economic-productive factors, the heterogeneity of territorial dynamics requires a study of "cultural" characteristics, or aspects of how this society lives and organizes itself. Several ideas in the social sciences are pertinent to these assessments, most notably associativity (or the production of "social capital"), citizen participation (related to concerns of leadership and governance), and institutionality (understood as social norms and legitimacy). The pages that follow examine various theoretical aspects that provide a framework for social capital in small territories.

When economic resources are limited, whether due to a lack of human capital, productive capital, or financial capital, it is worthwhile to highlight the possibilities of social capital. According to Martinez (2012), the territorial concept includes the social dimension; if the territory can be viewed as a social construction in constant change, the levels of organization of territorial actors will influence its permanent construction. The interaction of territorial actors is dynamic and can take the form of relations of cooperation, solidarity, collaboration, conflict, and agreements depending on the resources and capitals available in the territory.

A - Social capital and relationship networks

One of the most significant assets that territories have is social capital. It is a relational capital that demands the capacity to form trust and cooperative connections as well as time to construct and consolidate the process. According to Pecqueur (2013), social capital plays a significant role in the creation of specialized resources from generic resources. It is a social force capable of mobilizing other resources to build the territory.

Social capital is referred as the collection of actual and potential resources associated with the possession of a durable network of more or less institutionalized interconnection and inter-recognition relations; or, in other words, belonging to a group (...) a set of agents who share not only common properties (...) but are also linked by permanent and useful connections. Bourdieu (2001, p.84).

These links, according to Bourdieu, are physical, geographical, economic, or social. They are relations of solidarity, contiguity, lasting and based on belonging, which provide identity, knowledge, and recognition to those who are part of that social network, as well as those that are formally institutionalized and represent mutual recognition of the group members. Coleman (2000) quoted in Barreiro (2003) speaks about the capacity of individuals to interact and collaborate in groups or associations that rely on the informal institutionality of the group. In such groups, trust is the integrating or motivating factor of internal activities.

Trust is an attitude based on previous behaviors of group members and future behavioral expectations of these members. Trust is established when group members' subsequent behavioral interactions are predictable. Loyalty and the opportunity cost - involved with preserving it - are the sources of trust. Trust is the first component of social capital; it demands that the standards and norms be followed by the community with force and motivation (Ostrom, 2016).

The social capital of an agent is determined by the size of the network of linkages that he can effectively mobilize, as well as the volume of capital (economic, cultural, symbolic), that possess each of those to whom he is linked (Bourdieu, 2001, p.84).

Barreiro (2003) describes social capital as a component that influences individual and collective behaviors that lead to collective action. Barreiro's concept of social capital is similar to North's concept of institutions. Cultural processes, habits, traditions, and instances that are repeated through time provide assurance to individual actions in the emergence and transmission of norms.

Social capital is the norms and networks that enable people to act collectively. Social capital is the institutions, the set of relationships, attitudes and values that determine the interrelationships between people and that imply, in turn, the existence of a social network that produces utilities and benefits to the people who participate in it (Barreiro, 2003, p.3).

Barreiro's definition refers to the role of institutions, both formal and informal, that norm the interactions of actors and the network connections, both internally and externally. According to the author, if the network of the actors is dense, they can obtain benefit. The level of engagement in networks is a factor that influences the benefits that can be obtained.

Social capital requires the participation of group members, by subordinating their individual interests to collective interests. Cooperation aims to achieve common objectives or solve common problems. Thus, it is linked to the ability to associate and share a set of values and internal norms that promote group cohesion and stability;

informal and formal norms reduce transaction costs and the possibility of opportunism.

Reciprocity is the second component of social capital. According to Barreiro (2003), social capital implies that the principles of reciprocity are maintained; these are exchanges that are not strictly related to buying and selling relationships, but rather to an exchange of benefits that are not immediately or precisely compensated. Once again, trust plays a role in inspiring confidence in the solidarity of the other member. Solidarity is created in a collective environment where support is offered without the expectation of immediate and direct benefit. Individual interests are sacrificed in order to promote collective benefit.

Mutual recognition and time to consolidate the knowledge of the other are required for reciprocity. As contrast to the prisoner dilemma, it would suggest multiple repeating games in which people participate cooperatively and receive cooperation from the other. In the learning process, in the cooperative environment generated by routines, players understand that cooperating will lead to greater future individual performance than not cooperating; hence, cooperating is the individual and collective optimal (Barreiro, 2003). This cooperative behavior requires group inter-recognition. On the contrary, there is the prisoner dilemma, which is the possibility of a single game with no repeat.

In other words, prior behaviors of group members and knowledge of each other offer a base for establishing and solidifying cooperative connections. This does not provide complete confidence about the other's behavior, but it does provide members with an advantage that allows them to collaborate. Repetition increases both knowledge and trust. A lack of motivation to play with other actors, to play collectively, or to collaborate may be a symptom of opportunism or a vision of gaining little advantages in comparison to the cost of producing social links, which is expressed in costs in terms of time and relationship capacities.

The third component of social capital is networks, a network of interactions based on the ability of people and collectivity to relate to others, which gives them an advantage.

"Networks describe a given system as a set of its localized components, called nodes, and the interactions between these components, called links," write Poteete, Jansen, and Ostrom (2012, p. 319). The actors are identified as nodes in the social networks that are characteristic for the study of collective action. The connections and interconnections between actors are identified as links. According to the authors, closer networks with a higher amount of clustering and nodes can have a bigger influence on the level of cooperation among network members, and thus on collective action.

It might be important to distinguish between interactions that occur inside the social group (for example, within the territory) and relationships with other social groups or external groups within the trends of social capital analysis. Burt (1992) distinguishes between internal processes of trust within a collectivity (which he refers to as union

social capital) and those that associations activate with other collectivities (bridging social capital). This implies various kinds of relationships.

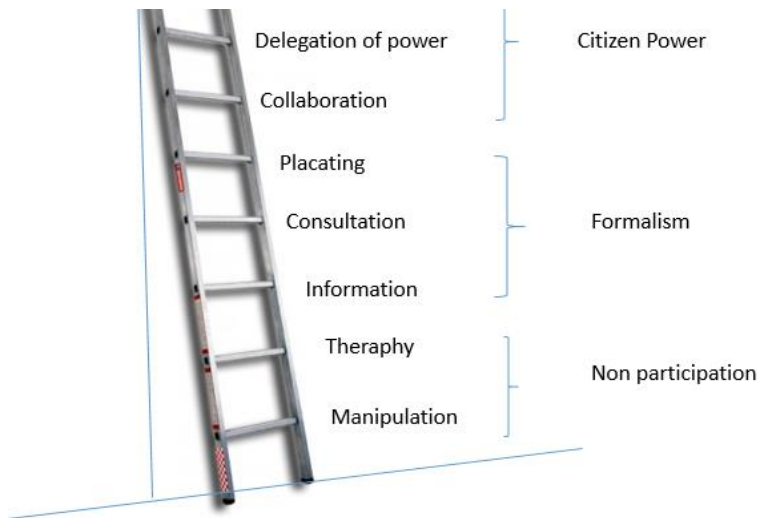
Above all, the availability of social capital and the capacity of this relational capital to increase governance, negotiation possibilities and the transaction and production costs encountered by networks and members of organizations is particularly essential in small cantons. Such capital can aid in cost reduction and the development of greater trust and equity. In addition to social cohesion, social capital allows the possibility of influencing public policy decisions and the ability to carry out actions that directly or indirectly benefit the territories, which is known as public action (North, 2014).

B - Citizen participation

The relational capital must be involved in public policy decision-making in territorial administration. There is a broad theoretical frame on citizen participation, although citizen participation does not need organization or membership in networks.

Based on the statement that citizens may gain power by active and involved participation in strategic decision-making, Sherry Arnstein (1969) constructed her "ladder of levels of participation," which she graphs in eight rungs and in which she includes various forms of intervention. When individuals are consulted or just informed at the bottom of the ladder, they do not participate effectively. Arnstein defines these degrees as non-participation, whereas other levels, such as collaboration or transfer of authority to the voting box, suggest more active participation. Ultimately, the last step of the ladder is connected to citizens gaining power, citizens exerting citizen control. This author considers this ladder, the highest degree of participation since it requires true involvement and decision making with other actors, see figure 36.

Figure 36 Arnstein's ladder of participation



Source: Arnstein (1969)

Based on Arnstein ladder, and the assumption that participation implies direct citizen involvement, it is possible to visualize the factors that might inspire such participation and collaboration from individuals without the intrusion of formal regulations imposed by the State. Individual cooperation, according to Hardin (1982), is based on game theory, highlighting the challenges inherent in collective action with large interacting groups. For him, two factors explain collective action problems: group size and the connection between advantages and costs. Participants' compliance will be dependent on conditional methods such as vigilance or punitive measures.

Cooperation is also influenced by information on the behavior and conduct of other agents, on their capacity to fulfill or not fulfill a commitment. It is necessary to analyze community culture and the possibilities of establishing exchanges and interactions based on trust and reciprocity, which are important for the Andean world like the minga or the prestamanos. Ostrom (2015) examines community attributes for cooperation, shared values, common understanding, and cultural homogeneity. On the contrary, cultural differences, inequality in asset ownership and access, and lacks in internal institutionality can hinder cooperation and increase the cost of maintaining internal rules.

North (2014) considers socioeconomic evolution as "survival patterns of social organization," which firstly vary from social inertia via traditions or standards of social conduct, imitation or natural selection, or logical thinking (Hirshleifer 1987, quoted in North, 2014). North indicates the limitations that these actions create; he identifies them at first stage when the prospect of achieving collective action is presented.

Some authors, such as Lapeze (2007) and Courlet and Pecqueur (2013), emphasize the significance of social animation in achieving collaboration in territories, a role played

by leaders or social activists who accompany improvement processes in any dimension required by the territory. Local government workers, NGOs in the region, university students conducting linking activities in the communities, or community members who obtain the collaboration of local actors to solve a problem or improve a condition might play the role of animator. This is also connected to social mobilization and agency capacity (UNDP, 2010), which indicates that the social organization participates, mobilizes, operates, and acts with the goal of solving problems that impact the group.

C - Effects of social capital on development

Social capital is essentially relationship capital. According to Dagasputa and Serageldin (2000), as quoted in Barreiro (2003), social capital supports not just the network members but also society. Innovative environments in territories, for example, emerge from environments of innovation and creation generated by the trade and connectivity of firms in the territory and the organizations that compose the local production systems. Social isolation of companies, on the contrary, does not add to the beneficial effect of environment of innovation in the region in which they are located. Silva Lira (2005) distinguishes between companies that are interconnected, interact to reduce costs or internal commercial advantages, and generate territorial advantages, which he refers to as “companies of the territory”. Those that do not cooperate with one another and whose sole purpose is to profit rather than establish internal relations are referred to by the author as “companies in the territory”.

Social capital is generated through the capacity to relate to people and form social networks that transcend the economic dimension. Investing in internal networks provides a sense of belonging and identity to the group, as does the exercise of management and governance ability, which strengthens the group’s negotiating power and social mobilization potential. Social capital is a personal as well as a societal resource. "It is a resource that may be invested with the prospect of a return" (Barreiro, 2003, p.16). Internal groups can develop relations networks with the outside world, enhancing social capital and access to other resources such as strategic knowledge, connections, and access to other networks that allow them to minimize transaction and opportunity costs or to improve their level of relations in the future. The benefits of social capital are factors that contribute to territorial development.

Social capital grows in more interdependent environments; it accumulates through networks that are consolidated through time and reinforced through interaction and the many connections that they build. External networks, or weak ties as defined by Granovetter (1973), might assist in establishing bridge partnerships with international networks that give significant economic potential. While the development of internal networks creates more dense social capital, this can benefit members by strengthening identification, sense of belonging, and identity, values that are shared inside the group

and distinguish them. Martinez (2012) describes mutual self-recognition as occurring in organizations that manage to generate this feeling of mutual reference and counter-reference.

Putnam, Leonardi, and Nanetti (1993), for their part, remind us of an organized community capable of demanding competent management from its authorities, which leads to improvements in health and education services through comprehensive study in Italian areas. The Italian example demonstrates the lobbying ability that civil groups or social capital gain via civic activity. Although the research began with a focus on regional institutions, the historical components and collective action theory aided in the examination of Italian regional differences in terms of social capital.

Putnam analyzes Neo-institutionalism to explain how paying more attention to the norms of civil organizations may help to improve regional state performance and how socio-cultural features such as political culture and civic culture can increase the efficiency of regional political organizations. The research findings show distinctions in regional culture or institutionality between northern, central, and southern Italy.

The research presents decentralization as a broad political process that promotes increased interaction between residents and regional governments; these processes encourage voter involvement in regional decision-making. The study identifies varied possibilities and capacities in regional governments to use their governance capacities in order to solve public problems; what makes the difference is civil society power to demand more compliance in management to public agents.

On the contrary, as a result of less regional social capital, organizations are vertical, and they do not share organizational values, the connection with regional states becomes more clientelist and opportunistic, which has an impact on governance and regional development. As the authors of the study demonstrate, this indicates weaker organizational effectiveness, which translates into lower rates of development in regions, mostly in the Italian South. The negative repercussions for regional development come from a lack of social capital networks capable of demanding that the state adhere to best practices in public policies (Putnam, Leonardi and Nanetti, 1993).

D.- Levels and measurement of social capital

According to Martinez (2012) and Barreiro, social capital is a challenging resource, difficult to quantify. It is critical to generate and strengthen social capital, especially in regions where other physical resources are few and social capital might serve as an alternative. The demand to evaluate social capital has emerged, with Putnam's research on the relationship between social capital and territorial development in Italy. Putnam's measurement took over 20 years to develop and focuses on identifying the benefits of social capital at the territorial level. He studies regional, cultural, and institutional

differences between regions, and more effective regional government actions when the level of institutionalism is higher. The author demonstrate that better institutional performance measured in social, political, and fiscal indicators conduct to better results in territorial development.

Putnam argues that higher civic participation, as represented in community groups joined by solidarity, explains the development differences between northern and southern Italy. Such civic engagement motivates individuals to participate in public affairs and become more interested and engaged in the region public life. The goal of this involvement is to improve the performance of the regional state and the outcomes of public policy execution by achieving higher gains in physical and social capital.

Social capital creation and consolidation are dynamic: territorial social capital can give rise to forms of collective action. If these forms occur in the regions, it indicates a greater degree of social capital.

The accumulation of social capital leads us to consider its levels or degrees throughout time. Social capital is built on connections, which might occur at an early stage of formation or a later stage of network and political influence consolidation. An initial level of institutionalization or a highly institutionalized level of collective action can be achieved. This capital has great influence on the socioeconomic dynamics of the territories, in other words, a higher level of maturity that - as Putnam studies demonstrate - can influence public policy decision-making and improve the performance of public agencies.

Figure 37 Territorial interactions - iterations of Social Capital



Source: Author

The figure 37 represents the many degrees of territorial social capital that may be achieved. The positive interaction that can occur in reciprocal community relations -

such as mingas²³ - can be scaled up to informal or formal sectoral associativity. Associativity related to production or any extra-economic social dimension that requires decision-making by members seeking common goals can lead to collective actions. Finally, a higher institutional level can achieve a high degree of political incidence in the territories. At all levels, the local network can establish contacts and interactions with other local or regional networks of greater scope (Bebbington, 2001).

The network ability to exercise political influence will be determined by the degree of institutionalization of the network participants, center, nodes, and connections. It will depend on the interest of actors in getting involved in territorial political life, as well as their ability to demand better performance from public actors who territorialize or generate public policy at the local level. Elected public actors at the territorial level and those who represent the agent-principal relationship in the territories must create a favorable environment to social capital.

Therefore, it is conceivable to imagine a set of mostly qualitative, sensitive indicators for measuring social capital. These indicators could be found in the following variables: the type of relationships (family, social, economic, work, study), the scope of the relationships (home, neighborhood, sector, territory, nation, global), the degree of formality of the relationships, the type of effects shared (information, resources, emotional support), the degree of citizen participation involved, and the level of social capital achieved in the territories, among other forms of measurement.

E- Resilience and Organized Action

Resilience is defined as "the ability of an organization to sustain or restore a state of dynamic stability that permits it to continue functioning during and after a big occurrence or in the midst of continuous stress" (Hollangel, 2008, p.16), as quoted in (Altintas and Roger 2009, p 268). The definition first appeared in the physical sciences.

Similarly, resilience is defined as "the capacity of complex systems to exhibit stability or persistence in the face of change, to adapt creatively to external perturbations, or to self-organize" (Perz, S. G., Cabrera, L., Carvalho, L. A., Castillo, J., & Barnes, G. (2010, p. 305). According to several research, the notion of resilience is close to the complex systems. Holling, (1973); Adger, (2000); Adger et al (2003) quoted by (Perz, S. G., Cabrera, L., Carvalho, L. A., Castillo, J., & Barnes, G, 2010, p. 305) defined social resilience as "the capacity of social groupings or communities to resist or creatively adjust to externally caused shocks".

²³ These are community support systems in which each family participates in the execution of an infrastructure project or a common service as a contribution to the community on the basis of cultural solidarity and reciprocity.

From an economic perspective:

Regional economic resilience is described as an economy responding to an external shock, either through a stable and sustained growth path (shock resistance) or by the capacity to recover and rapidly return to a pre-shock equilibrium condition or growth path (Foster, 2012) quoted in Xiao and Drucker (2013, p 149).

Cyrułnik - in a psychological conception - (2001, p.10) frames resilience in the social sciences and defines it as "the capacity to succeed, to live and develop constructively, in a socially acceptable way, despite fatigue or adversity, which generally entail a substantial danger of a bad outcome". According to the author (2001, p.9), resilience is the ability to overcome and turn painful experiences and disasters into positive learning and metamorphosis of overcoming adversity "There is no fantastic misfortune. Yet, when adversity hits, do we have to surrender? And what weapons do we have if we fight?" Above all, resilience is a multifaceted and polysemic concept.

Lessons acquired from disasters and pandemics reveal that preparedness and prevention are acts engaged in sustainable development. Reliance on trustable organizations with a high level of institutionalism, as well as continuous training, simulation, redundancy, and a collective culture of coexistence and risk knowledge, as well as the existence of organized groups of collective vigilance (Altintas and Roger, 2009), enable territorial organizations (civil, political, and business) to continuously learn the resilient way to manage risk and vulnerability. The procedure involves the formation of habits that allow for risk and crisis management. Nevertheless, as the authors note, post-crisis learning periods have received little attention, and "the link between crisis management and the goal of developing resilience has not been experimentally proven" (Altintas and Roger, 2009, p. 272).

According to the authors, post-crisis learning leads to predicting future scenarios, such as developing new potential solutions to unfavorable occurrences and focusing on initiative-taking rather than reactive strategies. Learning improves an organization's ability to deal with a new issue. Resilience becomes a factor that improves reaction capacities of organizations reaction while strengthening social cohesiveness.

When disasters occur, risk is important, but vulnerability is more critical. Communities with better income, education, and health are more capable of dealing with the impacts of natural or anthropogenic disasters. This was demonstrated by Tadele and Bernard Manyena (2009), Mavhura, Manyena, Collins, and Manatsa, (2013), and (Kervyn, et al, 2015) in various sectors of Africa that suffer floods or droughts. Furthermore, Perz, Cabrera, Arajo, Castillo, and Barnes (2010) analyze resilience some territories of the Amazon in the area of influence of large infrastructures. Socioeconomic variables influence people's decisions to live in high-risk places, exposing them to various degrees of natural disasters.

The studies emphasize community prevention and learning efforts to respond

resiliently to disasters, as well as the need to create spaces for participation, such as workshops in which people contribute and become empowered in the face of risk, as well as knowledge of local geography, which is used for prevention and effective response.

Based on these diagnoses, more effective resilience approaches for addressing the causes of anthropogenic disasters²⁴ may be developed. Greater institutionalization, with more active governments working on prevention actions, as well as a more educated and organized population are conditions of preparedness for disasters. The promotion of diversification of livelihoods that put less stress on land resources, are deemed more effective in reducing risks and preventing disasters caused by human activity. They imply the need for long-term disaster resilience development processes to contribute to impact reduction as well as the creation of a resilient economy (Xiao and Drucker, 2013), that implies greater diversification as well as the possibility of generating employment and income during the reconstruction process.

From this perspective, resilience is conceived as a dynamic capacity, built through the strengthening of internal organization (in other words, social capital), which can build resilience capacities if external shocks occur.

In conclusion, the theoretical foundations discussed here assist to comprehend the territory as a system from the perspective of complexity, and they give sectorial views that must be incorporated into the analysis of each element that influences territorial dynamics. We could not discover identification of components that explain these dynamics or identification of the factors that I explore in this research in the theoretical framework. In fact, several of the territorial studies that I present make reference to more abstract subsystems that are part of the complexity theory.

²⁴ For example, erosion, deforestation, construction in hazardous areas, poor land use planning, logging, poor water management, inadequate wastewater management, among others.

Chapter 2

Empirical section: the four factors within the four cantons

In this chapter, I attempt to address the study question by indicating four factors that may explain differences in the territorial development patterns of the four cantons studied. Throughout the chapter, a description of the conditions of each of the factors is provided, and in the end, the many configurations that each factor represents in terms of development in the cantons are studied.

2.1 Population dynamics of the four cantons.

The theoretical frame examined in Chapter one, particularly the demographic transition theory, was used to review the population trends in the four cantons.

The research focuses on quantitative data on birth rates, internal migration impacts, and the demographic structure of the four cantons. The national population growth rate serves as a baseline for determining whether the dynamics are favorable or negative.

Interviews with governmental, private, and social actors of the four cantons were conducted in this research. This section includes some of the perceptions stated in those interviews about population trends.

General questions were asked about the population situation, such as the visible difference in growth between the urban and rural sectors (in the case of Baños), or the comparison of cantonal population growth with the national average (in Cotacachi and Jama), or explicitly about migratory processes (in the four cantons). Because these are broad topics, some of the components examined, such as the population pyramid, the demographic bonus, or mortality, are absent from the interviews.

The analysis on population dynamics is divided into three sections: the reference to population dynamics and structure, with issues of population growth and decrease; second, the urbanization of the population, given that rural activities are very important in small cantons in Ecuador. Third, two particular factors that have impacted the geographical distribution are considered: the road network as an organizer of this distribution, and the effects of catastrophic natural occurrences, such as the Tungurahua volcanic eruption in 1999 and the earthquake in Manabi in 2016.

2.1.1. Births, Birth rate

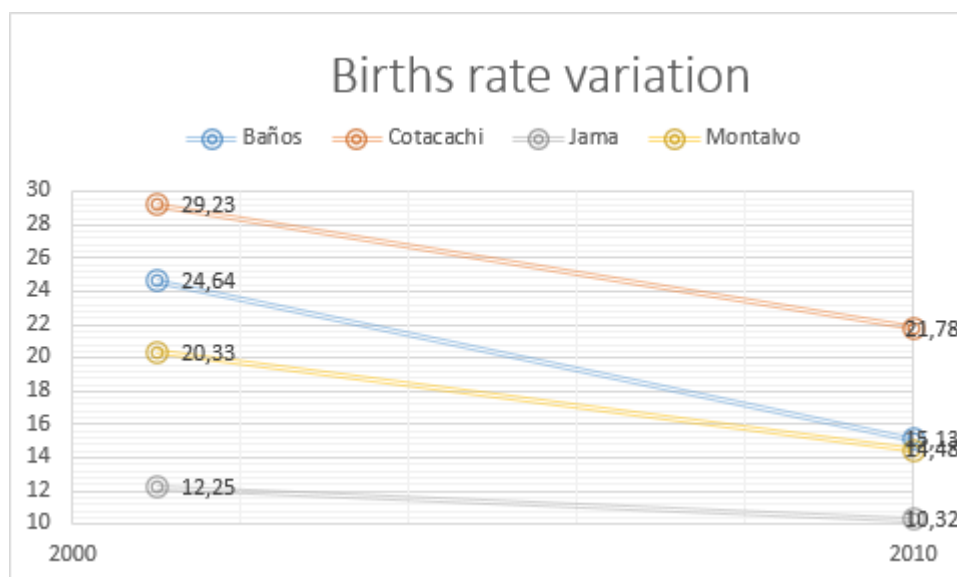
It is appropriate to examine the birth and death rates between censuses to analyze the natural growth between cantons:

Table 13 Birth rates among censuses

Year	Baños	Cotacachi	Jama	Montalvo
2001	24.68	29.23	12.25	20.33
2010	15.13	21.78	10.32	14.48

Source: INEC 2001-2010

Figure 38 Births rate variation



Source: INEC 2001-2010

The declining birth rate data in **Baños** is consistent with the number of household members, it is visualized that households tend to have fewer children, which is also part of the modernization process with a tendency to form smaller families, see table 13 and figure 38. The data also imply that migration processes to Baños were more important than natural growth. The data are consistent with the country situation regarding the reduction of the total fertility rate shown in Ecuador: from 3 to 2 between 2001 and 2010. The 2010 census indicates an average number of children per household of 1.6, while in 2001 it was 1.8 and in 1990 it was 2.3. Urban-rural differences are maintained when the urban rate is 1.5 and the rural rate is 1.7 for 2010 (INEC-Analitika, 2012). Differences in the number of children between urban and rural locations indicate inequality, a larger

number than in urban areas indicates a family occupation in agricultural activity.

In the case of **Montalvo**, although the birth rate decreases between censuses, after 2010 there is a significant natural growth in the canton, which is consistent with the population pyramid and the number of dependents and young people in the canton. Throughout those years and after 2010, the birth rate remains almost constant according to the population projection. In 2018, this rate was 15.42. The rate increases compared to 2010. If the data is compared with the province of Los Ríos, the provincial rate is higher: 18.84 and the provincial capital rate: Babahoyo, is also higher than Montalvo's rate: 18.79 (INEC, 2001-2018). The statistics support the argument that due to the availability of better medical facilities in bigger cities, parents prefer to give birth in the province capital.

In the case of **Jama**, lower birth rates appear. Between 2001 and 2010, the birth rate of Jama canton decreases, the data is consistent with the decrease in the birth rate at the national level and the trend of decreasing number of children in households. That is, Jama population loss is linked not only to a very low migration pattern, but also to an equally low natural population growth rate.

In 2018, 331 births were registered in the canton, which would be equivalent to a birth rate of 12.82 per thousand (INEC, 2018), a figure that exceeds the number of births in 2010 and 2001, and which may indicate greater confidence in the canton gynecological-obstetric health system. Health services were strengthened in the cantonal capital, with force after the 2016 earthquake.

The birth rate decreases in **Cotacachi** between the two censuses, despite the reduction, the birth rate is the highest of the four cantons. If we see only the decrease in the canton, it may be a product of family planning programs promoted by various health and non-governmental organizations in the territory. As indicated in its development plan, in 2018 the number of births also decreases to 736, which generates a lower rate of 16.80, both the mestizo²⁵ population and the indigenous population were immersed in these programs.

More specifically, the Central Committee of Women of UNORCAC (Union of Peasant Organizations of Cotacachi) strongly supports the health sector in the canton. This is a significant union that organizes the canton's indigenous population and the strategic role of the midwives who provide crucial support to indigenous women in the area during pregnancy and childbirth. According to Development Plan and Territorial Ordering (PDyOT 2015), midwives attended a substantial number of birth cases, including "229 first care and 663 postpartum cares for 2014."

²⁵ In Ecuadorian censuses, ethnic self-recognition has been promoted. Mestizos acknowledge both indigenous and white origin.

From the perspective of childbirth services, it could be that the parents decided to have the birth in a city with more complete health services or better level of care. In this case, Quito and the provincial capital: Ibarra, both very close to the canton. Nevertheless, Cotacachi has the highest birth rate among the four cantons. This canton is known for its intense planning efforts, Cotacachi register a decline of 7.45 points between the two censuses. The decrease is more significant due to the high percentage of indigenous people that live there. Meanwhile, Baños records a decline of 9.51 points between the two censuses, this was the biggest rate decline between censuses among the four cantons.

2.1.2. Fertility concern

The topic of family size, the onset of sexual activity, appears in some of the interviews in Canton Montalvo. Curiously, there is no mention of these topics in the other three cantons. Respondents consider that in Montalvo Canton the vegetative growth (due to the high birth rate) is related to the early onset of sexual awakening and the lack of sexual education.

(M03) Question: (why do you think there is such a high population growth of 2.1% when the national average is 1.9%?) Answer: Maybe because there is no sex education. No, today it is not given, but we used to receive it. Now it is normal to see three or four girls who are studying and are pregnant. There is no education, no one knows how to control themselves, or how to protect themselves.

(M08): Suddenly due to the lack of education, lack of prevention, especially in these areas we see that there are 12–14-year-old girls who already have their children and then, lack of education at home, lack of education in schools, use of means of prevention. (...) Apart from this aspect also, we observe that there is also a percentage of the population that comes from other places, but it is minimal, it is not as high as the growth that we experience here internally due to births.

(M12) It is worrying, there should be control by the governments as in other countries, the realization of campaigns to make people aware of population growth. I have always thought about that, that the family should be more real, that is, to think about my family and who I can answer to as a father. Question: (Why is there population growth?) ...Answer: Because of ignorance, lack of awareness and irresponsibility. Since it has been proven that the poorest people have many children, especially in the rural sector.

(M13) I think it has to do with poverty, intellectual poverty. Above all, families do not have proposals about sexuality and proper guidance. So, people who are in puberty and adolescence especially are very lonely in this field, they lack information. Although it is also important to mention that the family also plays a role since young people lack values. In addition, I would like to say that we human beings differ from animals because we can lead a responsible and planned sexuality.

(M17) Also because of cultural issues (...) I mean, they are also traditionally not, that is why I was talking about education issues, since they do not have access to certain information, no, they keep coming back and repeating the same patterns. So if we are talking about population level, reproduction, they do not have access to these control programs that they may have, then you will see quite large families, the moment you see

short families is because they have already gone to university, to schools outside of Montalvo, so this pattern continues to be maintained in general terms.

2.1.3. Households with basic services, number and members

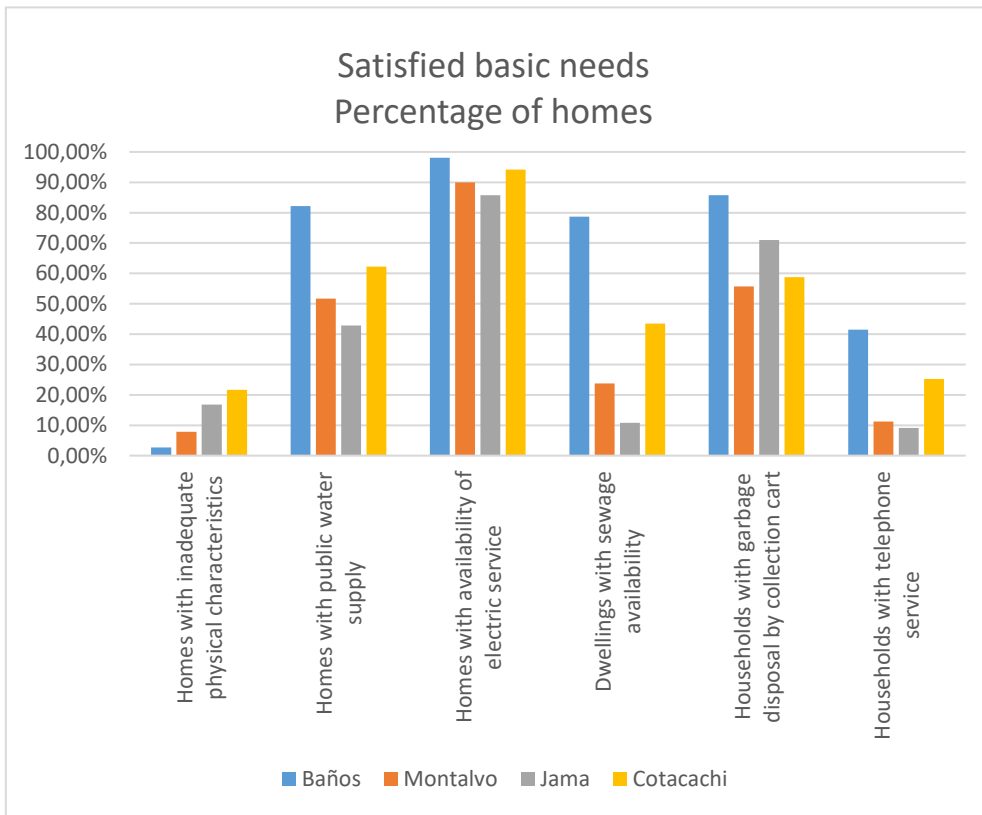
For 2010, the cantons show different behaviors with respect to their access to basic services, see table 14. The data show that only Baños, compared to the other cantons, has the highest access indicators and the best infrastructure conditions, while Jama, at the other extreme, has the worst indicators, except for garbage collection. The most critical percentages for three of the cantons are public water supply and sewerage availability, three with percentages below 50%, which is directly related to the issue of population density and urbanization rate as illustrated in figure 39.

Table 14 Satisfied basic needs, percentage of households

Canton	Homes with inadequate physical characteristics	Homes with public water supply	Homes with availability of electric service	Housing with sewage availability	Households with garbage disposal by collection cart	Households with telephone service
Baños	2.7%	82.2%	98.1%	78.7%	85.8%	41.5%
Montalvo	7.9%	51.7%	90%	23.8%	55.7%	11.2%
Jama	16.8%	42.8%	85.7%	10.8%	71%	9.1%
Cotacachi	21.7%	62.2%	94.2%	43.5%	58.8%	25.2%

Source: INEC, Analitika, 2012

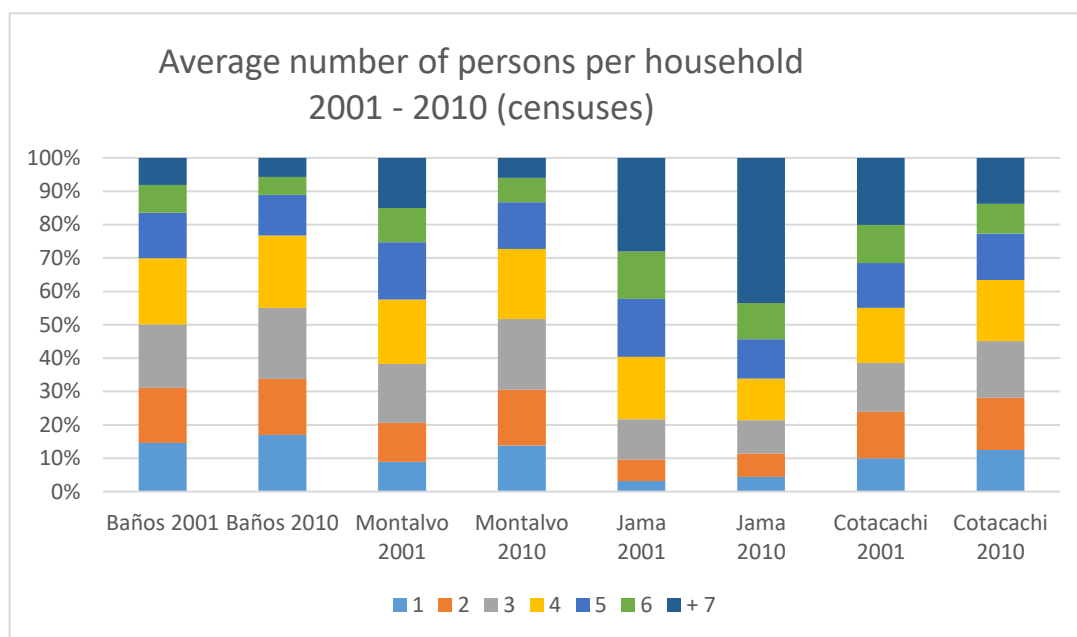
Figure 39 Satisfied basic needs



Source: INEC, Analitika, 2012

Another variable that may reflect the population dynamics in both, the cantons, whose population is growing more than the national average, and whose population is growing less than the national average is the changes that have occurred between censuses in the number of households and persons per household as illustrated in figure 40.

Figure 40 Number of persons per household



Source: INEC, 2001 and 2010

In Baños, the data on number of households and household size also reflect an important growth, the number of households grows at 3.6% per year between censuses, while households with more than 6 and 7 members stop growing. Households with 1 and 3 members are the fastest growing. In one-person households, growth is 6.1% per year, and in three-person households, 5.4%. The growth could be due to two factors: new households becoming independent or migrants entering and starting economic activity in the canton after the eruption of the volcano in 1999 and the subsequent return of the population in January 2000.

Additionally, the decrease in household size in Baños is possibly related to the decrease in the birth rate, according to INEC data, between 1990 and 2017, the birth rate in the country decreased by 13.4 live births per 1000 inhabitants (INEC, 2020).

For Montalvo, data on the number and persons per households are another indicator of the cantons and population cantonal head's expansion, as well as migratory growth. Who arrives to this canton? less qualified workers, who are linked as salaried workers in agricultural activities. Between censuses, the number of households grows by 5.04% annually. In general, all household groups grew, except those with more than 7 members, which registered a decrease. The sizes of households that grow the most are those of 2 members with an increase of 12.05% per year and, when absolute value is observed, more than doubles between censuses. The data may indicate new families that were formed in the period, or couples who arrived in the canton at ages over 30 years old, in search of employment. Households of 3 and 4 members also grew with rates of 8.24% and 6.49% per year respectively, an important growth in the formation of new

households that became independent and of households formed by migrants that migrated to the canton with the prospect of obtaining employment in the agricultural sector.

Besides it, the average number of persons per household shows a decrease between censuses, an issue that could be due to the tendency to reduce household sizes. This is verified in the country between 1990 and 2017 and which implies the formation of new households with fewer children, which is also consistent with the data of change in household size.

For Jama canton, households consisting of one person show a slight growth of 4.72% per year, those of size 2 persons: 0.84% per year and the following sizes show a decrease between censuses, up to the size of 7 or more persons per household with a growth of 6.19% per year. The growth in the size of households of more than 7 persons may be due to the limited supply of housing for new families or because it was not economically feasible to achieve the independence of new families, an issue that is reinforced by the data on type of housing and tenure. Jama is the only canton in which the size of households of more than 7 persons is growing, which is also consistent with the testimonies of interviewed people, who speak about the difficulty of achieving family independence due to the lack of employment.

The number of households in the canton hardly changes between censuses, the population is installed in increasingly larger households. When the population pyramid and growth rates are reviewed, the youngest segments of the population grow the most, these segments are those who probably, through teenage pregnancy, will constitute larger households in the homes of their parents. Finally, the average number of persons per household increases between 2001 and 2010, it is the only case in which this occurs, in the other cantons the indicator decreases, also confirming that this is a rural territory. Jama is not a population attractor; it shows a vegetative growth of the population. Teenage pregnancy is not only a regional problem; Ecuador has very high teenage pregnancy rates compared to other Latin American countries (Villacís y Carrillo, 2012). Factors that may affect the indicator are the educational level of parents, access to basic services and cultural factors such as the age at which they decide to form a couple or have sexual relations.

In Cotacachi, the indicator of number of households and household members shows growth for households with fewer members and a decrease in those with more than 7 members, possibly due to the formation of new, younger families.

Data indicate growth, but not as significant as in other cantons such as Baños. In Cotacachi, the growth in total number of households was 2.11% per year between censuses, while households with more than 6 members stopped growing, as in the other two cantons: Baños and Montalvo. The population of households with more than 7 members decreased by -1.96% annually. The size of households is reduced between

censuses, the growth of households with 1 to 4 members reaches 5.38% in the first case, households with 2 members have a growth of 3.79% and those with 3 members grow by 4.12% per year. The 4-member households also show a growth pattern of 3.56%, with the highest growth rates for households with up to 3 members. This is also consistent with the data on the increase of apartment or house rentals and the improvement of services in the urban area. This may be due to households becoming independent and to the fact that foreign migrants or migrants from nearby cantons arrived to the canton, possibly households with 3 or 4 members, including adolescents.

The average number of persons per household between censuses also confirms what was indicated above. A decrease in the average household size, although the average number of persons is larger than in Baños canton, which may be because it is a more rural canton, which implies a larger family size. Undoubtedly, the size has decreased between censuses, which is possibly related to a decrease in the birth rate due to the family planning effort that has been promoted by public and social actors over these years, both with mestizo and indigenous populations. Data is consistent to what is happening in the country and the decrease of birth rate by 13.4 live births per 1000 inhabitants (INEC, 2020).

2.1.4. Mortality

The country's mortality rate was 5.13 per 1,000 inhabitants in 2001 and 5.07 in 2010.

Jama rates are much lower than the national rate, but if we consider the canton in isolation, by 2010 the indicator gets worse, reaching more than double the number of deaths compared to 2001. The high indicator reflects its condition with respect to health and basic infrastructure, as well as the fact that, when faced with an imminent terminal illness, patients are transferred to health services that can provide more specialized care and that are in provincial capitals or larger canton capitals.

In the case of Baños, there is a significant improvement in the mortality rate, even better than the national rate, as seen in table 15.

On the Montalvo side, while the canton's numbers indicate a decrease in mortality, it is not clear that the mortality situation has improved between censuses, but rather that it remained steady. While in Baños, there is an improvement in this indicator, in Montalvo this constant could be due to the weaknesses that the canton has in terms of public health infrastructure and initial levels of care, a different situation from canton Baños, with a higher health system and more specialized units.

As for Cotacachi, the following data are available:

In Cotacachi, the mortality rate is higher than the national average; however for 2018 the number of cases of deaths decreased to 202, the rate of deaths per thousand

inhabitants reaches 4.61. Less high compared to the national data. Although the figure could mean that in cases of an extreme health emergency, families prefer to go to health centers in Ibarra or even Quito, because of proximity.

Table 15 Mortality rates

Mortality rates in the four cantons				
Years	Baños	Cotacachi	Jama	Montalvo
2001	7.32	6.45	1.13	5.68
2010	4.59	5.54	2.15	4.84

Source: INEC 2010-2018

2.1.5. Migration

Regional migration causes changes in the cantonal population structure and dynamics, the population migrates from one place to another with the prospect of obtaining employment, improving their economic situation, or having access to basic services, health, and education. In the 2010 census, that 5.8% of the censored population lived in different areas from where they lived 5 years ago (Villacis, Carrillo, 2012). The provinces of the four cantons have a differentiated behavior with respect to migration. In the case of Tungurahua province, the percentage is 5%, therefore, the case of Baños is especially significant. Los Ríos has 4.9%, Manabí has 3.7% and Imbabura 6.3%.

In the case of Baños and the 2010 census, if we consider the question of Population registered and birth elsewhere, migration reaches 38.15% of the counted population. The question is linked to the census questions of whether the person was born in another community, and complementarily, whether five years ago the person lived in another place. In relation to this last question, 12.16% of the population in 2010 had lived in Baños 5 years ago (INEC, 2010), a high percentage if we compare with the national and provincial information. The places of origin with the highest migration are Ambato, Europe, Quito, Riobamba, and North America. The important weight of Population born in other places and migrating to Baños may have the following explanation:

1. The situation experienced by the inhabitants of the cantonal capital, who had to leave the city after the emergency eruption of the Tungurahua volcano in October 1999²⁶, and returned with force in January 2000, repopulating the city after the emergency was surpassed.

2. The opportunity that arose after 2000, for local, national, and foreign investors to

²⁶ The journalistic chronicles speak of the fact that around 20,000 baneños were forced to leave the city of Baños (El Universo, 2012)

generate businesses in the canton linked to the most important activity: tourism, a potential that was evident after the volcanic eruption.

3. Table 16 shows that more than one in four migrants to Baños come from the city of Ambato, which is the provincial capital. It is possible that many people were born in that city because of distrust in health care in the canton. It implies that parents move to the provincial capital only for childbirth, and then return to live in their territory; we cannot confirm this hypothesis with data however interviews talk about this situation.

The growth rates are very important in the economically active population, especially among the groups from 20 to 24 years old up to 55 to 59 years old. The highest growth rate is between 45 and 49 years of age. This could lead us to assume that the population that has migrated to the Canton. We cannot verify this with the census, which does not have a question on the reason for moving (except for the emigration to foreign countries). Additionally, Baños received migration of retired people from North América and Europe, who chose to reside in the cantonal capital due to its environmental features, is considered an appropriate place for tourism and living for retired people.

Table 16 Living in Baños, born in a different territory

Nº	Canton of origin	Number	%
1	Ambato	2,054	26.90
2	San Pedro de Pelileo	675	8.84
3	Quito	583	7.63
4	Pastaza	447	5.85
5	Riobamba	366	4.79
6	Penipe	230	3.01
7	Exterior-America	222	2.91
8	Patate	220	2.88
9	Exterior-Europe	194	2.54
10	Mera	161	2.11
11	Others	2,485	32.54
TOTAL		7,637	100.00

Source: INEC 2010, census

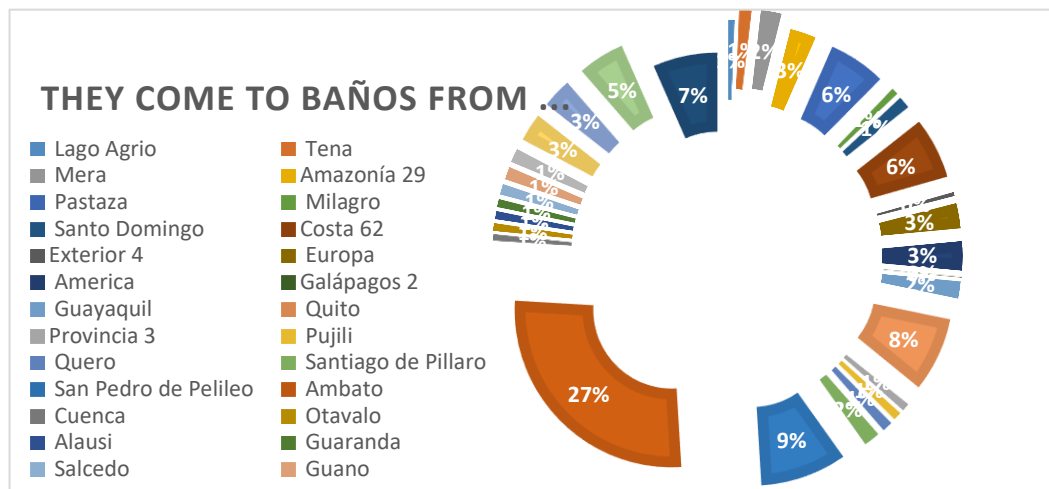
The opportunities for investing in tourism, handicrafts, and related services in Baños attract both domestic and foreign migrants. Within the province, the proximity to Ambato and Pelileo motivated domestic migrants to come to the city, while migrants from outside the country occupy the fourth place in importance.

In order to better distinguish the cities from which the residents of Baños originate and the group others, the following graph was chosen, which corresponds to the origin of all migrants based on the census question where they resided 5 years ago.

Figure 41 illustrates the origin of migrants to Baños according to the question "Where

did you live 5 years ago?

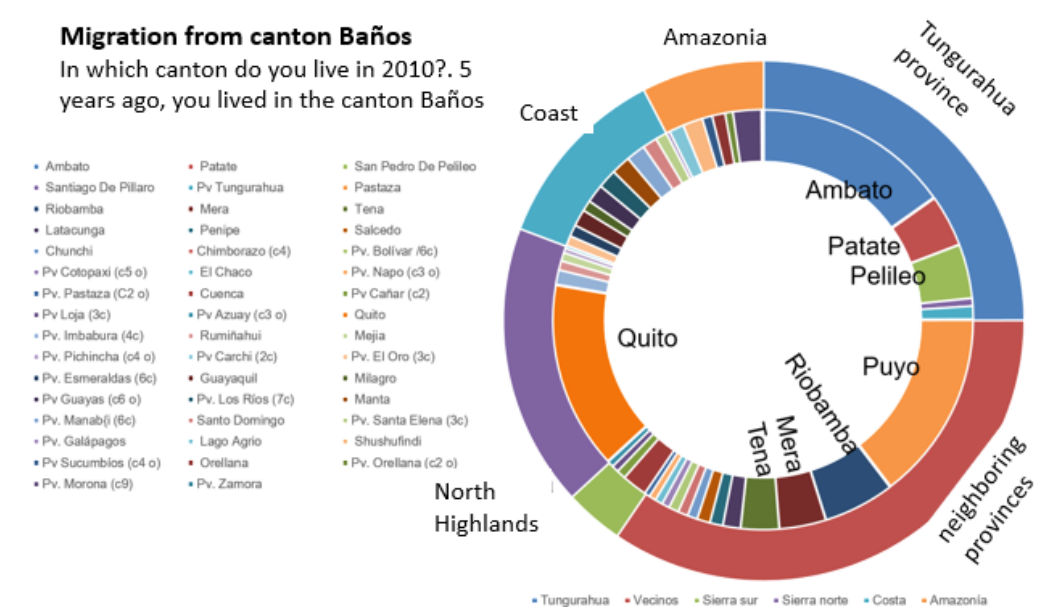
Figure 41 Migration to Baños



Source: INEC census 2010

Along with migration, another significant information point is identifying the pattern of emigration in the Baños canton, figure 42. In this regard, under the question of where you resided 5 years ago, emigration from the canton happens mostly to adjacent cantons.

Figure 42 Migration from Baños



Source: INEC Census 2010

More specifically, about the emigration abroad from the canton to foreign countries,

1.9% is the percentage of people who migrated with respect to the total population. The main reasons for migration are work and family union (INEC, 2010). The percentage helps to confirm that Baños is the attractor, there is a regional migration, for studies, and overall, people return to the canton to develop livelihoods.

In relation to Montalvo canton, migration to Montalvo is a key variable, if we consider the question of registered population and birth elsewhere, the figure reaches 47.09% of the census population in 2010 (INEC, 2010), the highest figure of the four cantons as illustrated in table 17. If this question is enriched by the question of registration on the date of the 2010 census in and where he lived 5 years ago, the percentage rises to 34.21%. Migration comes from Babahoyo, Guayaquil, Quito, San Miguel (Bolívar), Guaranda, that means a regional migration, except for Quito and Guayaquil, which may imply that there are agricultural investments from both cantons in the province of Los Ríos, and specifically in Montalvo canton. If the study adds the testimonies from the interviews, there are two sources of population growth in Montalvo: the increase in births since 2010 and, regional migration.

There are several recent informal settlements in the cantonal capital that lack basic services, which could confirm the migration of people of working age attracted by the employment as agricultural worker. Workers of rice and hard corn companies inhabit these urban settlements. The table below is based on another migration question: Population registered in the canton but born in another canton, implying that the parents traveled to bigger cities before giving birth to have more specialized health care in case of an emergency, as previously stated, see table 17. It might also imply that the canton's health-care facilities are worse than those in bigger cities around Montalvo. Babahoyo, a bigger city for example, is located 35 minutes from Montalvo by car.

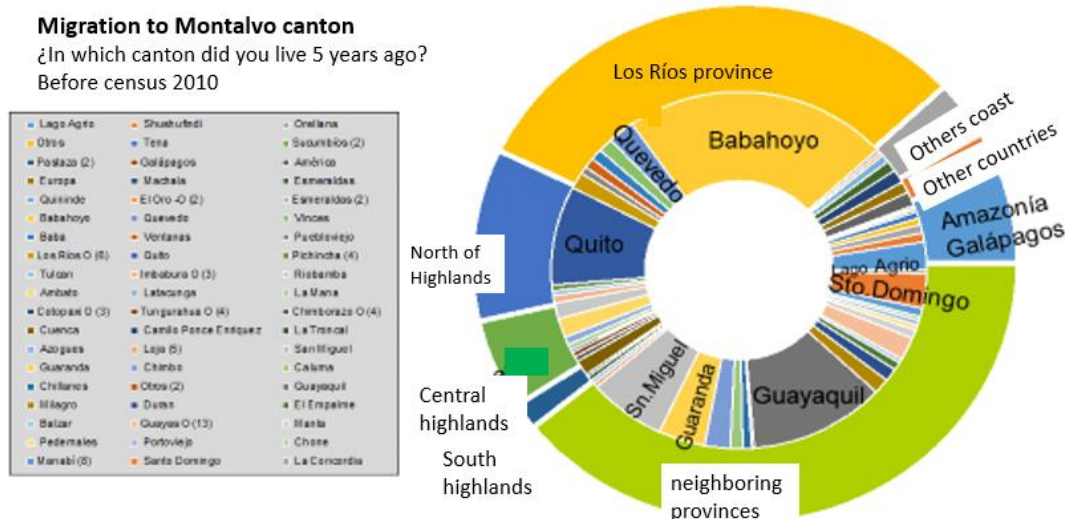
Table 17 Living in Montalvo, born in a different territory

N°	Canton of origin	Number	%
1	Babahoyo	4,338	38.12%
2	San Miguel	1,566	13.76%
3	Guayaquil	836	7.35%
4	Guaranda	788	6.93%
5	Chimbo	561	4.93%
6	Quito	241	2.12%
7	Chillanes	208	1.83%
8	Caluma	163	1.43%
9	Baba	124	1.09%
10	Vinces	120	1.05%
11	Ambato	99	0.87%
12	Others	2,335	20.52%
TOTAL		11,379	100.00%

Source: INEC 2010, census of Population and housing

This means that almost half of the Montalvinos, 47.09%, were born in another canton. 38.12% were born in the provincial capital, probably because it has better health conditions, equipment, infrastructure, and services for childbirth. Furthermore, other cantons in the province of Bolivar were chosen for birthing, with 23.95% of cases taking place in cities near Montalvo. Basic health supply in the canton does not make it possible to attend a medical emergency of greater complexity, which explains the low growth rates of children under 4 years of age according to census data. The figure 43 illustrates the regions from which Montalvo residents come when asked which canton they resided in five years prior to the census. Another plausible explanation for the growth of migration is that in Montalvo there is more temporary work in agricultural activities (or better income, even if temporary, especially for people from Bolivar).

Figure 43 Migration to Montalvo



Source: INEC census 2010

As previously stated, migration comes from neighboring cantons, one of which is Guayaquil, one of the most important population centers in the country. The second most important is the north-central Sierra, where Quito is located, which is also one of the most populated centers in the country. There is also immigration from the interior of the province, which is more regional. The importance of immigration is highlighted; it accounts for a substantial proportion of the census population in both measurements. Besides it, the migratory growth may be due to the expansion of agro-industry and the potential of the entire province to produce agro-industrial inputs.

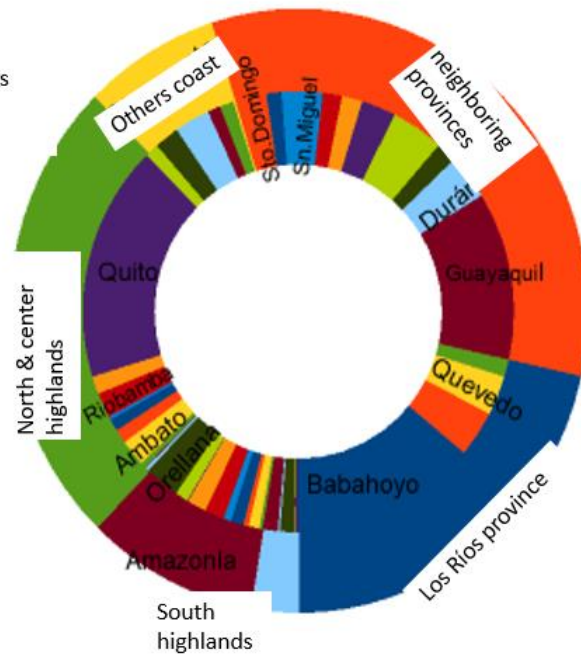
Furthermore, the figure 44 shows that the most prefer destinations for Montalvo residents are neighboring provinces such as Santo Domingo, Guayas, or Bolivar, several cantons of the province of Los Rios, and the central and northern highlands region, including Quito. This departure accounted for 5.1% of the entire population in the canton that year.

Figure 44 Migration from Montalvo

Migration from canton Montalvo

In which canton do you live in 2010?. 5 years ago you lived in the canton Montalvo

- | | | |
|------------------|-----------------|---------------------|
| ■ Babahoyo | ■ Los Ríos, (8) | ■ Quevedo |
| ■ Baba | ■ Guayaquil | ■ Durán |
| ■ Milagro | ■ Guayas, (15) | ■ Caluma |
| ■ Chimbo | ■ Guaranda | ■ San Miguel |
| ■ Pv. Bolívar, o | ■ Santo Domingo | ■ Santo Domingo (o) |
| ■ Machala | ■ El Oro, o | ■ Manabí, o (3) |
| ■ Santa Elena | ■ Esmeraldas, o | ■ Quito |
| ■ Pichincha, o | ■ Riobamba | ■ Chimborazo, o |
| ■ Latacunga | ■ Cotopaxi, o | ■ Ambato |
| ■ Tungurahua, o | ■ Carchi | ■ Imbabura |
| ■ Orellana | ■ Los Sachas | ■ Orellana, o |
| ■ Lago Agrio | ■ Shushufindi | ■ Sucumbios, o |
| ■ Mera | ■ Pastaza, o | ■ Pv. Napo |
| ■ Pv. Galápagos | ■ Cuenca | ■ Azuay, o |
| ■ Pv. Cañar | ■ Pvv. Loja | ■ Pv. Zamora |



Source: Census 2010

Besides it, about the migration abroad from the canton to foreign countries in both censuses, in 2001, 0.7% migrated, only 146 cases, 67.8% between 20 and 39 years old, 59.5% went to Spain, the main reasons for migration are work and search for residence. In 2010, 228 cases, not even 1%. The majority, 62.7% have gone to Spain, 37.2% between 20 and 29 years old and 23.6% between 30 and 39 years old, among the main reasons for migrating are working and family union. In other words, the people of Montalvo do not have an important pattern of emigration abroad as other cantons in Ecuador, such as Jama or Baños.

On the contrary, migration to Cotacachi is not as influential as in other cantons, such as Baños or Montalvo. In the 2010 census, when considering the question of Population registered and birth elsewhere, in the table 18, the figure reaches 19.08% of the total census. When the cantons from which migration originates are listed, it has regional strength: Otavalo, Ibarra, and Quito. In the case of the last two cantons: Cotacachi and Jama, the same argument about leaving the canton to give birth due to deficient health services weighs heavily. It is also vital to consider that in the canton of Cotacachi, there is a special assistance to the health committee of the Central Committee of Women of UNORCAC, as well as the strategic role of midwives who provide important support to Indigenous women throughout their pregnancy and birth. They attend a considerable number of cases of childbirth, as indicated above. Furthermore, a distinct pattern may be observed in terms of external migration: 4.45% of those registered who were born overseas came from North America. Cotacachi has become a canton chosen for

residency by retirees from that nation, drawn in part by the canton's natural and cultural richness, as well as the attractiveness that have given it the title of Ecuador's enchanted town.

Table 18 Living in Cotacachi, born in other territories

Number	Canton of origin	Men	Women	Total	Percentage
1	Otavalo	841	786	1,627	21.30%
2	Ibarra	776	739	1,515	19.83%
3	Quito	759	672	1,431	18.73%
4	Antonio Ante	200	218	418	5.47%
5	America	151	189	340	4.45%
6	San Miguel de Urcoquí	93	111	204	2.67%
7	Montufar	59	71	130	1.70%
8	Tulcán	71	58	129	1.69%
9	Pedro Vicente Maldonado	58	69	127	1.66%
10	Pimampiro	60	41	101	1.32%
11	Others	810	808	1,618	21.18%
Total		3,878	3,762	7,640	100%

Source: INEC 2010, census of population and housing

Another piece of information is related to the census question: in which canton or province did you live 5 years ago, again data of figure 45 shows that there is a regional pattern in the recent migration to the canton. Migrants come from three cantons in the province of Imbabura: Otavalo, Ibarra, Antonio Ante, additionally, from Quito in the province of Pichincha and in fifth place, from North America and Europe. The commercial link connecting Cotacachi, Otavalo, and Ibarra is vital for both the provision of essential commodities: Ibarra, and the commercialization of diverse products, including manufactured goods. Studies (Ospina, Ortiz, Santillana, 2009; Báez, García, Guerrero, Larrea, 1999) speak about the importance that the canton gives to the vision of the local actors of Cotacachi that seek for equity, community management and local development. That spirit favors a more endogenous supply market, however studies also mention other commercial relationships and highly profitable investments, such as flower production. The research of Ospina, Ortiz and Santillana (20029), shows that a portion of these investments comes from Quito, and look for the export market. This information is also considered on data from cantonal productive specialization.

Cotacachi is perceived by foreigners as a quiet, safe, and diverse place, both from a cultural and natural perspective. The canton is also close to Quito, the capital of the republic, which has better health facilities to meet the need for more specialized levels of health care.

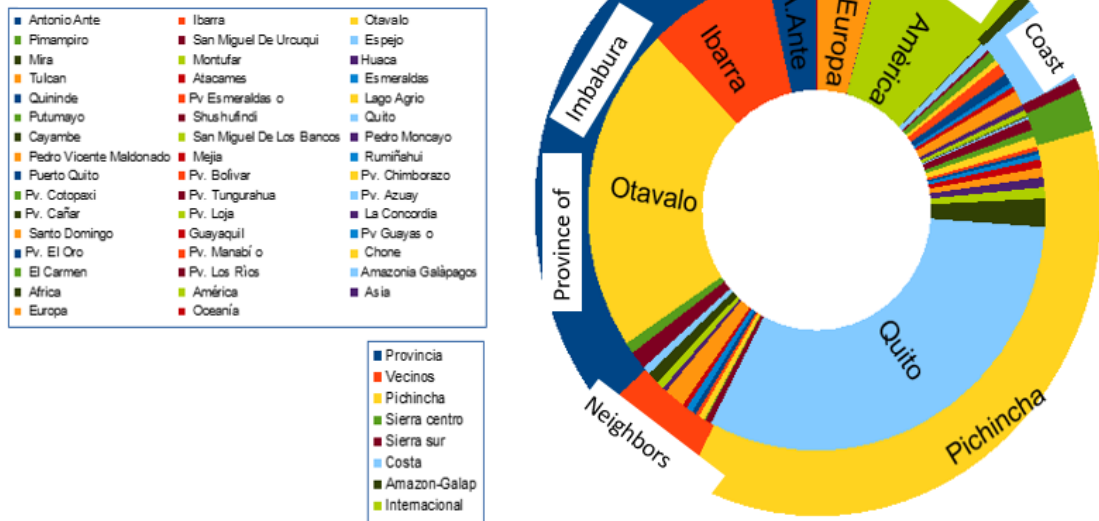
Migration pattern is regional, based on the question: where you lived 5 years ago. The proximity to the cantons of the province of Imbabura and the province of Pichincha motivated this regional mobility. Considering the trade flows of products, it is also possible to identify the importance of the cities at the regional level, especially Quito, Ibarra, and Otavalo.

Of the four cantons studied, Baños and Cotacachi have the highest quantities of international migration, and both are regarded attractive for foreigner residency.

Figure 45 Migration to Cotacachi

Migration to Cotacachi canton

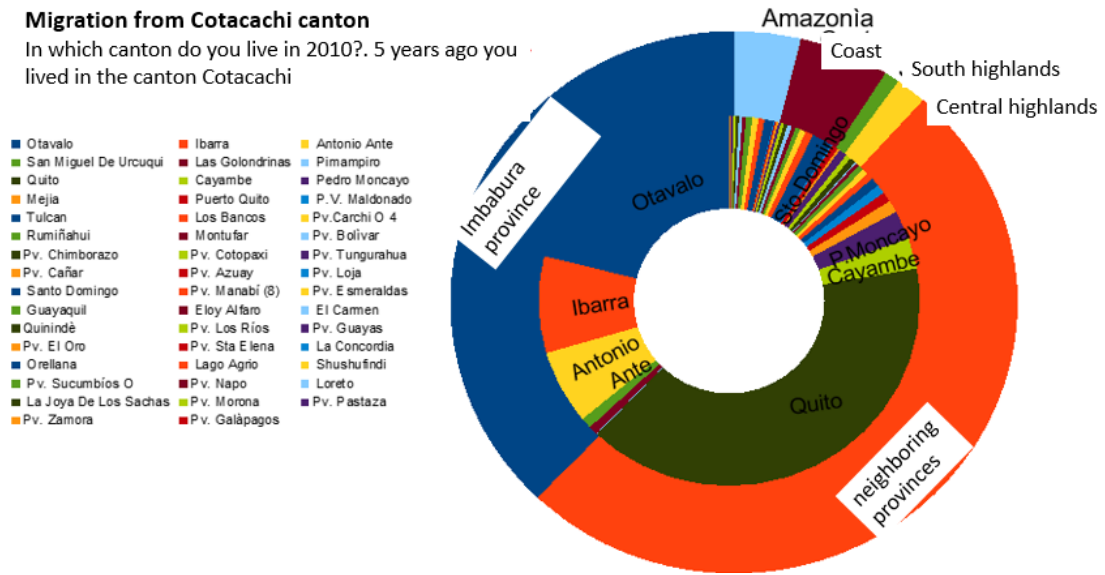
In which canton did you live 5 years ago? Before census 2010



Source: Census 2010

In terms of emigration, which can be seen in the figure 46, the pattern appears again, the neighboring cantons and various cantons of the neighboring province of Pichincha. It is possibly a temporary or seasonal migration given the proximity of the places or based on the investments from Quito which are located in the canton, that were studied in the research of Ospina et al (2009).

Figure 46 Migration from Cotacachi



Source: Census 2010

If we review outward migration of Cotacachi, in 2001, the year after dollarization, there was an emigration of 1.39% of the total population, the main causes for mobility are summarized as work, seeking residence abroad and tourism. For 2010, the number decreased to 1.06% of the total population, the main cause was work and the second family reunification. For this canton, emigration is not as high as for the neighboring canton: Otavalo, that registers the highest number of cases in the entire province, mainly due to the commercial activity carried out by the inhabitants outside the country (INEC, 2001-2010).

Migration to Jama, depending on the different place of birth, is registered especially from the cantons of the province of Manabí, to which the canton belongs. As indicated in table 19, of the list of 10, 7 belong to the same province. Guayaquil, Quito, and Santo Domingo cantons have national cities with a large concentration of people that are physically near to the canton. It is also understandable that many individuals were born in the canton of Sucre, which is virtually adjacent to Jama, because a larger city can concentrate public health services and is favored by the Jama population. Considering another canton of birth, represents 21.2% of the total counted in the 2010 census. A substantial percentage comes from Pedernales and Sucre, both neighboring cantons with which Jama population maintains commercial, financial, and administrative relations in the case of Pedernales and recreational or supply relations in the case of the latter, these are cities with better public services and greater economic dynamism than Jama.

Table 19 Living in Jama, born in other territories

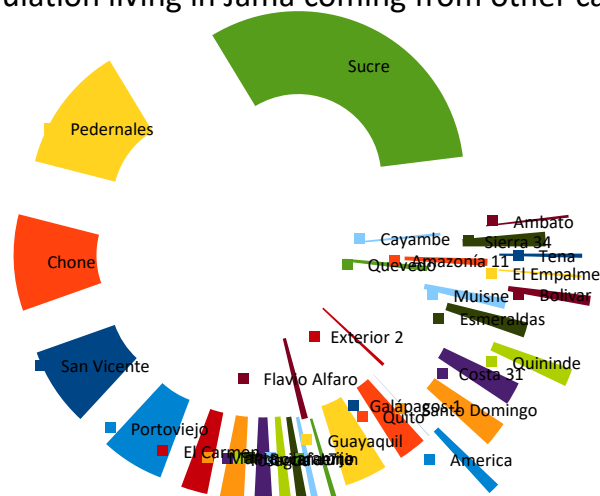
N°	Canton of origin	Number	%
1	Sucre	1,551	31.72
2	Pedernales	603	12.33
3	Chone	460	9.41
4	San Vicente	377	7.71
5	Portoviejo	301	6.16
6	Guayaquil	205	4.19
7	Quito	134	2.74
8	El Carmen	127	2.60
9	Santo Domingo	121	2.47
10	Manta	114	2.33
11	Others	897	18.34
TOTAL		4,890	100.00

Source: INEC 2010, census of population and housing

The figure 47 allows observing the migration to Jama, coming from the cantons of the country and even from outside the country. In the case of Jama, there is a regional migration pattern that reaches 72.26% of total migration (INEC, 2010). Although the numbers of registered population born in another canton may seem important in relation to the total census population the canton does not constitute a pole of attraction for migrants, this issue is best seen with the other indicators.

Figure 47 Migration to Jama

Population living in Jama coming from other cantons



Source: census 2010

Immigration according to the question of the canton where the population lived 5 years ago, in the figure 48 indicate the following data: for 2010, only 1210 people arrived from outside the country, that is, 5.20% of the Population registered in the census, while for 2001 the figure was 4.83%, that is, a very small percentage of migrants and the lowest percentage among the studied cantons.

The other indicator is the population registered in the census and whose habitual residence is in another canton; this figure was 268 in 2010, representing barely 1.15%, the cantons with the highest proportion of migration were, in that order, Portoviejo, Guayaquil, Pedernales, Quito, and Sucre.

For the year 2001, the same figure represented 0.86%, the highest number of immigrants was from Quito, Manta, and Guayaquil, also in that order. That is, a very low representation of migration (INEC, 2001, 2010).

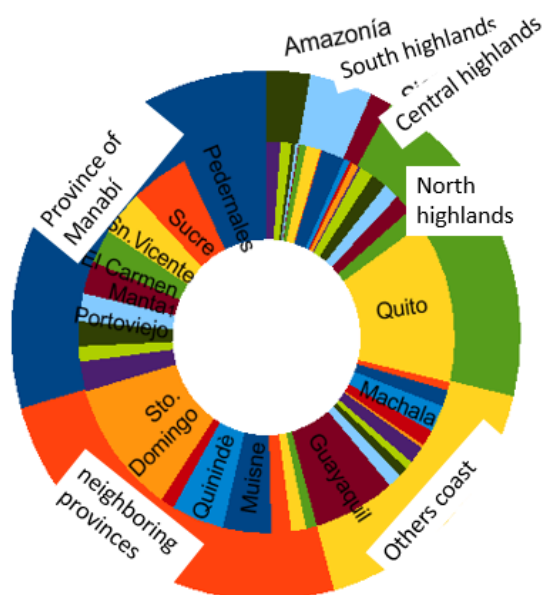
In relation to the percentage of international emigration, for 2010, it represents 0.44% of the total census population; two are the main reasons for emigration abroad: work with 69% of cases and family union with 15.5%, in third place, is study with 10.6% of cases (INEC, 2010).

Figure 48 Migration from Jama

Migration from canton Jama

In which canton do you live in 2010?. 5 years ago you lived in the canton Jama

- | | | |
|--------------------------|-----------------------|---------------------------|
| ■ Pedernales | ■ Sucre | ■ San Vicente |
| ■ El Carmen | ■ Manta | ■ Portoviejo |
| ■ Chone | ■ Jaramijo | ■ Manabí - O (10) |
| ■ Santo Domingo | ■ La Concoordia | ■ Quinde |
| ■ Muisne | ■ Esmeraldas | ■ Atacames |
| ■ Prov. Esmeraldas O (3) | ■ Guayaquil | ■ El Triunfo |
| ■ Duran | ■ Balao | ■ Prov. Guayas O (8) |
| ■ Prov. Santa Elena | ■ Prov. Los Ríos (7) | ■ Machala |
| ■ El Guabo | ■ Prov. El Oro (3) | ■ Quito |
| ■ Cayambe | ■ Puerto Quito | ■ Pedro Vicente Maldonado |
| ■ Rumifahui | ■ Pr. Pichincha O (3) | ■ Prov. Imbabura |
| ■ Prov. Bolívar | ■ Prov. Cotopaxi | ■ Prov. Tungurahua |
| ■ Cuenca | ■ Prov. Azuay O | ■ Prov. Cañar |
| ■ Prov. Loja | ■ Morona | ■ Napo |
| ■ Pastaza | ■ Orellana | ■ Sucumbios |



Source: census 2010

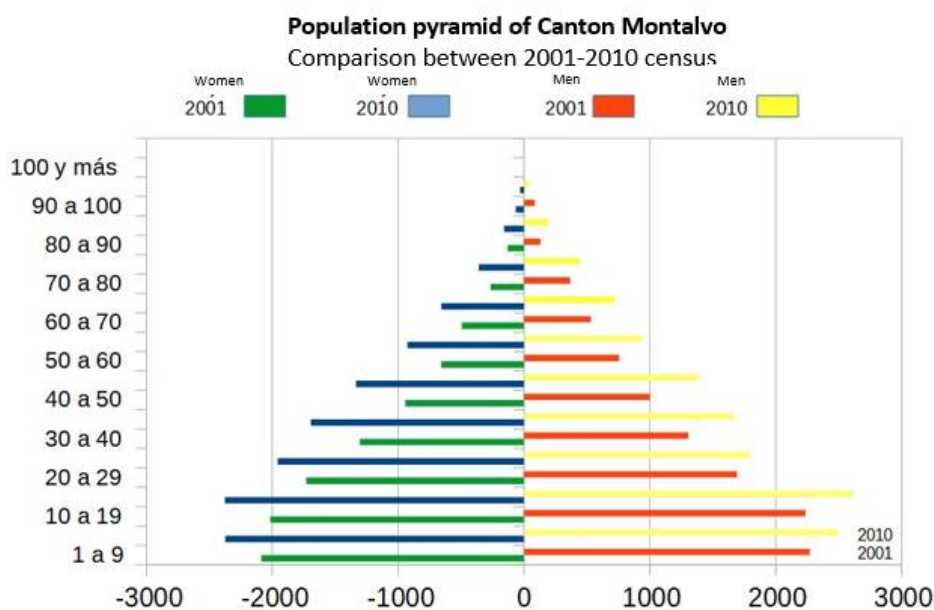
To summarize, in terms of migration data, in the four cantons it is possible to identify the importance of regional or internal migration, caused by existing inequalities at the

regional level in terms of basic infrastructure, employment opportunities, greater access to health services and education, and poverty. For both Baños and Montalvo, the percentage of immigrants is more relevant than in the other cantons; they are receiving migration due to the job opportunities they offer, they attract population. In third place would be Cotacachi, despite its importance as a canton of international migration.

2.1.6. Pyramids and demographic transition

In Montalvo, according to the respective pyramid in figure 49, immigration dominates population growth in the ranges of 30 to 49 years, 55 to 74 years, and 80-84 years. While emigration appears from the 20 to 24 and between 25 to 29 years possibly with their children (under 4 years).

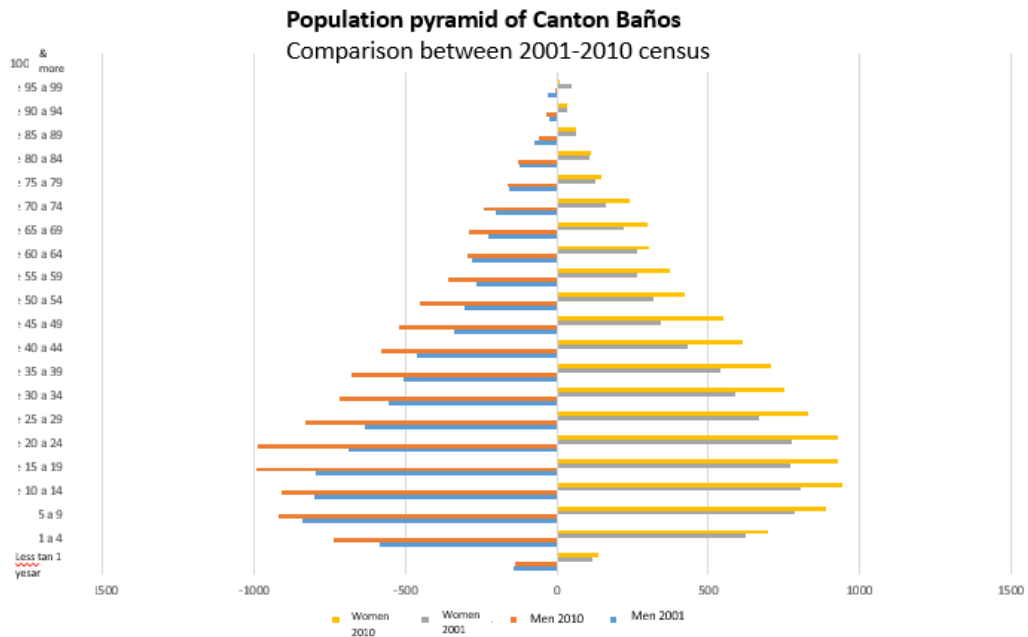
Figure 49 Population pyramid of Montalvo



Source: INEC, census 2001 - 2010

The population pyramid shows a distribution that indicates a high percentage of adult population between the ages of 30 and 74, as well as a population that involves young population that is in the educational training stage and is categorized as dependent. The population from 10 to 19 years old, which is in the adolescence and youth stage is also important between censuses, although its growth rate is lower than that of the adult age ranges, i.e., ranges of people of working age.

Figure 50 Population pyramid of Baños

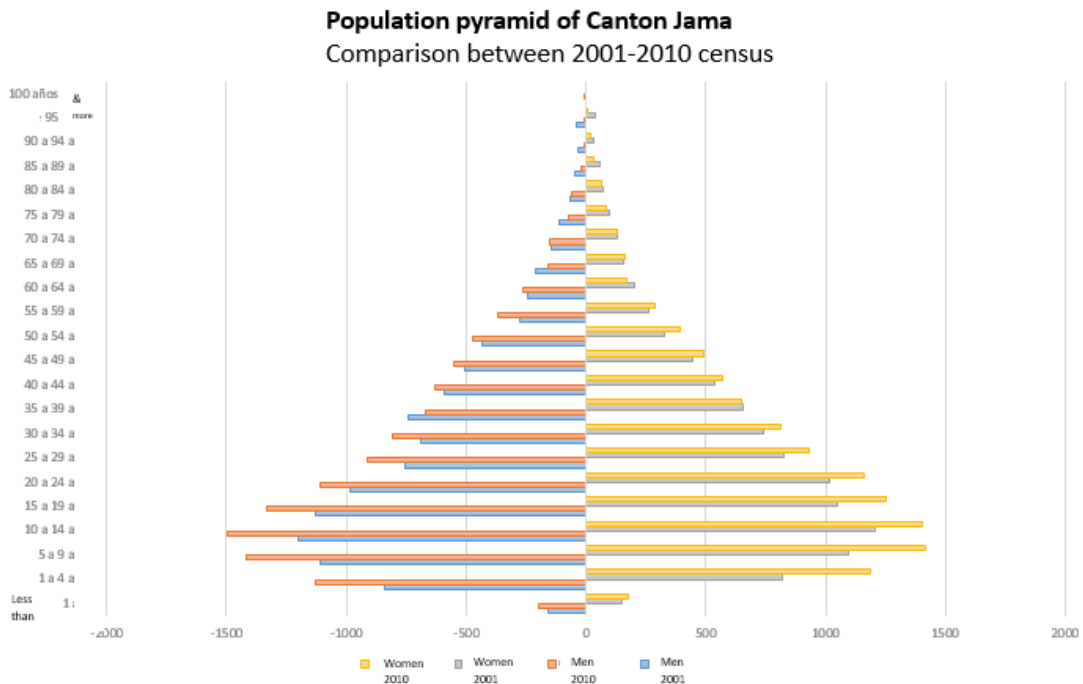


Source: INEC, census 2001 - 2010

Baños has a pyramid that is closer to the transition phase, see figure 50, while in Montalvo the pyramid is wider at the base, so we could speak of an earlier phase in the demographic transition as illustrated. Baños will soon be in a population bonus phase.

In both cantons, the population between 20 and 64 years of age, that is, of working age, represents 51% in the case of Baños and 54% in the case of Montalvo, a relevant percentage of population in relation to the total population of both cantons. An estimate of the young population between 20 and 29 years of age indicates a proportion of 17.8% in the case of Baños and 15.5% in the case of Montalvo.

Figure 51 Population pyramid of Jama

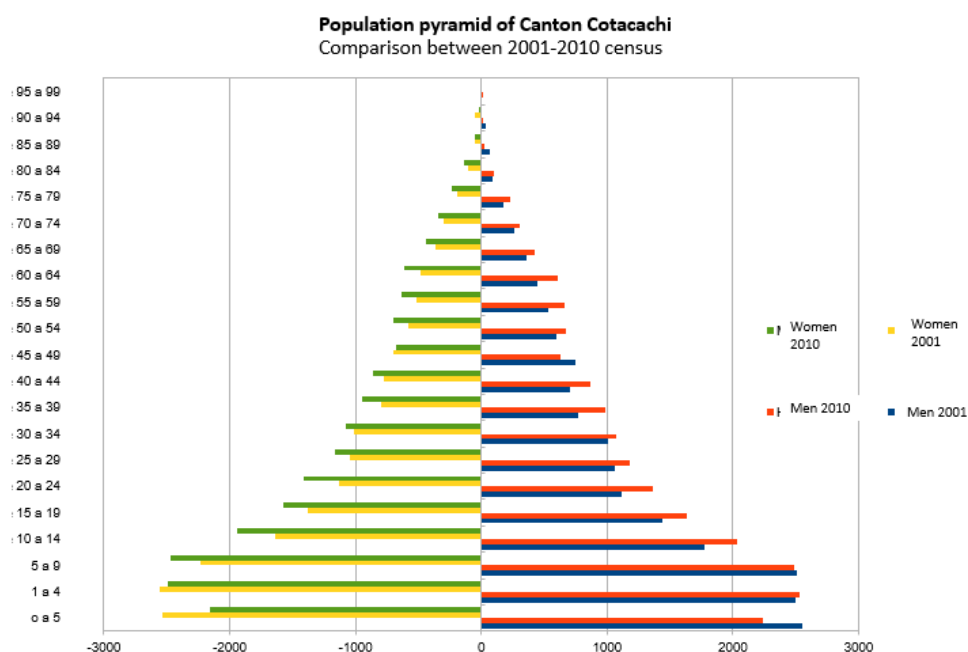


Source: INEC 2001-2010

The pyramid of Jama in figure 51 indicates that the population between 5 and 19 years of age, linked to childhood and adolescence, has more population in relation to the other age groups. Problems related to this age group, such as teenage pregnancy or drug micro-trafficking, are some of the major problems faced by this population group. The latter, an existing problem that has been reported in national and international news and that demands more action, control, and security from the national authorities. The young population between the ages of 20 and 24 and the 30 to 54 age groups have even lower population growth rates than the canton, reinforcing the idea of population decline and emigration in the young working age groups and the link between this behavior and the difficulty in obtaining employment sources.

Initially, the pyramid is wider in the early years, which implies that there is a high proportion of dependent population. Then a second observable element in terms of growth rate, is that the working age population is growing at a very low rate, finally, the overall total rate, 1.55%, is lower than the country's growth rate (1.9%). When comparing the dynamics of growth by age group, the highest rates are found in the younger population, up to 14 years of age, teenagers' group, as said before, dependent population.

Figure 52 Population pyramid of Cotacachi



Source: INEC, 2001, 2010

Cotacachi's pyramid in figure 52 indicates a decrease in the population up to nine years of age between censuses and illustrates a low growth rate up to 15 years of age, ranges considered dependent population. This decrease in growth rates may be due to the family planning efforts that have been implemented in the canton and are detailed in the 2015 development plan. Furthermore, in almost all ranges up to 49 years of age, a growth rate lower than the national average is observed, except between 25 and 29 years of age. Notwithstanding this appreciation about growth rates, the young population is important in absolute terms compared with the total population. The range between 50 and 54 years decreases between censuses, the fall may be due to migration in pursuit of resources and employment. In the case of the ranges between 60-69 years and 80-84 years, these experience growth, this may be due to immigration from abroad to the canton.

For both cantons that are losing population - Jama and Cotacachi - and for the year 2010, the percentage of people in the 20-64 age range, i.e., of working age, represents less than 50%, 48% in Jama and 45% in Cotacachi. This percentage is lower than in the cantons with the highest population growth. An estimate of the young population, between 20 and 29 years of age, indicates a percentage of 17.7% and 14.9%, respectively.

2.1.7. The urban-rural distinction

Growth is greater in urban areas. The exception in these territories is the parish of La Esmeralda, in Canton Montalvo, which has grown more than the urban area. The urban-rural distinction appears diluted in the interviews; in some of them, agriculture is mentioned as a differentiating element.

(B02) Well, if the population decreases in some parishes, it will be the migration of people, especially young people. Today young people no longer work the land, older adults continue to do it, there are many young people who migrate to study or work because maybe they want a better life, so that is what is overshadowing the parishes in this case ... so that is why I imagine, the youth, especially the youth, are migrating.

(C05) Yes, from 1975 onwards it is like it equals that of the country (the growth rate) and then it starts to decrease, and it is because, I assume, that is my part, I have not taken into account much. But people are rare, and they are not dedicated to agriculture, to the agricultural part. So, the farmers try to make sure their children are not like them, and that they are not like me, they are not ashamed of being farmers, although now what they want is not to be called farmers. They want to be called entrepreneurs, modernization of the countryside, and they say, 'I don't want my children to be like me and I prefer them to leave,' and they leave. So, in Cotacachi it seems to me that in the indigenous communities they mainly went to Quito for construction.

(J10) Como idea propia, que yo he visionado, digamos que la juventud rural no opta, se queda, se viene, y más bien salen a los estudios a los centros educativos, a los centros del milenio, le van cogiendo amor a la ciudad y como que ya, que de pronto se van quedando, y para ellos el trabajo rústico ya no lo hacen como sus progenitores en este caso.

(J10) [As my own idea, that I have seen, let's say that the rural youth do not choose, they stay, they come, and rather they go out to study in the educational centers, to the millennium centers, they begin to love the city, and it seems that suddenly they are staying, and for them they no longer do the rustic work like their parents in this case].

(J17) That people have nothing to do, supposedly to the urban sector because there are no jobs, if there were job offers people would migrate there, here Manabí enjoys, here the population of Manabí is a very dispersed population, you find settlements of 10 families. That is the way of life of the Manabita. That is why it is not possible to provide public services to all these people, that is why it is not possible to plan to achieve that. For that you need political will and planning, which is not available, that is why in the natural case of Jama there is no urban job offer for people to migrate and have population growth.

(J22) For example, Tabuga, where I live, has grown. 10 years ago, 12 years ago there were 300 people, now there are 800, and what I can tell you is that certain communities have not been able to grow because there is not the necessary support, or the leaders have not done what is necessary to. And that causes people to want to leave because there is no movement, growth always happens because people say I want to live here because I see movement and I want to start a business, if there is not that, then there is nothing.

(C15): More young people migrate, why does migration occur? not so much from the urban area, migration is more from the rural area, why? Because there are no university opportunities, because unfortunately there is no awareness of the issue of employment generation. Most of the time what young people want is a job, often in an office, yes. They have been saying that the city gives you job opportunities but on the other hand there are

not many people who have dedicated themselves to this productive issue that even though it generates it, there has not been a real investment policy towards agriculture. For example, although they tell you that Banecuador gives you opportunities, it does not give credit to the real farmer, the credit is given to real landowners who work with poor people who are there and who need it and that is why. And on top of that, the youth don't have an appropriation that is still a little contradictory, no, but they simply want work, but easy work, for example, we in Intag, imagine what it is like to be paid 500 dollars a month, which is not the best salary but not the worst either, to do nothing, extractivism is what has generated within our territory, it has hired 120 people, some of them have been made to work very hard but also to maintain this supposed work economy, sometimes they have them playing volleyball, they have them in a very different dynamic so there are people who say: ah well, I am going to work in the mining company at least there are times when you work hard but there are times when they pay you without doing anything, that has also generated discomfort, has also generated that people want a higher payment for salary, yes. In any case, I think that the youth is the one that leaves our canton more than the population, much more, but if it is for the issue of study opportunities and other times for work.

Some of the people interviewed in Jama and Montalvo make a more specific distinction between urban and rural. The functioning of the cities of Jama and Montalvo can be considered more as "small towns" or "rural towns", even if they concentrate support or administrative activities, they are still seen as rural spaces. In other words, people interviewed cannot be considered urban because they live in cantonal capitals. The settlement's operation is tied to primary activity rather than the provision of services. The presence of a road layout and blocks in the small city does not alter its rural nature.

2.1.8. Urbanization, population density

Comparison urbanization rate in percentage 2001-2010

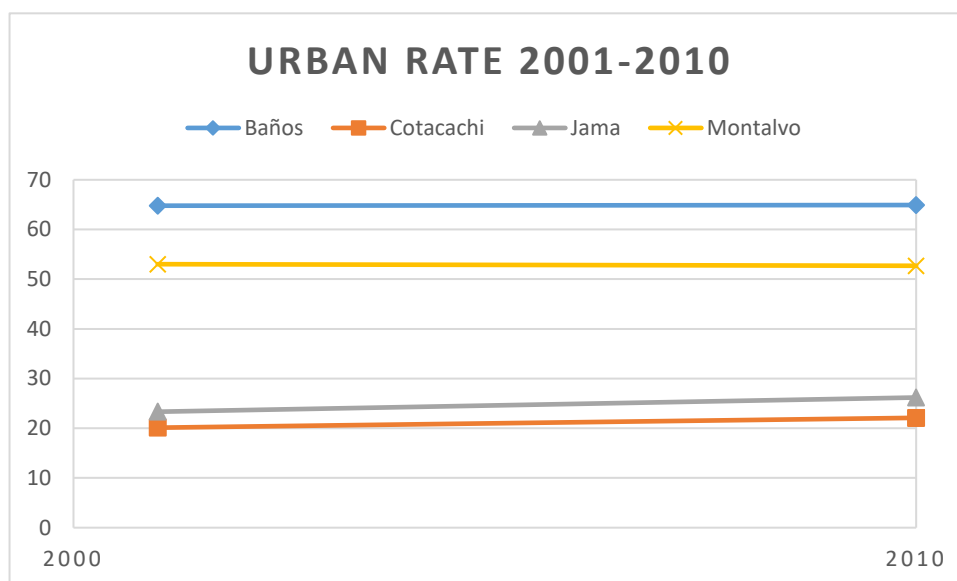
Table 20 Urbanization rates

Years	Baños	Cotacachi	Jama	Montalvo
2001	64.79	20.12	23.33	53.02
2010	64.92	22.1	26.19	52.7

Source: INEC 2001-2010

When comparing the four cantons, the weight of the urban population is greater in Baños and Montalvo, it is inferred that more people have access to the services that are concentrated in Baños compared to Jama, or Cotacachi, see table 20 and figure 53. In the case of Montalvo, although the urbanization rate is high, there are not good public services. While there has been significant urban population growth in the country, the cantons maintain the same urban and rural population structure between censuses. The concentration of basic infrastructure and services in the urban area is most noticeable in Baños. The other three cantons, as well as their rural areas, have larger deficits in terms of living conditions and access to those fundamental services.

Figure 53 Urban rate



Source: INEC 2001-2010

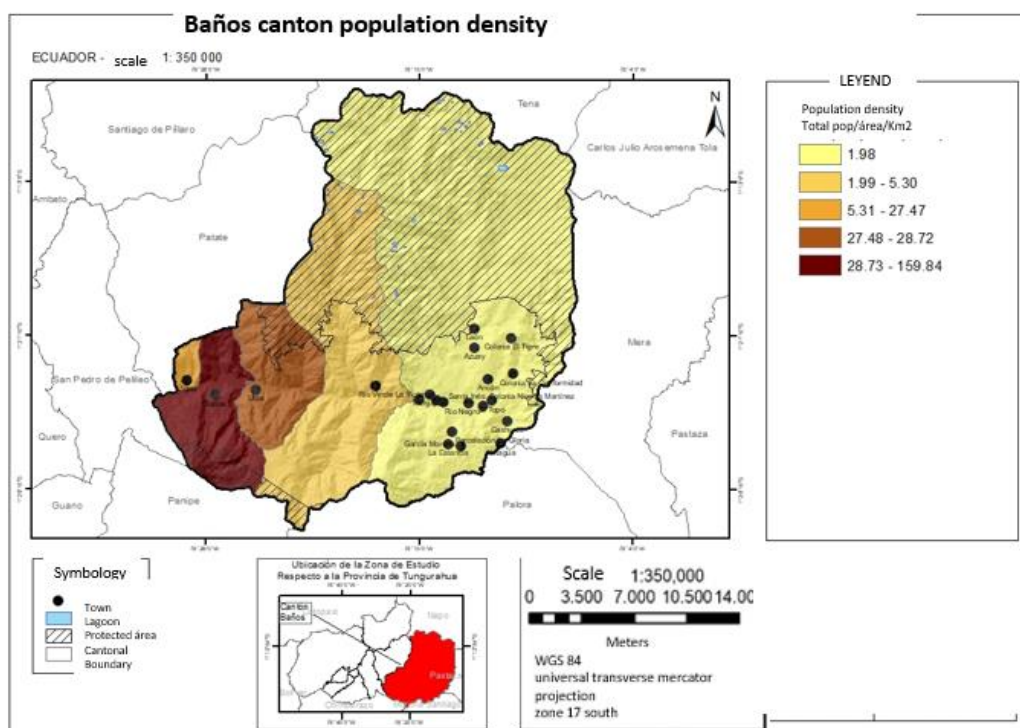
In the case of Baños, the urbanization rate shows the irreversibility of urbanization trends (Polèse, 1998). Data from table 21 illustrate the importance of the cantonal capital as an urban center. The rate is higher than 64% in the 2001 and 2010 censuses. Ulba parish, still considered rural, is contiguous to the city, and could be considered a conurbation, with a higher rate of urbanization and a more accelerated growth of the urban population in relation to the rural population, see figure 54.

Table 21 Population by parishes, Baños Canton

Parish	Census 2001			Census 2010			Annual population growth rate
	Males	Females	Total	Males	Females	Total	
Baños	5,801	6,001	11,802	7,318	7,335	14,653	2.4
Lligua	159	153	312	138	142	280	-1.2
Rio Negro	581	505	1,086	638	608	1,246	1.5
Rio Verde	553	504	1,057	669	638	1,307	2.4
Ulba	947	908	1,855	1,271	1,261	2,532	3.5
Total	8,041	8,071	16,112	10,034	9,984	20,018	2.41

Source: INEC, census 2001 2010

Figure 54 Density, Baños Canton



Source: Census 2010

In the case of Montalvo, urbanization rates are lower than Baños: 53.02% in 2001 and 52.69% in 2010, a more rural canton than Baños with a population distribution that responds to the productive structure in the space, see table 22. In the case of this canton, the intercensal growth rate of the rural population is higher than the urban population.

Table 22 Population data for the urban-rural canton Montalvo canton

	2001	Percentage	2010	Percentage	Growth rate
Urban	10,640	53.02%	12,734	52.70%	1.99
Rural	9,427	46.98%	11,430	47.30%	2.14
Total	20,067	100.00%	24,164	100.00%	2.06

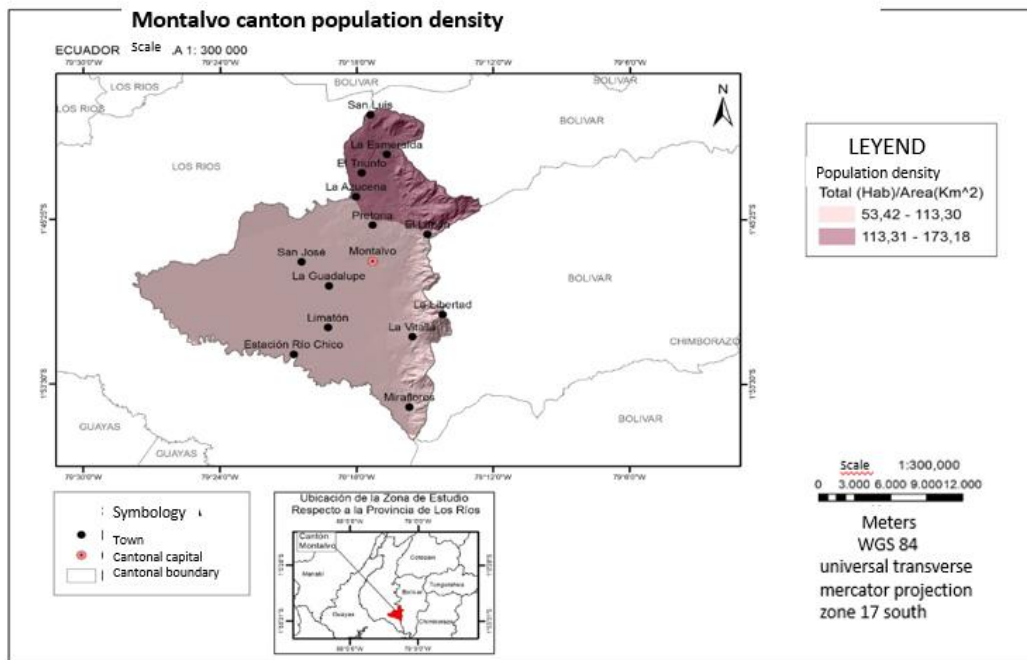
Source INEC 2001 – 2010

Montalvo has a rural parish, La Esmeralda, which was officially created on January 13, 2012. The population of La Esmeralda parish is 11,430 people (La Esmeralda, 2015), although the figure is inaccurate because a parish census has not been conducted and the figure does not specifically consider the population of the other precincts that are part of the canton.

The highest population growth is registered in the rural area, surely linked to the

creation of La Esmeralda as a parish, which was legalized two years after the 2010 population census. This growth rate is even higher than that of the canton as a whole and may imply that there is a source of employment in the rural sector, linked to agricultural products. Additionally, the area of the parish of La Esmeralda is smaller than the cantonal capital, so in the 2022 census it will probably appear with a higher geographic density as seen in figure 55.

Figure 55 Density, Montalvo Canton



Source: INEC census 2010-population actualized 2012 IGM 2012

The canton is also made up of several precincts: 24 de Mayo, La Nena, San Jorge, San Pedro, Potosí, Pisagua, Las Mercedes, Las Cruces, El Triunfo, La Pradera, Limatón, Carmen Rosa, Las Balsas, La Vitalia, Pretoria, La Victoria, El Cisne, La Ernestina, San Antonio, San Joaquín.

The map also shows a level of dispersion of settlements in space, which shows a rural canton where the social network is concentrated in the parish created in 2012 and of course in the cantonal capital and dispersed in rural areas. Although the map illustrates that the highest density is located in La Esmeralda parish, it is actually the cantonal capital that concentrates more population. As can be seen in the data of 2001 and 2010 censuses. However, these rates of population growth imply that livelihoods are highly concentrated in rural areas.

In Jama canton the rural population is higher in percentage: 73.8%. This canton is essentially dedicated to agricultural activities, especially aquaculture associated with shrimp for agribusiness and fishing, as well as agricultural and fruit crops. Despite the

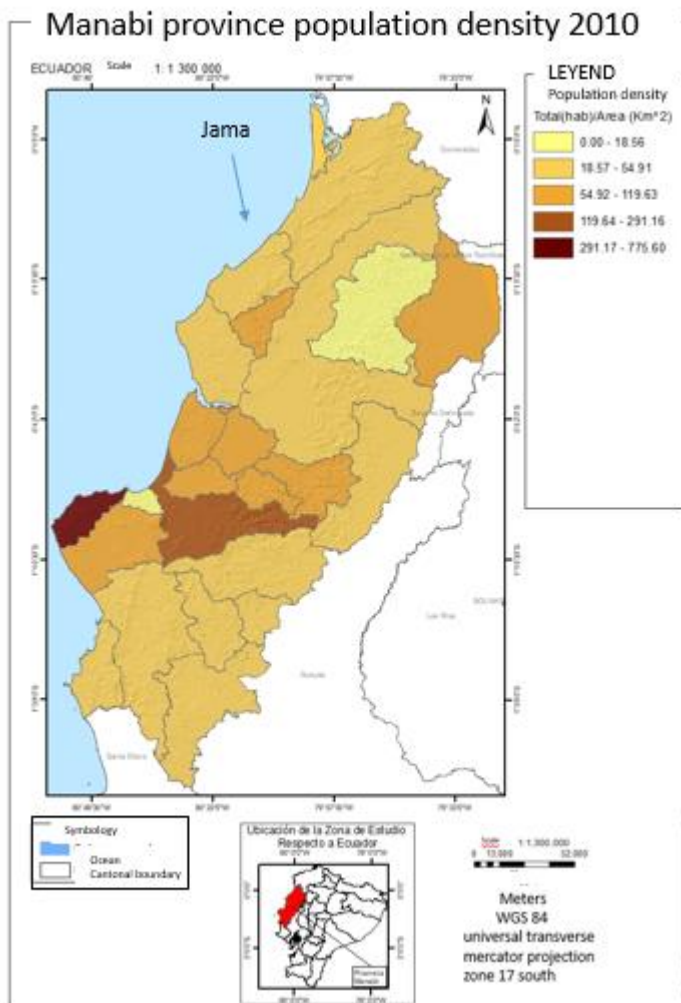
low growth rate, the existence of a large number of young people poses significant challenges to entrepreneurs and public actors to create employment opportunities and generate livelihoods that attract or retain young people and allow them to stop the economic and commercial stagnation that is evident in the canton and specifically in the cantonal capital.

Indeed, the urbanization rate indicates that the canton is essentially rural, even its administrative political division speaks of an urban center: the cantonal capital. There are also rural communities. Only one of every four inhabitants of the canton habits in the urban sector. As will be seen in the distribution of the employed population, the central activity that generates income is agriculture and fishing, which reinforces the rural socio-economic dynamics. Another interesting aspect of this data is that the population growth of the canton also reflects the loss of population specifically of working age due to migration.

The situation of lower population growth may have deepened after the 2016 emergency. Several testimonies indicate that the population left the cantonal capital and located in nearby communities in the canton, such as Salima. This would imply that urban growth would drop even more and rural growth would increase. That is a strange situation that could only be explained by the earthquake, or that may occur with large urban populations that cause growth in suburban or rural areas (as in the case of Quito, whose current population growth poles are rural areas such as Calderon, Tumbaco or Cumbaya). Possibly, the settlement of Salima is due to the search for greater security in the face of future risk events, given the experience of earthquake in April 2016. The latter argument has been expressed through interviews with stakeholders of the canton who focus on the loss of commercial dynamism of the urban area, the closure of businesses and the transfer of economic activity to the neighboring canton: Pedernales.

In the case of Jama, the annual intercensal urban population growth rate is 2.83%. Considering that Jama has only one urban parish and the canton is made up mostly of communities, the percentage reflects internal migration from the rural to the urban sector, despite this, the canton is rural. The figure 56 illustrates the low population density of Jama canton in the Manabi province.

Figure 56 Density, Manabi province



Source: IGM 2011

In the case of Cotacachi - the largest canton in extension - the data in the table 23 indicate that population decrease in 5 of the 9 parishes. Only García Moreno, Quiroga and Cotacachi, as the cantonal capital, grow at a higher rate than the canton as a whole. Indeed, it is one of the largest cantons in the country, so the geographical dispersion may affect this growth rate. In the case of Quiroga, it is a parish adjacent to the cantonal capital, a conurbation with the highest population growth in the canton. According to the cantonal development plan (2015) it is there where the supply of basic services is concentrated, García Moreno parish could also be considered colonization area, hence its growth.

Table 23 Population by parishes, Cotacachi Canton

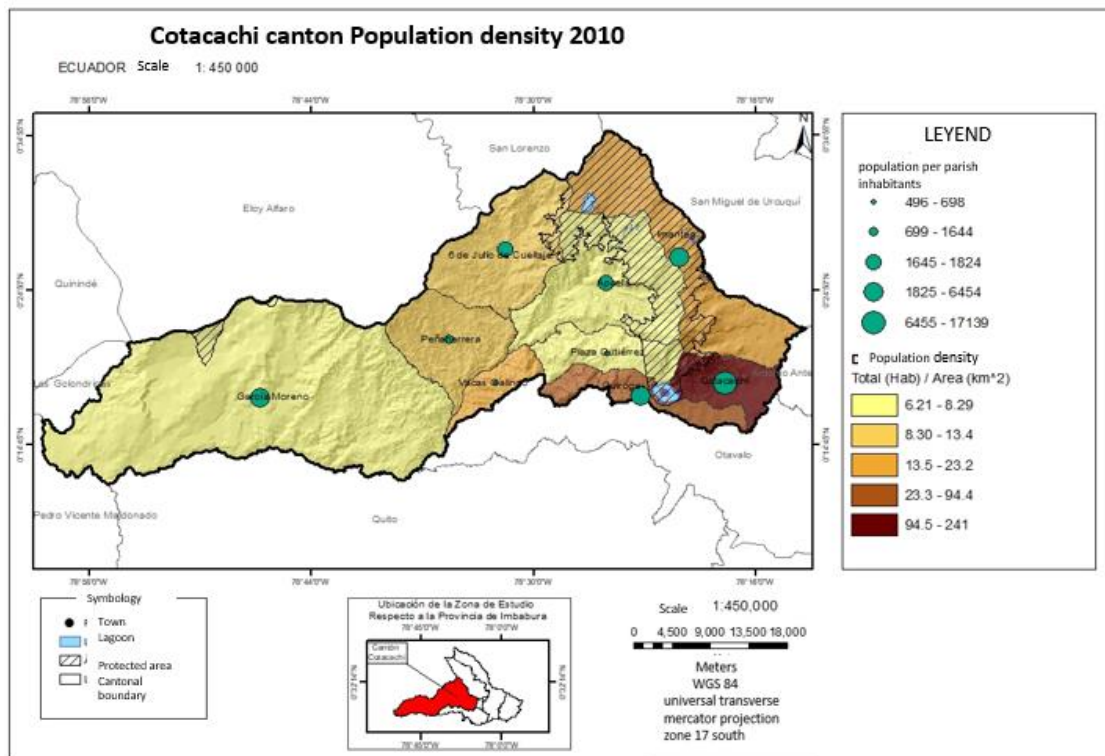
Parish	Census 2001			Census 2010			Annual growth rate
	Males	Females	Total	Males	Females	Total	
Cotacachi	7,244	7,758	15,002	8,398	8,741	17,139	1.47
Apuela	1,009	900	1,909	942	882	1,824	-0.50
García Moreno	2,565	2,117	4,682	2,675	2,385	5,060	0.86
Imantag	2,343	2,317	4,660	2,424	2,517	4,941	0.65
Peñaherrera	1,062	937	1,999	850	794	1,644	-2.17
Plaza Gutiérrez	354	299	653	260	236	496	-3.05
Quiroga	2,720	2,841	5,561	3,210	3,244	6,454	1.65
Cuellaje	1,005	898	1,903	936	844	1,780	-0.74
Vacas Galindo	471	375	846	395	303	698	-2.13
TOTAL	18,773	18,442	37,215	5,651	19,946	40,036	0,81

Source: INEC 2001-2010

The extensive area of Intag - relevant in terms of resources - which is part of the Cotacachi Cayapas ecological reserve, includes several parishes: Apuela, Peñaherrera, Cuellaje, Vacas Galindo, García Moreno, Plaza Gutiérrez, five of which have lost population. To summarize, seven of the nine cantonal parishes have a larger dispersed population. Only Cotacachi and Quiroga show a higher concentration of population in absolute terms.

The following population density map in figure 57 shows the above-mentioned population concentration in certain parishes. Furthermore, it should be noted that the map does not consider the area of Golondrinas, which was annexed to the canton in 2016, after the popular consultation carried out in April of that year. Only Cotacachi, the cantonal capital is the most densely populated, followed by Quiroga and Imantag, a parish that ranks third in population density.

Figure 57 Density, Cotacachi Canton



*(This map does not include the area of Las Golondrinas, which was annexed to Cotacachi in 2016).
Source: IGM, 2011

In Cotacachi, the annual urban population growth rate was 1.85, which implies that it follows the urbanization pattern found in the other small cantons, however, most of the canton's population is rural, as can be seen by the urbanization rate which does not exceed 22.1% in the table. It was already seen that the greatest concentration of population is in 3 parishes, one of which: Quiroga is connected to Otavalo, a canton with which Cotacachi has an important commercial relationship. It should not be forgotten that Cotacachi was part of the Otavalo canton until its independence.

Urban growth is also explained by the attraction of foreigners, and by the growth of housing and buildings and infrastructure for basic services and public spaces and urban roads, as will be seen below.

2.1.9. Attraction and Expulsion factors

The main argument presented by interviewees for population dynamics is linked to employment opportunities and the lack of higher education institutions to promote youth learning. According to those interviewed, no aid is provided for the creation of businesses that generate jobs, and the city does not provide them with any job prospects. All of these causes lead to the population's exodus.

(C02)²⁷ Cotacachi is growing less because of the lack of job opportunities, people leave to other cantons, to other provinces. I think that is one of the strongest factors, for example, employment, so people prefer to leave... I think that the urban area has decreased due to the lack of employment, many people migrate, migrate to other places because of employment, because they stay in Quito and only return for the holidays. In Intag, for example, it has decreased because the young people go out. They do not come back, they do not come back for the holidays. I think, because the education there should be a little bit more efficient, so, in the university for example, they do not have the university in the territory and an extension, For example, in Intag they used to be a strong community, but the children grew up and left and only the parents remained, many of them have passed away and that community has been lost.

(J01) Yo supongo que porque la gente se va, y porque y bueno que va a hacer usted en Jama. Supuestamente se tiene un convenio para negociar para que se pueda estudiar acá, pero veo por ejemplo ese convenio que tienen Pedernales con la universidad de Eloy Alfaro, que abrió en Pedernales, pero en la vida real no funciona eso. Usted, a fin da cuentas quiere hacer su tesis, tiene que hacer, esto, tiene que ir a Portoviejo; es como una sucursal mal llevada. A mí me consta que en Pedernales, y yo le veo parece más fácil, pero prefiero ir afuera. si alguien quiere trabajar mejor sólo fuera, porque aquí no se cumple, el tipo de sueldos básicos aquí no se cumple lejos, con la llegada de los venezolanos peor, Se paga 10 dolares por día en (jornadas) de doce o catorce horas de trabajo, si quieres vienes, sino te vas. Es algo normal aquí, la gente se va para fuera, mucho se va a Santo Domingo, a Quito, Guayaquil

(J01) [I suppose because people are leaving, and well, what are you going to do in Jama? Supposedly there is an agreement, so that you can study here, but I see for example, that agreement that Pedernales has with the Eloy Alfaro University, which opened in Pedernales, but in real life that does not work. At the end of the day, you want to do your thesis, you must do this, you have to go to Portoviejo; it is like a poorly run branch office. I know that in Pedernales, and I see it seems easier, but I prefer to go outside. If someone wants to work better just outside, because here it is not fulfilled, the type of basic wages here is not fulfilled far, with the arrival of the Venezuelans worse, It pays 10 dollars a day in (days) of twelve or fourteen hours of work, if you want you come, if not you leave. It is something normal here, people go abroad, many go to Santo Domingo, to Quito, Guayaquil]

(J03) because people leave, because nobody has education or sources of work, here people who graduate leave quickly for the city.

(C06) Of course, I believe that it is migration, that people are leaving, because of course, it is not that people come to work because there are no industries, there are no companies that generate employment, most of them are local subsistence jobs that do not even supply local jobs, so they leave to work abroad. Migration is high, so I believe that the decrease in population or the slow or low growth is due to migration, and it must be, I do not know how it is registered, because there are many foreigners.

²⁷ Quotations refer to the numbering given to the interviews for processing in Atlas ti program. The letter refers to the Canton, the number to the order in which it was entered. For example, (C02) refers to the second interview in Cotacachi canton. In some cases, the corresponding questions are included in parentheses, to give context to the answer.

(C07) This indicator should be for the city; here (in a rural sector²⁸). We have decreased here due to the lack of educational opportunities, for example, there is no higher education institute here in the area, so we have to say that there are a certain number of students 17, 18 years old, they leave to study, they get married, they make their own lives, the young people have left. So it is, no, you know Cotacachi is one of the largest cantons in the country and the vast majority is rural, so we are very scattered here, it is quite difficult to grow, and they leave.

(J04) There is little support for the economic productive activities of the people, Jama has been like, I calculate that half of Jama (the land) is in very few hands. So, people leave because there is no support, if there was infrastructure for irrigation, the communities would produce, they would populate, and the trend would be reversed. Another thing is that the population in the PDOT has not updated since 2004. So, for the people, they turn sixteen and go to another city or go to work in bigger cities, and then the populations of children, and of elderly adults, and very few older adults: Pedernales, Santo Domingo, Bahía, including Chone.

Population and Dynamics: a summary

The territorial research of demographic dynamics aids in the identification of sustainable population strategies for cantonal territorial planning and management, which can contribute to the improvement of numerous factors in the territories. Strategies that are intentionally suggested in collaboration with local stakeholders are required, particularly to prevent depopulation dynamics that end up hurting and negatively impacting areas and their residents. Demographic analysis helps to outline public policy strategies focused on population groups, in these cases especially young people of education and working age, who mainly migrate. Both, bottom-up and top-down policies can help to reduce territorial disparities and create incentives to encourage the population to remain in their place of origin, ideally from a regional perspective.

The dynamics are very different in the four cantons. To summarize briefly, they could be characterized in these elements:

- Baños canton is growing in large part of the territory, especially in the urban sector, which would be linked to the impulse of tourism activities. There are rural areas, especially Lligua, which have an almost stagnant population dynamic or expulsion, linked to agricultural activity and poor connectivity, as well as a perception of risk in the territory.

- Montalvo canton has a vegetative growth, linked to the birth rate, and an important

²⁸ In some questions, phrases are added in parentheses and in italics to contextualize the answers. These are my additions.

contribution of migration. This is mainly linked to the opportunities for agricultural activity. The proximity to the city of Babahoyo (around one hour away) would make migration for studies outside the canton, less necessary. The interviewees consider that there is a lack of sexual education, as a factor that influences the population growth.

- Cotacachi looks to have a weak dynamic, with a significantly lower growth rate than the other cantons. It is recognized that it is not stagnant, although it is lower than the national average. The dynamics of migration are heavily emphasized, particularly for education and job seeking. A group of international migrants has also been welcomed.

- Canton Jama also exhibits poor population dynamics, which are connected to a sense of a lack of possibilities, in addition to population redistribution caused by the disastrous earthquake. Jama is seen as a center that is losing commercial and service importance in comparison to its neighbors. It is not a population attractor.

The rate of growing population is not a predictor of development or economic growth itself. However, it appears that the areas with a lower dynamic, as well as the possibilities that the so-called "demographic bonus" should suggest for the territories, should be carefully considered. However, this can only be accomplished through increasing human capital and encouraging job growth; otherwise, the conditions for "migratory expulsion" would persist.

An analysis disaggregated by sex and cultural elements would be missing, these are beyond the scope of the territorial analysis of this thesis.

A small population with high levels of poverty inevitably implies a limitation to local development processes, because it is not possible to accumulate sufficient savings to promote or leverage such processes, unless an opportunity is discovered, converting a comparative advantage into a competitive advantage, as is the case in Baños with adventure and leisure tourism.

In these four small cantons, the population is increasing slowly, either via natural growth (births) or through migration. There has been a substantial wave of migration to neighboring cantons in the Jama sector, which is one of the cantons that lost population in absolute terms between the 2010 and 2022 censuses. The population of Baños and are expanding at a slower rate than the national average. Only Montalvo's population grew more.

Fertility reduction rates across the country have slowed population growth. Montalvo canton has the greatest fertility rate among the four cantons, however it is insignificant when compared to the overall population.

The dependency ratio, or the link between the working age population (between 15 and 65 years of age), the younger population (under 15 years of age), and the elderly (65 years of age and older), is another factor examined in the demographic issue. According

to demographic transition theory, a lower dependence ratio means higher production potential. The population pyramids of the four cantons show a trend toward this transition, but with little impact on productivity: in fact, in the rural sectors, there is more of a "growing old" of the population, with a tendency to "expel" labor to cities (primarily to provincial capitals or intermediate cities, rather than cantonal capitals).

We believe that monitoring the demographic situation is critical, because population decrease, or low growth are strong indications of the general population condition. Local information methods are required since the irregularity of census procedures makes planning difficult: in theory, they should be done every ten years, but in fact, they were done in 2001, 2010, and 2022.

This becomes much more critical when "floating" populations are considered, who require public services but do not have a stable domicile in the cantons (for example, temporary laborers, forced migrants, or temporary lodgings in the event of catastrophes or disasters).

The demographic elements can be summarized as follows²⁹:

Table 24 Summarize demographic factor

Element	Baños	Cotacachi	Montalvo	Jama
Fertility rate	Low	Low	Medium	Low
	It would react to national dynamics (such as decreased fertility throughout the country). The variation discovered in Montalvo appears to have no effect on the development process.			
	The fertility rate does not appear as a factor that differentiates territorial development processes.			
Out-migration for study or work reasons	Low	Medium	Low	Very high. In the last census, the population decreased.
	There are no local policies that tend to keep the population stable. If they existed, they may be viewed as an explanatory element. Actually, it is a critical component in Jama's situation.			
	It appears to be an adequate signal that something is happening, but it would not be utilized as an isolated sign of development or as a cause of any local development process. It might be viewed as a result of the conditions of work access.			

²⁹ For each element, 3 rows are considered: in the first row, the level of the canton in this subject is rated. The second row compares the cantons and explains the differences. In the third row we seek to answer the research question

Element	Baños	Cotacachi	Montalvo	Jama
Dependency (demographic transition)	Not yet at the transition stage	Not yet at the transition stage	Not yet at the transition stage	Not yet at the transition stage
	The ratio of dependents to adults of working age is expected to achieve a condition of demographic bonus in the future.			
	If there are policies that improve productivity or skills, it just acts as an explanatory factor.			
	We view demographic considerations to be vital, but not causative, factors in territorial developments. There appears to be a direct effect of concerns like as access to education and health, coverage of public services, and availability to sources of income, which might be viewed as supporting the emigration requirement. On the other hand, we found no local policies aimed at population expansion or attraction: if they do exist, we may assume that they are the result of individual decisions related to climate or landscape concerns, or for subjective reasons, rather than an intentional activity by local actors			

2.2 Economic situation of the four cantons

This section examines the four cantons from an economic standpoint. Some of the territorial conditions that lead to comparative advantages and productive specialization are examined, followed by a review of local structure and employment conditions using GDP and census data. The research uses these factors to investigate the markets to which local production is oriented. Finally, the current business structure in each canton is examined, together with perceptions of value addition and local associativity.

In this section, quantitative and qualitative information are separated, nonetheless, in certain cases, interviewees' responses ratify what the data indicate. We made the decision to proceed as described above to lend greater weight to the words of residents who were regarded qualified informants.

The interviews suggested several questions on the economic dynamics of the territories. Most interviews reveal a sense of pessimism, anxiety about the individual cantons' situations, and little opportunities for development.

The context in which the interviews were conducted can explain some of the discontent or despair. Ecuador begins a series of economic crises in 2014, with the collapse in oil prices, then a series of political crises that erupt in October 2019 in a "social explosion" (which worsens with the COVID crisis between 2020 and 2021). In those years, there was a significant loss of employment at the national level, resulting in a fall in income for the common Ecuadorian.

Small cantons have modest economies as well. Poverty is twice as prevalent in Ecuador's rural sector as it is in the urban sector. And some of these accumulating issues are represented in the interviews, which we will try to extract components from on the pages that follow.

2.2.1 Structure and dynamics of the cantonal economy

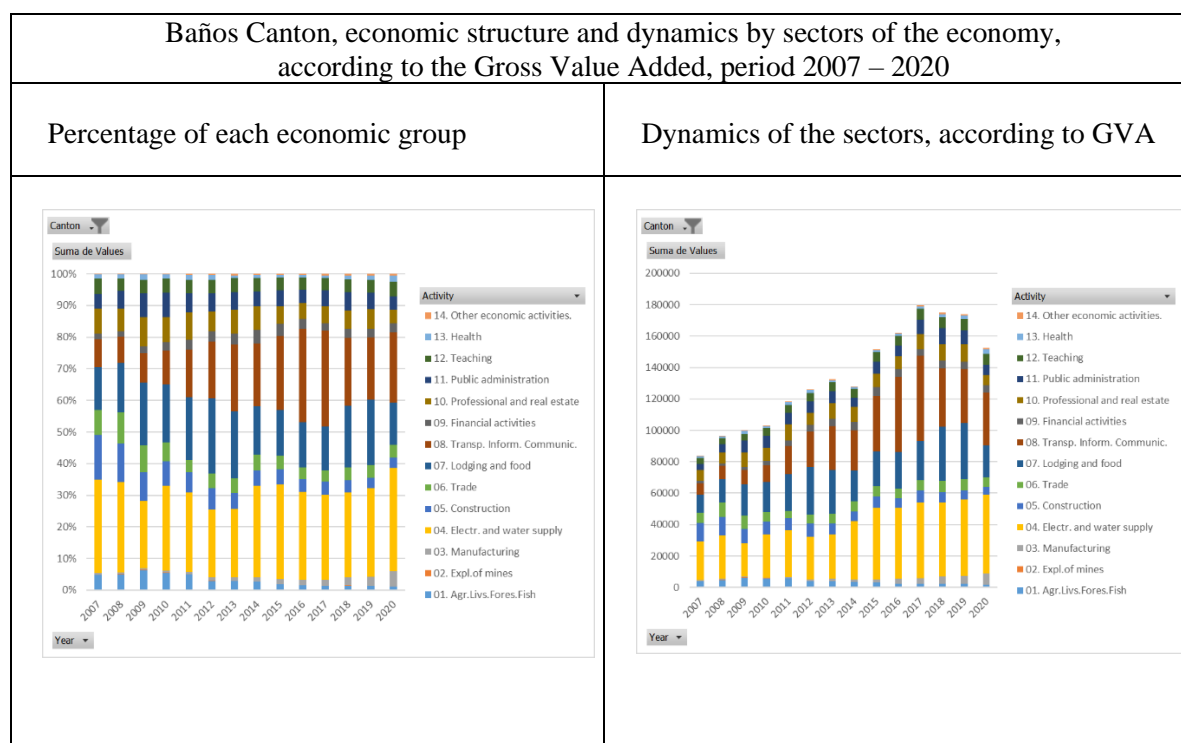
2.2.1.1. *Growth in economic activity*

The research uses data on Gross Value Added supplied by the Central Bank from years 2007 to 2020 in order to analyze the structure and dynamics of cantonal economies. This data indicates the monetary value of fourteen types of economic activity in thousands of dollars³⁰. The Gross Domestic Product statistic, which is generated by adding additional factors to GVA, is insufficient for structural comparisons since it cannot be applied to the above-mentioned groupings of economic activity.

³⁰ 1) Agriculture, livestock, forestry, and fishing; 2) Mining and quarrying; 3) Manufacturing; 4) Electricity and water supply; 5) Construction; 6) Commerce; 7) Accommodation and food services (Tourism); 8) Transportation, information, and communications; 9) Financial activities; 10) Professional and real estate activities; 11) Public administration; 12) Education; 13) Health; and, 14) Other economic activities.

Baños

Figure 58 Economic structure, Baños Canton



Source: Data from the Central Bank of Ecuador, regional accounts 2007-2020.

Table 25 Total CVA per yer, Baños Canton

Baños canton, GVA growth		
Year	Total GVA	Growth Interannual
2007	83.723	
2008	96.373	0,15
2009	99.668	0,03
2010	102.881	0,03
2011	118.172	0,15
2012	126.202	0,07
2013	132.414	0,05
2014	127.967	-0,03
2015	151.547	0,18
2016	162.135	0,07
2017	179.644	0,11
2018	174.911	-0,03
2019	174.068	-0,00
2020	152.454	-0,12

Source: Central Bank.
Prepared by: the author

Two crises stand out in the table of contributions in thousands of dollars: the one in 2014, with a considerable fall in GVA, and the one from 2018 to 2020. The decline in 2020 is severe, because of the COVID crisis, which results in a smaller overall economy than in 2016. This is supported by the statistics in the associated table, which shows that Baños' economy has been declining for four years as seen in table 25.

The energy supply industry, which features one of the country's key hydroelectric facilities, is the sector that is developing and contributing the most to the economy in the Baños canton. Financial activity, transportation, and tourism are other significant contributors.

Agricultural activity is less important in this canton in terms of GVA contribution (but it is quite important in terms of employment, as we will

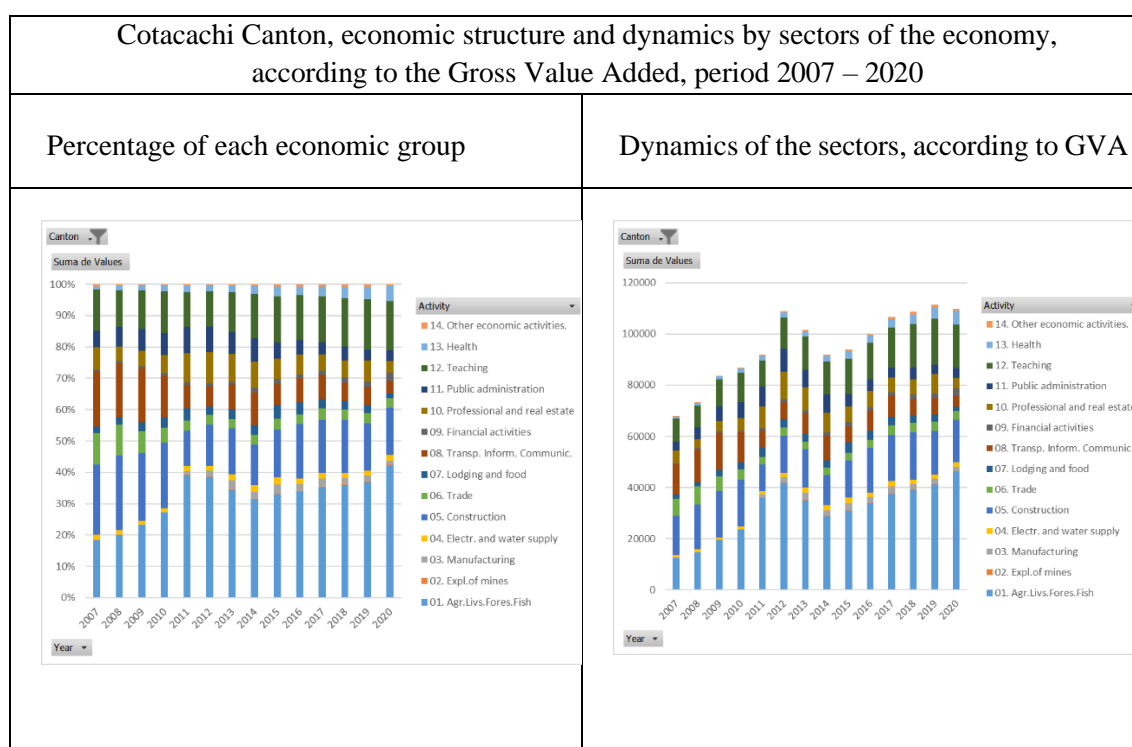
see later). According to GVA, agriculture's contribution to the canton would have been cut from 4.86% in 2007 to 1.08% in 2020, as seen in the figure 58.

In the interviews, it is notable to note that this structure is not transparent to the people, who highlight tourism as the primary economic sector, despite the fact that in proportion and size, it is the fourth sector in the canton, after energy production, transportation, and commerce.

Cotacachi

Cotacachi Canton's economy is somewhat smaller than that of Baños, with a significant focus on agriculture, which will account for 42% of the local economy in 2020. Construction activities (which reached 20% in the first year and will decline to 15% in 2020) and commerce (10% in 2007; 3% in 2020) are losing relative importance (in percentage terms). The 2020 data may represent the COVID crisis, but the decrease in the percentage significance of commercial and construction activity is consistent throughout the period, as seen in figure 59.

Figure 59 Economic structure, Cotacachi Canton



Source: Data from the Central Bank of Ecuador, regional accounts 2007-2020.

Table 26 GVA per year, Cotacachi Canton

Cotacachi canton, GVA growth		
Year	Total GVA	Growth Interannual
2007	67.975	0,00
2008	73.312	0,08
2009	83.743	0,14
2010	86.762	0,04
2011	91.980	0,06
2012	108.923	0,18
2013	101.510	-0,07
2014	91.942	-0,09
2015	93.970	0,02
2016	100.036	0,06
2017	106.695	0,07
2018	108.595	0,02
2019	111.389	0,03
2020	109.735	-0,01

Source: Central Bank.
Prepared by: the author

The table 26 and graph of sectoral dynamics reveal two periods of economic downturn: one between 2013 and 2014, with a little recover in 2015, and another in 2020, which would be explicitly tied to the COVID crisis, although only by a small margin (0.01%).

Agriculture is the primary source of growth. Some export-oriented products, such as coffee, flowers, and broccoli, are highlighted in interviews. This might entail the use of intensive agricultural practices, technology, and quality control tied to the goods' export potential.

Construction and education are key economic groupings in terms of percentage contributions and sums (approximately 15% in 2020). The fall in proportion and volume in transportation (from 17% to

3%) is notable.

Montalvo

Canton Montalvo's economy is somewhat smaller than that of Cotacachi. It is the most agricultural of the four economies, with agricultural importance exceeding 50% in most years, beginning at 62% in 2007, as illustrated in figure 60.

Agriculture is followed in significance by education, transportation, and commerce, with contributions averaging 7% in 2020.

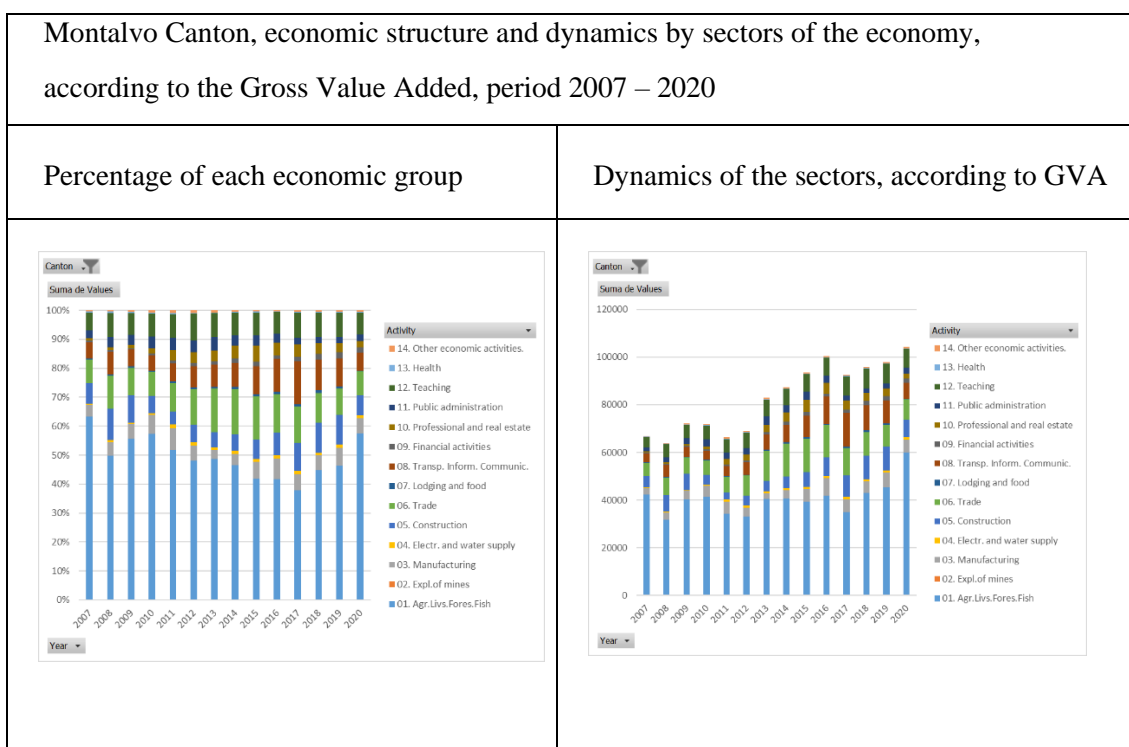
It is interesting to notice that the sector of accommodation and restaurants does not exceed 1% of GVA in all years of the a period of time It is possible that the sector may be very small in Canton Montalvo.

Table 27 GVA per year, Montalvo Canton

Montalvo canton, GVA growth		
Year	Total GVA	Growth Interannual
2007	66.802	0,00
2008	63.899	-0,04
2009	72.136	0,13
2010	71.995	-0,00
2011	66.392	-0,08
2012	69.044	0,04
2013	82.921	0,20
2014	87.373	0,05
2015	93.539	0,07
2016	100.355	0,07
2017	92.639	-0,08
2018	95.880	0,03
2019	97.943	0,02
2020	104.230	0,06

Source: Central Bank.
Prepared by: the author

Figure 60 Economic structure, Montalvo Canton



Source: Data from the Central Bank of Ecuador, regional accounts 2007-2020.

This canton saw four periods of reduction in GVA, possibly due to the dominance of the agriculture sector, in the years 2008, 2010, 2011, and 2017. Overall, it is one of the few cantons that grows rather than decreases in the middle of the COVID epidemic. This might (hypothetically) be because production is directed toward the local and national markets, and it is known that rice consumption did not cease throughout the epidemic, local production would have had a guaranteed market as indicated in table 27.

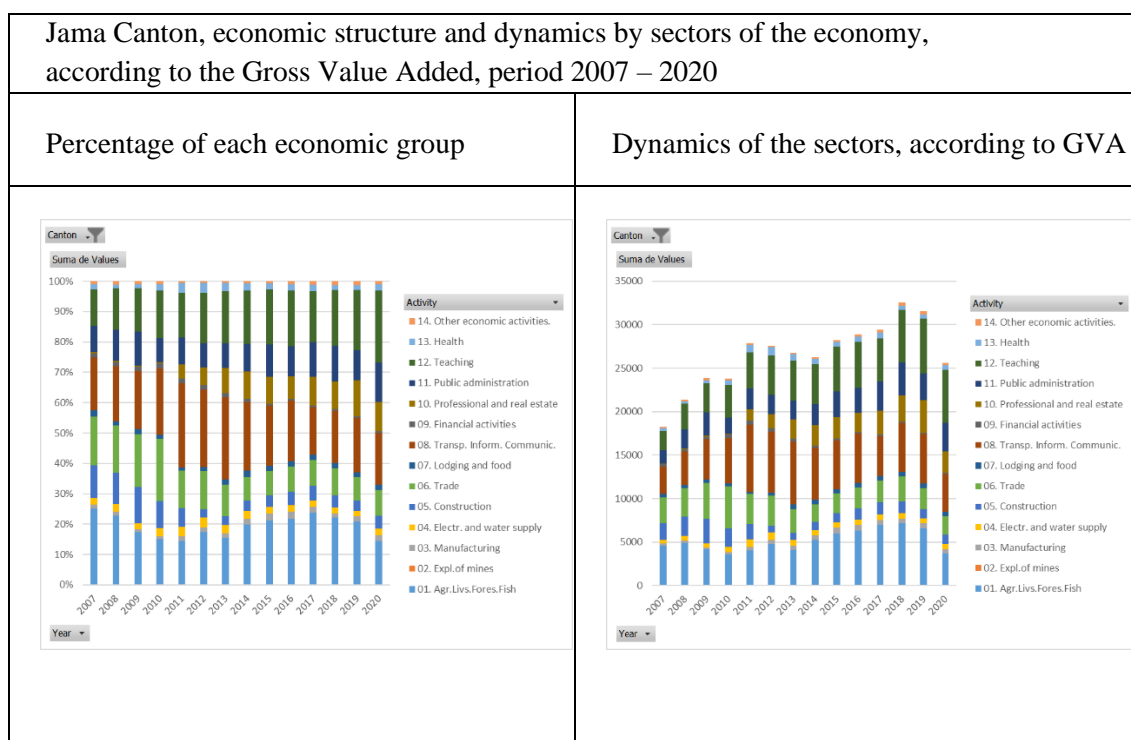
Jama

In comparison to the other cantons, canton Jama has an effectively small economy. Canton Montalvo is worth around a third or a quarter of that.

Some differences stand out: the agriculture sector in Jama is mostly comprised of fishing and aquaculture industries. Other items are produced less locally. It will fall from 25% in 2007 to 14% by 2020 as seen in figure 61.

The education sector is another major component. It increases from 12% to 23%, placing it primarily in the group of activities. The difficulty is that the majority of this activity is public, therefore it may be studied alongside the groups of public administration and health; hence, there is a dependent on the national public budget. It might also indicate infrastructural spending, which would support the budget proportion.

Figure 61 Economic structure, Jama Canton



Source: Data from the Central Bank of Ecuador, regional accounts 2007-2020.

Table 28 GVA per year, Jama Canton

Jama canton, GVA growth		
Year	Total GVA	Growth Interannual
2007	18.262	0,00
2008	21.390	0,17
2009	23.844	0,11
2010	23.781	-0,00
2011	27.862	0,17
2012	27.551	-0,01
2013	26.744	-0,03
2014	26.249	-0,02
2015	28.245	0,08
2016	28.885	0,02
2017	29.399	0,02
2018	32.582	0,11
2019	31.598	-0,03
2020	25.594	-0,19

Source: Central Bank.
Prepared by: the author

Considering the inter-annual growth rates, the data of table 28 illustrates six instances of economic slowdown in the years 2010, 2012, 2013, 2014, 2019, and 2020. In 2020, economic activity would be less than in 2011. This highlights the fragility of Jama's economy, which has been unable to sustain a virtuous cycle of local growth.

In 2016 and 2017, the economy stayed practically flat, but nevertheless healthy. The large Jama-Pedernales earthquake in 2016 had a significant impact on the national economy. National contributions may have been accounted for (hypothetically).

2.2.1.2 Specialization

A city is specialized when a significant portion of its workforce is associated with a specific activity, involving a limited range of goods and services produced and a concentration of investment and infrastructure associated with the sector, which can lead to development (Pecqueur, 1989), quoted in Demazière (2014).

In the debate over whether specialization of a territory contributes to its development, Jane Jacobs asserts that the more diversity found in territories, the more opportunities cities have to overcome periods of economic or social crises. In her opinion, overspecialization would damage cities.

Jacobs emphasizes cities' economic capacity and their creative and progressive force to wean themselves off of reliance on imports from other regions, which entails revitalizing the city's resources by producing goods and services for production and consumption and generating new export processes to other cities or regions.

The city's creative power and one of its most important resources, the urban labor force, may be used to replace imports. According to this viewpoint, local workers must be taught to make goods consumed locally as well as new goods to be sold to other regions (Jacobs, 1975).

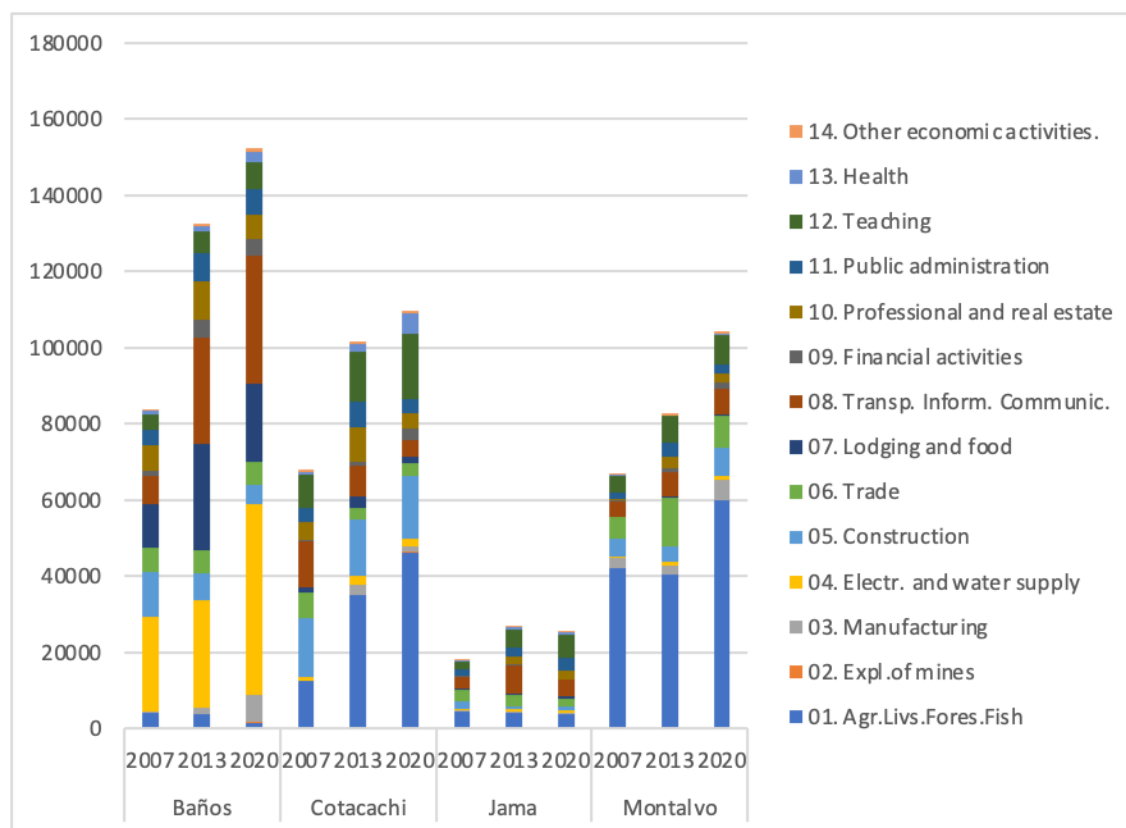
This energy propels territories that flourish and manage to replace imports, resulting in the birth and growth of additional financial and non-financial businesses that build the city's economic tissue.

The statistics from the four cantons enable us to consider a fairly broad specialization of the EAP (economically active population) in the primary sector, agricultural operations (Cotacachi and Montalvo), and aquaculture (Jama). Commercial activities are growing in importance, as evidenced by the distribution of GVA, however the only city with a higher specialization in tourism activities (of the four analyzed) is Baños.

Baños has capitalized on its natural comparative advantages and has specialized in the tourism sector, which includes all economic activities such as accommodation, restaurants, spa services, sweets processing, and handicrafts. Tourism is the activity that dynamizes the canton.

2.2.1.3. Comparison between cantons

Figure 62 Economic structure, four cantons



Source: Central Bank of Ecuador. VAB

Because it is not possible to review all of the cantonal tables in a single set, this study is carried out by comparing the cantons at three points that can be considered milestones. In all situations, 2007 is year one since it is the first year of the data series published by the Central Bank. In addition to being the average figure, 2013 is the last year before the multiple national problems listed above (oil price crisis, slowing growth due to earthquake, COVID issue). The year 2020 is the final year of data in the Central Bank's series.

When the economies are combined, the size of the economies is the first thing that stands out. Baños has a larger economy and significantly higher growth than the others (however, when compared to the entire time, the strongest growth is in 2017, and the economy in 2020 is less than in that year).

Montalvo and Cotacachi are comparable in size and growth. Cotacachi's development is thought to be larger than Montalvo's.

Jama's economy is by far the smallest of the four. It only reaches a third or a quarter of what the other cantons do. The economy also suffers when compared to 2013, as the impact of the 2016 earthquake is larger.

The figure 62 depicts the relative weights of economic activity in the local economy. They stand out: agricultural activity is by far the most significant in the cantons of Montalvo and Cotacachi when compared to the other 13 categories. In Montalvo, agricultural activity indicates a contraction in the middle of the period, in favor of commercial activity, which declines in the last year.

Agriculture, tourism (hotels and food), and health services have all grown significantly in Cotacachi. The illustration highlights the comparatively low importance of manufacturing, despite the fact that interviewees in the canton have placed a strong focus on leather crafts, especially export.

Three categories stand out in Baños canton: energy (because to the significance of the electrical sector), tourism, and transportation. All three exhibit considerable increase in the three years presented, however tourism appears to be around the same size as in 2013, which might be attributed to the COVID pandemic. In contrast to the other cantons, the relative insignificance of the agricultural sector, as well as the expansion of the industrial sector in the latest year's visualization (as compared to the preceding two, where it nearly does not prevail), stand out.

Jama canton, although small in size, impresses out for its diversity. Most economic disciplines contribute similarly to the economy, with no apparent highlights. This, while intriguing if it were the consequence of growth processes, is counterproductive when considering the weight of public administration, health, and education, since it speaks of an economy dependent on government support. Transportation grows in the middle period, but this does not continue in the final period (in fact, it declines). All of this picture points to a slow and weak economy.

2.2.2 Employment

2.2.2.1. *Perceptions about employment*

We will see below that employment in the four cantons is mainly related to the agricultural sector, the sector is the main source of income for most of the population. The data do not allow the study to identify how much of this employment is formal (i.e., under contract, with social security and access to other rights), and how much is informal or self-employed.

The perception of the interviewees tends to emphasize in one sector over the others as a generator of income or livelihood. In three cantons, the agricultural topic stands out, but in the case of Baños, many interviewees from the urban sector pointed to the tourism sector as the major source of employment, although the figures do not indicate this.

(B02) El servicio turístico, Baños es una ciudad turística eminentemente grande en ese servicio, entonces acá tenemos buenos hoteles, buenos hospedajes entonces el servicio turístico es en donde tiene la atracción acá de todo turista, por ende tenemos igual los restaurantes que igual lo reciben si usted viene a visitarlos por lo general los sábados y domingos. Baños tiene una gran afluencia de turismo entonces ahí es donde la ciudadanía mismo tiene su trabajo ,tiene su negocio, la vida cotidiana mismo es en el turismo. (*y en forma adicional*), bueno el servicio del transporte, como lo decía anteriormente el transporte igual por ende han podido los compañeros que son parte igual del sindicato y socios de las diferentes operadoras; han podido tener unos buenos vehículos para poder dar el mejor servicio a la comunidad, entonces creo también que es parte del transporte por la afluencia misma de turistas, el trabajo principal es el turismo de Baños que es pequeño, no tenemos unas macroempresas acá, no tenemos todo lo turístico.

(B02). [Tourist service (...), Baños is an eminently large tourist city in that service, so here we have good hotels, good lodgings so the tourist service is where the attraction here is for all tourists, therefore we have the same restaurants that also receive you if you come to visit them usually on Saturdays and Sundays. Baños has a great influx of tourism, so that is where the citizens have their work, their business, and their daily life is based on tourism. (And additionally) well, the transportation service, as I was saying before, transportation has been able to provide good vehicles to be able to give the best service to the community. So, I think it is also part of transportation because of the influx of tourists, the main work is tourism in Baños, that is small, we don't have macro companies here, we do not have everything as tourism].

The phenomenon of migration is specifically mentioned in interviews in Baños canton. The issue of migration does not appear in the other cantons. Ecuador has received approximately half a million Venezuelan migrants, and one interviewee mentions as a problem the incorporation of these people in the tourism sector, as competition to local labor.

(B20) In terms of employment, now we see that almost most of the establishments have foreign people working there, so these people for example, we are talking about Venezuelans. Venezuelans who are mostly working in some cases with all the legal documents and obviously they are receiving all their legal fees. So, what do they do? They generate foreign currency, send (money) to their family and friends. I do not know if money is for buying food, (...), trade can occur through the locals but generate employment perhaps through the sale of cane products and derivatives. Generate employment as well, but even though they are small family businesses, they generate economic resources and work, because the father works, the mother works and the children work, even though they may not earn a basic salary or be insured, but they have their work for the day to day.

Another particularity highlighted in Baños canton is that the tourism activity implies a permanent dedication. Employment is nearly typically family-based (and hence informal), which causes further social concerns.

(B09) I believe that, in that sense, many of those here have dedicated themselves to work, and that is why on a weekend, for example, a baneño cannot leave his home, he cannot have as in other cities, that on a weekend we get together as a family. On the other hand, a Baneño is here on a weekend because he receives tourists; then everyone goes to work or the parents must leave the family to go to work, so that is where there are also ruptures within the family.

(B24) It is true, if you ask me what a baneño is, it is a person who works, who works 364 days. That is a baneño for me, many people spend all their time working, and you know what the problem is, that from Monday to Friday the children are going to the educational institutions. Saturday and Sunday when it is the time to spend with the family, Saturday and Sunday as the tourists arrive, they spend their time working, so, family is broken a little bit, yes, because there is no time to family, to be a unit, dad, mom you know what, I need to talk about this, because they are so worried about moving forward that they forget that there are other more important things, that is my vision.

In the case of Cotacachi, diversification is reiterated, diversification also to obtain employment sources.

(C03) Within the dynamics we have the issue of leather production, the tourism issue, tourism looking from an urban, rural and community perspective. The issue of handicrafts which is the strong point of Cotacachi, the leather issue, clothing also, it is not so big, but we have certain groups of clothing in handicrafts, livestock, considering that Cotacachi has been territorialized by zones: Andean zone, urban zone, Intag zone and today we have annexed Las Golondrinas.

(C05) In the canton, the main branch of activity is agriculture and agricultural issues. Tourism also and the one that has more people in this branch of activity is the Intag area with approximately 5500 people who are dedicated to the activity. The economically active population of Cotacachi is more or less fourteen thousand people, but the largest amount comes from the Intag area, the second is manufacturing, which I was talking about that it is here the urban area where the leather issue is energized. I assume that there are approximately one hundred leather stores, of these one hundred leather stores that are distributed only in the urban area, divided between two parishes, San Francisco and El Sagrario. Half of the street "10 de Agosto" where it goes, half belongs to one parish and the other half to another parish and there are more activities here in terms of commerce and other activities, other types of commerce (C05).

In Jama canton, interviewees mentioned that employment is obtained from fishing activities, and even from some public sector. It is specified that the shrimp sector, which represents the highest income, generates few jobs. Rather, the fishing sector stands out as an important source of income for families.

(J02) One is the municipality, others that the greatest source of income or wealth are the shrimp farms, but it does not generate much source of employment. I understand that previously there was a packing plant that provided jobs for people, but they closed it down, so there is no longer that source (of employment). Well, the people are engaged in commerce, fishing, livestock, and agriculture.

(J06) I always want to point out that Jama, as a canton, does not have a balanced economy, even with all the citizens connected to the cantonal capital. Why I say this, because we have a place that has historically been a pillar of economy and is the fishing

and tourist port of *El Matal*, where several tons of fish are fished daily. In fishing season much more. This is the place where more sources of employment or underemployment are generated. Fishing is not a daily activity that ensures every day (that guarantees success.), but the diversity of fishing means that there is never a lack of production (...). Then we see that in *El Matal* there are perhaps 300 or 400 boats that are developing their work activity between one day and another, that makes the dynamics of this sector of *El Matal*, move the economy of the urban area, because everything that the people of this sector consume is marketed in Jama. What they produce is more for regional consumption and they sell it abroad. Consumption in Jama is minimal. In terms of employment, (once) before there were shrimp ponds, where for example for each pool there was a family that was feeding the shrimp or doing their housing. But it turns out that now with many crises that have occurred in the shrimp industry, the big owners opted to reduce almost 80% of the labor source. Now the issue is that with the new legislation they must ensure, they must give full legal benefits (to workers), and all this caused a decrease in employment, (...). For example, in the purely formal work, that is, in the public institutions of the canton, for example the municipality, we are talking about ministries, MIES, the Ministry of Education, the Ministry of Health, which are the ones that mostly generate sources of work. But not for the population of Jama, because we lack many professionals and they must be brought from other cantons, and they work in this canton.

The employment crisis appears specifically in Cotacachi canton:

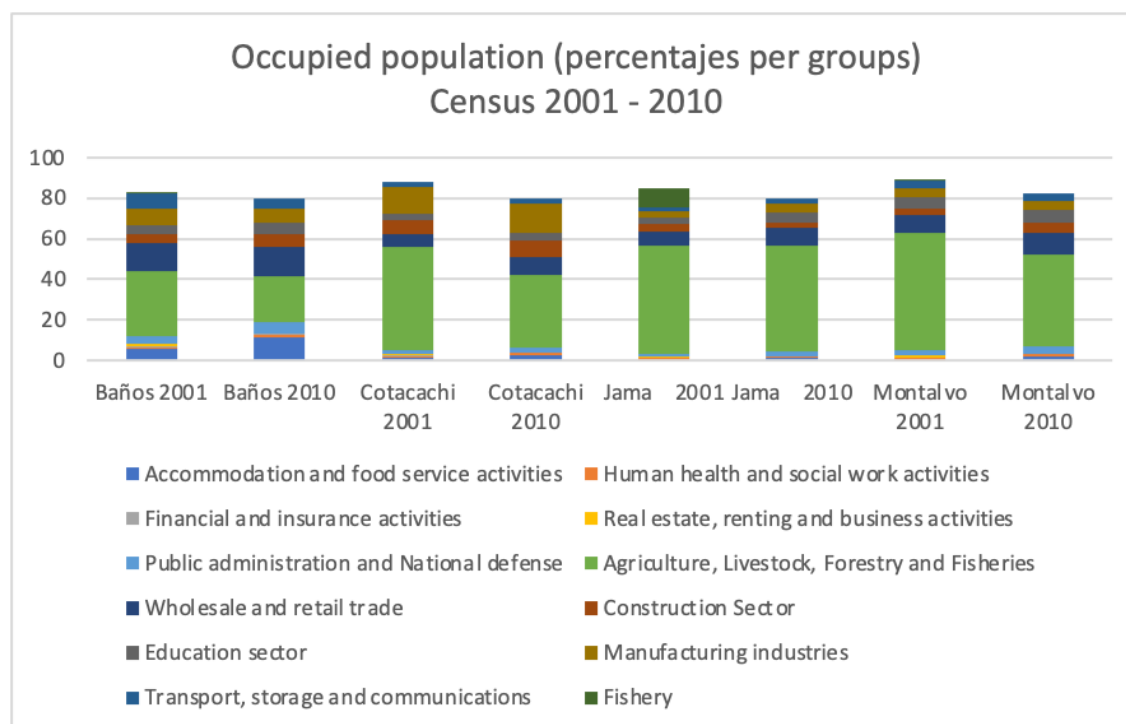
(C10) In employment... let us be very practical. Right now we are quite low, I do not know the exact rate but it was handled here that 80 percent of the production is leather and 80 percent comes mostly from the canton.(...) The mayor's office for its taxes and the deductions that each citizen has to make based on the law, but handicrafts have been like a very special foundation for the development of this canton, not so much as economic growth but with these nice things to maintain social harmony, to maintain family unity.

A special mention is made to the issue of employment informality.

(B01) I hope so, because Baños needs to move to another stage. It needs to stop being a third world town, things must be well done and here there is a big problem in Baños. People are not affiliated to the IESS (Ecuadorian Institute of Social Security), they pay them whatever they want, now with Venezuelan labor it is worse, in other words, it is a total exploitation. There is no control by the Ministry of Labor in the town, so it is good that these chains (foreign chains of hotels) come to Baños, I salute them, and I hope that 100 hotel chains come, and 100 companies come. This town will go to another level, in terms of design, in terms of architecture, in terms of payment to people, and affiliation to IESS and comply with the law. So, there is a lot of non-compliance with the law in Baños and a town cannot progress like that. (B01)

2.2.2.2. Employment structure

Figure 63 Occupied population, 4 Cantons



Source: INEC – Ecuadorian Census 2001-2010

Cotacachi

Agriculture is the activity that employs the greatest number of people, according to data from the 2001 and 2010 censuses, although between 2001 and 2010, there is a decrease in the population employed in this activity by 2.31% per year, while the population engaged in manufacturing grows by 2.91%. The population employed in construction activity also has the highest growth rate with 4% per year, as well as wholesale and retail trade with 5.83%, which is related to the urban growth of Cotacachi.

Again, due to the concentration of population employed in economic activities related to construction, it is possible to think that there was an important urban growth in Cotacachi, which is also seen in the housing data. Another attracting factor was the construction of housing for foreign migrants. This implies that there were activities that generated internal and regional dynamics, even though the growth rate of the total cantonal population was lower than the national average between censuses and the urbanization rate decreased between censuses.

In Cotacachi canton, productive actors promote several activities, including tourism (at the urban-rural and community level), manufacturing of leather goods, handicrafts and

clothing, small and large-scale agricultural production, and livestock production. Mining is also another productive activity; however, it presents complexities and incompatibilities for its exploitation, both at the artisanal and large-scale levels, due to the biodiversity of the physical space, an important natural heritage for the canton and its inhabitants.

On the other side, agriculture is the most important economic activity in the canton, according to GVA statistics, with a growing trend from 2007 to 2010, and particularly high levels from 2012 forward, followed by construction activity. Activities such as manufacturing and tourism have an interesting behavior, in the case of secondary activity, it shows a very high growth between 2009 and 2011, from 2012 it decreases sharply and stabilizes. In the case of tourism, it shows the same behavior as manufacturing in the same years, although there is not such a sharp decrease. Educational activities are also on the rise in the canton, which might be attributed to the development of public physical infrastructure.

Baños

The people's resilience in the face of the disaster in 1999 enabled them to see the Tungurahua volcano, which continues to be active, as an opportunity and an essential natural attraction for the canton's main economic activity: tourism. This ability of the people of Baños to adapt to the reality of risk and coexist with the volcano implied a significant population mobility, as evidenced by migration data between censuses and the ability to constantly refresh and innovate tourism services.

Tourism is the leading economic activity in Baños canton, as seen by the rising trend of Gross Added Value in sector-related activities like as accommodation, food, and transportation. According to the interviews, tourism entrepreneurs have been developing their offers and innovating to meet the demands of the various sectors of local and foreign tourists visiting the canton. Religious, thermal, relaxation, adventure and nature tourism are the options available in the canton. Although the lodging offer is concentrated in the city of Baños, the rural parishes are gradually investing in this type of infrastructure with success. The importance of tourism as the main economic activity of the canton can be seen in the data presented.

The canton strongly specializes in the tourism sector. The remarkable natural attractions, the two national parks that cross it, the Tungurahua volcano and its geographical location give it an unparalleled comparative advantage that reinforces this productive specialization. The employed population between censuses has a different behavior depending on the economic activity. Employed population decrease for agricultural activity, which is related to the difficulties for production and trade identified by several actors during visits to the canton, while the employed population linked to accommodation and food activities grows strongly. The population linked to transportation and storage is growing very little and, there are short or daily touristic

circuits sold by tour operators in the city. Agriculture remains the most important source of employment, but with little added value and limited connections to hotel enterprises. Although Baños has three agricultural product marketplaces, producers tend to value connections with intermediaries who buy on-farm, this trade mechanism is privileged probably because it generates lower expenses than direct retail sales.

Jama

The main activity that generates income for the population is agriculture, within which the fishing, shrimp, livestock, and fruit sectors are the most important. Jama's dynamics respond to a reality of population growth that is lower than the national average between 2001 and 2010 censuses. However, although the stagnation of commercial activity in the capital is notorious, there is a type of agricultural dynamic linked to pisciculture, a primary activity that is concentrated in terms of property and does not stimulate other economic activities. There are also corn, coffee, cacao, and papaya crops. People through interviews indicated that in the last 10 years there has been an important change in the agricultural mosaic, especially due to the investment of the shrimp ponds, an investment that at the time was strongly promoted by the national government via NTS (National Territorial Strategy).

Based on data about employed population between censuses, omitting the activities that generate less employment, the importance of the agricultural sector is notorious, nevertheless, this activity has minimal potential to generate more employment or production-related services in the canton.

When analyzing the GVA distribution data, the study finds small changes in the occupied population (from 7006 to 7150, which means that in 9 years, barely 144 jobs were created, 0,22% growth per year); it would be necessary to analyze if these jobs can be considered adequate, that is, if this work has social guarantees.

This canton appears to have minimal economic dynamism and diversification, focusing on primary products. Construction is dropping (an essential measure of the health of the economy) and does not provide evidence of an increase in job creation (unless the next economic census indicates a major change in the number of real estate units). Only trade and manufacturing activity are growing.

Montalvo

Agriculture is the most significant activity in the Montalvo canton, notably agribusiness: rice and hybrid corn for the poultry industry. The agricultural sector dominates the GVA figures, accounting for 44% of the canton's overall economy in 2018. The canton is primarily rural, with an agricultural economy (Central Bank, 2018).

Additionally, regarding land tenure, having cantonal cadastral information is not possible, the only information available is the 2002 national agricultural census, which shows a concentration of land extension in a few owners.

Within the canton, there are also several centers located along the main road that connects the province of Bolívar with the canton, which are spas and resorts that take advantage of the existence of rivers, slopes, mountains, and the natural attraction of Montalvo's geographic position, which is located in the Andes Mountains' foothills and has a favorable temperature. The spas are located next to the water sources and are basically attractors of regional tourism on weekends, several of these recreation centers also constitute small farms with banana or fruit production. These places are not located in rice or maize cultivation zones that are distinguished by valleys.

Based on occupied population data in various activities, the study also considers the population employed in public administration and defense and in public health and education activities³¹. The data indicate that public sector is a significant source of employment in the canton, both for 2001 and 2010, surpassing the manufacturing agro-industrial activities. Clearly the public sector is, as in other rural cantons, an important source of employment generation.

The canton's specialization in the sector of agriculture is visible with the data of people who were working, gainfully employed, or self-employed at the time of the census. This productive specialization is reinforced by the geographic location of the canton, which makes it suitable for the crops mentioned above, crops that require floodable surfaces in certain months of the year. Data illustrates that more women are incorporated into agricultural activity, the number of occupied women has an annual growth of 9.82%. Agriculture is clearly the sector that governs the canton's economic dynamics; while it may not be developing as rapidly as other industries such as trade, manufacturing, or construction, it is the industry that creates the most jobs in the canton. In the same period, commercial activities grew at 7.04% per year and manufacturing at 3.64% per year, construction at 10.58% per year between censuses, agriculture grew less, at 0.6% per year. In this case, although it grew less than other activities, agricultural production specialization is evident.

The other sector that shows significant growth is related to trade activities, which may be linked to the significant growth of people in the urban area and certainly related to the agricultural sector. Another data that can also be observed is the increase in the occupied population of the construction sector, that is growing at 10.58% per year between censuses. These five sectors are more important in terms of their representation in the

³¹ Education and health activities include both public and private activities. The study does not have specific data for each one, so the sum of both values as a whole would necessarily be an approximation of the number of personnel employed in the public sector.

total occupied people by branch of economic activity. This implies a connection with the agro-industrial production of the canton, on the one hand, and with the growth of the urban sector in Montalvo and La Esmeralda on the other hand. The cantonal capital surely generates trade, services and transformation activities that support agricultural activity. As indicated above, the transformation activities are linked to the rice pilers.

The employed population of the manufacturing sector is tied to the linkage of rice pilers activities, which corresponds to a value addition to the primary product that generates employment and contributes to increasing the canton's value added. Although its relative representation is smaller than that of the construction or commerce sectors, as some interviewees say, the number of milling machines in the canton has declined. The commercial sector is expanding, while agriculture is becoming more significant due to the increased number of maize storage facilities.

Finally, as data illustrates, other activities - which are not business sector - indicate the size and significance of the public sector, education or health sectors, economic activities that are important in terms of employment.

As a summary, data of the four cantons indicate the importance of the agriculture activities in term of occupation, that also implies a less qualified labor force. Cotacachi and Baños seem to have a more diversified occupied population between economic activities, meanwhile Montalvo and Jama are specialized in agriculture activities, both related to agroindustry. Montalvo linked to national market and Jama to external one. The creation of value from primary production is certainly low in Jama, however, Cotacachi, Baños and even Montalvo show that secondary sector has an important presence. Baños is the one that has developed the tertiary sector better in comparison to the other cantons. The comparison among cantons is reflected in the figure 63.

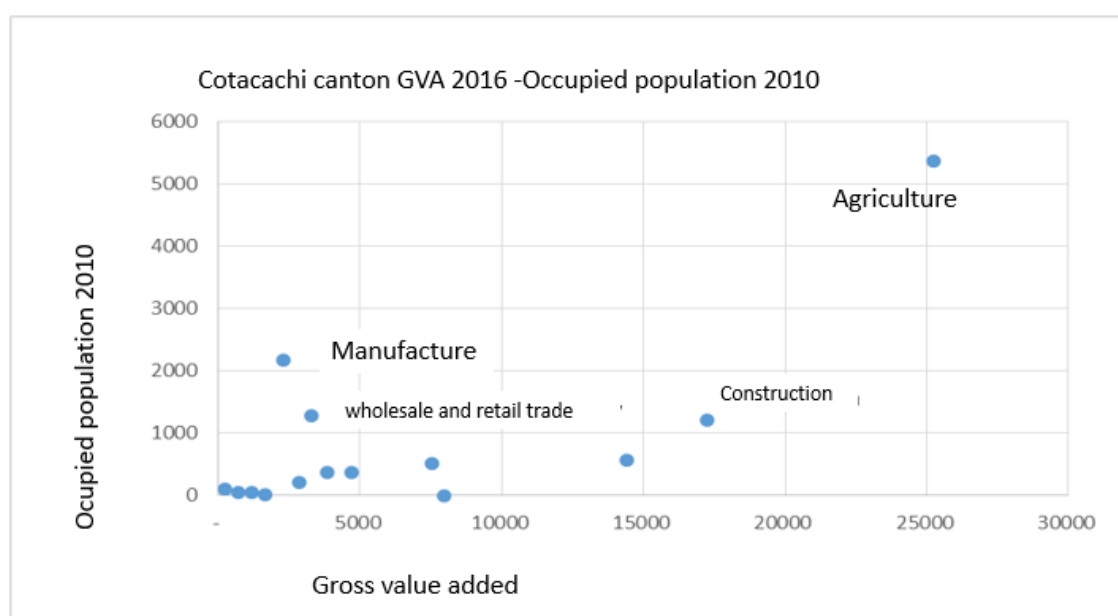
Finally, geographic location also defines the economic activities of the cantons, in other words, the given territory with its geophysical characterization (Pecqueur, 2014; Santos, 1999), has a strong weight in terms of their productive and economic possibilities. Configuration of productive matrixes is not independent of the geographic issues.

2.2.2.3. Relationship between GVA and occupied population

Cotacachi

The relationship between the canton's GVA in 2016 and the occupied population for 2010, figure 64, illustrate the importance of the agricultural, manufacturing, retail and wholesale trade, and construction sectors as employment generating activities in the canton. It is noteworthy that the real estate sector, despite having a great expansion as a dynamic economic activity, has not developed many internal sources of employment. Urban growth and the attraction of foreign migrants require construction and the expansion of public and private infrastructure in the extensive territory, as evidenced by investment indicators. The number of people employed in real estate activity is minimal, located in the first grid.

Figure 64 GVA - Occupied population, Cotacachi



Source: Central Bank of Ecuador (2016), INEC, 2010.

For the year 2016, agricultural activities generated 27.11% of the total produced in the canton's gross value added; this productive specialization is shared with the construction sector, which is the second most important product in gross value added with 18.5%; both activities, as seen above, generate significant employment. Although the manufacturing industry has a low value generated it is the canton's second greatest source of employment and is vital to its economy. This activity is also linked to tourism, although if viewed in relation to housing and food services, it is hidden with others that appear in the first grid. However, because the tourist sector produces various dynamisms with other sectors, such as retail and wholesale trade, its relevance and relationship to manufacturing activity should be recognized, as many trade enterprises have connections to the leather products trade activity.

The graph of GVA and occupied population illustrates how agricultural activity leads in the development of the canton's dynamics; it is not only the canton's greatest source of production, but it is also the major source of employment. However, while real estate and professional activity are essential, they do not produce employment in the canton.

The urbanization rate in the canton is an interesting data, in 2001 it was 28.05%, which corresponds to an eminently rural canton, as also indicated by employment and GVA data. In 2010, the rate was 22.1%, indicating that the canton's urban population is declining in absolute terms. One reason for the decline, according to the interviews, is migration, which is concentrated in the youthful population. Another reason for the declining could be that public services are deconcentrated in rural areas. Labor was demanded for construction that is not necessarily found in the urban area, which is feasible according to the information on health, education and municipal investment that appears below, which caused people to stay in the countryside, reducing the rate of urbanization and at the same time increasing the GVA in construction.

The tourism sector, expressed in accommodation and food activities, which should be important given the attractions of the territory, experienced growth until 2011, but then its value added decreased, despite the tourism potential and its biodiversity resources and natural attractions due to the protected area located in the canton.

Finally, in terms of employment, data illustrates growth in the occupied population between censuses: 1.40% per year, but in absolute terms it generates fewer jobs in activities such as education or transportation.

Baños

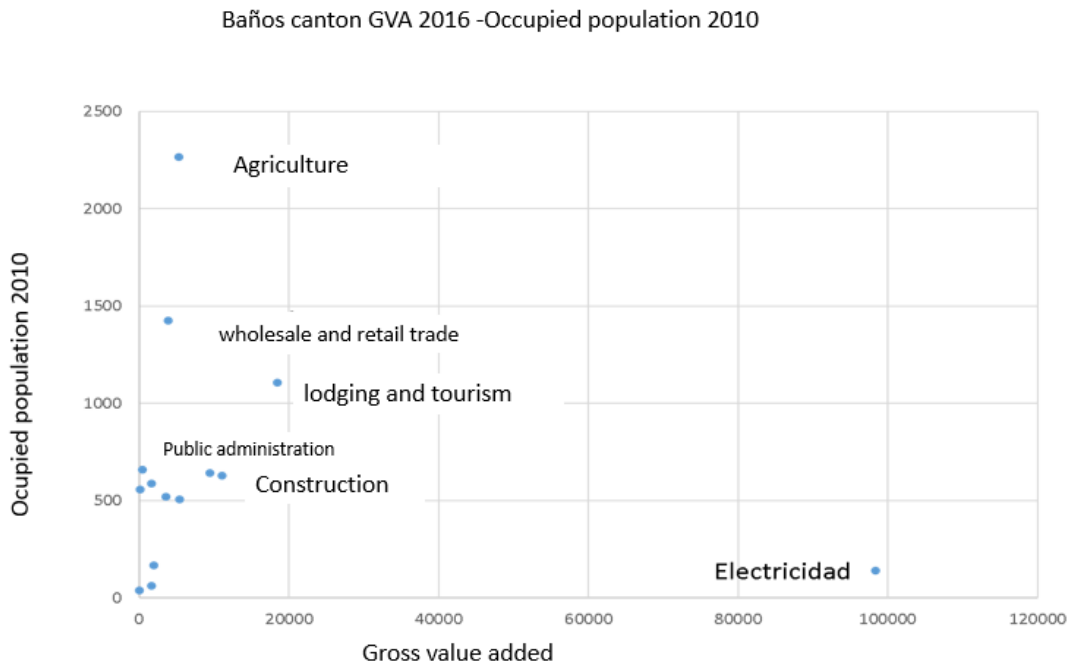
Looking at the cantonal GVA, the electricity sector generates approximately 60% of the GVA, but being a public company, it has little impact on the local economic dynamics (except for a percentage of royalties that go to the municipality, and a percentage of employment of about 1.5% of the occupied population). The activity that follows in GVA generation is tourism, with an average of 11.4% of the cantonal GVA. For this reason, the study includes two figures: 65 and 66, one including and the other excluding the electricity sector, allowing comparing the relative weights of economic activities and employment.

Agricultural activities produce the largest occupation (24.3% of employment according to the 2010 census), followed by commerce (15.3%). However, GVA creation in the two sectors is relatively low: agriculture generates 3.30% and commerce generates 2.39%. This speaks about low level of productivity, or a retail trade with minimal value creation.

Fruit production is significant and is linked to the production of handmade sweets linked to tourism. The production of the famous *melcocha*, one of the main products consumed

by local tourists, is based on sugarcane, input that comes from neighbor province of Pastaza. Melcocha has a low level of industrialization and advances in branding.

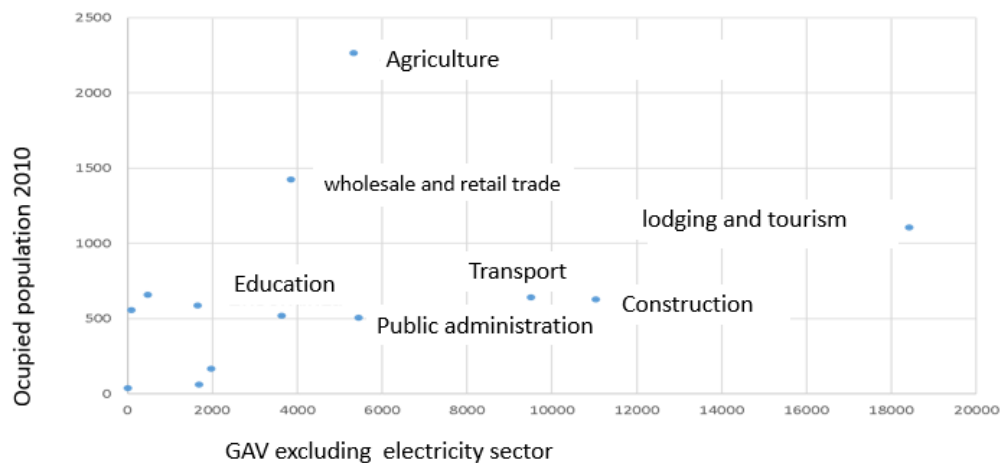
Figure 65 GVA - Occupied population, Baños



Source: Central Bank of Ecuador (2016), INEC, 2010

Figure 66 GVA - Occupied population, Baños, adjusted

Baños canton GVA 2016 -Occupied population 2010



Source: Central Bank of Ecuador (2016), INEC, 2010

Primary production goes mainly to Pelileo and Ambato and is also sold in the Baños market. A certain physical space in this market is dedicated to the sale of agro-ecological production, which is still marginal.

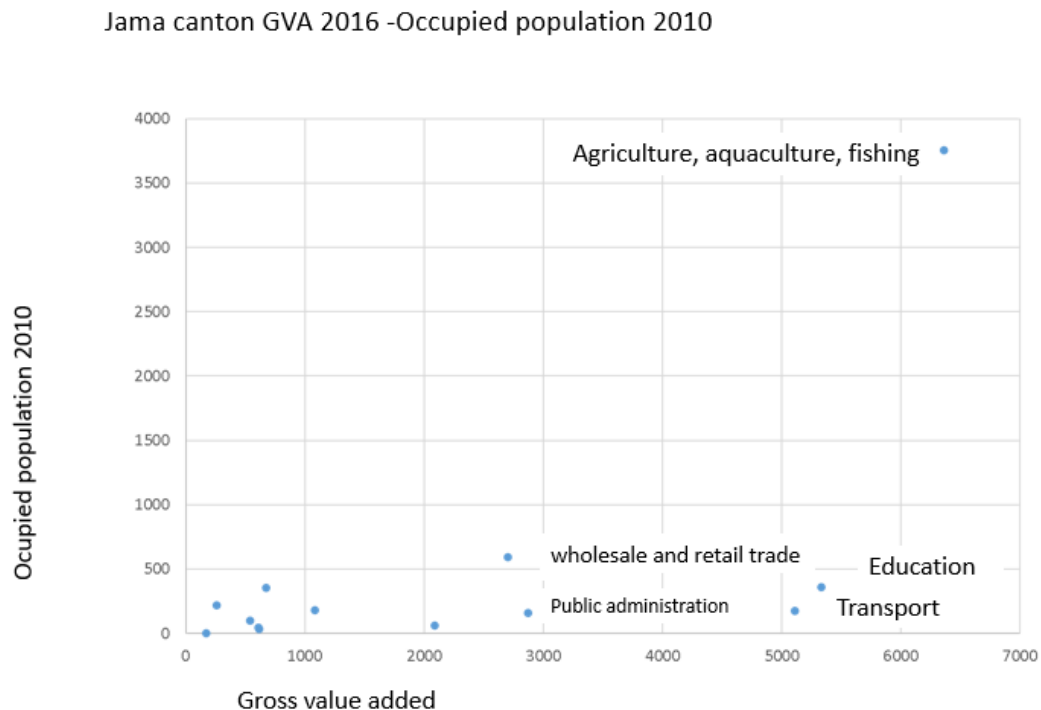
The canton specializes in the tourism sector; its remarkable natural attractions, the national parks that cross it, the Tungurahua volcano, and its geographic location give it an unparalleled comparative advantage that reinforces this economic specialization.

There are no production chains in the area; tourism service providers do not form alliances with others to link their services; the same is true for agricultural production. The non-existence of chains is linked to the lack of associativity in this geographic area. On one side, social capital is a pending issue for interviewees, there are difficulties in terms of generating territorial assets from the strengthening of relationships between territorial actors. On the other, there is a powerful influence of the canton's comparative advantages, which leave behind the advantages of relational capital and associativity (Guerrero, 2021).

Jama

The GVA numbers reported later in the economic analysis demonstrate the agriculture sector's role in the canton's total production. There are additional enterprises dedicated to gastronomy and food for travelers going through to ports that are more open to regional tourism on the Spondylus route, which connects Jama with Canoa.

Figure 67 GVA - Occupied population, Jama



Source: Central Bank of Ecuador (2016), INEC, 2010

Data of occupied population shows a primary economic structure in the canton, with a high dedication of labor to agriculture, aquaculture and fishing, which accounts for more than 62% of the employed population, see figure 67. The fact that education and transportation rank first and second in GVA indicates that these services provide more value than public administration, commerce, or manufacturing. Commerce ranks second in terms of employed population (9.9%) in the 2010 census, although its contribution to GVA is less than half that of agriculture - aquaculture.

Given this basic production structure, the question of whether the population's income is sufficient remains unsolved.

Despite having various tourist attractions, economic activity has not expanded as much as in adjacent cantons such as Pedernales or San Vicente. Several of Jama's localities are related to tourism: Don Juan, Bellavista de Don Juan, Punta Blanca, Punta Prieta, El Matal, Tasaste, Rambuche; nonetheless, the canton's tourist potential has not yet been positioned and is a potential source of revenue.

Jama is located between the cantons of Pedernales and Canoa, both of which are popular tourist destinations. Jama has hotel infrastructure, although occupancy levels are low all year; the canton's tourism season is limited to national vacations and short stays. However, it is acknowledged that there is undeveloped potential due to Jama's geographic location (comparative advantage), closeness to Quito, and history as the cradle of one of Ecuador's major pre-Columbian cultures: the Jama Coaque culture.

One of its significant attractions is its topography; it has distinct biological levels, resulting in a diverse range of flora and fauna; the highest areas may reach 600 meters above sea level. This mix of water and high-altitude woods opens up a variety of opportunities for environmental and beach tourism. The Lalo Loor Forest (privately owned), the Jama mangrove swamp, and the Jama Coaque natural reserve are among the important ecological zones.

Exclusive vacation residential complexes have been installed or are being considered for location in the canton; they are large private residential infrastructure investments that are already present and, according to those interviewed, correspond to investments from the country's highlands. They correlate to an investment that comes from outside the canton and can create significant patterns of social exclusion in the Garden City's architectural style, as various opponents of the classic vision of the schools of architecture have pointed out. This real estate dynamic would develop prior to the 2016 earthquake. One aspect that may have triggered these investments is Jama's closeness to Quito, which may have put financial pressure on investors to invest in these complexes.

Furthermore, Jama's production is linked to the initial linkages of primary production; while there are processing efforts in coffee, fish cleaning, clothes, and wood, no processing enterprises are based in Jama (Guerrero, 2021).

Value-added activities have been pushed by different public, business, and social actors in recent years, particularly following the April 16, 2016, earthquake, which had its epicenter in the adjacent canton of Pedernales and resulted in extensive infrastructure damage in that canton as well as nearby cantons.

The interviewees all agree on the existence of a concentration of production means in a few hands and how this could impede local wealth building attempts with more equitable income distribution. According to the 2010 census, 90.3% of the population was assessed to have Unsatisfied Basic needs, implying that just 9.7% of the population's requirements would have been met. There are not precise statistics on the distribution of income deciles since these are collected in national surveys that are not applicable at the cantonal level, but the UBN data suggest that there is a substantial concentration of resources.

The study collected data from the municipal land registry in Jama, where the concentration of land in the canton could be verified. The table 29, corresponding to 2019, shows this situation of inequality, with 49% of properties of less than 1 ha constituting 0.37% of total cadastral area, while properties of more than 100 ha constitute 3.27% of properties and represents 50.08% of total cadastral area, indicating a high concentration. It should also be emphasized that only 10 properties account for 18.62% of all registered hectares. This is the only land registry that the study could find using the information provided by the municipalities.

Table 29 Cadastre of rural properties, Jama Canton, 2019

Size	UPAs	Sum of Property Value	Sum of Total Ha	Average Area
≤ 1	1,603	9,083,517.94	217.3034	0,135560449
1 to 5 ha	487	5,382,825.12	1,210,6061	2,485844148
5 a 20 ha	553	18,955,166.80	6,220,7402	11,24907812
20 a 50 ha.	374	23,622,558.51	11,639,8769	31,12266551
50 a 100 ha	144	22,579,111.33	9,804,6842	68,08808472
100 a 500 ha	97	30,451,489.01	18,336,8796	189,0399959
+ than 500	10	17,948,120.19	10,856.7004	1085.67004
Grand total	3,268	128,022,788.90	58,286.79	

Source: Municipality of Canton Jama. Own elaboration

The actors in Jama recognize that the canton's capital generates little local productive and economic dynamics, consequently, only one savings and credit cooperative, Cooperativa Calceta, is located there, while the main regional offices of the central government: financial, educational, are located in the city of Pedernales, a canton bordering Jama that has greater dynamics.

Following the earthquake, the canton began the process of providing infrastructure, water, and road and building restoration; nevertheless, productive activity fell, particularly in the canton's major city, where many enterprises are closed during the day. Many individuals who used to reside in the cantonal capital have relocated to Salima and

neighboring communities for safety. People inquired for the research spoke about the necessity to develop productive activities in the cantonal capital, that is the small city, since this is the point of connection with the villages of the canton.

Montalvo

The manufacturing sector's occupied population is linked to the rice milling operations, which corresponds to a value addition to the primary agricultural product that provides employment and adds to the canton's value added. Although its relative representation is smaller than that of the construction or commerce sectors, as some respondents say, the number of milling machines in the canton has declined. Meanwhile, data illustrates that business sector is expanding, while agriculture is becoming increasingly significant due to the canton's large number of maize storage facilities. Finally, other activities, which are not business, but indicate the size of the public sector such as education or health, are important in terms of occupation, see figure 68.

Tourism activity associated with local resorts provides a dynamic of weekend visitors, as well as in other sectors such as food and accommodation. The population employed in hotels and restaurants increased significantly between censuses, but in absolute terms, it is very small and does not represent many cantonal jobs.

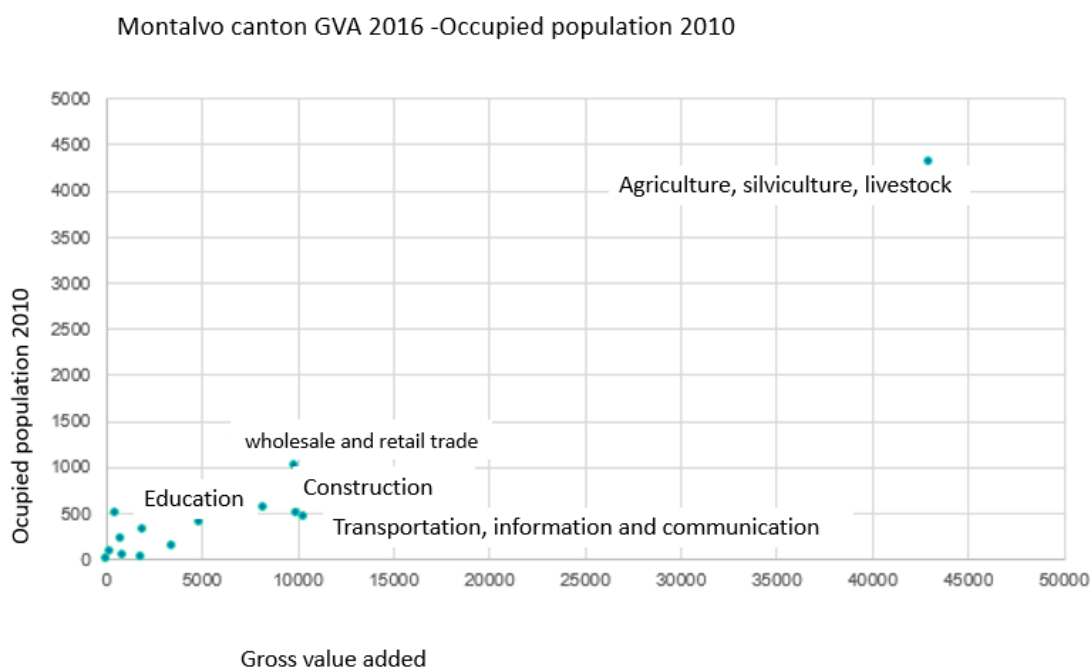
Probably due to the increase in the service and commercial sector of the city, but also due to tourism activity, there is a 25.3% annual growth of occupied people. In 2001 there were only 67 employed people and increased to 220 in 2010, Although the relative figure is significant, it is a very small number compared to what agriculture represents.

It is notable that Montalvo, while being a rural and primarily agricultural canton, has not designed or constructed a special square for the selling of agricultural goods. However, these small businesses are dispersed across the city, particularly in the streets around the church and the city's central park. The market, according to the interviewees, is one of the canton's most weak infrastructures and a broad claim basis.

In other words, there is no dedicated infrastructure or municipal market for commercializing local or foreign products, particularly food consumption. On Sunday, residents of the precincts are said to travel to the population center to stock up.

However, it is indisputable that there is a network or numerous marketing networks for agricultural goods in relation to the cultivation of maize, rice, cocoa, and fruits. According to individuals interviewed, this marketing occurs in other Los Rios cantons, such as Ventanas and Bolivar.

Figure 68 GVA - Occupied population, Montalvo



Source: INEC, 2010 census; Central Bank of Ecuador, Regional Accounts 2016.

As a summary between GVA and occupied population

In terms of the relationship between GVA and the occupied population, it should be noted that agriculture is a critical activity for the four cantons, particularly in terms of occupied population and value added. Each canton has its own expertise, such as tourism in Baños, building and manufacturing in Cotacachi, aquaculture and agriculture in Jama, and rice and maize agroindustry in Montalvo. The four illustrate various types of economic and commercial dynamics.

In summary, the graphical information that links GVA and occupied people indicates the preponderance of agricultural activity, but also of other activities that energize the cantons when their productive aptitude and geographical qualities are considered. In the case of Baños, the key activity in the generation of GVA is the electrical activity of the Agoyan hydroelectric plant, but not in the generation of employment; thus, excluding this activity, several activities that generate cantonal added value and provide employment can be verified: tourism, commerce, and construction activities. Cotacachi, on the other hand, has a similar pattern, with a greater balance of employment in several industries, the most important of which being agricultural, and the others being manufacturing, construction, and commerce. According to writings of Demàziere (2017), Campagne and

Pecqueur (2014) both cantons as more dynamic, thanks to the multiplicity of economic activities that are part of its production.

Agriculture is the most important activity in Jama in terms of added value and occupation; the other activities do not create dynamic occupation levels, a low economic level is observed in the other sectoral activities. The same can be said about Montalvo, agriculture is a high-value-added industry that generates employment, and other activities have a poor ability to dynamize the economy in terms of both output and employment.

The statistics from the four cantons corroborate the relevance of agricultural activity in rural regions as an occupation dynamizer, as shown by research such as (Martinez, 2013 or Chiriboga, 2011a). Other activities that generate work in small cantons are also present, such as commerce and others based on their levels of productive specialization, such as tourism in Baños or manufacturing in Cotacachi with the leather activity, and agro-industry in Montalvo with the rice pilling machines. In the case of Jama, it is evident that agriculture (agriculture, fishing, and aquaculture) is the main force behind the canton's employment. The agricultural activities that generate the most GVA in two of them are tied to exports: Jama with shrimp and Cotacachi with flowers, cacao, dried fruits. The productive linkage in Montalvo is with national agroindustry, finally in Baños, the focus is mostly on small agricultural products.

2.2.3 Markets

Economic decisions are strongly influenced by territorial connectivity. The availability of product markets, as well as the ability to reach national or worldwide markets, help to explain disparities in productivity and employment.

2.2.3.1 Final markets

The articulation of local production with local or foreign markets is readily visible, with probable ultimate markets for the products mentioned. To begin, it is essential to separate between goods for self-sufficiency of the farm family, those for the local market (or "short marketing chains"), and those for foreign markets. This response from Canton Jama clarifies this idea:

(J15) Q: (is primary production self-subsistence or market oriented?) A: It has both, what is more specialized is the shrimp sector, it is oriented to a market that can be national or international. The fishing sector, which is more artisanal, is perhaps oriented towards a national or even regional market in the area. And then there is the issue of agriculture, it is more for local consumption because there is not exactly a specialized (...) production that has (...) international promotion perhaps or at a national level.

The closest market is the local fair. Except for Montalvo, in the three cantons local fairs are mentioned, but with a very diminished importance (especially in Jama).

(B16) The Plaza 5 de Junio basically becomes, like most of the plazas and markets in Ecuador, a space for the intermediary, for the reseller. So, farmers have very little presence. What the municipality was able to do was to provide a space within the market for the agroecological producers of Baños and they can sell there what they want. But the number of agroecological farmers in relation to the number of farmers in the canton is minimal because most of them do not want to produce in an agroecological way yet. So those who produce so far are a small group. The group has its profit, but most of the farmers go and sell their products to the intermediary. So, this point in Baños has not been overcome. And what the farmers of the parishes Rio Verde, Rio Negro do is to take it out and sell it at the roadside in a stand (sell part of their production).

The role of the intermediary, who is the transporter that buys on site and brings the products to intermediate or final markets, is highly questioned in small economies, but appears as "unavoidable" in some interviews.

(M14) That is the main problem that exists here, marketing. Because at the moment of harvesting, the intermediaries come and, depending on the mills, the product drops (...) It seems simple, but it is quite difficult, because of the situation of the intermediary, he disrupts the whole situation. Besides, we must consider that we must recover our investment, since it is difficult to keep our products and wait for a better price. Of course, it is always expected that these agreements exist, since the farmer always expects the government to set the price, as it was done before, and the price was respected; now that is no longer the case.

In the tourism sector, there is a (small) market for fishing in Jama Canton, although much of the seafood is taken to a larger market (the city of Santo Domingo, around three hours away, or Manta, two hours away from Jama).

(J26) La pesca esa es la principal... sacar vísceras eso es lo que está haciendo la facilidad pesquera. Eso es uno, pero la otras es con los operadores turísticos es viene la pesca, lo limpian y lo venden como un producto ya terminado, en el Matal. (La mayor cantidad de peces), sale a Santo Domingo, sale todavía con todo. Muy poco, como un 15% nomás (sale limpio).

(J26) fishing that is the main one... taking out viscera that is what the fishing facility is doing. That is one, but the other is with the tour operators, they come to fish, clean it, and sell it as a finished product, in the Matal. (The largest quantity of fish), goes to Santo Domingo, it still goes with everything. Very little, only 15% (it comes out clean).

The agricultural production of Baños canton goes mainly to the markets of Ambato (provincial capital) and Guayaquil (port and main city in Ecuador).

(B02) But I think that most of it goes to Guayaquil. I have heard from the producers, from the retailers who are there selling, that there are people who come, buy their products, and take them to the coast, so I don't know specifically, I do not know that area...but I know from conversations that many of the products from our area go to the coast.

(B01) From here, from Baños, that is, tomato production, babaco, that goes to the wholesale market in Ambato, from there it is distributed to the whole country.

(B01) Yes, they go to Pelileo, they go to the wholesaler in Ambato, many and few who have their deliveries, their contacts come to pick them up from their own land, but most of them go to the Pelileo or Ambato markets because they are trying to get a better price.

Something similar happens in Cotacachi. Although it is an hour and a half from Quito (the capital city and main market in the country), according to those interviewed, production goes more frequently to the Guayaquil market.

(CO3) (Where does production go, what is the final market for your production?). So, yes, there is a market issue, our products go almost all to the coast. For example, with the wholesale issue, everything goes to the coast because the products go to the wholesale market and from the wholesale market they go to Quito.

Apart from shrimp, other products that were identified in the interviews with international markets are coffee and dried fruits, grapes, from Sumak Mikuy in Cotacachi, which would have an outlet to the Japanese market in the case of coffee and to other countries in the case of dried fruits.

2.2.3.2. Connection to markets

Cotacachi

Cotacachi is located near the Troncal de la Sierra: E 35 highway, which connects it to the rest of the nation. However, it has provincial highways that connect it to two economically vibrant cantons: Antonio Ante because of the proto cluster of knitted textiles that is situated there, and Otavalo, which is also significant in the production sector of handcrafted fabrics and commerce.

The fact that Cotacachi is situated on one side of the highway does not suggest a disconnect, but rather that one comes in Cotacachi with the aim of visiting the canton or its many tourism and artisan products. The Panamericana highway, often known as the E 35, connects it indirectly with Ibarra and Quito. To the northwest, there is also a road link to the Golondrinas region, which has been incorporated to Cotacachi since 2016 after a public consultation with its residents.

Agricultural goods are sold in numerous locations, including Ibarra, the wholesale market, Otavalo, and Quito, as well as through intermediaries. These cities also sell leather products produced from the canton.

Another system of agricultural commercialization of clean and healthy production is carried out by UNORCAC in the cantonal capital, in one of the spaces occupied by the peasant organization, and in Otavalo with the production system of alternative short circuits. This kind of production and marketing scheme connects directly producers and consumers, in these farming experiences, the production is agroecological.

Intag's production includes: uvilla, passion fruit, coffee, and Asociación Agroartesanal de Caficultores Río Intag [Agroartisanal Association of Coffee Producers Río Intag] (ACRI) is a significant coffee dealer; livestock, loofah, fruit trees, panelas, and cabuya are also important products. Dehydrated uvilla is shipped to Europe via solidarity trade networks like UNORCAC's Sumak Mikuy, a solidarity trade firm. Intag also has family-owned artisanal production of soap and other items, notably in El Rosal, which has an endogenous community tourism system, especially targeted at foreign tourists.

Cotacachi obtains its leather from Ambato, Cuenca, and Colombia; the leather is then transformed and sold in the city, on the famed 10 de Agosto Street, at organized leather fairs, and in Quito. Interviewees indicate that leather products are not sold in large quantities and are not a product of continuous consumption. In the opinion of regional tourists, the price of leather products in Cotacachi is more expensive than in other places, such as Ambato. The demand for these products by foreigners may have increased the price, although it is recognized that the manufactured articles have an excellent quality.

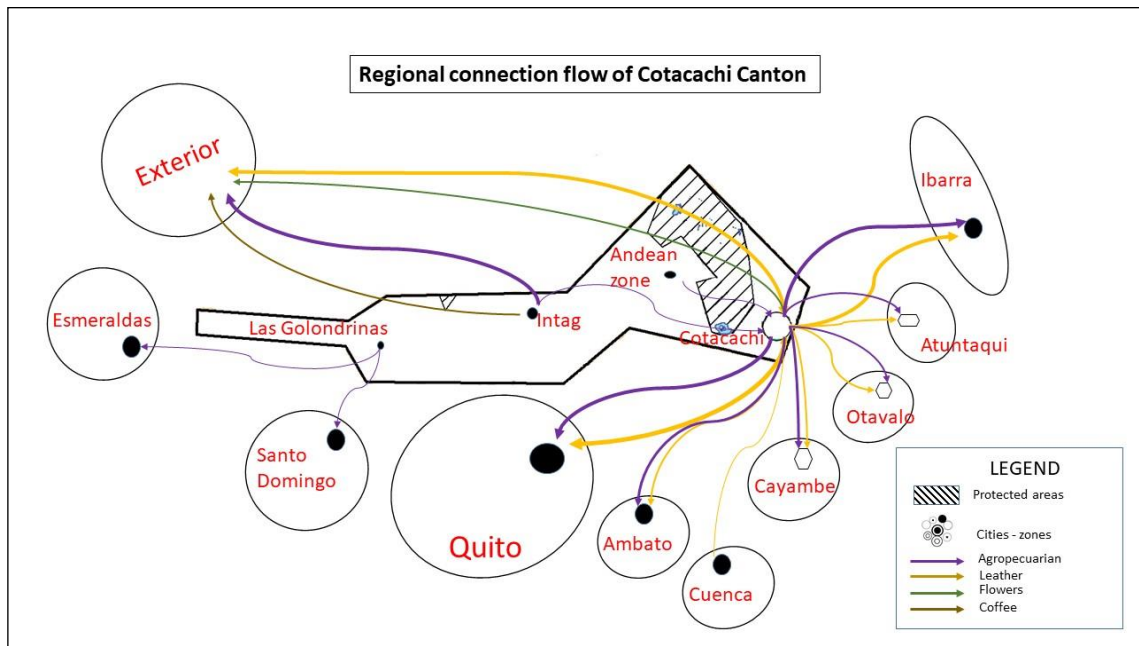
There is also exportable flower cultivation and broccoli production. Organic coffee from Intag is available in Japan and the United States. Beans, which are grown in the canton as well, are marketed in Colombia. The canton's disaggregated GVA data provides the highest representative value in absolute terms to flower production.

Imantag's agricultural goods and food products are sold in Antonio Ante and on the local market in Cotacachi. Santo Domingo de los Tsáchilas receives production from Golondrinas. Furthermore, cocoa is sold in Esmeraldas.

When tourists arrive in Cotacachi, they have various options for shopping, eating, and visiting places of interest. They may visit the Cuicocha Lagoon, one of the canton's greatest attractions; nevertheless, according to interviews, tourists do not stay in Cotacachi; instead, they travel to Otavalo for hotel facilities. Quiroga is the urban hub with a link to Otavalo, and the canton's agricultural produce or small livestock is also directed to Otavalo. Cotacachi, in summary, has a strong regional and worldwide commercial activity.

The flow of connections in the canton can be seen in figure 69.

Figure 69 Chorema of regional connections, Cotacachi



Source: Author Field research

Cotacachi has no universities; nonetheless, it is bordered by larger and nearby urban places that have universities and support the canton. One of PUCE's university campuses located in Ibarra, PUCESI, contributes to the development of local capacities; moreover, the closeness to Quito, home to various universities and training institutions, encourages mobilization towards the national capital for third level education objectives.

As indicated in the graph, Cotacachi is categorized as a small city of regional significance. It lacks the dynamism of other cities, but it is undeniably a cantonal regional axis, and its urbanization rate is low: 28.05% in 2001 and 22.1% in 2010, implying that it is mainly a canton with rural functionality and agricultural production, both in terms of GVA and employment. It is worth noting that the floricultural activity dominates the value provided by this industry.

The city provides a variety of financial and administrative services, agricultural and manufacturing trade centers, health, education, manufacturing centers, municipal services related to its competencies, justice, internal and interregional mobility, cultural, leisure, security, tourism, food and lodging, social and organizational cohesion through the cantonal assembly, among others. This last factor is very important in social terms and a distinguishing feature of management, participation and territorial governance.

Baños

The canton's geographical position and the road network that connects it produce several links with the rest of the country. Except for Lligua, the state highway runs across

the populous strip, connecting it to Pelileo and Ambato to the north and Puyo to the east. Pelileo and Ambato are the cities that provide inputs to the area, particularly for agricultural production and handicrafts, and with which the area is linked for the sale of agricultural goods and handicrafts. Agricultural production is directed at Pelileo and Ambato, but little value is added. Given the prominence of the Ambato market, products may end up on the coast, in Cuenca or in Quito. There is also a significant reliance on intermediaries, which is raised by several stakeholders. Additionally, Baños has marketplaces for the selling of agricultural products at fairs dedicated to this purpose.

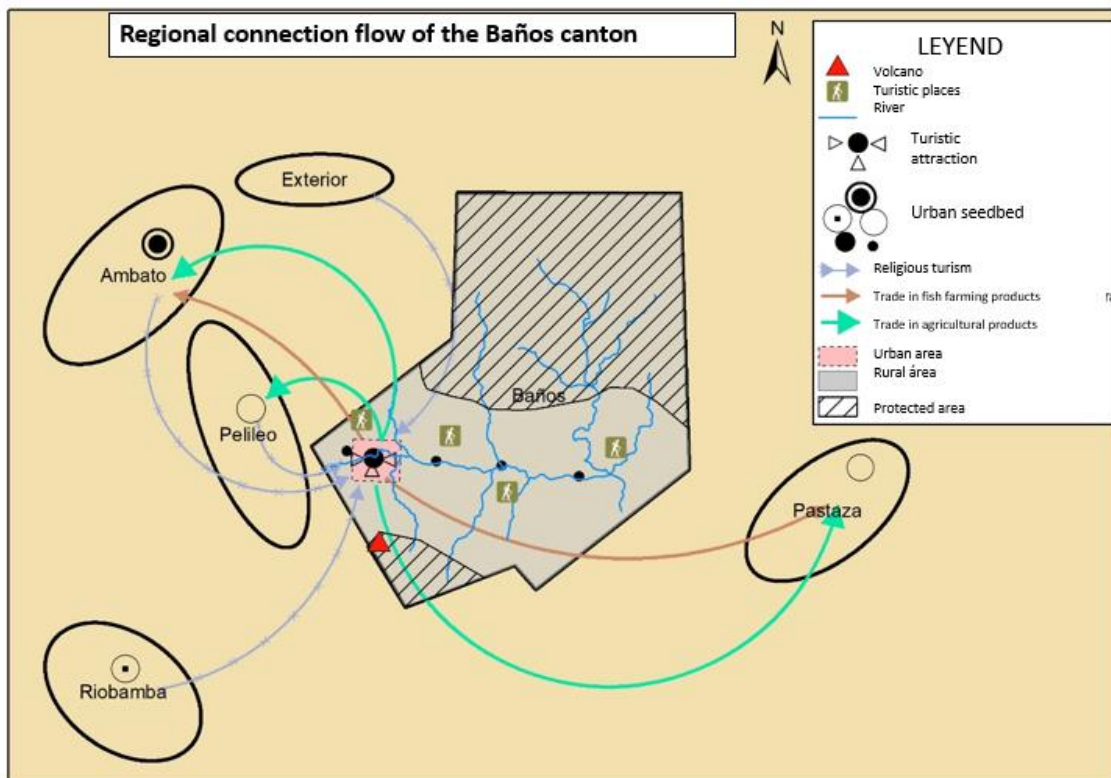
There is a link with Puyo for the supply of inputs (sugarcane, balsa) and the selling of agricultural goods. Baños is known as the Amazon's doorway, implying an intense cultural and demographic tie with the provinces of Pastaza and Napo, in particular.

Tourism has linkages to local, national, and worldwide markets (through agencies in Guayaquil, Quito, and globally). worldwide agencies position the destination, while local agencies promote daily or short-term tourism packages. According to the Ministry of Tourism's zonal coordination, there are 75 travel agencies in Baños. The link with Chimborazo is mostly for thermal and religious tourism. It is unknown how many international tourists visit Baños, however it is estimated that 25-30% of visitors are foreigners.

In summary, there are local, provincial, and international tourist trade networks in Baños. It should be noted that none of the two economic dynamics-generating activities involves value-adding operations or a production chain approach. Sweets, including traditional melcochas, have no recognized trademarks or health registrations, and there is no product difference. Individual investment projects are being undertaken to reinvent industrial processes through the purchase of mills and new machinery (Guerrero, 2021).

The flow of connections in the canton can be seen in figure 70:

Figure 70 Chorema of regional connections, Baños



Source: Author Field research

In Baños, there are no universities. Local stakeholders have cited PUCESA, UNIANDES, ESPOCH, and UTA as universities that assist the canton and collaborate with studies, internships, local capacity building, and human capital training facilities in the canton.

Jama

It was stated that there are no productive transformation linkages in the canton. At the productive level, Jama is linked with Pedernales, both for the acquisition of inputs and for getting financial services and support; due to its closeness, this is the canton with the greatest degree of connections among the Jama inhabitants.

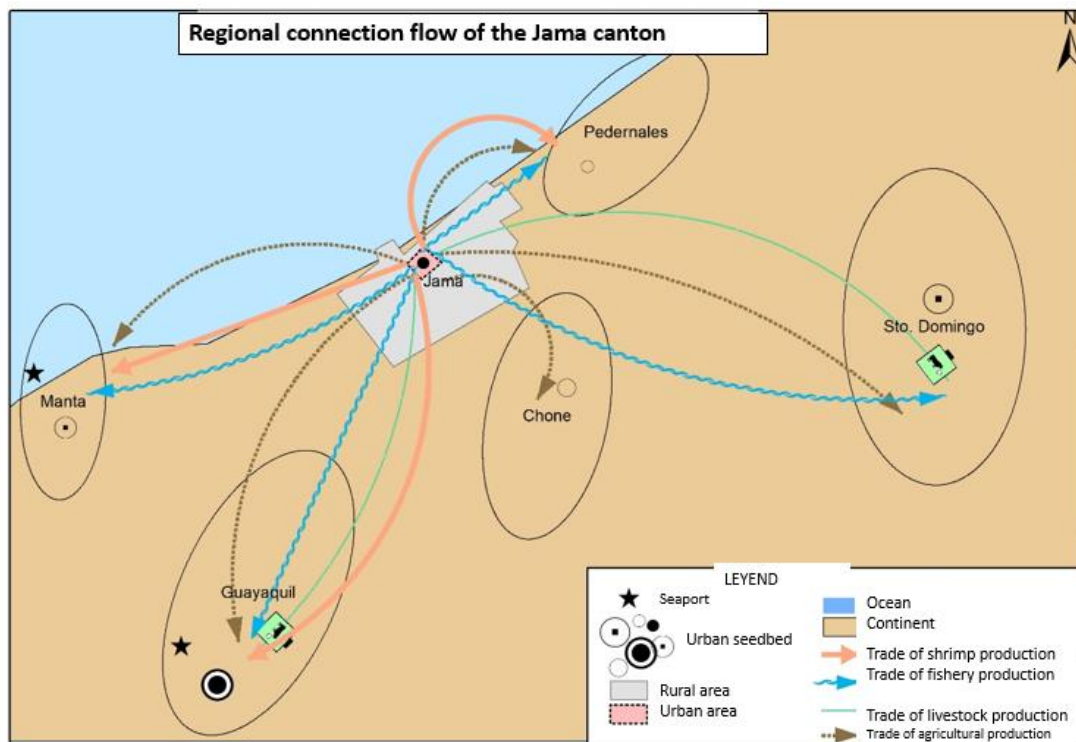
In Guayas and Manta, fish items, particularly shrimp, are vacuum-packed. The state route E-15 crosses the canton and connects neighboring cantons from north to south: Pedernales, Muisne, El Carmen to the north and San Vicente, Bahia, Chone, and Portoviejo to the south; however, the road does not pass Jama laterally. Agricultural products are sold in Santo Domingo and Portoviejo.

Shrimp and fish are associated with exports, which go as far as Peru. Because of the lack of growth in the value chain and the canton's lack of processing of fish or agricultural goods, there are little expectations of exporting additional products.

The debate over who controls the agriculture sector revolves around one of the Jama families, which has maintained political power for numerous decades. Until 2019, the Jama mayor's office was related to members of a powerful family: the Cevallos family.

Several localities are appealing for tourism: Don Juan, El Matal, Tasaste, La División, Punta Blanca, and Punta Prieta. As previously said, tourism flourishes during holidays in the highlands and on the shore. Tourists mostly visit Quito; there are no internal or international tourist marketing networks, except for direct networks between specific tourism service providers and foreign organizations. The figure 71 illustrates the flow of connections in the canton (Guerrero, 2021).

Figure 71 Chorema of regional connections, Jama



Source: Author Field research

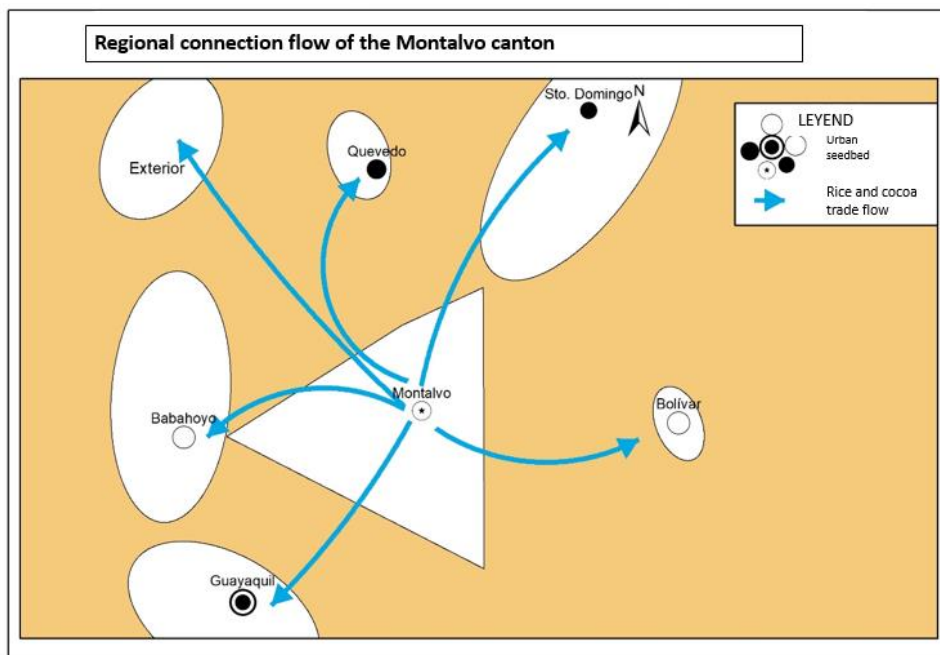
There are connections with the following universities: San Gregorio and Manabi's Escuela Superior Politécnica Agropecuaria. The Universidad Laica Eloy Alfaro has just launched a distance-learning program in which the Municipality of Jama is also a participant. This is the sole virtual education option listed; residents believe that this relationship would be essential in promoting human capital building and higher socioeconomic dynamics within the canton.

Montalvo

The canton is situated between the highlands and the coast, at the foothills of the Andes Mountain range. The No. 491 Road network, which connects the city of Guaranda in the province of Bolivar to Babahoyo in the province of Los Rios, allows the canton - which is located in the center, between the mountains and the ocean - to have commercial relations with the province of Bolivar, as well as Los Rios and Guayas. Furthermore, links to Santo Domingo and Guayas are built via the E25 motorway from Babahoyo. Cocoa, for example, is sold to Guayas, while hard maize is shipped to Ventanas and Babahoyo for poultry production. According to the interviewees, Pronaca acquires the merchandise in Ventanas. Poultry firms in Ambato also make direct corn purchases. Fruits and citrus, as well as bananas, grown in places such as La Esmeralda parish, are sent to the highlands; in any event, from what has been seen, the canton's experiences with value addition are tied primarily to rice and to a lesser degree to cocoa. Incubandina is a significant firm that is also present in other cantons. This business is also dedicated to the production of chicks, which are fed locally with hard corn.

Intermediaries who buy from farmers were also noted by the respondents. In short, there are several business linkages in the canton for the primary items they manufacture, but they always offer little value, save in the circumstances outlined above. The city of Montalvo does not have a specialized retail infrastructure or market; the market for agricultural items is held along various important roadways. The figure 72 shows the internal and external flows in Montalvo canton.

Figure 72 Chorem of regional connections, Montalvo



Source: Field research and PDyOT

Regarding technical centers and institutions with a presence in the canton, the Universidad Técnica de Babahoyo is the most frequently mentioned due to its closeness; the relationship between this center and the canton is through internships or community outreach programs. In any case, they are associated with businesses and agricultural operations.

Despite the lack of commercial infrastructure, the small city of Montalvo plays an essentially functional role in the canton's aptitude and productive activity, both for the supply of inputs for production as well as for the supply and sale of food, financial, and a connecting role for marketing. These functions are more closely related to geography and the matrix of main agricultural production specialization. The study found that it is one of the cantons that have been functionalized to a logic of market production and agriculture. In which land represent a generic resource, as well as unskilled labor, associated with basic production and affected by gaps in technology and productivity (Pecqueur, Gumuchian, 2007) (Veltz, 2013).

2.2.3.3. Comparison

Berdegú & Proctor (2014) and Martínez Valle (2017) emphasize the relevance of the small or intermediate city as an urban aggregation and economic dynamizer of the cantons. Small cities serve as an axis for urban-rural linkages, as well as social, cultural, and economic links, in addition to being a center for many interactions at the local and regional levels. In this regard, the four cantons' commercial relationships occupy essentially the regional location. Relations occur between neighboring cantons and between provincial capitals for the supply of inputs, procurement of services, and sale of finished goods, there are also relationships for export. The mappings took information from cantonal development plans and information acquired from interviewees into account.

As Martínez Valle (2017, p 103) points out, geographical closeness promotes organized proximity, which favors field-city links and the relationship between territorial actors, public, private, and social, which has also been studied by Pecqueur, Lapeze, Gumuchian, Courlet, and Grontcharoff. Understanding these linkages and interactions is a significant notion that promotes the potential of encouraging methods of sustainability and social capital creation in territories. Closeness and proximity lead to organized local actions that empower citizens to be more prepared for the future, as well as avoiding risk techniques, an issue that no local government is now considering in order to limit any danger of disconnection or flow breakdown that may occur in the case of a natural or anthropogenic disaster, both of which are widespread in the national territory.

Using the notion of proximity, the strongest and most historical ties are illustrated in Cotacachi and Baños in relation to Jama and Montalvo. Cotacachi and Baños' relations with neighboring areas are not just historical, but also economic. Thus, in Baños, the

linkages with numerous cantons of Chimborazo are religious, tourism, and supply; in Cotacachi, the links are political, commercial, and of parentage with the adjacent city of Otavalo, with which it shares having been part of that canton. Jama and Montalvo's relationships with their surrounding cantons shape a more economic and even functional reality. Such is the case of Jama, which has been losing public or private services that are now situated in Pedernales, forcing Jama residents to travel to Pedernales and take advantage of the situation to complete the numerous processes or supplies that are available in that small city. Montalvo's case is unique because of its geographic location between the coast and the highlands, allowing it to maintain close ties with cities in both natural regions, Santo Domingo, Babahoyo, Quevedo for supplies, input purchases, or product sales, and Guaranda for proximity, health, and other economic relations.

In conclusion, diverse dynamics are constructed in the cantons depending on the kind of relationships and the rootedness of the link, as experienced in the cantons. It is also affected by geographical location and the economic matrix of production and services that has evolved through time.

2.2.4 Entrepreneurship and value addition

The Marshallian industrial district is a productive system that seeks interrelationships between enterprises; the system is built on the capacity of companies to collaborate and build routines of innovation and obtention of productivity. The approach produces regional economies of scale that benefit the firms. The systems need conscious and coordinated action on the part of the territory's public and private actors, as well as a scale that permits them to be a part of the system. When faced with the prospect of developing these links, micro-enterprises would be at a disadvantage.

2.2.4.1 Cantonal companies and establishments

Cotacachi

The study utilized the 2010 economic census to acquire data on enterprises and institutions that might produce job promotion dynamics in the canton, which does not allow for comparison research because the previous census was done 30 years earlier. In the data, two variables were cross-referenced: the kind of ownership of the enterprises and the major activity. The canton has 935 registered enterprises, of which 58.7% are wholesale and retail trade establishments, as well as motor vehicle and motorcycle maintenance. Tourism is the second most significant category, accounting for 10% of all enterprises in Cotacachi, which gets both regional and international visitors. With 9.3%, manufacturing is the third most important industry, see table 30.

Table 30 Firms, Canton Cotacachi, 2010

Canton Cotacachi (ISIC 4.0 classification Main activity)	
Main Activity	Number
Manufacturing industries.	87
Electricity, gas, steam, and air conditioning supply.	1
Wholesale and retail trade; repair of motor vehicles and motorcycles.	549
Transportation and warehousing.	8
Accommodation and food service activities.	95
Information and communication.	43
Financial and insurance activities.	7
Real estate activities.	1
Professional, scientific, and technical activities.	21
Administrative and support service activities.	3
Public administration and defense; compulsory social security schemes.	13
Education.	18
Human health care and social welfare activities.	16
Arts, entertainment, and recreation.	12
Other service activities.	58
SD	3
Total Result	935

Source: INEC (2010)

Only 7 enterprises are associative, or cooperatives; the great majority are individual establishments of natural people, where family labor may predominate; this group accounts for 90.3% of the entire census. The second category, at 3.33%, consists of public entities in charge of staff. It should be noted that the peculiarity of the kind of establishment as stated by the International Standard Industrial Classification (ISIC) is considered.

Baños

The variable of type of ownership and major activity was crossed in the business data. Only 7 of the 1,508 enterprises surveyed are associative or cooperative in form. Tourist-related firms account for 32,02%³² of the total, with just one associated tourist business; the majority are individual enterprises, see table 31.

³² As a proxy, the study considers activities of manufacture, accommodation and food services and transportation.

Table 31 Firms, cantón Baños, 2010

Canton Baños. Companies by main activity ISIC 4.0 Classification	
Main Activity	No. of Companies
Manufacturing industries.	119
Electricity, gas, steam, and air conditioning supply.	3
Construction.	4
Wholesale and retail trade; repair of motor vehicles and motorcycles.	664
Transportation and warehousing.	16
Accommodation and food service activities.	348
Information and communication.	50
Financial and insurance activities.	7
Real estate activities.	1
Professional, scientific, and technical activities.	32
Administrative and support service activities.	61
Public administration and defense; compulsory social security plans.	21
Education.	26
Human health care and social welfare activities.	25
Arts, entertainment, and recreation.	26
Other service activities.	105
Total Result	1508

Source: INEC (2010)

Family labor takes precedence over paid job in Baños canton, as evidenced by the interviews conducted. The data from the 2010 economic census reveals that more businesses and individuals declare that they do not hire and pay employees. (ISIC) 4th level includes activities like as lodging and food service, which are closely tied to the tourist sector.

Jama

According to the national economic census, the canton of Jama has 206 enterprises, 7 of which are public establishments. Retail commerce, car maintenance, and motorcycles, particularly the latter, which allow movement throughout the canton, which is primarily made up of rural settlements, account for 51.9% of Jama's enterprises. Companies associated to housing and food services are the second most important group, accounting for 11.1% of all establishments, see table 32.

Table 32 Firms, cantón Jama, 2010

Canton Jama. Companies by main activity Jama	ISIC 4.0 Classification
Main activity	Companies
Manufacturing industries.	20
Electricity, gas, steam, and air conditioning supply.	1
Water distribution; sewerage, waste management, and sanitation activities.	1
Wholesale and retail trade; repair of motor vehicles and motorcycles.	107

Transportation and warehousing.	5
Accommodation and food service activities.	23
Information and communication.	8
Financial and insurance activities.	1
Professional, scientific, and technical activities.	1
Public administration and defense; compulsory social security schemes.	3
Education.	10
Human health care and social assistance activities.	4
Arts, entertainment, and recreation.	2
Other service activities.	18
(empty)	2
Total Results	206

Source: INEC, Economic Census 2010

Based on the interviews and field observations, wood furniture firms and clothing manufacturing enterprises in the area have been identified. The third group includes relatively few seafood processing businesses, mostly cleaning and artisanal fish chilling. The canton's restaurants demand fish supplies, both in El Matal, where there is a concentration of restaurants, and on the route to Canoa, where there are other eating-places for regional tourists.

Montalvo

In Montalvo, 671 firms were registered as seen in table 33, according to INEC data. The primary activity associated with the business sector is the sale and repair of vehicles and motorbikes. 54% of the population falls into this group, and the data is connected to the canton's areas and reality as a rural canton with local roads appropriate for four-wheel drive cars and motorcyclists, normally linking communities. With 11.77% of the total number of firms, housing and food service activities are the second most important group. There are more food service businesses in this category than accommodation enterprises, while Montalvo does feature regional tourist goods that utilize water resources, such as swimming pools and spas that take use of the province's natural abundance. There are just a few hotel options in the cantonal capital.

Manufacturing sectors are also a significant industry in the canton, accounting for 7.3% of total employment. This is a rural canton, and the production is tied to agribusiness. As previously said, manufacturing businesses may be rice piler machines or those involved in the processing of hard corn and poultry.

It is worth noting that there were 494 occupied population in the population and housing census of 2010, yet there are only two enterprises included in the same year's economic census. This is due to the fact that not all of the occupied population work in firms or

enterprises; construction workers can work informally in these activities, as can teachers and painters.

The company ownership structure is primarily individual or natural, with relatively few occurrences of private corporations (limited or anonymous) being formed, resulting in a more familiar style of corporate governance and maybe of a smaller scale; 88% of enterprises in Montalvo are family firms. Agribusiness firms are the largest in terms of size because, while they are natural enterprises, the agribusiness line of business demands them to be larger in order to achieve economies of scale. In this section, a theoretical reflection of Coase (1960) on the transaction costs faced by Montalvo's business structure could be made, based on neo institutionalist theory, which states that small businesses face higher costs of operation and functioning and can innovate less quickly than larger ones. This challenge would have an impact not just on their competitiveness, but also on their capacity to sustain themselves over time. It is possible to trace a link between individual enterprises and corn milling or corn storage companies; many companies in these fields of agriculture are family businesses, not small.

Table 33 Firms, Montalvo Canton, 2010

Canton Montalvo: Companies by main activity (Code ISIC 4)	
Main activity	Number of companies
Agriculture, livestock, forestry, and fishing.	1
Manufacturing industries.	49
Electricity, gas, steam, and air conditioning supply.	1
Water distribution; sewerage, waste management and sanitation activities.	1
Construction.	2
Wholesale and retail trade; motor vehicle and motorcycle repair.	366
Transportation and warehousing.	4
Accommodation and food service activities.	79
Information and communication.	30
Financial and insurance activities.	4
Professional, scientific, and technical activities.	4
Administrative and support service activities.	5
Public administration and defense; compulsory social security plans.	14
Education.	12
Human health care and social assistance activities.	17
Arts, entertainment, and recreation.	9
Other service activities.	61
#NA (not available)	12
Total	671

Source: INEC, Economic Census 2010

Several actors have previously remarked that the canton has organizational weaknesses with extremely small local farmers and major producers linked to agro-industrial networks with greater market power. In terms of employment, this is the canton's

production structure, however it does not necessarily produce value-added relationships. It is a relative absence since research demonstrate that agricultural productive potential is substantial and that processing enterprises exist in the area.

There has not been any economic census since 2010, although the Internal Revenue Service of Ecuador's single taxpayer register gives information on taxpayers by canton and economic activity group based on ISIC 3 categorization. The data of 2023 is not comparable to that of 2010, but it does aid in understanding the structure of taxpayers as a proxy for the present structure of enterprises and the key economic activities in the four cantons.

The number of contributions is greater in Cotacachi and Baños and much lower in Jama. In terms of contributors per capita, Baños has the greatest number, indicating a more organized economy. Another intriguing feature is the importance of agricultural activity in the number of contributors, with Montalvo and Jama ranking first, Cotacachi ranking second behind retail commerce, and Baños ranking fourth, with a relative small number of contributors.

The primary activity in Baños are retail commerce, food and beverages, and transportation.

When looking at the societies in Baños, the first activity that comes to mind is travel agencies, tour operators, bookings, and associated services. When we include transportation and food and beverage services, we reach 37.86% of the total number of participating societies.

Associations, social aid activities, public administration, and defense are the activities that stand out in the group of societies in Cotacachi. These three groupings account for 45.3% of the enterprises in the SRI cadaster.

Montalvo and Jama have a very small number of societies among taxpayers, which may also express a tendency towards individualism as a cultural and economic element, see table 34. This is corroborated by an analysis of the social capital in these two cantons.

Table 34 Registered Taxpayer Data RUC 2023

Categories		Baños	Cotacachi	Montalvo	Jama
Taxpayers		13507	16410	8047	5551
Individuals		12720	15458	7721	5301
Companies		787	952	326	250
Agriculture	Taxpayers	884	2845	2403	1745
	Position	4	2	1	1
Retail trade	Taxpayers	2636	2847	1481	923
	Position	1	1	2	2
Other relevant – individuals	CIU group	Food & Beverage	Other actors	Wholesale trade	Fishing
	Taxpayers	1662	2120	796	378

	Position	2	3	3	3
Other relevant - individuals	CIIU group	Transport	Food & Beverage	Transport	Wholesale trade
	Taxpayers	1548	899	546	354
	Position	3	4	4	4
First group in companies	CIIU group	Travel Agencies	Associations	Associations	Personal Services
	Taxpayers	225	210	122	44

SRI: Servicio de Rentas Internas (Internal Revenue Service)

RUC = Registro Único de Contribuyentes (Single Taxpayer Registry)

Source: SRI (2023): Cadastre Database RUC by province - Individuals and Companies

2.2.4.2 Value addition

The productive structure centered on agriculture (and in the case of Baños, tourism), has not involved value addition mechanisms or the creation of local productive systems. Producer is linked to intermediaries or tries to sell his product at fairs to the direct consumer. The most identifiable exception in the interviews is the shrimp sector:

(M19) That is why I tell you; our backwardness is basically because of that; no product has value added. There are a few small attempts, but nothing serious. For example, we are farmers, we harvest rice, but we sell it at I do not know, at 24 or 25, and it is useless at that price. You know that this rice is sold in supermarkets at different brands, they just change the presentation of the brands and raise it to a super high price, and we see how it happens, because nobody defends us from this situation, in these 10 years that there was so much money the government never took care of it.

(J15) (Is there any mechanism for adding value in these sectors?) Only in the shrimp sector, perhaps the issue of research in larvae production and in improving productivity with respect to shrimp production (...) especially to be able to produce more shrimp per hectare of pool, and because there are new controls, because of the environmental issue. Therefore, to minimize the environmental impact of shrimp production, it is necessary to provide added value, especially knowledge and best practices.

There are small community enterprises where value addition is assumed, often with the support of NGOs. For example, in Cotacachi

(C02) (about the "Naturaloe" initiative). Well in 2003 the plant was installed to try to sell, because we saw that here in Intag the aloe vera grew very well, we are at a suitable altitude, so we said we are going to have a good quality plant. And during the time that it was for sale, since nobody here has vehicles, we wanted to sell it to an intermediary and he paid us ten cents a kilo, but he put it in the parish in the town center. So, we saw that we could not afford the investment and from there we asked the foundation "Ayuda en Acción" to train us, then we lit the match to make creams, soap and shampoo, so we asked, and we said that with this we give added value, and we created sources of work.

Value addition is considered an ideal, for which there is still a lack of capacities, which are sought outside (from technical assistance).

(J07) If I were mayor of Jama, I would first build a plant to add value to shrimp and to add value to artisanal fishing, which does not exist. Generate alternatives for cattle ranchers, here in Manabi we have an average of 0.7, 0.8 head of cattle per hectare, I would work more on sustainable cattle ranching. You could have up to 20-25 head of cattle per hectare, semi-stabled and with different pastures (one hectare with one pasture, another with another type of pasture), and they have been told this has been explained to them and us, as a prefecture sent a bill to the Assembly to promote this issue. And that if a cattle rancher has one hectare of cattle, he should keep 10% of it as forest, as shrimp farmers are required to have a percentage of 10% of mangrove, cattle ranchers should be required to have a percentage as a forest, as a silvopastoral project, with pasture and trees, because that increases the humidity of the vegetation and the soil. Unfortunately... ojalá que nos paren bola algún día [we hope they will pay attention to us].

(M14) We as an association have always wanted to do a project based on cocoa and rice. But we have not done it maybe because of lack of knowledge or training. Once we wanted to focus on rice-based creams, like the Chinese do, but these are extremely expensive projects, and it is a long study. I hope that one day we will have the opportunity to add value to the product we have.

2.2.4.3 Partnerships

Additionally, to the lack of value addition, interviewees did not identify any experiences of associations between producers and other actors in the production chains. The chain approach does not appear in the territories, except, as in the previous point, in Jama's shrimp sector, where the association would be with a family nucleus or group. A challenge for the future.

(J25) (sobre la producción de larvas como eslabón de la cadena): Sí, lo que pasa es que requiere una infraestructura más pequeña, pero es sumamente importante para apoyar lo que es el sector camaroneero, normalmente están vinculados. Unos miembros de la familia tienen la camaroneera y otros miembros tienen la larvera o hay asociaciones entre personas en donde todo el grupo tiene una división que se encarga de la producción de camarones y otros que se encargan de la producción de larvas. (...) No le podría decir la cantidad de familias, no me las sé, pero generalmente estas familias influyen también no solamente en la parte económica al generar empleo y al generar ciertas condiciones de dinámica económica, sino también son las que de alguna u otra forma participa también en política.

(J25) [(On larval production as a link in the chain): Yes, what happens is that it requires a smaller infrastructure, but it is extremely important to support the shrimp sector. Some members of the family have the shrimp farm and other members have the larvae farm or there are associations between people where the whole group has a division that is in charge of shrimp production and others that are in charge of larvae production (...). I cannot tell you the number of families, I do not know them, but generally these families also influence not only the economic part by generating employment and generating certain conditions of economic dynamics. But they are also those that in some way or another also participate in politics].

Rice is the primary product of Montalvo. In this situation, the link is often created with a collecting structure, known as a *piladora*, which receives and processes the rice. In general, the ultimate markets for Montalvo's rice are defined as the *piladoras* in the

Ventanas canton (in the province of Los Rios) or others in the province of Guayas. Although they are identified as the producer's final markets, they are not mentioned in the interviews as being part of a production chain. Value addition and production chain are sometimes confused in the responses.

(M14) (In Montalvo): How many production chains do you see here in the canton? A: Like the one Nixon Zapata has with soybeans. (Q) And what does he do with soybeans? (A) Soy milk. (Q) Is he the only one you know of? (A) Yes, that's why I say that it was always a project, and we hope that it will happen someday.

Intermediaries serve as the link between the producer and the other members of the chain. There are not forward (industry or ultimate market) or backward (purchasing of inputs) links. One possible explanation could be an individualistic approach, where there is no interest in cooperating but rather in competing. This appears in one interview from Canton Baños, but not in others. This feature will be revisited in the study of social capital in another section, but I leave it here as a consideration for the economic system.

(B16) It is a sociological aspect of Baños, if there is individualism, people want to be outstanding on their own, without caring about affecting the other. So, there is an interest in getting ahead in their company or business, and that affects them quite a bit in Baños. And since it is a small city and attracts many tourists, there is a level of competition where individualism tries to prevail.

Few respondents addressed the possibility of articulating products with the tourism business, signifying a new type of interaction. Both as a possible market for local products (hotels and restaurants, "horecas") and as a prospective market for agricultural tourism or shrimp farms. However, in certain cases, they exist in the production system as goals rather than realities.

(B01) (P) ¿Hay alguna simbiosis o búsqueda de simbiosis entre esta actividad agrícola y el turismo? (R) No, y ahí estamos muy equivocados porque tenemos que enlazar el turismo a la agricultura. Hacer como hizo Gramado en el Brasil, tuvieron un buen asesoramiento, la alcaldía en Gramado. Hicieron un programa para integrar Gramado con las comunidades, entonces se arma paquetes que salen en tours al campo. Los campesinos muestran sus chakras, ofrecen el almuerzo o muestran, muestran lo que tienen, y además hacen sus vinos, se compran con los vinos, con las marcas y ahí estamos mal, o sea el turismo, no estamos integrados con el campesino ahí estamos muy mal.

(B01) (Q) Is there any symbiosis or search for symbiosis between this agricultural activity and tourism? (A) No, and there we are very wrong because we must link tourism to agriculture. Do as Gramado did in Brazil, they had good advice, the mayor's office in Gramado. They made a program to integrate Gramado with the communities, so they put together packages that go on tours to the countryside. The farmers show their chakras, offer lunch or show, show what they have, and make their wines, they are bought with the wines, with the brands and there we are bad, that is tourism, we are not integrated with the farmer there we are very bad.

2.2.4.4 Comparison

Government-related operations, like in other small cantons, provide for most of the paid employment, additionally, there is as a substantial number of unpaid staff in family enterprises.

Table 35 Little Firms

Canton	Number of companies with 1 to 9 employees	Total companies	Percentage
Baños	1465	1508	0.97
Jama	200	206	0.97
Montalvo	631	671	0.94
Cotacachi	902	935	0.96

Source: Economic Census 2010

Additionally, when research adds the data on paid and unpaid personnel to the above reflection, data illustrates that individual enterprises generate less employment or have less paid personnel, implying that the structure is essentially family-based and, thus, in many cases unpaid, which is a constant for commerce, manufacturing, and service enterprises³³.

In terms of cantonal entrepreneurship, most of the companies in the four cantons are the size of a micro-enterprise in terms of employee count, indicating a precarious business situation and the limited possibility of fostering sustainable business networks or innovation ecosystems in these circumstances, see table 35.

Schumpeter's theoretical approaches to innovation, or Marshall's in terms of clusters, stay in the realm of the suggestion for interconnected and medium-sized businesses, rather than for small canton's small enterprises. However, the ability to build cantonal productive or value linkages is not clear or evident. Beyond the perspective of the strategy mentioned in the cantonal development plans, the interviews revealed that the concept of productive chains is still abstract, and its benefits have not been visualized among the four cantons' producers, processors, or traders, so it has not been constituted as an associative strategy. It has not been feasible to focus on industrial areas and their benefits if initiatives to establish and reinforce chains have not been encouraged.

³³ The informal economy is registered through the employment and unemployment survey, which shows a very high value for Ecuador, with 54.8% of the occupied population in the informal sector in July 2023, according to ENEMDU; the survey is representative at the country level. According to INEC's national projections, around 4.4 million individuals work in the informal economy (ENEMDU, July 2023).

2.2.5 How territory influence the economy.

The economic theory presented in the preceding chapter highlights the intimate relationship between the territory and the economy established within it. The location theory, which was also discussed, defines the productive process in relation to availability to means of production, raw materials, and transportation connections in each sector. Indeed, the geographical location of the four cantons studied reveals characteristics that suggest remarkably diverse potentialities (comparative advantages).

This section includes the estimation of many indicators that show cantonal specialization or concentration levels of economic activities. The interviewees discuss economic difficulties, cantonal resources, and the local dynamics they create.

There is a clear differentiation between productive activities in the four cantons. The interviews reflect a greater diversity in Cotacachi, a predominance of tourism in Baños, but in conjunction with agricultural activity, while in Jama and Montalvo the economy is more specialized: in Jama with shrimp and fishing; and in Montalvo with agricultural activity:

Canton Jama is located on the Pacific Ocean's coast, which gives opportunities for beach tourism as well as fishing and aquaculture activities; Montalvo is situated in the Guayas River Basin, which is one of the most fertile agricultural areas in the country. Cotacachi, in the highlands and foothills towards the coast, has a variety of microclimates and highly differentiated production; its main population center is in a highly exploited Andean zone; Canton Baños, is situated in the highlands and eastern foothills towards the Amazon, has an economy that has took advantage on the sector's tourism potential.

2.2.5.1 Territories with possibilities (what inhabitants say about it)

Actors in the four cantons value their respective areas' possibilities or opportunities. In general, we refer to territories with enough soils and resources (such as water and mining). In certain circumstances, a sense of "fondness" or "topophilia" serves as a foundation for the relationship with the territory in question. At the same time, stagnation and poverty are acknowledged as obstacles:

(B01) You will see the intangible countryside of Baños. Well, that God has privileged us with all the natures, enormous advantage. But there is also one thing, there is a particularity, the Baneños, love Baños, for the climate, for the tranquility, for everything, for everything we love, I see here, I have here in my house in Luna Runtun, I can stay here for a month, I do not even go down to Baños. So, the Baneños love Baños and the Baneños do not want to go anywhere. We Baneños want to live here, so the four reales the little or the much we have, we invest right here, whatever it is, we do not want to leave.

(B03) Baños es una ciudad pequeña y concentrada, que es fácil de identificar en los sistemas públicos y privados porque aquí puede, como dice todo mundo, aquí en Baños contiene todo, tienes cómo hacer todo cerca, hay piscinas, tienes hoteles, tienes cómo hacer esas cosas de las termas, tienes cómo distraerte, caminas, todo aquí mismo.

(B03) [Baños is a small and concentrated city, which is easy to identify in the public and private systems because here you can, as everyone says, here in Baños you contain everything, you have how to do everything nearby. There are swimming pools, you have hotels, you have how to do those things of the thermal waters, you have how to distract yourself, you walk, everything right here].

(M16) Bueno, Montalvo tiene mucho potencial comercial, turístico o aquí hay muchos balnearios. Pero no se ha aprovechado ni se ha visto obras, por lo tanto, es un estancamiento que no ha permitido que la gente crezca. De hecho, Montalvo es uno de los cantones más atrasados de la provincia.

(M16) [Well, Montalvo has a lot of commercial potential, tourism potential, here there are many spas (health resorts). But this potential has not been realized, likewise, no work has been noticed.; therefore, there is a stagnation that has not allowed people to grow. In fact, Montalvo is one of the most overdue cantons of the province].

(C04) (...) Also as a strength in that Cotacachi has different characteristics in the economy and in nature. From the territories, because here we differentiate it already in four zones, the urban zone, which is a mostly mestizo and indigenous population, the Andean zone with a mostly indigenous population and the zone of Intag: mestizo, montubio, which is how they self-identify in the population and housing census. And we also go to a characteristic also of Montubios, in an area of the Andean zone because it is a territory that is annexed to Cotacachi. And the difference is that as it has different climatic floors, the level of production is much higher for example for what corresponds to the food issue. I think that we survive from the Andean zone and the Intag zone that are really the producers and traders of all kinds of products that are found in the basket, in the market so to speak.

(C10) Well, agriculture is another important activity that is a millenary and ancestral activity because there has always been that possibility, the fact that historically our people domesticated about 380 new plants both for food and for other activities, even for industry. So that has been the bulwark for people to maintain themselves because if there had not been those foods until now, we would be starving living from hunting.

In the case of Montalvo, location is also pointed out as an important factor in the localization of commerce:

(M06) Montalvo in a sense, as it is between the highlands and the coast, for example many people from Bolívar, they come to buy materials in Montalvo because it is cheaper for them, many businesses sell iron, materials, ceramics. They buy the materials and take them to San Pablo, Balsapamba, Bolívar, San Miguel and the prices are much more competitive than in the province of Bolívar.

However, in some interviews there are historical, political, or social conditions that limit the use of these riches or elements of opportunity. In the specific case of Jama, the following observation is noteworthy:

(J19) (...) it is poorly cultivated because, the problem in Jama is that there is a latifundismo of the first order, no, the latifundios are immense, are large and that generates

a negative factor in terms of production. Because, as the latifundista says this is mine, and here the best lands are in the hands of land holders who do not make them produce. Lowlands where irrigation can be done, short-cycle crops can be produced but they are wasted, calculating one hectare for one bovine unit, which is really wasted, the land is not well cultivated.

(J25) In Jama, there is a little distortion of the data, it is called arable land more than what is suitable for cultivation, a lot of soil is taken from the slopes or certain areas that are not suitable for cultivation, but that are still cultivated. (...) what happens is that if you move away from the coast in Jama, you have a quite mountainous territory and people have become accustomed to planting in mountainous territory, but it is not the most sustainable because they can deforest the hillsides. When it rains a lot, the hillside erodes and drags a lot of palisades that covers the riverbeds and under the bridges. So, I believe that the 80% that is only arable depends on the approach, it may be that right now it is being cultivated. But I assure you that 80% is not the value suitable for cultivation.

The interviews discuss the opportunities and benefits that geography provides to the territories, as well as the concerns that unsustainable production poses in the territories. Although agriculture is one of the principal occupations in the territories, cantonal productive capacity is different.

2.2.5.2 Different indicators linked to location

1 Levels of productive specialization

Given the limited information available, the location and productive specialization indices are evaluated in this section, based on calculations from the cantons' GVA. The magnitude represented by the producing sectors may be seen in both the canton and the province. The study examined the data from the activities that comprise the GVA in 2010 and 2020, implying a comparative description of both years in order to find significant productive shifts or, moreover, cantonal productive trends. It should be noted that the study refers to small cantons, known as local articulators in the ETN. This national strategy, which is incorporated into national planning, characterizes cantons with populations ranging from 15,000 to 50,000 people as local, as well as small cities with limited functioning (Secretaría Nacional de Planificación, 2021) [National Planning Secretariat, 2021]. The data that will be presented below should be understood in this perspective.

Because in Ecuador there are no regions as political-administrative entities, a regional framework of comparison will be visualized for this sectorial approximation, which is based on the ECLAC technique for regions with restricted access to information. That is, it is viable to carry out this approximation as a level of governance and decision making, and that the provinces might play an important intermediation function between the local and national levels, as it is a strictly productive role that is outlined below.

Location quotient

The first indicator is the *location quotient*, see table 36, which helps research to identify the activities in which the territory specializes, determining the difference between cantonal and regional contribution to the activity. > 1 Specialized < 1 Non Specialized

$$Q_{ij} = \frac{GVA_{ij}}{\sum_j GVA_{ij}} / \frac{\sum_i GVA_{ij}}{\sum_i \sum_j GVA_{ij}}$$

GVA ij: Gross value added corresponding to sector i of canton j

\sum_i GVA ij: Total cantonal GVA

\sum_j GVA ij: Total sectorial GVA

$\sum_i \sum_j$ GVAij: Total provincial GVA

Table 36 Location quotients of activities

Comparison of location quotients of four activities in four cantons 2010-2020								
Cantons	Agriculture		Manufacturing		Accommodation and food services		Transportation and communications	
	2010	2020	2010	2020	2010	2020	2010	2020
Cotacachi	2.70	4.49	0.02	0.13	0.87	0.72	1.13	0.41
Baños	0.92	0.14	0.04	0.34	6.09	3.40	0.78	2.00
Jama	1	1.46	0.08	0.10	0.85	1.02	2.89	1.73
Montalvo	1.33	1.17	2.17	1.34	0.50	0.39	0.70	0.74

Source: Central Bank of Ecuador (2020-2020), ECLAC (1987).

In the instance of Baños, which is part of a province of national and regional economic importance: Tungurahua, the canton's location quotient (Boisier, 1980) for the year 2010 is 0.92 for agriculture, which is near to 1. This suggests that the sector in Baños is slightly smaller than in the province, with agricultural crops (excluding long cycle crops) and animal breeding being the key activity. 7 of the 9 provincial cantons have a location quotient larger than one, indicating a focus on agriculture. Electricity and water supply activities are greater than 1, indicating the importance of the Agoyan hydroelectric plant in Baños; similarly, accommodation and food service activities, implying that tourism activity in the canton exceeds that of the province, indicating a relevant specialization of the tourism sector at the cantonal level.

According to the last year's regional accounts of the Central Bank of Ecuador (BCE), the importance of the agricultural sector in 2020 does not indicate any improvement or specialization, neither at the cantonal nor provincial level, and the same products are produced as in 2010. The housing and food services business, for its part, continues to be a specialized sector of the tourism canton of Baños. Although the quotient is lower than in 2010 (from 6.09 to 3.40), the drop may be attributed to the severe hit sustained by tourist activity as a result of the pandemic's impacts; yet tourism activity remains vital for both the canton and the province. The transportation sector, which is linked to the commerce and tourist sectors, has shown a good trend in both years, increasing from 0.78 to 2, indicating that it will be more specialized in 2020 than in 2010.

In the instance of Cotacachi, the location statistics for 2010 reveal a canton specialized in agriculture, with higher strength in flower cultivation; this is the sector with the biggest value created within the canton, with an item also more than 1 in teaching activities. It is worth noting that, despite being a canton dedicated to the productive activity of handcrafted transformation of leather into clothing or utilitarian garments, the canton's regional accounts show little specialization in this sector, with a ratio of 0.02, which is very low when compared to its neighbors, Antonio Ante and Otavalo, which are distinguished by the importance of the textile industry.

By 2020, the canton of Cotacachi will have confirmed its high expertise in agriculture, particularly in floriculture. Again, with the largest quotient in comparison to other activities, specialization in mining and quarrying activity appears, which had a quotient closer to 0 a decade before but a decade later reached 1.38. Mining activity raises public opposition to exploitation. The data indicate a value of 1 in the construction quotient, implying that the size of this sector in the canton is significant in provincial terms and identical to the relative size of the sector in the province, which is noteworthy given that Cotacachi has a lower population growth rate than the national average. Despite its huge tourism potential, the activity in the accommodation and food services sector is less than one. Manufacturing activity is likewise less than one, as are commercial activities, showing a lack of specialization in the manufacturing sector.

In the case of Jama, a coastline canton, it is part of one of the country's largest provinces, with the largest number of cantons: 22 cantons. Agriculture and fishing were cantonal activities with the same relative size as the sector in its provincial ratio, with a coefficient of one, by 2010 (six years before the 2016 earthquake), with no cantonal specialization in this activity in comparison to the other cantons. The most important agricultural sector operations are tied to different short and long cycle crops and shrimp farming in Pedernales, Olmedo, and Puerto Lopez, provincial cantons with more specialization in agriculture, livestock, or fisheries. Another activity, in this case tertiary, in which Jama demonstrates specialization for that year is transportation and communications.

In 2020, the situation is different; Jama indicates greater specialization in agricultural activity, which is supported by an increase in shrimp production after 2010. The pools

had a significant impact on the canton's coastal landscape and was detrimental to the possibility of positioning the cantonal head as a beach tourist destination. Non-productive activity categories and specialization are expanding: Although public administration accounts for 1.07% of Jama's output, the canton is suffering a retreat of services that are focused on the adjacent canton of Pedernales. Transportation maintains a specialization value comparable to 2010 and the activities of lodging and food reach 1.02, indicating that the tourist industry manages to have a larger relevance in the canton and equal importance in comparison to the province. El Matal, a particular location next to the cantonal capital, is regarded a favored zone for Manabi gastronomy consumption, which might explain the index's trend.

Finally, the location quotient for the agriculture sector in Montalvo, Los Rios, is larger than one in 2010, illustrating growing relative specialization even within the province. The major products are hard maize and rice, although other crops such as cocoa cultivation and livestock breeding are also significant. What makes this canton notable is the specialization of the manufacturing sector, which is connected to the presence of mills that clean and pack the rice produced in the canton. This year, the value reached 2.17, reflecting the cantonal and provincial sectoral worth of these industries. The canton specializes in these two sectors; the location quotient in the other sectors is less than one.

The canton of Montalvo demonstrates specialization in the same sectors in 2020: agriculture, industry, financial activities, energy and water supply, and professional real estate. Due to the bottling facilities in the Montalvo metropolitan area, which have an increasing demand due to the poor quality of the water provided by the public service, there may be a specialty in water delivery.

Location coefficient

Another measure based on regional production is the location coefficient, see table 37, which is defined as "the existing measure between the interregional structure of an activity and a certain interregional structure of another regional activity that is used as a standard of comparison" (ECLAC, 1987, p.54). It is a relative indicator that assesses the concentration of activity in the canton and the area. With this definition, the study performs the regional analysis in a provincial scale. the location coefficient is an intrasectoral measure.

$$Q_s = \frac{1}{2} \sum_i \left[\left(\frac{GVA_{ij}}{\sum_j GVA_{ij}} - \frac{\sum_j GVA_{ij}}{\sum_i \sum_j GVA_{ij}} \right) \right]$$

$$\frac{GVA_{ij}}{\sum_j GVA_{ij}}$$

relative value of the sector of canton j with the cantonal total

$$\frac{\sum_j GVA_{ij}}{\sum_i \sum_j GVA_{ij}}$$

relative value of the sector total at the provincial level

Table 37 Location coefficients, comparison for provinces

Provinces	Agriculture		Manufacturing		Accommodation and food services		Commerce		Mining and quarrying	
	2010	2020	2010	2020	2010	2020	2010	2020	2010	2020
Imbabura	0.37	0.29	0.26	0.59	0.08	0.00	0.15	0.13	0.23	0.02
Tungurahua	0.17	0.15	0.15	0.10	0.29	0.15	0.12	0.09	0.11	0.13
Manabí	0.30	0.24	0.62	0.65	0.41	0.36	0.44	0.26	0.96	0.83
Los Ríos	0.21	0.16	0.37	0.40	0.40	0.41	0.27	0.25	0.91	0.91

Source: Central Bank of Ecuador (2020-2020), ECLAC (1987).

For the year 2010, in the specific case of Baños and the province of Tungurahua, none of the economic activity coefficient values are close to one, implying a lower degree of geographic concentration of economic activities in comparison to the sectors of electricity and water supply, which have a value of 0.65, and accommodation and food services, which have a value of 0.28. Both are important producing activity for the canton, with the latter, tied to tourism, being more important in terms of regional employment. Specifically in Tungurahua, the provincial data for agriculture, manufacturing, construction, and financial activities reveal a lower degree of geographic concentration (0.15; 0.16; 0.15, respectively) in relation to lodging and electricity supply, which are represented by the country's oldest hydroelectric plant: Agoyan, and the canton's tourism activities in Baños. Finally, based on this indicator, it can be confirmed that the provincial sectorial behavior is not focused on a single canton but in numerous cantons in the province, which might be suggestive of a province with higher equality among cantons.

The coefficients decrease for 2020, but the pattern of greater relative concentration remains consistent and falls on the same activities: water supply and lodging and food services, while agricultural, manufacturing, and financial activities are not very concentrated (values of 0.15, 0.10, and 0.11, respectively). Mining and quarrying activity has a coefficient of 0.12, which is greater than manufacturing activity. Manufacturing is more geographically concentrated in Ambato and Pelileo.

In the instance of Imbabura, this occurred in 2010. All economic activities have a location coefficient of less than 0.5, with the agricultural activity having the highest coefficient of 0.37, indicating that there is almost no concentration of the agricultural sector in a single canton or region, and that the sectoral distribution in the cantons is

similar to the sectoral distribution in the regional-provincial economy. Manufacturing and mining and quarrying industries, with lower coefficients (0.26 and 0.22, respectively), indicate a larger relative concentration after agriculture. In other words, the agricultural dynamics of Cotacachi alone do not explain the province's regional dynamics.

The location coefficient is less than one in 2020, reaching 0.593 in the manufacturing activity based on three productive cantons: Otavalo, Antonio Ante, and Ibarra. Agriculture is the second most important value at the provincial level, with a coefficient of 0.29 and two cantons that stand out: Cotacachi and Ibarra. This implies that, while the leather craft activity is very important within the canton of Cotacachi, this dynamic does not explain the provincial regional dynamics in a relative way. Given Imbabura's proximity to Colombia's northern border, the activities of electricity and water supply and trade reach 0.16 and 0.13, respectively, reflecting Ibarra's commercial prominence over the other cantons.

The province of Manabi, one of the largest in the country and with the highest number of cantons in Ecuador: 22 cantons, and the Jama canton that interests this study, exhibit the following behavior. Mining and quarrying had the closest coefficient to one in 2010: 0.9629, followed by manufacturing and building activities: 0.62 and 0.55, respectively. Manabi has significant production capability due to the export of seafood goods and ongoing investment in tourism infrastructure. The provincial statistics for this indicator indicate that cantonal dynamics are focused in a few activities and cantons. When compared to similar activities in other cantons, the figures on Jama's activities are quite minimal.

The trend repeats again in 2020, however the values decline due to the impact of the pandemic. The difference between these two sets of peaks is represented in the coefficient of Accommodation and food services, which for that year exceeds the coefficient of trade; similarly, it can be observed for this year that the activities that drive regional dynamics are not focused in one but in numerous activities. According to this statistic, the sectoral distribution of the Jama canton is negative, indicating that the cantonal dynamics are very low in comparison to the other cantons and the region as a whole.

In the case of Los Rios and Montalvo in 2010, the coefficients are less than one, with the largest corresponding to mine and quarry exploitation, an activity related to construction. Other key economic activities are housing, food services, and manufacturing, in that order (0.48, 0.39, and 0.37). After the largest cantons in the region, Babahoyo and Quevedo, Montalvo is the third most important canton in terms of manufacturing, and while the coefficient is lower than other activities, it is clear that agro-industrial activity improves the local economy, though it does not explain regional dynamics.

By 2020, manufacturing activity in the same province will have increased and will be connected to two key products: rice and hard corn, which will stimulate other production,

commercial, and service activities in the cantons. The dynamics are centered on mining and, secondly, industry related to the agro-industrial sector.

Herfindal index

Finally, the Herfindal index, an absolute indicator, will be applied to conduct an intersectoral study within cantons utilizing the equal distribution of sectors within the canton as a baseline for comparison, see table 38.

$$HERF_i = \sum_j \left(\frac{GVA_{ij}}{\sum_j GVA_{ij}} \right)^2$$

GVA_{ij}: Gross value added of sector i of canton j

\sum_j GVA_{ij} : represents the total cantonal GVA

Table 38 Herfindal index

Comparison of the Herfindal index in the 4 cantons years 2010 and 2020

Cantons	2010	2020
Baños	0.16	0.21
Cotacachi	0.2	0.33
Jama	0.19	0.16
Montalvo	0.42	0.41

Source: Central Bank of Ecuador Regional accounts

In the specific case of Baños, the Herfindal index in 2010 was 0.16, while the ideal is 0.08. That is, despite the fact that the distribution of economic activity among sectors is not ideal, Baños has a low score in comparison to other cantons in the province with greater sectoral concentration. As previously stated, Baños reaches 0.16, and while there is specialization in the fields of water supply and accommodation and food services, the canton also has other major activities such as trade.

In the canton, the index will rise to 0.21 by 2020. The canton's four most important activities are electricity and water supply, which accounts for 34.9% of economic activity, transportation and communications, which accounts for 23.6%, lodging and food operations, which accounts for 14.3%, and manufacturing, which accounts for 5.11% of growth since 2010.

In the instance of Cotacachi in 2010, the comparison reveals that the canton has a greater degree of specialization than the ideal in each of the cantons; the canton's index is 0.2, while the ideal is 0.08. In relation to the canton's overall productive economy, agricultural activities account for 31.9% of the canton's total productive economy. The canton focuses 24.64% of the GVA in construction; nonetheless, one of the activities that most identifies

the canton: leather work, which is part of the industrial activity also related to the tourist sector, accounts for less than 1% of the GVA.

By 2020, agricultural activity has reached a Herfindal index of 0.33, owing mostly to specialization in agriculture and building industries. Cotacachi has a higher ranking than the other cantons since it is more focused in this activity. Again, in comparison to the values provided, the manufacturing sector is low; agricultural activity accounts for 52.9% of all productive activities in the canton. Once again, it is notable that manufacturing accounts for only 1.67% of the canton's economic activities³⁴, despite being a highly valued sector associated with tourism.

In 2010, the index for Jama is 0.19, with specialization focused on transportation and communications, commerce and agriculture (26%, 24%, and 18%, respectively), and public administration (9%). The significance of commercial and governmental activity in that year is remarkable.

The canton displays another figure for 2020: 0.16, in the middle, an earthquake of 7.2 on the Richter scale occurs in 2016, severely affecting the canton. Following the catastrophe, and following the pandemic, economic activity falls: Transportation and communication: 22.98%, commerce: 11.35%, and agriculture: 19.62%. The government's post-earthquake rehabilitation operations may have contributed to the 17% increase in public administration.

In Montalvo, the Herfindal index reaches 0.42 in 2010, indicating a high degree of concentration in agricultural activity, which accounts for 62.6% of the cantonal economy. Commerce comes in second with 9.07% and manufacturing comes in third with 7.07%.

In Montalvo canton, a high sectoral concentration accounts for the following activities: agriculture with 62.27%, commerce with 8.82%, construction with 7.68%, transportation with 6.7%, and manufacturing with 5.57%, the latter with a value that falls compared to 2010, it is notorious the strength and concentration of economic activity in enclave agriculture as previously stated.

Comparison

In summary and relative terms, the indicators describe various realities in cantons and their relationships with provinces, which are regarded as regions in the specific context of the research. The cantons of the highlands and the coast have distinct sectoral realities and geography and differentiated growth patterns. In the instance of Baños and Montalvo, where the populations are increasing, it is visible that the major economic activities

³⁴ Health and education activities are excluded from this calculation.

provide higher attraction, in the first case via greater productive diversification and in the second through increased specialization in agribusiness.

On the other side, in Cotacachi and Jama cantons specialization is deeper and more focused in agricultural activity, independent of the productive subsector. In comparison to the other three cantons, Baños is unique in its ability to create not just diversity but also reduced concentration rates. Montalvo has the highest concentration of agricultural activity, with a high weight in its GVA. Economic activity in Jama decreased after the earthquake, however the trend has since reversed.

2 Some significant responses to the subject of specialization

(C04) Tourism I think is one of the issues to shore up in Cotacachi, the agro-industrial sector, livestock sector, then I think we would be talking I do not know if along the same line, trade, handicrafts at a general level, but this within tourism also as a line of work of the tourism approach. (...) The livestock sector, I believe, is stronger in the Intag area and, as I was saying, at the level of economic transformation, tourism also obeys to two different lines. In the urban area we have more of a shopping trade, more of a trade related to the acquisition of leather products. While in the Andean area, community tourism or tourism with identity is emerging when visiting community lodges. There are many hostels, I would say more than twenty hostels in different communities, where a model of coexistence with the community is generated and with the owner of the hostel because almost all the hostels are close to the family that manages, that administers. That is, we would say, the main denominator of the economy here in Cotacachi.

In terms of employment or incomes:

(B14) Let's see, in Baños the main dynamic has always been tourism. Around the communities there has always been agriculture, so to speak, the tangerine and avocado season, that is, it includes a lot of crops as you can see, blackberries are planted, grapes are planted, strawberries are planted, tree tomatoes, all these types of activities and the production of cheese and milk. This has always been an issue. And now in certain communities, with the support of the prefecture and even the municipality, they are working on aquaculture issues, on fishponds, especially in sectors of Río Verde, in that sector there are quite a few people who are dedicated to this type of activity. And obviously the one that has always been, the topic of guava and melcocha candy production that brings most of its raw material from the city of Puyo and here there is a factory that directly processes and transforms directly into mints and gifts for visitors.

(J26) The first source of income (in Jama) is the shrimp farms, artisanal fishing and livestock, agriculture and lately we are promoting tourism and also the vacation settlements or vacation resorts that are being built on the coastal strip of the canton, because it is a very (...) beautiful area with beautiful beaches, so many urbanizations are being formed around this theme and therefore tourism is growing.

(M16) I believe that here (in Montalvo) people only survive with what the land gives them, that is, by instinct people know that they should plow the land, apply fungicide, fertilizers, etc. But there is not the advice that there should be, it could be that one or the

other, depending on their economic capacity, hires someone from outside, but as such, to say that the authorities put emphasis on the agricultural field, I don't think so.

(M17) El sector agropecuario es fuerte, pero pienso que es muy dinámica la parte agrícola porque esto va a depender de los productos porque usted me mencionaba la soya, no actualmente tuvo dificultades con este cultivo, ciertas plagas, fue reemplazada en bastante superficie, antes se sembraba, pero sigue manteniendo un cultivo como este, que pienso que le genera un elemento en la parte industrial donde están las piladoras, y la parte turística que son los fines de semana

(M17) [The agricultural sector is strong. But I think that the agricultural part is very dynamic because it will depend on the products. Because you mentioned soybean, there were difficulties with this crop, certain pests, it was replaced in a large area, it was planted before, but it continues to maintain a crop like this (rice), which I think generates an element in the industrial part where the mills are, and the tourist part that is on weekends].

In the opinion of one interviewee (public official), it would still be necessary to promote the development of competitive capacities, towards a specialization in line with the opportunities.

(J25). I know that there is a tendency of many people to compete. They always say that Manta must compete against Guayaquil. We have to have the same number of containers that arrive to Guayaquil, that arrive to Manta and start with a series of issues, but it requires a lot of efforts and resources to try to take a slice of the pie from someone who already has a strong grip on it. It is easier to identify what we are unique in and promote that because we will have a series of competitive advantages and I think that is what Jama should do. Knowing how its dynamics is now, give it a different vision, that is, not to accept what others say, but to say: this is what happens in Jama, let's use it.

3 Tourism as an aspiration

The economic dynamics of Baños have transitioned towards tourism as the driving force of the local economy. It is considered that Baños is one of the main attractions for international tourism and that tourism products have been developed based on these advantages. In the other cantons there are natural attractions, but it does not appear that tourists recognize them as destinations and the creation of tourism products is still lacking.

Baños links its success with tourism to the attractiveness of the Tungurahua volcano, which erupted in 1999 and 2006.

(B01) We took advantage of the situation, and at the time when people were complaining about the volcano, I was president of the Baños Chamber of Tourism. I worked for two years, and with the chamber, we reversed it. If he (referring to a volcanologist) said that this was wrong, we were right. We went out to the country to tell him that our greatest attraction was the Tungurahua volcano, from that everything changed (...) It was the hand of marketing that made the Chamber of Tourism of Baños at that time. The Chamber of Tourism was the pillar of those two years for the city. 2 years of intense work of the Chamber (...), for marketing promotion to bring tourism back to Baños.

(B14)(Q) Here I would like to ask you about this transformation from religious tourism to adventure and nature tourism, how, how did it happen? (A) First the transformation is due to, and I do not believe that religious tourism has (lost), we have it every weekend, so to speak, we can have it when visitors arrive. Only visitors who do not stay overnight but who visit, spend the day, go to church, visit the Virgin of Agua Santa, even come to bless their own vehicles that can come between two thousand people in a weekend, so to speak. On holidays that can double or triple. And an example of this is the walk of faith itself, which attracts an average of about 10,000 people who make this type of walk-in religious tourism, so religious tourism is maintained. However, it is focused on a much broader section, a small group of individuals willing for adventure tourism. Baños is one of the pioneer cities in this case of adventure tourism, so much so that they are, or I think it is one of the examples in regulation that has from the own regulations in tourism in regulations and control in adventure tourism, which facilitates by the theme of the same destination. We have waterfalls, we have trails, we have several attractions, with a rich soil for climbing, being close to the Amazon for rafting, so in this case we have been privileged to have a very large territory to develop these types of activities and obviously the innovative theme of the people, so to speak, now we take advantage of a creek and establish a swing, so to speak, within this area they are introducing innovation on the part of the people of Baños.

(B18) Because of the opening of the portfolio of services that we have as a canton of Baños. It is true that we have a lot of influence that comes here because of the Catholic religion, not because of the Catholic Church itself, but we also have a high rate of tourists, especially foreigners who come here because of the different tourism offers that we have here in Baños. For example: extreme sports, the pools, the chivas, the tours, the different ecological walks that we have here, so we could say that Baños tends to have both religious and nature tourism as well.

Canton Jama offers "sun and beach" tourism attractions, as well as a position that makes it accessible from Quito (it is the second nearest beach, along with adjacent canton Pedernales). Beach tourism has grown significantly in the area, encompassing communities such as Pedernales, San Vicente, and Bahia de Caraquez, among others.

(J19) The real thing is (...) we do not have infrastructure. Because if we compare Jama with Canoa or Pedernales, here the beaches are much better. What happens is that here, because of the problem of land tenure... that is, if you come to invest here, as they (the land) are in the hands of the owners, they ask for a certain amount of money so as not to sell. And on the other hand, since there are no basic works, the investor does not take the risk and there is no real planning for the development of the community. We aim to plan the development of the larger communities such as Matal, Don Juan, Tabuga, which are attractive because of their beaches, but we must work on that, gather the information to look for financing. For example, if you go into the countryside, the very presence of the flora makes it ventilated, fresh, pleasant, that makes us and there are first class geographic features, we have the Jama waterfall which is an accident where the river slides through the hills and it is an attraction that many people don't even know about.

Montalvo Canton would appeal to a wide spectrum of audiences due to its location between the mountains and the sea. However, because of its position, it has been labeled a "passing place" that does not tempt people to remain the night, among other factors.

(M12) Apart from agriculture, our project also focuses on tourism, for which we need to work on improving the image, taking advantage of the geographical location, which is considered to have many virtues such as the river, for example. Other activities that should

also be considered are petroleum and mining due to the large mines in the canton. Therefore, it is important to negotiate with companies for the correct distribution of percentages that will later serve to improve Montalvo.

In Cotacachi Canton more tourism enterprises have been identified, but in an initial stage:

(C01) Well, what we have said here in the canton as an alternative should be the theme of tourism, because it is not exploited, we would say, only the most recognized sites such as the Cuicocha lagoon or as the Cotacachi Cayapas Reserve. So, the issue of the hides is recognized and, in the city, but what has been working from the organization, from UNORCAC is the issue of community tourism as an alternative, also to the issue of coexistence, to the cultural theme, the ancestral theme such as medicine, to the issues of spirituality, all of that. So, this is what should enter very strongly. In the Intag area, there are also people who are working as an alternative in tourism, but you know that mining is the strongest.

However, in one interview from Baños Canton, it was observed that tourism, if not adequately handled, could result in major cultural damage.

(B15) Yes, yes, yes, yes there is a bit of (...) especially in the sense of the perception of the people from outside, because the issue of having this type of places at hand, has made people have a kind of perception in the sense that here what is drugs, what is sexual relations at an early age, everything that has to do with criminal acts has supposedly increased, but more than anything else this has only been determined not even by the people who are from here in the canton, but rather this goes or reflects the statistics of people who come from outside. It is very normal that at night and the nightlife sectors here in the canton are full of foreign people or tourists from other places more than the inhabitants of the canton themselves. The increase in issues such as drugs, alcohol, or sexual issues may have greatly influenced the way of seeing the development of children, (...), and they are already growing up in an environment in which they know that Baños is an active nightlife city, so it is also something new in what they have come to experience.

Something similar appears in Jama canton, given its proximity to more international sun and beach tourism sites, such as the beaches of Canoa and Montañita, where similar attitudes to the one mentioned in the previous quote can be seen, regarding possible cultural damage.

(J19) Well, we have been very respectful people, well here we all know each other, and one of the things we do is that when someone arrives, for example, they look at you and see you arrive here, here is a fellow countrywoman. A lady that we do not know and that is good in small towns that we all know each other and that we say a town of gossipers because but not so in the big cities. That looking at it from the point of view is good because in terms of tourism people have always been hospitable. People have been careful and that is typical of our people, that makes us to be good hosts here, unfortunately what we do not have to be better or equal to others like Montañita. From the positive point of view is not having infrastructure, there are no hotels, no services for tourists but there is a negative factor that has been generated in Montañita and Canoa which is the consumption of narcotics and that can be avoided by educating young people. Educating people, as we know each other we know the weak points (...), there is already a presence of such businesses, but it is controlled. Here it is not very notorious, but Montañita and Canoa are

notorious, it is embarrassing to say it, but consuming cannabis in those places is like smoking cigarettes.

4 Mining as a fear

Given its dependence on oil resources, Ecuador sees mining as an essential national economic alternative. Ecuador has sought significant investment in this industry in recent years. The Cotacachi canton has experienced a mining conflict in the Intag region for various years, with considerable community opposition to businesses that have secured mining concessions. This scenario first arose in the Montalvo canton.

(C01) In the Intag area, there are also people who are working as an alternative in the tourism sector, but you know that the mining sector is the strongest. So now we also have a division because now there are large companies that are entering, so they pay a large amount as a salary for the people who are there, it is welcome, we would say, to hire a person and pay a good salary, but that will be the first few days, (...). So, we would say that as an alternative in the Intag zone, the production issue can be addressed because they also have large extensions and the environmental issue, which is the most important thing to take care of the issue of water. So, they have a lot of water in the area, where right now they are cultivating (...) coffee, all that they are exporting, so they are making the farms as tourist farms as well. So, I think they are creating an alternative, but in reality, I think that there is still a lack of support from the State. Now that the geopark has been declared at the provincial level, Cotacachi has been declared a magical city, so I think that we should really take advantage of these declarations for tourism planning.

(C02) The mining issue is a strong issue, in Intag. But we also consider the mining issue as an artisanal mining issue in Quiroga and a very strong one in Intag that we see as a very complex problem in the territory, due to the lack of consultation with the citizens, because we do not respect what the Constitution says. The citizens should be consulted on whether mining is feasible in each of the zones that are going to be implemented by the national government. There are some communities that have decided, others have not, so we are in a situation of citizen response to face the mining problem that is very strong, very aggressive, but the citizens in Intag have responded with the productive issue, with artisanal-productive enterprises and it is a model, for example they export coffee, as one of the best in the world, with the theme of "Café Río Intag": Intag River Coffee and have some products that have been born as an initiative of women, communities in the territories

In Canton Montalvo, due to the extraction of minerals for construction, there are voices of prevention regarding possible mining interventions:

(M12) Although it must be considered that the mining issue is conflictive due to the contamination generated by mining, even though it is legal and technical, the geographic location where it is intended to exploit, well, this is located in the hills where precisely all the streams that feed Montalvo are born. This makes it a delicate issue, but one that is the responsibility of the State. It is obvious that it generates resources, but it harms nature.

(M01) (Q) (I have been told that they are also starting explorations in Bolivar) (R) Yes, but this is already, supposedly, under concession with a Chinese company. In the previous government they have made a contract in which they have sold a part of the exploitation that they are going to do. Then, we ourselves as citizens, at least we as an organization,

(...) we have been in the market for 20 years. To exploit this mining, causes us harm. Because the materials that come out of the mining are going to fall on the ground and when they fall on the ground, they cause impurities. And cocoa, well not only cocoa, but all the products of our canton, will have a very strong impact because many times the knowledge of human beings is that sometimes we do these things, and we are opposed to the exploitation because it would affect us, and the impact will be great. (...) I would like to participate and explain and have a meeting (...) to explain what the damages are and what will be caused by the exploitation. Because we have the province of Los Ríos that we collect water from Guayas, (...) and now we are collecting (cocoa) from Manabí and now we are also stockpiling a part with the province of Bolívar and another part that we also want to stockpile is the province of Zamora Chinchipe (...). So, we as an enterprise, as a second-degree organization, we have technicians that each one of them are specialized and for example, last year we had a problem with the partners of La Esmeralda. There is a lot of contamination in La Esmeralda, and it is because of the mining that has been exploited, if you ever could know.

(M06) Just the rivers that we have and there is an issue of Telimbela. Now they want to do large scale mining in Bolivar with Chinese companies and now the whole population is really worried about the issue because supposedly there is uranium in that mountain. A war material and there are people imprisoned for protests and there is an issue that just from the explorations they are doing all the water they have extracted is contaminated and that water is used for crops, they are worried because it could be that water with a different ph. could come and affect production. This whole area is very concerned about the mining issue and that is more than anything else. The comparison of the economic dynamics of the four cantons reveals the local economies' weaknesses and heterogeneity, despite the fact that their populations are similar.

Conclusion of the economic factor

Between 1997 and 2020, Ecuador's national economy had various crises, including political problems in the 1990s, conflict with Peru, a drop in oil prices, climate occurrences such as volcanoes, earthquakes, and the covid. All of these shocks have a significant impact on local economy, sometimes exacerbating poverty.

The economies of Baños and Cotacachi appear to be the largest in terms of size; Canton Jama, on the other hand, has a substantially smaller economy, accounting for nearly a fifth of the economy of Baños.

The economies of Baños and Montalvo appear to be more dynamic than the national economy's growth. In the case of Baños, the economic weight of the Agoyan hydroelectric plant is significant, but it functions as an enclave economy with little impact on local dynamics, so tourism, in conjunction with transportation, is the sector that boosts the local economy; agricultural activity is less important in this canton.

When compared to the other 13 categories, agricultural activity is by far the most important in the cantons of Montalvo and Cotacachi. In Cotacachi, there is some increase in tourism and export of local items throughout this period, but the canton's general dynamics are slowing.

Canton Jama has a very small economy that is not extremely specialized. Public administration, health, and education are vital, implying a government-supported economy.

The road network connects the territories with their neighbors and the main cities (provincial capitals and economic hubs in Ecuador). None of the four cities have direct access to the country's main roads (the Coastal Highway and Pan-American Highway). The main roadways of Jama and Cotacachi pass "on one side" of the cities, (roads bypass cities) which may be a significant disadvantage. Nonetheless, external markets can be easily identified: Cotacachi's flowers, fruits, coffee and leather; Jama's shrimp; Montalvo's rice and corn; and Baños' tourism.

Internally, it is observed that Cotacachi serves as an articulation market for its rural residents, despite the distance from some "coastal" areas, where other linkage circuits (with the provinces of Pichincha and Esmeraldas) are located. Because of Montalvo's proximity to Babahoyo (the provincial capital), much of the output is channeled to that city rather than using Montalvo as a central location. In reality, Baños does not have a permanent local market, but rather weekly "fairs"; producers prefer to direct their products to the market in Ambato (provincial capital; in fact, one of the main collection centers in the country). Jama, on the other hand, does not play the role of articulation because it has a small market and is close to other external markets (the cities of Pedernales, Bahia de Caraquez, Chone, and Manta) that are more attractive.

Finally, depending on the type of relationship and the rootedness of the link, various dynamics emerge in the cantons. It is also influenced by geographical location and the economic matrix of production and services that has evolved over time.

With the exception of leather handicrafts in Cotacachi and piling machines in Montalvo, the small cantons have few manufacturing enterprises. Small businesses, particularly those that are small, are typically run by families and generate little employment. With the exception of the tourism sector, there is no company association strategy. There are no prerequisites for establishing innovation ecosystems, clusters, or value chains.

In the case of Baños and Montalvo, where populations are increasing, it is visible that the main economic activities are becoming more attractive, in the first case through greater productive diversification and in the second through greater specialization in agro-industry.

In contrast, specialization is deeper and more focused on agricultural activity in the cantons of Cotacachi and Jama, regardless of the productive subsector. In comparison to the other three cantons, Baños is unique in its ability to foster both economic diversity and low concentration rates. Montalvo has the highest concentration of agricultural activity, accounting for a significant portion of its GVA. Following the earthquake, economic activity in Jama fell; however, this trend has since reversed.

Small cantons in Ecuador contribute very little to national GVA: none of the cantons contribute more than 1%. Canton Baños has a stronger and more diverse economy than the other cantons, with a nearly double-digit growth rate (from 80 to 150 billion GVA) between 2007 and 2020.

Cotacachi and Montalvo have GVA growth at a slower but significant rate, Cotacachi has an annual average growth of 4.34% and Montalvo 4% between 2007 and 2020. the highest increase in growth happens between 2013 and 2020.

Agriculture and livestock activities are particularly important in the cantons of Cotacachi and Montalvo (approximately 40% of GVA in Cotacachi, more than 50% in Montalvo). It is quite low in Baños (less than 5%).

In the instance of Baños, one must evaluate the influence of hydropower generating, which would be the major weight in the GVA but is minimal when compared to employment production. Hydropower activity is a "enclave economy" with minimal influence on local development. Additionally, the tourism-related economic sectors of transportation, housing, and restaurants are particularly important in this canton.

Jama's economy is quite modest in comparison to the other economies: it is around one-fifth the size of Montalvo or Cotacachi, and one-seventh the size of Baños. Although the structure is more complex (the proportional weights of each sector are near), the activities of education, public administration, and aquaculture are given the most weight, despite the fact that the first two do not contribute to productivity per se. It is also the canton with the greatest economic crises (declines in the economy).

A mainly impoverished and small population, as seen in the four cantons studied, indicates a number of economic restrictions. Financial resources are one such restriction. The low quantity of banking services serve as "proxy" indications for the limited amount of financial resources: There are no branches or agencies in Jama or Montalvo; Cotacachi has three, Baños has five.

We did not discover enough data to determine whether there is external investment to supplement these resources. Some investments are possible, particularly in the tourist industry, with a higher incidence in Baños and Jama. Investment in shrimp farms in Jama, as well as mills and farmland in Montalvo, can be profitable. In the case of Baños, we find an important diversification, with a weight for hotel, transportation and commerce activities.

Integration of economies into regional, national, or global economies is another distinguishing feature. Baños has a great integration to the worldwide tourism market and to the national market through hydropower generation, although the same integration is not observed with agricultural or livestock products (which are the major source of income for many of its inhabitants).

Jama is a supplier of an export commodity, although its output is minimal. Although there is access to foreign markets via Guayaquil and Manta, this has no influence on local growth.

Montalvo and Cotacachi have regional (Babahoyo and Ibarra) and national (Guayaquil and Quito, respectively) links. Montalvo's specialized manufacturing provides it with a more robust economic base. The comparison is indicated in table 39.

Table 39 Summary of economic factors

Element	Baños	Cotacachi	Montalvo	Jama
Structure: Predominant activity	Tourist services	Agriculture	Agriculture	Fishing
	The city of Baños has a strong concentration of tourism-related services. The primary sectors are the dominant economic activity in the other three, both in terms of GVA and Occupied Population.			
	The local economic development approach would enable Baños to make better use of its potential resources, allowing it to achieve a competitive advantage based on its comparative advantage (tourist attraction). This endeavor would be absent in the other cantons (ref: Abromovay; Porter).			
Structure: Diversification of economic activities	Major	Minor	Minor	Minor
	Transportation, accommodation, food services, and, to a lesser extent, agriculture are all available in Baños. This suggests a variety of revenue sources and reduced reliance on a single occupation. Although tourism activities may be jeopardized, particularly owing to the volcano's closeness, there is a stronger capability to control vulnerability than in the other cantons.			
	The larger the variety of economic activity, the bigger the opportunities for job creation, and according to Xiao and Drucker (2013), the more diverse an economy is, the more likely it is to withstand catastrophic disasters. A more diverse economy may develop other methods to deal with disasters, which is a crucial approach for Ecuador. According to Jane Jacobs and Romer, the productive capacity of cities creates more commercial activity, which leads to more activity in cities (which is better from an economic sustainability standpoint to the concentration of activities) (ref: Jacobs, Romer). According to the base theory, the dynamics are dependent on acquiring revenue, and these are more viable in the face of growing diversification.			
Structure: Taxpayers registered on a national basis, in	Very High	High	Medium	Low
	The number of persons in the National Internal Revenue Service's (Servicio Nacional de Rentas Internas) taxpayers' registration indicates a certain formalization of income activities. Despite the fact that Cotacachi has a population of			

Element	Baños	Cotacachi	Montalvo	Jama
relation to the local population.	40,000 and Baños has a population that is about half that of Cotacachi, the number of taxpayers is nearly the same. This means that Baños will be more formal. It should be emphasized that Montalvo's corporate activity is related to agribusiness.			
	Better economic formalization implies more resources for government programs through taxes, better stability and dignity in employment, higher security for enterprises, and a stronger institutional framework that promotes territorial development.			
Structure: Occupied Population	Combines agriculture with services	Strongly agricultural	Strongly agricultural	Fishing
	The three cantons have more about a specialization of the occupied population in primary activities, although Baños has a lower percentage dedicated to the primary sector.			
	When the occupied population is oriented toward services, there is generally a separate skill training that increases human capital: the primary sector does not require further training. It also implies various levels of payment.			
Dynamics: Spaces oriented to commercial activity	Weekly fairs. Very small local market, permanent fair of melcochas and sweets.	Municipal market, permanent handicrafts market	No market infrastructure	Market with little movement
	Cotacachi has more consistent market activity, with a greater amount of commercial activity. Canton Montalvo did not have a commercial activity at the time of the research: local products were sold on the street informally.			
	Improving basic infrastructure is one of the public measures required to support growth, according to the theory of local economic development. Montalvo, in this way, limits the sales choices of its local producers by not having its own market infrastructure. We can relate improved market functioning in Cotacachi to increased income and better living conditions for local producers, which is not the case in Baños.			
Dynamics: Linkage with regional market	Medium, with Ambato	High, with Ibarra and Otavalo	High, with Babahoyo	Medium, with Manta and Pedernales
	Local producers find the major outlet for their products in regional markets, adjusting their activities to fulfill the demands of these markets beyond their canton. The comparison is done between the four cantons (it does not apply to the amount or price of items sold in foreign markets, but to the degree of articulation seen).			
	Connecting the local market to regional or national markets helps to explain the territory's economic trends. In this situation, we see a more linked economy in Montalvo and Cotacachi,			

Element	Baños	Cotacachi	Montalvo	Jama
	allowing local producers to rely on a certain level of demand consistency. In the case of Montalvo, however, the dynamics are more of economic growth than development. On the other hand, there is value addition in Cotacachi, both in production and in the valorization of their ancestral expertise (particularly in the UNORCAC market).			
Dynamics: Product internationalization	Tourism image	Coffee, flowers	No	Shrimp
	There are products in Cotacachi that are oriented to the international market, especially coffee. In contrast to Jama's shrimp production, Cotacachi's production for these markets is artisanal and community-based, while Jama's is a business enclave. Montalvo's production market is national, but its volume and productivity do not detract from its economic development. Baños attracts international tourists, especially from the United States and Europe. There are few Ecuadorian places that are located in international tourism agencies (Galapagos, Quito, Montañita beaches, Baños).			
	We may conclude that internationalization promotes growth in Baños and Cotacachi, but has had less influence in Jama, presumably due to the exploitation model (more entrepreneurial, and hence enclave-type, in Jama).			
	To summarize: national shocks have a strong influence on local economies; the agricultural sector employs a large number of people, but these are temporary jobs with little stability; there is no evidence of a business network, except in the tourism sector in Canton Baños; and the road network is critical for integration into external markets and internal articulation.			

2.3 Human Settlements in the four cantons : the city and its interconnection with the regions.

In small cantons, there are generally three levels of human settlements in relation to their population: the cantonal capital, which is usually a city of 10000 to 15000 inhabitants; a second level of city of 1000 to 3000 inhabitants, which sometimes has the administrative category of parish; and then other small settlements, which are more dispersed. According to the theory, cities fulfill differentiated roles within the region by grouping more people together; in the political-administrative division, in the "canton" or "municipality", a series of public services, such as courts, civil registry, notary registry, and the municipality, are located in the city. Furthermore, population density permits public service networks (such as water, sewage, and electricity). The city provides better coverage and access to education and health services.

With this context in mind, the next part explores many issues centered on the function of cities in the four cantons, taking into account the disparities between human settlements and urban and rural concentrations. First, the network of cantonal cities is examined, as well as how they interact with other cities in their province, country, and world, data is obtained on the variations in access to health and education between urban and rural areas. Beyond this, the section examines the features of small city efficiency, specialization, and how they connect to other cities in their province, country, and the world.

2.3.1 The city and its connections

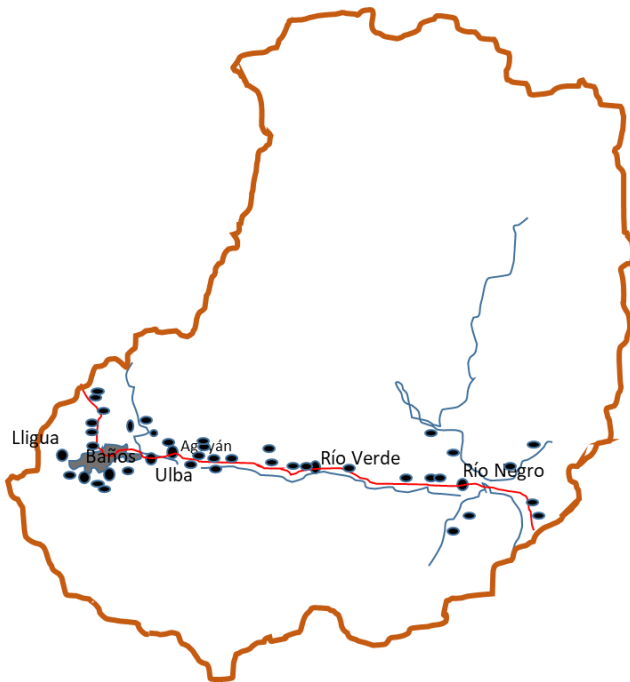
2.3.1.1 Internal connections

Human settlement networks are developed in the four cantons with a structure that is determined by geographical configurations, the status of access highways, and availability to resources. Some cantons are more concentrated on the urban center, while others are more rural, with a cantonal capital whose dynamics are mostly rural. In another scenario, the cantonal capital has a strong urban dynamism but a relatively rural population.

Baños

According to the 2010 census, Canton Baños has an outstanding city. The urban sector of Baños, and its periphery (rural settlements very close to the cantonal capital) accounts for more than 73% of the total population (15,010 inhabitants in Baños city, out of 20,506 inhabitants in the canton). While the urban area has a gross population of 43.28 inhabitants/hectare, the other parishes have a density of 0.36 inhabitants/hectare in Ulba, 0.34 in Lligua, and 0.09 in Rio Verde and Rio Negro. This is due, in part, to the extensive coverage of protected areas in the territory. When net consolidated areas are considered (excluding territories not intended for housing), the density would be 58.61 inhab/ha in Baños, 24.32 in Rio Verde, 16.44 in Ulba, and 13.47 in Rio Negro, see figure 73.

Figure 73 Representation of urban settlements in Baños canton



Source: PDyOT (2019)

The Ulba parish (which may nearly be considered a conurbation), the parish of Lligua, and ten communities surround the city of Baños, constituting a core of settlements oriented towards the urban center.

The parishes of Río Verde and Río Negro were established on the way to Puyo (the road that connects the central highlands with the Amazon). The route follows the Pastaza River, which originates near the city of Baños and serves as one of the few entrances from the highlands into the Ecuadorian Amazon³⁵. The population of these parishes is small (less than 1,400 people in each parish according to the 2010 census). With few exceptions in the Río Negro area, where there are people related to the river. Additionally, the small cities which are located in the Amazon area are similarly linked to the road.

There has been significant improvements in this road in the past twenty years (after the eruption of Tungurahua Volcano in 1999), making the area more active and dynamic. Population increase is expected in the cantonal capital, the parish of Ulba, and the two

³⁵ The highlands are linked to the Amazon región through few roads, the majority of which follow a river that begins in the highlands and flows to the east. Geographically, there are four roads parallel to the rivers: the Papallacta (Quijos River) to the north, the Pastaza to the center, and the Paute and Zamora to the south. 20 years ago, the bad conditions of these roadways made communication extremely difficult. Baños was a highland city that was easily connected to an Amazonian city (the travel from Baños to El Puyo used to take three hours on average, but now it takes one hour).

parishes located on the way to Amazonia. The expected growth is due to the Baños connection with the city of Puyo and the dynamic relationship with adventure tourism.

Cotacachi

Cotacachi has a specific configuration as seen in figure 74. The city is located outside the province's main road circuit (about 10 linear kilometers from the Pan-American Highway), making it a less connected sector than other cities in Imbabura. The main road passes through the three cantonal capitals, the cities of Otavalo, Atuntaqui, and Ibarra, while the cantons of Urcuqu, Pimampiro, and Cotacachi are not connected by this main network.

Figure 74 Representation of urban settlements in Cotacachi canton



Source: Own elaboration, approximate based on IMG maps

Cotacachi's population is mainly rural. According to the 2010 census, 8,848 people live in urban areas, representing 22.1% of the total population. A significant portion of the population is concentrated in small urban centers (parish centers of Quiroga, Imantag, Plaza Gutiérrez, Apuela, García Moreno, Peñaherrera, 6 de Julio de Cuellaje, Vacas Galindo).

It must be highlighted that the majority of the parishes are quite ancient, and none - with the exception of Cotacachi parish - meet the 10,000 inhabitants, lower limit for the creation of rural parishes according to the legislation of 2011.

The cantonal capital (Cotacachi) and the parish of Quiroga are practically contiguous (less than 2 kilometers between boundaries). The parish of Imantag is located to the north, in the same core region. There are about forty indigenous communities in the "highland zone" around them. There are various road networks in this region, one to the Quiroga sector and another to Imantag.

On the other hand, the Intag area is a subtropical zone that extends all the way to the coast. The Las Golondrinas precinct, which had previously been an undefined and

disputed area, was integrated into the Canton in 2016. This precinct is now the most populous settlement in this area (about 6,000 people).

The population density of the Intag-Las Golondrinas region is slightly higher than in the highlands, but substantially lower given the territorial size. It is located within the "Cotacachi-Cayapas" reserve, which limits the sector's economic activity. All of the population centers are located along the route that extends from Cotacachi to Nanegalito (in Pichincha), passing via Quiroga. The Golondrinas area has another entrance that connects it to the Quinde sector in the province of Esmeraldas; however, a direct connection with the rest of the canton has to be established. Actually, if people wish to go from Cotacachi to Las Golondrinas, they must first pass via Quito, which takes around three and a half hours by car and up to 9 hours by bus.

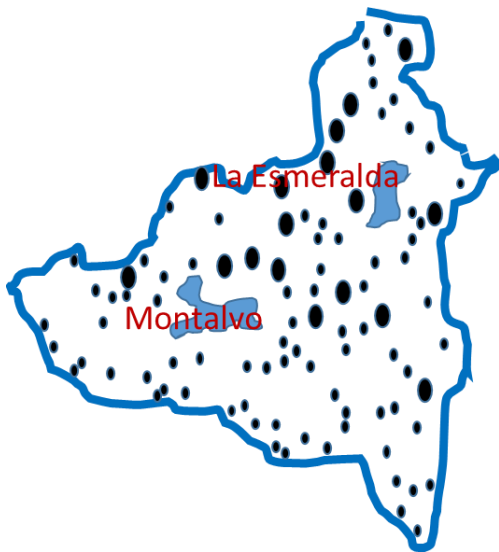
In summary, the canton's highlands are divided into three parishes: Cotacachi, which is separated into two urban parishes, Imantag and Quiroga, which account for 49.17% of the population. The towns of Garcia Moreno, Las Golondrinas, Peñaherrera, and a number of small settlements in the Intag region account for almost more than half of the canton's population.

Montalvo

The access to agricultural land (productive land) drives the growth of population centers in Montalvo Canton. Therefore, the population is dispersed in small population centers. They extend almost the whole canton because there are no restricted areas such as conservation areas or forest patrimony areas.

According to the 2010 census, of the 24,164 people living in the canton, 12,734 live in the city and 11,430 live in the rural area. However, agriculture and agricultural intermediary commerce is the primary activity of the urban population. This dynamic indicates a close connection to the rural sector as seen in figure 75.

Figure 75 Representation of urban settlements in Montalvo canton



Source: Own elaboration, approximate based on IMG maps.

Montalvo is located towards the canton's center-south, and is connected via the Babahoyo-Guaranda way. It is close to Babahoyo, the capital of the province of Los Rios.

There are other consolidated areas in addition to the urban area, one of which, "La Esmeralda," has been upgraded to a rural parish center, which means it has its own elected authority and public resources. Furthermore, according to the 2010 census, there are 34 population centers (called precincts). Second-order asphalt roads provide access to consolidated regions. Other places are reached through ballast or summer roads.

To summarize briefly, the canton has a fairly populated sector, but not dense, with several farming communities dispersed around the territory.

Jama

The city of Jama, according to the 2010 census, has 6,080 people, in relation to the 23,233 of the entire canton, which implies a 26.19%. That is, at that time, one out of every four people in the canton lives in the city, and three in the rural sector, as seen in figure 76.

Figure 76 Representation of urban settlements in Jama canton



Source: Own elaboration, approximate based on IMG maps

The beach route "Ruta del Sol" is the main axis for the location of the population settlements in the canton. It runs from north to south across the canton, almost reaching the Pacific Ocean. This results in a population concentration in the canton's western area, with roughly 12 settlements, including Matal, Don Juan, Rambuche, and Tabuga.

There are no population concentrations "inland" (in the canton's eastern quarter). The settlements are all clustered along the route, leaving an area without population.

The city of Jama is located approximately in the heart of this network. The majority of the communities are dedicated to fishing, aquaculture (shrimp), and, in a period of time sun and beach tourism.

2.3.1.2 Regional connections

As stated in the economic section, the local territory is connected to cities that serve as its external marketplaces or as service providers. The links of Baños are Ambato, and Quito or Guayaquil; for Montalvo, the connections are Babahoyo, and Guayaquil; for Jama the relations are Portoviejo, Guayaquil, and Santo Domingo; and in Cotacachi, the main connections are Ibarra, and Quito.

Cultural and administrative relations are assumed in conjunction with this mercantile articulation, particularly with the respective capital cities and with nearby large and small cities: in the case of Cotacachi, with the city of Quito, and in the case of Montalvo, with

Guayaquil, which are located in another province and approximately two hours away, making them accessible. In general, complementarity is highlighted (Berdegue & Proctor, 2014), with the other cities accomplishing what the cantonal capital cannot. This is especially true in Jama and Montalvo, where there are limited economic and social activities.

(J19) Well, (Jama articulates...) primarily with Pedernales, San Vicente, Bahia, and Portoviejo for banking issues, as there are no credit institutions here (...), and for marketing and product sales (...), for example as Pedernales has a packing plant, many people sell shrimp there, while others go to Guayaquil and Manta (...). Pedernales, for example, has a packaging business; many people sell shrimp there, while others travel to Guayaquil and Manta (...). Logically, Portoviejo is close, it is the provincial capital, and there are always standard bureaucratic procedures, such as (people) always going to the governor's office, to the intendency. to the provincial government.

(J16) Due to the lack of banks, public officials or residents of Jama change or receive their wages and come to shop outside because we lack a shopping center where they can buy certain items that they do in other locations, thus they travel to San Vicente or Pedernales

(M11) People who go on walks are nearby, and we are near Guayaquil (...) People prefer to go to Guaranda for medical appointments because we have a peasant health insurance there, a urologist, and because we have 10 peasant organizations here, they go to ask for an appointment with the urologist and are referred from there.

Given the importance of migrant mobility in Canton Montalvo's population dynamics, there is also the question of the link with "territories of origin," which requires a certain maintenance of distinct relationships linked to the identity of the population or topophilia.

(M17) (The canton's inhabitants are linked to...) The nearest one is Babahoyo, but it is in the province of Los Rios, whereas Balzapamba is in the province of Bolivar, and I believe that it would be much more... we are also talking about at the level of families, it is something that they are connected to (...) There is a lot, and many people from Montalvo attend church services at Balzapamba

Articulations with university campuses, indicate a personal contact for many families (and act as a stimulant of migratory activities at the time) would play a specific significance.

(J07) La falta de oportunidades que pueda dar el gobierno a las personas. Basta con que no haya una facultad, alguna carrera, para que la gente emigre, ¿porque los que termina en el colegio donde van? Van a Portoviejo, a Manta, a Calceta, a la ESPAM, que hay muchísimo estudiante; a Jipijapa, pero después ya no regresan, porque encuentran oportunidades de trabajo, se enamoran, se quedan por acá. Si llegasen a construir un instituto de mar, o un instituto de arqueología como le decía, estoy seguro de que van a regresar allá, (a Jama).

(J07) [The government's inability to provide individuals with opportunity. It is enough that there is no faculty or job for individuals to emigrate, since what happens to those who pass high school? They go to Portoviejo, Manta, Calceta, ESPAM, where there are many students, and Jipijapa, but they don't return because they find work, fall in love, and stay

here. If they built a marine institution, or an archeological institute, as I suggested, I am confident they would return there (to Jama)].

The investigation eventually discovered coordinated connectivity activities with neighbouring cantons. The sole scenario mentioned in the interviews is an attempt to manage the waste problem between Cotacachi and Otavalo.

(C03) For example, we are addressing and managing the recycling issue with Otavalo (...). Because of the contamination of the Ambi River, the Mayor has joined with virtually all of them except Pimampiro, for example, he has a follow-up, he travels through each one of them, so the aim is to detoxify the river, sometimes some give them answers, others stay there, but we are working on it. The waste issue is also (...) as a commercialization issue, since if we want to manufacture paving stones out of the plastic, Otavalo has no difficulty supplying it to us. We're also talking about being able to build a commonwealth with the waste problem, but we still need to accomplish it; the number hasn't been generated yet, so the discussions are ongoing.

2.3.2 Urban – rural relations

Cotacachi has stronger linkages between urban and rural regions than the other three cantons. One interviewee (a community leader) speaks about the people's "appropriation," which is represented by the "taking of the park," a cultural practice held on the occasion of Inti Raymi (around June 21, summer solstice).

(C09) (Q) How is the interaction between rural and urban regions linked? (A): I've always said there's a strong connection, and it's always been significant: and both sides have required each other, and it's been a very necessary complement. I believe it is one of the canton's values, first and foremost because of its strategic location, Cotacachi is a strategic location or a quadripartite: we are talking about the center where the power is, and around the center the communes and making a ring all the communes point and see from the hill and from the valley from the places, then Cotacachi is under assault and that strategic position from besieged allows peripheral as a cultural-social ring. People from rural areas cannot stop coming here to bury their dead, implying that cities have a powerful hold on them, certainly. So the communes have a strong appreciation here, it is not like Ibarra, Ibarra does not have a ring, Otavalo is a little different, there is no ring in Cayambe, that has caused, also the link of the communes is very close, it is 3 kilometers, 5 kilometers, that makes the city to be taken, easily and that makes people always here, They will always be sitting in the park, in the church, in the cemetery in the market, now, from before to now, the people eat, consume what the commune provides them with, from mortiños, which are seasonal fruits, to blackberries for the *finados*, always.

This view is not homogeneous. In the same Canton, another person interviewed says:

(C03) There are numerous unsatisfied basic needs, such as basic services in rural areas, sewage, drinking water, and electricity. I feel that telephone service with multiple operators is sometimes faster than essential services like water and sewerage. We have a very strong weakness in the Andean zone, for example, and in the urban zone we remain deficient, maybe due to a lack of planning to be able to comply; for example, there are certain lengths of sewers that have already collapsed. They must be changed, renovated, and they begin to be a problem when it was perhaps an important impact to have it, and today it becomes a

problem because the water issue collapses, we see that perhaps at first it was important to have the sewage system, to have the plant and contaminate the river, and then there are direct discharges into the river, There is a very strong influence in the environmental issue, the unsatisfied basic needs have been classified as water, power, and sanitation, but I believe that the environment should be included, with the significant contamination that we ourselves produce with the sewage system, for example. (C03)

The function of the small city as articulator of its territory is not acknowledged in the other interviews, which appear to believe that it is not fulfilled or is not evident. In other circumstances, it is even referred to as "divergent paths" or (in my understanding) "growth with a back to or at the expense of the rural," rather than the academically established "development engine" or "service" role.

For example, when questioned about the interaction between cities, towns, and rural areas in canton Baños, an iconic response was "(they go...) each to their own side" (B01). A sense of abandonment for rural areas.

(B01) It is the municipality's responsibility to invest. The true beauty is not in the town; rather, it is in the environs. If you merely travel up to Runtun, you may see the mountain spectacle; if you go to the front, to El Triunfo, it is magnificent. So there is a lack of investment; in other words, the municipality must invest in the villages, build lovely boardwalks, and build infrastructure; (...) Yes, there is no investment outside (relating to municipal investment in rural regions).

Despite the undeniable concentration of administrative activity.

Aquí se localizan más... Baños es una ciudad pequeña y concentrada, que es fácil de identificar en los sistemas públicos y privados porque aquí puede, como dice todo mundo, aquí en Baños contiene todo, tienes cómo hacer cerca, lo que piscinas, tienes hoteles, tienes cómo hacer esas cosas de las termas, tienes cómo distraerte, caminas, todo aquí mismo (B03).

(B03) [Baños is a small and concentrated city that is easy to identify in public and private systems because, as everyone says, "here in Banos you have everything, you can do everything, you have everything nearby, whatever you can do, you have hotels, you have how to do those thermal activities, you have how to distract yourself, you can walk, everything right here].

(M11) (Q) Why is there no market in Montalvo? (A): We have a stadium and a coliseum; what we need is a market; we have been suffering for more than thirty years since when it was merely a canton, money was given to create the market, but it was never completed, and it has been that way ever since. (Q) Do you claim any other infrastructural work? (A): The sewerage.

(J26) (Q) Is there any public business outside of Jama? For instance, consider the health center in... Yes, La Mocora (...) is really essential. The other is the ambulatory center of the peasant insurance of the IESS, which is located in Colorado.

Montalvo would have better service functionality in certain areas, being the supplier of its surrounding territory.

(M11) Montalvo is nearly fully dependent on the rural area since all of the people who go out to buy everything they need for the home, as well as food, even those who come from Bolívar are closer from there to here, so every weekend they come to shop and it is extremely crowded. (...)

In Jama, even that role of provision is questioned (although the interviewee in this case is an official of the Provincial Government):

(J07)(Q) What is the social and economic link between the communes and the Jama center? (A) I'm not sure, you've been there much longer than me, if there are families in Jama's urban area who also live in the rural area and go to visit them, because in the commercial area, or in the livestock, milk, coffee area, I believe it's very low, if you know what I mean. That doesn't seem very powerful to me. I'm sure if the Jama market was hosted in Tabuga, everyone would go there and forget about Jama.

The link on the cultural side is seen as sporadic, often around religious festivities, apparently still with a strong attraction.

(M16) It's a close connection, especially on Sundays during the fair when people come to view the food, go to church, and then return to the precincts . As I previously stated, it is a very close connection.

One activity that would maintain a certain cohesion as cantons is sports.

(P): Y cómo ¿qué tipo de vinculaciones culturales hay entre las comunidades? (R): Normalmente deportivo (P): ¿Nada más? ¿Y las fiestas? (R.): Son las fiestas patronales, y ahí si nos reunimos a sitios así (P) Por ejemplo: ¿vienen acá de Jama cuando son sus fiestas? (R) Sí (P) ¿Cuándo son las fiestas? (Resp) Aquí son en agosto y en octubre (...) Entonces aquí se llena de jameños (J10).

(J10) [(Q): What type of cultural relationships exist amongst the communities? (A): Typically, sports (Q): Is there anything else? And what about the festivals? (A): They're patron saint celebrations, and we gather in locations like there (pointing to a park or sports fields). (Q): Do they, for example, travel here from Jama during their festivals? (A) Yes (Q): When do the festivities take place? They're here in August and October (...) So there are a lot of Jama residents here.

(M13) Cada que sale en sus fiestas patronales (de Montalvo) hay esos juegos, ya mismo viene la fiesta aquí en San Clemente, el 26 de este mes principia la fiesta de San Clemente ahí hay un cuadrangular de deportes, de fútbol.

(M13) [There are these games every time they go out for their (Montalvo's) patron saint festivities, and the party is coming up with the San Clemente party, on the 26th of this month, and there is a sport quadrangular, soccer].

According to the interviewees, there is a need for more coordination and solidarity.

(B01) I mean, yes, if they sell in town, which they do, but we need to do more, we need to truly establish a notion where.... I argue that the best business is to grow together. We must assist communities in growing. We need to connect, we need to take visitors to El Triunfo (a rural area), we need to help some people in some houses, we need to help them with skills, we need to teach them how to cook anything they put in, like open a little food

business. We have to circulate the knowledge and take tourists to view the sights; in other words, we must help.

2.3.3 Territories as spaces of inequality : (access to education and health services)

Inequity in access to education and health services is another way of expressing inequality of access in the rural sector. The dispersion of the population in rural regions makes it extremely difficult to find places close to the network of services, and the situation becomes even more complicated when the services are concentrated in a single location (school, college, health center, or hospital).

2.3.3.1.- Health

The Ministry of Health of Ecuador establishes degrees of complexity in health care, the first level including health posts, general clinics, and public health institutions. The second level of treatment comprises outpatient care in clinical-surgical specialty clinics or day hospitals, as well as inpatient care in basic and general hospitals. Specialized centers, outpatient clinics, specialized hospitals, and speciality hospitals comprise the third level of treatment. There is a fourth level of treatment, which include high sub-specialty clinics and research facilities.

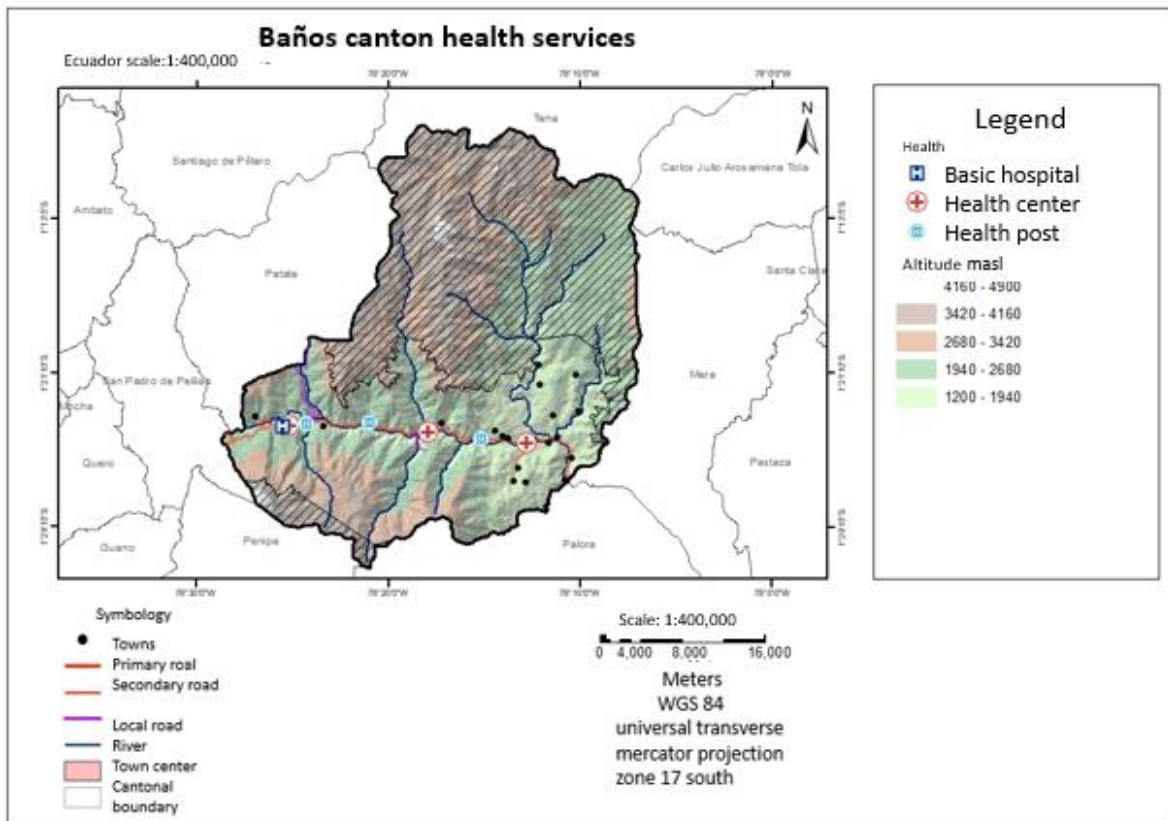
In communities of up to 2000 people one health post is established. Type A health centers serve populations ranging from 2000 to 10,000, whereas type B health centers serve populations ranging from 10,000 to 50,000 inhabitants.

There is no minimum population need for installing a basic hospital, which is considered a second level of treatment. Outpatient, emergency, clinical hospitalization, basic burn treatment, basic specialties (internal medicine, pediatrics, gynecology-obstetrics, general surgery, and anesthesiology), dental, laboratory, and imaging services are all offered by a basic hospital. It does not include intermediate and intensive care, as well as subspecialties (MSP, 2012). Nevertheless, health system in Ecuador is in deficit. According to WHO global data, Ecuador and Colombia both had 1.5 beds per-100 population in 2013. In Germany, there are 8.3 beds per-100 people. This means that the country is in deficit in case of a health crisis.

More specifically, based on census data, each of the four cantons should have a "health center B." Both Baños and Cotacachi, on the other hand, have more complex infrastructures, such as basic hospitals. Because of the population dispersion in Baños and Cotacachi, it is necessary to establish "health posts and centers" in several parishes.

There is one basic hospital, two health centers, three health posts, a nested unit, and an ambulatory care unit in Baños, see figure 77 (SICES, 2010).

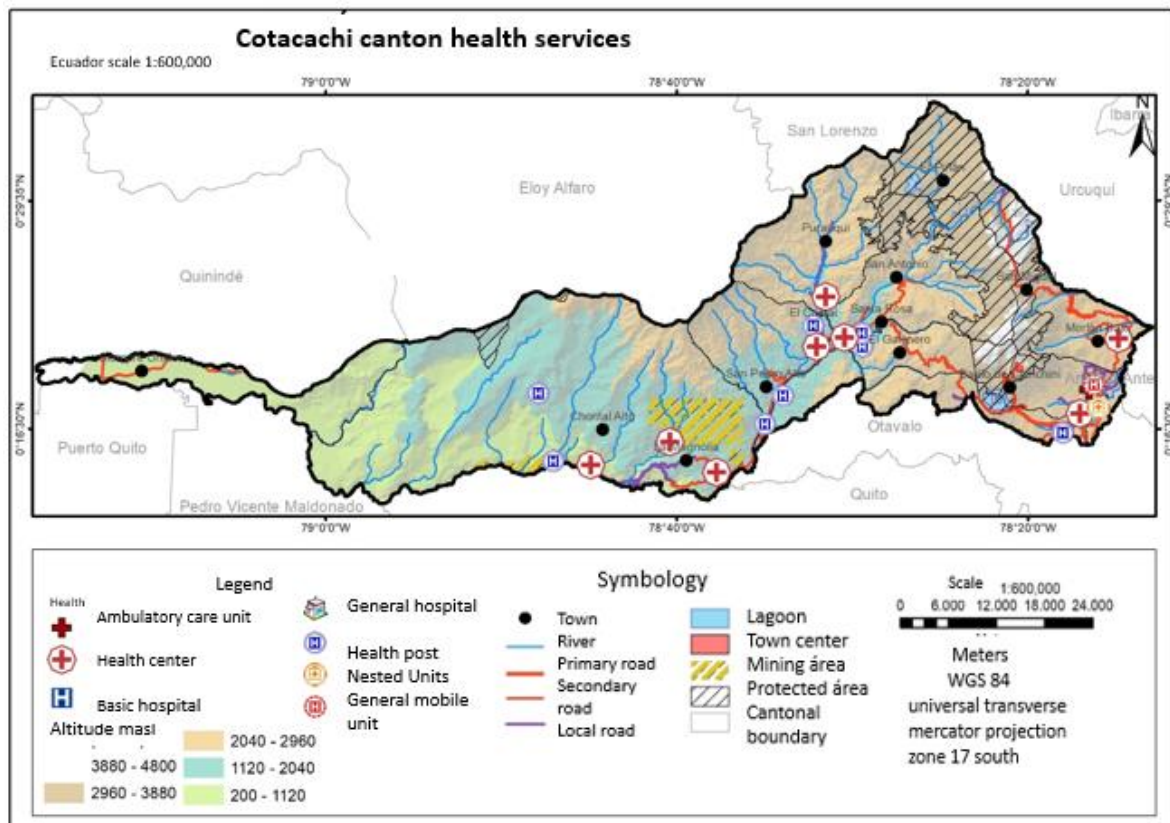
Figure 77 Health services, Baños



Source: IMG (2018).

Cotacachi has 8 health posts, 8 health centers, one basic hospital, and two mobile units, one ambulatory and one nested unit. There are parishes such as García Moreno and Golondrinas that do not have these health services, see figure 87 (SICES, 2010).

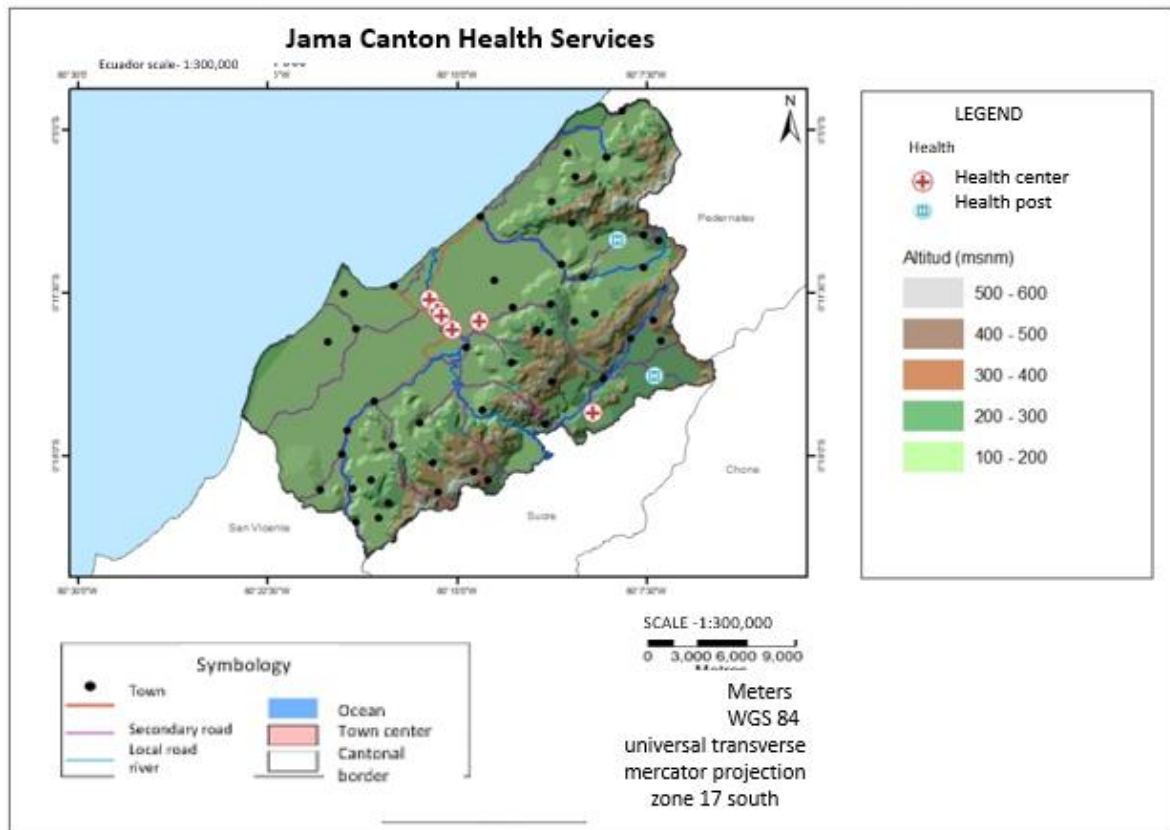
Figure 78 Health services, Cotacachi



Source: IMG (2018)

Due to the small population of Canton Jama, and its proximity to Canton Sucre, the availability of health services is lower. There is one health center, two health posts, and five "type A" centers in this canton as seen in figure 79 (SICES 2010).

Figure 79 Health services, Jama



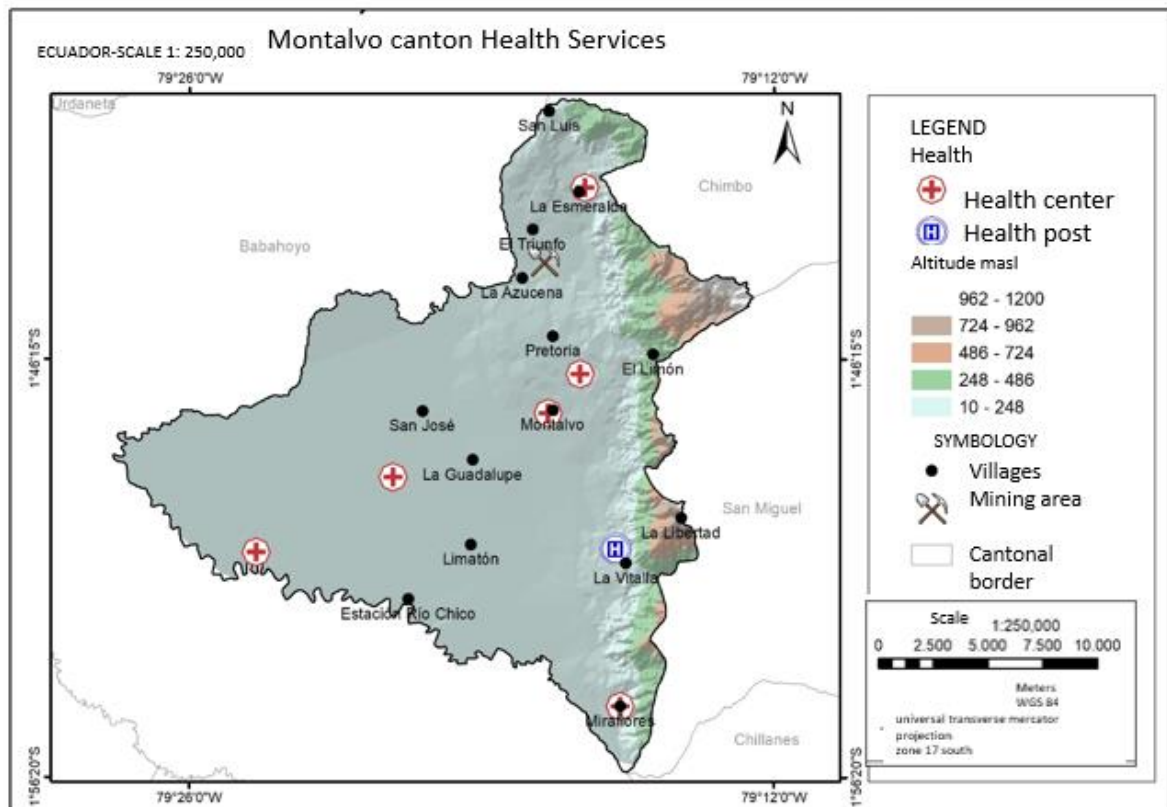
Source: IMG (2018)

As previously said, Montalvo's population is distributed across the canton. The population moves easily to the cantonal center and the city of Babahoyo - the provincial capital - which is about half an hour from Montalvo. Perhaps as a result of this geographical proximity, the canton's quality of care can only reach the first level, with 6 health centers and 1 health post. This is a very basic level nevertheless the size of the population of Montalvo.

These health establishments support the promotion and implementation of disease prevention, rehabilitation, and palliative care strategies; however, there is no ambulatory care, so the population travels outside the canton for health needs that are more related to disease cure.

Type B health centers would be justifiable in terms of the canton's population. The presence of such basic health institutions may also be connected to the canton's mortality rate, see figure 80. Probably, hospital emergency or specialized cases must be transported outside the canton, implying that deaths occur in hospitals outside the canton, either in Guaranda or in Babahoyo.

Figure 80 Health services, Montalvo



Source: IMG (2018)

2.3.3.2.-- Education

Education service coverage is usually distributed in accordance to population concentrations. Access to secondary education is complicated in locations with a high rural population, particularly if the population is dispersed, resulting in long travel times and few means of transportation for students of the rural areas.

The educational reform, which began in 2006 and is currently in effect, aimed to improve the quality of education in Ecuador. 10-year general basic education (GBE) was introduced (1 year of pre-school, a 6-year school cycle and a 3-year basic cycle), as well as the unified general baccalaureate (UGB) (3 years for students who passed the GBE). Middle school secondary education is the three years that follow the ten years of basic education. The reform sought to strengthen language and mathematics competencies, but in practice, these competencies were not strengthened because the baccalaureate is general and does not consider the specialties offered by the previous system: physics-mathematics, chemistry-biology, and social sciences.

Between censuses, the number of students in primary and secondary school fell while those in basic and middle secondary education grew due to system changes. If the

measures of the number of persons getting education sector services improve, little can be said about quality.

In general, rural areas experience difficulties of access to educational services, and a low average number of years of schooling in the population. There is also a scarcity of services in the most isolated areas.

Baños

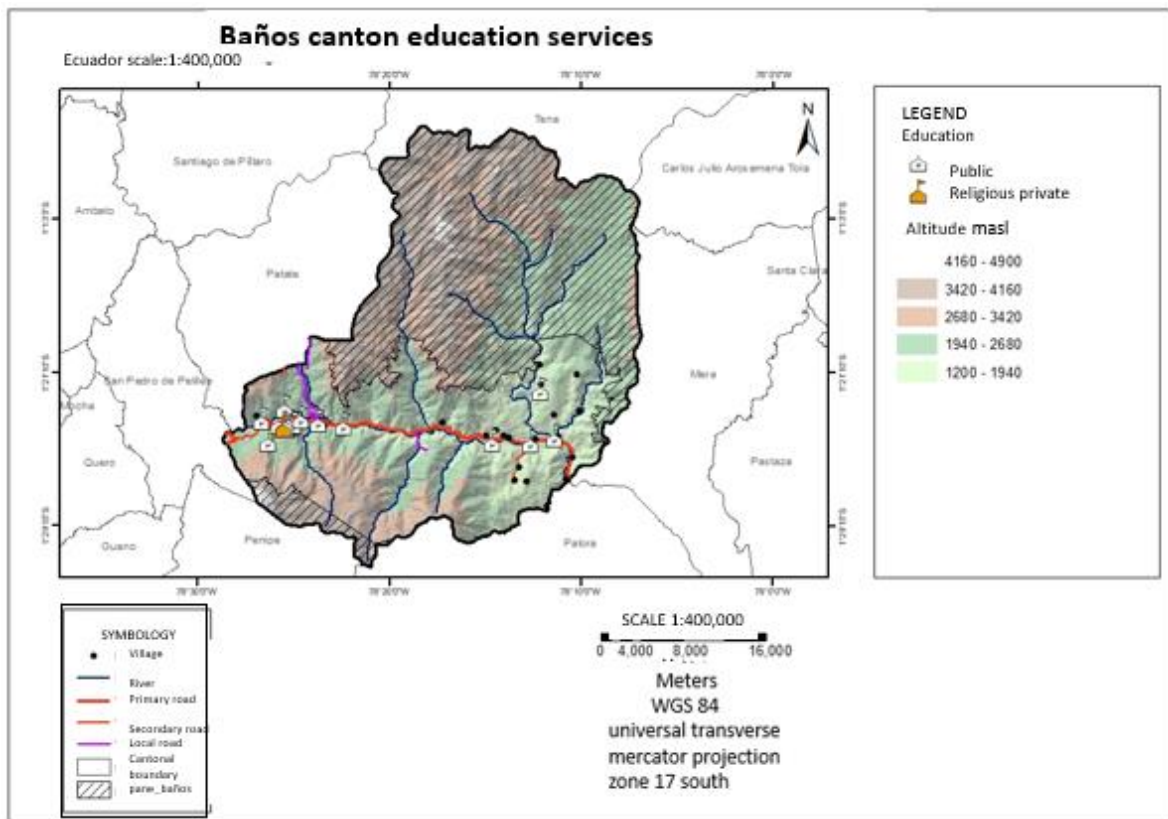
Data on health and education services in Baños Canton suggest a concentration in the cantonal capital. The map below shows a higher number of establishments that provide 10 years of basic education, excluding three years of middle school secondary education. The Ministry of Education's registry of educational units for the 2022-2023 school year lists 23 educational units ranging from literacy, preschool to high school. There are no universities in the canton; those that exist are located in Ambato, the provincial capital and the neighboring canton of Baños, see table 40 and figure 81. Ambato also has technical training establishments.

Table 40 Type of education, Baños

<i>Education infrastructure offer</i>	<i>Cantonal offer</i>	<i>%</i>
Private religious	2	9,52
Public	19	90,48
Total Education	21	100,00

Source, SICES, 2010

Figure 81 Education services, Baños



Source: IMG (2018)

In this canton, the number of people with high school, university, and postgraduate degrees has increased between censuses, due to state policies that promote education. It is also significant the canton's economic dynamics and the predominance of tourism, which requires the generation of technical skills such as lodging, food, and guides for service providers.

Additionally, the data of table 41 indicates that in 2010, 56.9% of the population had a primary or secondary education, implying a relatively low degree of academic preparation. The data corresponding to the “ignora” category represents a category created by INEC for census cases that did not have a valid response and thus could not be assumed within the other education categories (INEC, 2020b). Whereas the differences between the total population and the level of education between censuses are due to the population ages 0 to 4 years old, i.e. the preschool stage.

Table 41 Level of education between censuses, Baños

Educational level attended	2001						2010					
	Men	%	Women	%	Total	%	Men	%	Women	%	Total	Total
None	290	4,0	441	6,0%	731	5,0%	217	2,4%	346	3,8%	563	3,1%
Literacy	52	0,7	58	0,8%	110	0,8%	49	0,5%	73	0,8%	122	0,7%
Preschool		0,0		0,0%		0,0%	67	0,7%	76	0,8%	143	0,8%
Primary	3653	50,	3094	42,2	6747	46,1%	3349	36,6	3053	33,4	6402	35,0%
Secondary	1653	22,6	1860	25,4	3513	24,0%	1995	21,8	2008	22,0	4003	21,9%
Basic education	431	5,9%	515	7,0%	946	6,5%	947	10,3	985	10,8	1932	10,6%
Middle school secondary	54	0,7%	61	0,8%	115	0,8%	780	8,5%	778	8,5%	1558	8,5%
Post Bachelor's Cycle	42	0,6%	79	1,1%	121	0,8%	104	1,1%	120	1,3%	224	1,2%
Higher	585	8,0%	643	8,8%	1228	8,4%	1391	15,2	1463	16,0	2854	15,6%
Post-graduate	16	0,2%	10	0,1%	26	0,2%	119	1,3%	112	1,2%	231	1,3%
Ignore	537	7,3%	571	7,8%	1108	7,6%	141	1,5%	134	1,5%	275	1,5%
Total	7313	49,9%	7332	50,1%	14645	100,0%	9159	50,0%	9148	50,0%	18307	100,0%

Source: INEC, 2001-201

Cotacachi

In terms of educational level, the percentage of persons with secondary, basic, middle secondary, and higher education increases between censuses as seen in table 42. Nevertheless, the data illustrates that the canton's population has the largest percentage of primary education, which is more frequent in rural areas. Despite the fact that the demographic pyramid indicates a considerable number of people between the ages of 0 and 4 years old, the relatively low percentage of persons in preschool is remarkable. According to statistics, just around 10% of this population gets access to preschool education. Preschool education is significant to promote capacities in pedagogy for developing socialization, fine and gross motor abilities, which will later be important in the process of learning to read and write, as well as learning mathematics.

The statistics relating to the "ignore" category are related to an INEC created category for instances that could not be considered in any of the prior educational categories.

Higher education grew significantly between censuses, both in absolute terms (doubling the number of individuals with this degree of education) and in relative terms. The same is true for post-graduate education, which increased six times between censuses. The number of student enrolled in secondary school is likewise increasing, at a rate of 4.4% every year.

Table 42 Level of education between censuses, Cotacachi

Educational level attended	2001				2010							
	Men	%	Women	%	Men	%	Women	%				
Non	2226	13,7%	3256	20,5%	5482	17,1%	1822	10,2%	2491	14,0%	4313	12,1%
Literacy	65	0,4%	49	0,3%	114	0,4%	126	0,7%	293	1,6%	419	1,2%
Preschool	0	0,0%		0,0%		0,0%	198	1,1%	228	1,3%	426	1,2%
Primary	8930	55,1%	7690	48,4%	16620	51,7%	8094	45,3%	6924	38,9%	15018	42,1%
Secondary	1686	10,4%	1930	12,1%	3616	11,3%	2440	13,7%	2615	14,7%	5055	14,2%
Basic education	1658	10,2%	1517	9,5%	3175	9,9%	2647	14,8%	2544	14,3%	5191	14,6%
Middle school seconday	88	0,5%	109	0,7%	197	0,6%	872	4,9%	874	4,9%	1746	4,9%
Post Bachelor's Cycle	57	0,4%	87	0,5%	144	0,4%	111	0,6%	109	0,6%	220	0,6%
Higher	532	3,3%	564	3,5%	1096	3,4%	1092	6,1%	1236	6,9%	2328	6,5%
Post-graduate	11	0,1%	8	0,1%	19	0,1%	64	0,4%	56	0,3%	120	0,3%
Ignore	962	5,9%	693	4,4%	1655	5,2%	389	2,2%	420	2,4%	809	2,3%
Total	16215	100,0%	15903	100,0%	32118	100,0%	17855	100,0%	17790	100,0%	35645	100,0%

Source: INEC, 2001, 2010

<http://redatam.inec.gob.ec/cgi-bin/RpWebEngine.exe/PortalAction?BASE=CPV2010>

Similarly, as the health services map reveals a particular dispersion and a more deconcentrated placement in the canton's territory, so do the education data of table 43 and figure 82. Only two of the 69 institutions are private, with the great majority being public educational institutions. There are no universities in the canton; the universities in Ibarra - the provincial capital and the canton nearest to Cotacachi - provide this third level educational service. Ibarra also has technical assistance centers.

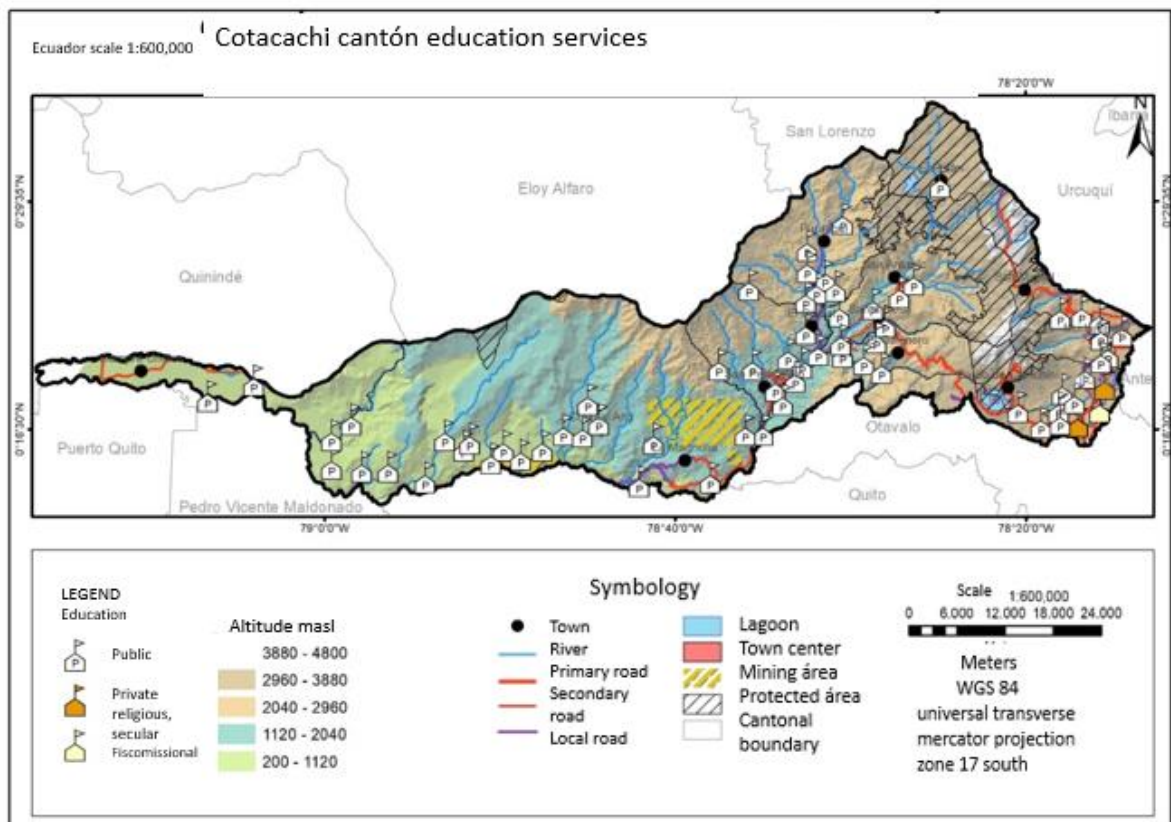
Table 43 Type of education. Cotacachi

<i>Education infrastructure offer</i>	<i>Cantonal offer</i>	<i>%</i>
PRIVATE SECULAR	1	1,45%
PRIVATE RELIGIOUS	1	1,45%
FISCOMISSIONAL	1	1,45%
PUBLIC	66	95,65%
Total	69	100,00%

Source: SICES, 2010

While SICES identified 69 educational institutions in 2010, the Canton's Strategic Plan of 2015 reports 92 educational institutions with a presence in the canton, indicating a major increase of these institutions for the canton. The Ministry of Education has registered 75 educational units for the 2022-2023 academic year.

Figure 82 Education services, Cotacachi



Source: IMG (2018)

Jama

There has also been an increase in secondary and higher education between censuses in canton Jama, with a large rise of 12.2% per year at the secondary level and a very high growth of 42% per year in higher education, see table 44. Since 2007, public initiatives and government assistance for the education sector have resulted in this goal. The economy of Jama is mainly focused on primary production, which does not need a high degree of education.

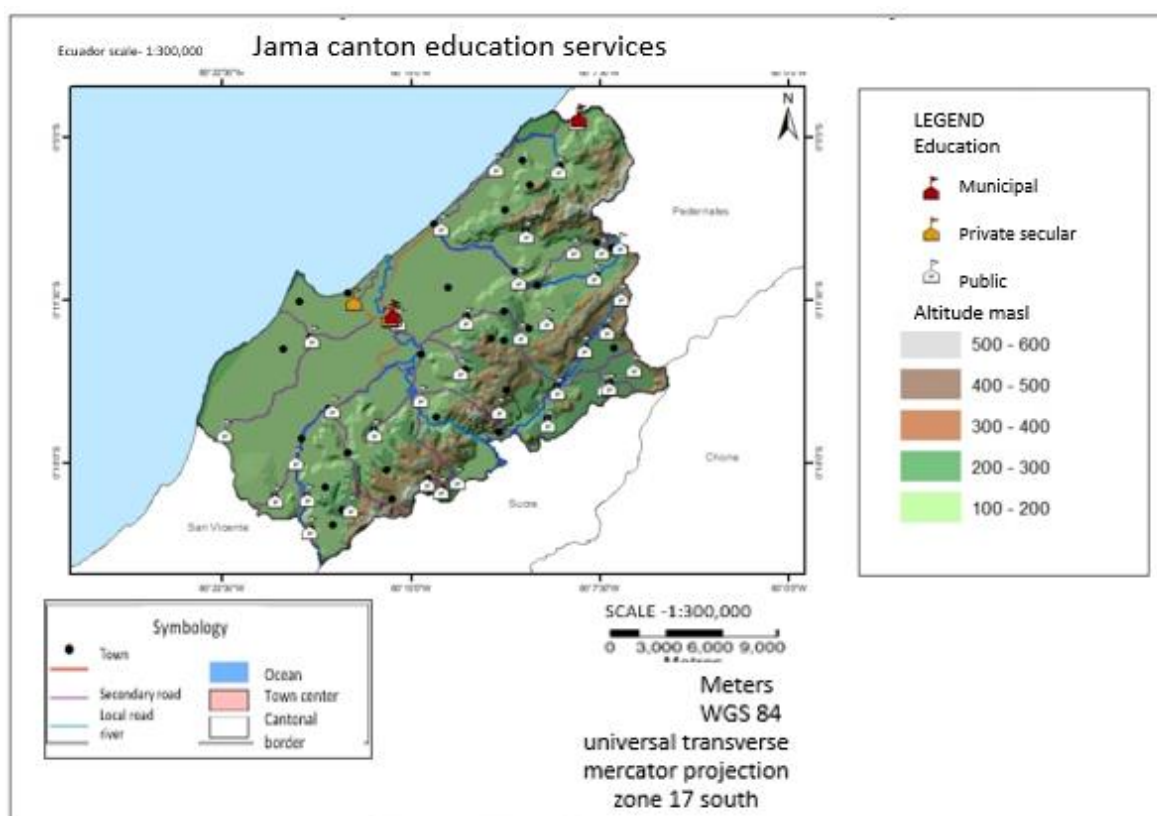
Table 44 Level of education between censuses, Jama

Jama	2001						2010					
	Men	%	Women	%	Total	%	Men	%	Women	%	Total	%
Non	1252	13,4%	1137	12,7%	2389	13,1%	837	8,0%	857	8,5%	1694	8,2%
Literacy	49	0,5%	51	0,6%	100	0,5%	50	0,5%	100	1,0%	150	0,7%
Preschool	0	0,0%	0	0,0%	0	0,0%	159	1,5%	151	1,5%	310	1,5%
Primary	5805	62,4%	5528	61,8%	11333	62,1%	4518	42,9%	3967	39,5%	8485	41,3%
Secondary	1004	10,8%	1071	12,0%	2075	11,4%	2206	21,0%	2142	21,3%	4348	21,1%
Basic Education	221	2,4%	183	2,0%	404	2,2%	1073	10,2%	1033	10,3%	2106	10,2%
Middle school Secondary	24	0,3%	28	0,3%	52	0,3%	500	4,8%	486	4,8%	986	4,8%
Post Bachelor's Cycle	15	0,2%	21	0,2%	36	0,2%	86	0,8%	82	0,8%	168	0,8%
Higher	136	1,5%	158	1,8%	294	1,6%	642	6,1%	764	7,6%	1406	6,8%
Post-graduate	0	0,0%	0	0,0%	0	0,0%	17	0,2%	22	0,2%	39	0,2%
Ignore	804	8,6%	773	8,6%	1577	8,6%	435	4,1%	434	4,3%	869	4,2%
Total	9310	100,0%	8950	100,0%	18260	100,0%	10523	100,0%	10038	100,0%	20561	100,0%

Source: INEC 2001-2010 Redatam

The same analysis that was done for Baños can be done for Jama, perhaps with a distinction between the canton's Jama dispersion and the lack of proximity to higher education centers as shown in figure 83, which has not been an impediment to increasing the percentage of students with higher levels of education. Between censuses, the number of students in primary and secondary school fell while those in basic and middle school secondary education grew due to system changes.

Figure 83 Education services, Jama



Source: IMG (2018)

The national education offer comprised the establishment of a Millennium Education Unit in the cantonal capital, as well as other branch units located throughout the canton, see table 45. The province of Manabi contains the most of these Millennium Education units in Ecuador. The Ministry of Education's registry of educational units for the 2022-2023 school year lists 38 educational units ranging from preschool to high school. A decrease compared to 2010.

Table 45 Type of education, Jama

<i>Education infrastructure offer</i>	<i>Cantonal offer</i>	<i>%</i>
Private secular	3	6,52
Municipal	2	4,35
Public	41	89,13
Education (Total)	46	100,00

Source: SICES 2010

Montalvo

Educational indicators increase between censuses, particularly in secondary education, with some differences between males and females. The data for basic education attracts attention, with a lower number of females, which is consistent with the population

pyramid that indicates that in the 10-14 age range, there are more males than females in the canton (INEC, 2010). Only 70% of females between the ages of 10 and 14 are enrolled in basic education, which is of concern due to the high rate of adolescent fertility, as mentioned in the interviews.

Although the situation for women improves in the higher and postgraduate education ranks, the data of table 46 also illustrates a low percentage of people reaching or exceeding the third level of education. The fact does not represent an achievement in the education sector and at higher education levels, an important indicator of educational equity. It should also be noted that, in relative terms, the highest percentage of the population attains a secondary level, that is, if we add basic and secondary education - which corresponds in the new education system to secondary education - the secondary level represents 76.68% in 2001 and 80.6% in 2010. This indicates the canton's largely rural nature and primary economic activity, which is also supported by the proportion of persons in the literacy phase, which means that people aged 15 or older joined this phase of education.

Table 46 Level of education, Montalvo

Educational level attended	2001				2010							
	Men	%	Women	%	Total	%	Men	%	Women	%	Total	%
Non	692	7,48%	651	7,52%	1343	7,50%	500	4,50%	481	4,48%	981	4,49%
Literacy	44	0,48%	25	0,29%	69	0,39%	86	0,77%	125	1,16%	211	0,97%
Preschool		0,00%		0,00%		0,00%	122	1,10%	105	0,98%	227	1,04%
Primary	4640	50,15%	4047	46,74%	8687	48,50%	4475	40,30%	3820	35,54%	8295	37,96%
Secondary	1971	21,30%	1960	22,64%	3931	21,95%	3266	29,41%	2999	27,90%	6265	28,67%
Basic education	488	5,27%	423	4,89%	911	5,09%	922	8,30%	872	8,11%	1794	8,21%
Middle school (secondary)	109	1,18%	95	1,10%	204	1,14%	616	5,55%	643	5,98%	1259	5,76%
Post Bachelor's Cycle	26	0,28%	59	0,68%	85	0,47%	81	0,73%	117	1,09%	198	0,91%
Higher	481	5,20%	615	7,10%	1096	6,12%	832	7,49%	1363	12,68%	2195	10,04%
Post-graduate	4	0,04%	3	0,03%	7	0,04%	26	0,23%	48	0,45%	74	0,34%
Ignore	798	8,62%	780	9,01%	1578	8,81%	179	1,61%	175	1,63%	354	1,62%
Total	9253	100	8658	100	17911	100,00	11105	100	10748	100	21853	100

Source: censuses INEC 2001-2010

In terms of educational establishment supply, in table 47, there is a concentration of services in the cantonal capital. While several establishments are located in the territory's human settlements, people complain about the distance and prefer education in the main city, where the quality of education is higher. The following map illustrates the location of establishments, which, in addition to the concentration of population centre, displays a considerable deconcentration of infrastructures on precincts. The nearest university to Montalvo is located in Babahoyo city, and there are no technical training centers in the canton.

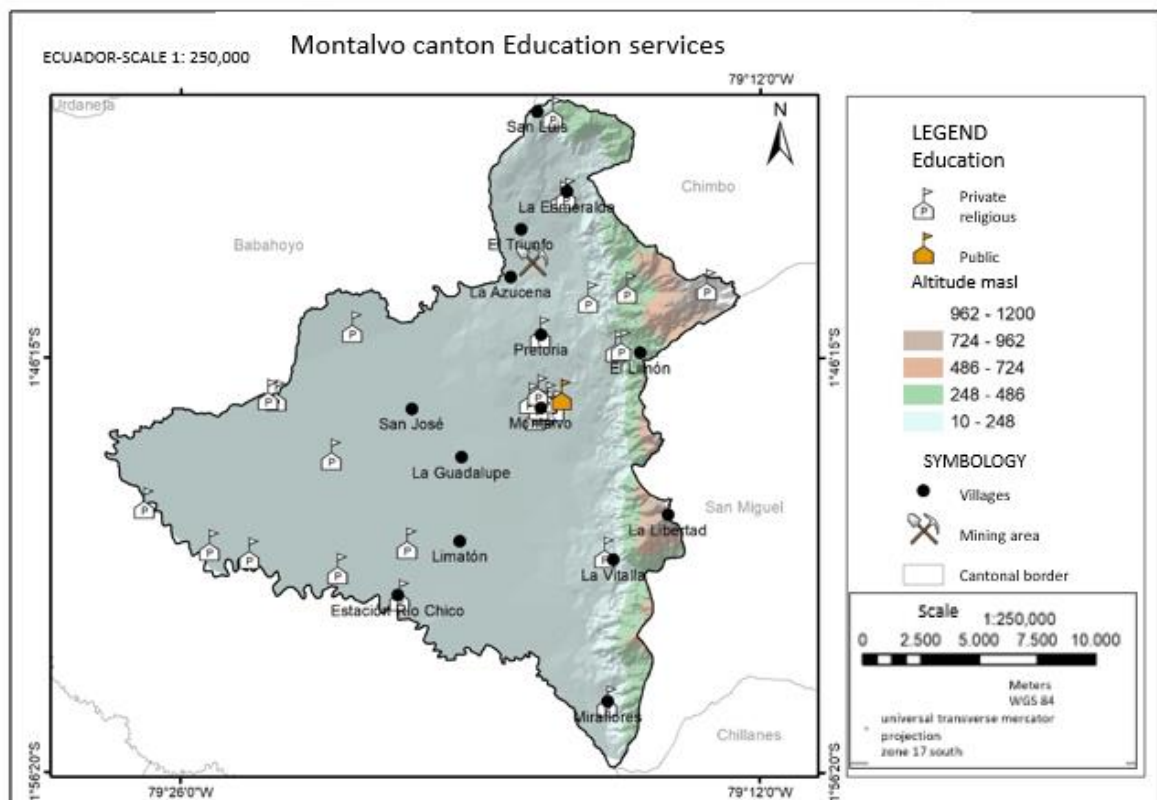
Table 47 Type of education, Montalvo

Education infrastructure offer	Cantonal offer	%
Private religious	1	4
Public	30	96
Educación (TOTAL)	31	100

Source: SICES, 2010

It is not possible to determine the quality of educational units. There was no Millennium Education Unit in the canton, which would have meant closing several rural schools. This fact explains - in part - the dispersion of different schooling units in the canton's communities and may have influenced the significant percentage of people with secondary education, see figure 84. It is worth noting that in other cantons where Millennium Education Units were created, local rural schools were closed, generating problems of transportation costs for the mobility of students to the educational centers. The Ministry of Education's registry of educational units for the 2022-2023 school year lists 29 educational units ranging from preschool to high school. A decrease compared to 2010.

Figure 84 Education services, Montalvo



Source: IGM, 2018 SICES

2.3.3.3.- Growth of cities and household types

Cantonal capitals are considered cities in Ecuador, regardless of population size or density. This is due to the fact that these conglomerates functionally integrate the working of the political power (mayor's office and municipality), the judicial function (civil, criminal, and family courts), and a number of national services based in these cities.

The urban area concentrates all cantonal services as well as the state's deconcentrated public services (education and health districts, tourism).

Between the 2001 and 2010 censuses, we observe a significant growth in urban households in the four cities. This would be comparable in the cities of Baños, Cotacachi, and Jama, at around 30%, but it is considerably higher in Montalvo, at 63%, as seen in table 48.

Table 48 Housing

Canton	Baños		Cotacachi		Montalvo		Jama	
	2001	2010	2001	2010	2001	2010	2001	2010
Urban housing	3,671	4,806	2,160	2,831	2,596	4,248	991	1,301
Housing growth		30.92		31.06		63.64		31.28
Urban population	10,439	12,995	7,489	8,848	9,427	12,734	4,719	6,090
Population growth		24.49		18.15		35.08		29.05

Source: Data from INEC, censuses 2001 and 2010. Own elaboration

Table 49 Types of housing 2001

CENSUS 2001 TYPE	BAÑOS	%	COTACACHI	%	MONTALVO	%	JAMA	%
House or Villa	2,486	67.72	1,756	81.30	2,238	86.21	875	88.29
Department	342	9.32	92	4.26	71	2.73	55	5.55
Room	442	12.04	113	5.23	90	3.47	19	1.92
Mediagua	321	8.74	182	8.43	61	2.35	7	0.71
Ranch	16	0.44	3	0.14	101	3.89	26	2.62
Covacha	8	0.22	1	0.05	3	0.12	7	0.71
Hut	3	0.08	3	0.14				
Other	18	0.49	1	0.05	26		1	0.10
Private Household								
Hotel	27	0.74	5	0.23	4	0.12		
Military	2	0.05	1	0.05	2	0.08	1	0.10
Quarters								
Hospital	1	0.03	1	0.05				
Religious	5	0.14	1	0.05				
Institution								
Other collective			1	0.05				
Total	3,671		2,160		2,596		991	

Source, INEC, 2001

We confirm that Montalvo has a larger growth of the population that appears in the census when compared to the urban population growth between the two periods. Cotacachi has a lower growth rate, although the number of households is growing in a similar way to the other cantons (excluding Montalvo). This might be due to a cultural change in the number of persons in families.

When it comes to defining the kind of households in table 49 and 50, we get into trouble because the 2001 categorization includes hotels, hospitals, and other sorts of centers that are listed as "not applicable" in 2010 (in the sense that they do not represent typical homes).

The 2010 census data clarifies that "department" refers to a household within a building, and that "rooms" would be room rentals. We assume that the concept of department includes individual bathrooms and kitchens. We do not have a count of hotel households in the 2010 census. We assume that a significant number in Baños have changed their occupancy type. It is noteworthy for the moment that in the 2001 table there is an important difference in this category between Baños and the other cantons. (I must note that in 2001 the canton was still in the process of "return" after the population displacement caused by the eruption of the Tungurahua volcano).

In the concept of "not applicable", there would also be unoccupied households. This could be very relevant to identify gentrification processes, so the high number of "not applicable" in three of the four cantons is worrying, but a categorization of this group of households could not be confirmed.

Table 50 Types of housing 2010

CENSUS TYPE	2010	BAÑOS	%	COTACACHI	%	MONTALVO	%	JAMA	%
House/Villa		2,563	53,33	1,992	70,36	2,902	68,31	1,028	79,02
Department in house or building		582	12,11	197	6,96	160	3,77	138	10,61
Room(s) in rented house		369	7,68	100	3,53	140	3,30	40	3,07
Mediagua		128	2,66	94	3,32	117	2,75	9	0,69
Ranch		0	0,00	1	0,04	167	3,93	28	2,15
Covacha		0	0,00	0	0,00	27	0,64	7	0,54
Hut		0	0,00	0	0,00	4	0,09	5	0,38
Other private household		3	0,06	3	0,11	6	0,14	0	0,00
Not applicable		1,161	24,16	444	15,68	725	17,07	46	3,54
Total		4,806		2,831		4,248		1,301	

Source, INEC, 2010

The number of "not applicable" for the city of Baños is nearly identical (if not slightly greater) to the difference in households between the two censuses: 1,161 and 1,135, respectively. This makes data comparability harder. It should be noted that the number of homes does not increase significantly (only 77 new houses in ten years), but there is a significant increase in departments (240 new departments, about 80% more than in 2001, implying that some buildings were divided for new uses). It's also worth noting that the "ranch, covacha, and hut" classifications, which denote less livable houses, are disappearing.

In the city of Cotacachi, the number of "not applicable" (444) is more than the change in the number of households (671 more between the two censuses). The number of rental rooms is decreasing, while the number of houses (236 more) and departments (105 more) is increasing.

As previously stated, the city of Montalvo had the biggest increase in the number of households (1,652 more), as well as the greatest population growth. It increased from 2,238 to 2,902 houses, 71 to 160 departments, 90 to 140 rental rooms, and 61 to 117 mediagua. There is also an increase in less appropriate living types (rancho, covacha, and hut). This information should be cross-checked with GVA statistics per sector to determine if the change is represented in the construction sector, but no data is available for the period 2001 to 2006. The number of "not applicable" is likewise unusually large, at 725.

Regarding the statistics for Jama, while the percentage rise in the number of households is comparable to that of the other cantons (around 310 additional households, or a 30% increase), the percentage growth in the number of departmental households stands out, jumping from 5.55% to 10.61%. It is worth noting that following the 2016 earthquake, several residents opted to leave Jama and construct in more stable places within the same canton.

2.3.4 Coverage of basic needs in the four cantons

All cantons have a population concentration in the city, which acts as the cantonal capital, as well as in small settlements. Some population settlements located in Cotacachi and Baños serve as "cabeceras parroquiales," adopting roles of authority in relation to adjacent areas (the "Juntas Parroquiales Rurales"). There are no parishes in Jama, and just one rural parish in Montalvo.

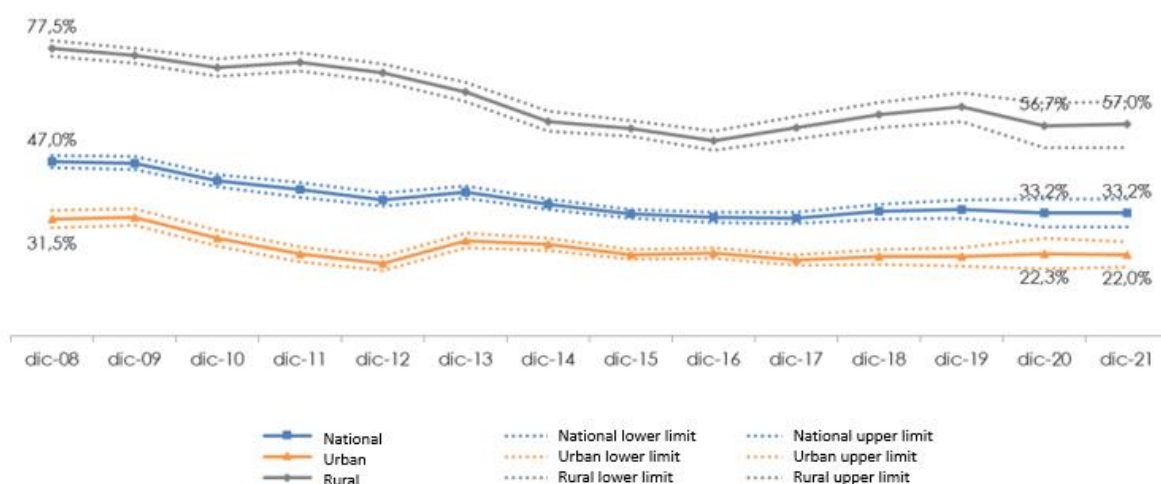
Cotacachi has more people living in rural areas than in urban areas, which is an exception within the four cantons. This might be an important factor that explain the lower average population growth than the national average growth. It also may explain the economy's dynamics.

In order to consider the efficiency of the population distribution, this study considers the comparison among Unsatisfied Basic Needs indicator between cantons³⁶. In Ecuador, unsatisfied basic needs are measured as a composite indicator that considers the condition of housing, access to water, sewerage and garbage collection services, and, finally the level of education attained by the head of household. If a household is deprived in any of these elements, it is considered "UBN poor". The greatest weight for UBN metric is assigned to access to sewerage and drinking water systems, both of which have greater deprivations.

Before analyzing the differences between cantons in terms of Unsatisfied Basic Needs (UBN), it is necessary to reiterate and make explicit that Ecuador shows a decrease in poverty by UBN between 2008 and 2021, according to the report on poverty, employment, and unemployment for the year 2021, based on the INEC (National Institute of Statistics and Census) survey. This national aggregate cannot be extended to cantons, but it illustrates a major change in the poverty issue. On the contrary, it demonstrates the disparity between urban and rural poverty in the country. The comparison of levels of Unsatisfied Basic Needs 2008-2021 can be seen in figure 85.

³⁶ Table 51 reiterates the data in Table 14. Because of the relevance of this information for visualizing the function of basic services in small cities, I thought it was important to reanalyze it.

Figure 85 Levels of unsatisfied basic needs



Source: INEC: Technical Bulletin N° 02-2022-ENEMDU 2021 (p.7)

While rural poverty has fallen from 77.5% in 2008 to 57% in 2021, in the urban sector it has fallen from 31.5% (2008) to 22% (2021). The table highlights the increases in poverty in the urban sector in 2013 and in the rural sector from 2016 onwards.

The biggest difference between the urban and rural sectors is seen in access to basic services, especially drinking water and sewerage in table 51. For the comparison, the percentage of households without access to the services considered in the indicator of "unsatisfied basic needs" in the country is referred.

Table 51 Acces to services, 2010 census

Canton	Homes with inadequate physical characteristics	Homes with public water supply	Homes with availability of electric service	Dwellings with sewage availability	Households with garbage disposal by collection cart	Households with telephone service
Baños	2,70%	82,20%	98,10%	78,70%	85,80%	41,50%
Montalvo	7,90%	51,70%	90%	23,80%	55,70%	11,20%
Jama	16,80%	42,80%	85,70%	10,80%	71%	9,10%
Cotacachi	21,70%	62,20%	94,20%	43,50%	58,80%	25,20%

Source: INEC, Analitika, 2012

The statistics in the table come from the 2010 population and housing census. Information between censuses is not gathered at the cantonal level (it is extrapolated from various non-census sources, particularly the employment and unemployment survey, which is not representative at the cantonal level). It is assumed that general living

conditions have improved from the census year to the current day. Thus, the data constitute a legitimate reference at the time of the previous census, nevertheless, we assume the improvement of all data until 2021, as described in previous paragraphs.

The table specifies the needs achieved; the needs that have not been satisfied are those that must be achieved in order to reach 100% satisfaction. The first column in this table is an exception, as it alludes to the absence of acceptable physical conditions in the household. Every other column is more favorable than the first one.

In terms of drinking water, sewage, and trash collection coverage, canton Baños stands out among the other cantons. These services are also available in the canton's rural parishes and principal communities. In contrast, Jama has the worst outcomes in most categories, with the exception of garbage collection, which may be attributable to the size of the canton, which allows for the extension of service coverage. Data about ubn illustrates that this canton is less prosperous than the others.

There are also significant disparities among services. In all cantons, electricity service has the maximum coverage (more than 86%), whereas garbage collection and sewage services have lesser coverage.

With the exception of Cotacachi, the information on coverage in urban and rural regions indicates significant disparities. This is explained by the fact that network building costs in infrastructure are substantially cheaper in urban areas when measured per capita. For example, in the consolidated urban sector, 1000 linear meters of network of drinking water or sewage may accommodate between 100 and 200 people on average, and considerably more in the case of buildings. However, in the rural sector, due to the dispersion between parcels of land, three or four families can be served.

According to statistics from the 2010 census gathered by the PDOT, there are 6,649 homes in Montalvo Canton, with 3,523 in the urban sector and 3,126 in the rural sector. Water coverage in the urban sector is 93.8% while water coverage in the rural sector is 64.2%. The sewage system provides even more remarkable data: 41% coverage in the urban sector, 4.22% in the rural sector (GAD Montalvo, 2014, p. 101).

In canton Jama, the census 2010 counts 3,804 households; there are more households in the rural sector (2,549, compared to 1,255 in the urban sector). Water service coverage in the census year is 53% for the Canton, with higher coverage in the rural sector (20.75% in the urban sector and 31.41% in the rural sector). The Development Plan indicates, in addition to the coverage deficit, a serious deficit in the need for water. In sewerage, the cantonal coverage is only 10.78%, with 25.5% in the urban area, and 3.53% in the rural sector; the implication is the use of septic tanks and discharge into natural watercourses, which can lead to health problems and environmental pollution for the population.

In Cotacachi, the number of rural households is about three times that of urban households, with 7,342 rural homes compared to 2,387 urbans (a census total of 9,729). Despite this, water system coverage is great, with 93% of the population obtaining piped water. Sewerage coverage, on the other hand, is 43.5%: 92.5% in urban areas and 27.57% in rural regions. The most concerning statistic for the PDOT is that 28.02% of the rural sector says there are no other options for sewage disposal (GAD Cotacachi, 2015, p. 300).

Baños has, contrary to the other cantons, an important urban concentration; in the urban sector there are 3,645 households, in the rural sector 2,046, with a total of 5,691 households in the 2010 census. The drinking water system reaches 99% of the urban sector and 94% of the rural sector (according to the 2010 census). Sewerage service in Baños is concentrated in the urban area and its expansion area (communities of Pondoá, Juive Grande, Juive Chico, Illuchi and Runtun). The coverage in the urban area is 85%. In the PDOT, special consideration is given to the "functional vulnerability" of the network in case of risks due to volcanic eruption or earthquake movements (p. 71). No information about vulnerability is available for the rural sector.

2.3.5. Routes and Risks

2.3.5.1. *The road axes as an organizing force*

The location of the population in the territory is very clearly linked to road axes. The type of existing roads, accessibility (especially in rural areas) becomes an organizing element of human settlements and could be related to the issue of population expulsion.

(B20- Baños) It could be that these (the urban centers, Río Verde and Río Negro) gain because they are crossed by the main road, obviously a commercial road, and obviously the people who stay there, stay because they saw that the natural resources can be used for tourism. Lligua is on a third order road. ... This being of first order is a point in favor, but for Lligua it is already of third order and obviously there the natural resources are not known.

(B16) Lligua decrece porque está alejado, antes con la carretera que pasaba por ahí era el más visitado era tipo Ulba pero hoy al haber una carretera de buen nivel entonces ha quedado desplazado. Se piensa que por su ubicación geográfica y sobre todo por su sistema de viabilidad. Pero es el más concurrido lo cual ocurre de vez en cuando está obstaculizada la vía principal por el zoológico San Martín y pasa por Lligua, pero esto es muy muy ocasional

(B16) [Lligua decreases because it is far away, before with the road that passed through there it was the most visited, it was Ulba type, but today with a good level road it has been displaced. It is thought that it is because of its geographic location and above all because of its feasibility system. Nevertheless, it is the busiest which happens from time to time is obstructed the main road by the San Martín Zoo and passes through Lligua, but this is very occasional].

(J25) Manabí has a problem that may be an opportunity, but I have not yet been able to turn it around, but the dispersion of its communities, I think it has about four thousand communities, maybe more, scattered throughout the territory. All the people want to live in their homeland, but they want all the services nearby. It is impossible we would not have enough money to provide them with roads, drinking water, sewage and electricity because ecologically it could also cause damage, to build so much infrastructure cutting so much territory. So many ecosystems, so many forests, but it is super dispersed and that at this moment is a problem, I do not know if later it could be an opportunity, but at this moment it is a problem.

2.3.5.2. Risk as a differentiating factor

For some populations, risk is the driving force. In the case of Baños, the parish that decreases in population is considered a risk zone: in the case of Jama, certain territories grow because they provide safer spaces (after the earthquake disaster). In other words, risk can function as an expeller or as an attractor for some territories.

(B18) : Lligua is in a place that is also catalogued as a risk zone, because of the river that goes down there, so many people do not stop growing, but they migrate from that place to live for example, you can go and ask there, there are many people that have their properties, their houses in Lligua but they go to live here in Baños, so the population is increasing in all the parishes, what happens is that they come and live here in Baños, and maybe in their working days they leave and stay there.

(J05) Here in Matal it has increased, because there were people who came here because of the opportunity to be given a house, so they took advantage of that opportunity to come here, I think that instead of being less people now we are more.

(J08) Even now, after the earthquake, many people left Jama, you find them in Santo Domingo, the majority, in El Carmen, in Guayaquil, any number of people, my brothers are all in Guayaquil, only I stayed, and the rest of them all; and Portoviejo which is also a city where there are many people from Jama. And people study and stay, I have a granddaughter who graduated last year, she is an auditor, she stayed in Manta working, because here there is no stable economy or someone to give her a job, she stayed in Manta, she is there, she comes every fifteen days.

2.3.6 The future of the canton and its capital

The interviews often concluded with the topic of how they envision the territory in the future. We can distinguish two sorts of responses: those that relate to supplementing currently deficient services and those that refer to land use planning or regulation.

(B02)What exactly do I mean by "growth"? since, when it comes to the territorial problem, Baños no longer has space for expansion; it is a little city; many people describe it as a wonderful little hole with no place to expand since we are surrounded by mountains (...) The parishes would be expanded, for example, the Ulba parish, which is about 2 kilometers away and is already very populated because there we no longer have, I repeat,

the mountains are the only thing we have since it is not inhabited, and we as Baños no longer have places.

(C03) In the future, I see a bit of disorganization; we need to raise awareness on the heritage issue because we do not have the competence as municipal government to disseminate, protect, and maintain the heritage issue in our territory, but we need to empower, and I believe that this growth sometimes implies the abandonment of houses in order to build others and buy buildings, leaving the territory abandoned, so I believe we need an articulated link to empower and give the important value that a heritage issue has as infrastructure, not like Quito, I go to Quito after two years and I see a lot of houses. Cotacachi still does not have such a strong growth, moderate I believe, moderate, we see that the urbanizations in some sectors, especially in the parishes, because Cotacachi as an urban center does not give more, I believe that it is complete, rather I believe that it implies a responsibility of joint work between the parishes, between Quiroga, Imantag, for example, that we are almost very close to this growth, then we must work on it.

(J19) Well, at the moment the biggest problem... is a lack of urban regeneration; imagine Jama's streets in the twenty-first century are dusty, and we don't die of pollution because our people are too strong, but that needs to change.

The key concern is the functioning of urban services (water, sewage), without which the future is perceived as un motivating.

(M16) Q) How do you view the urban area's future growth? (A) That is, the city is growing, but the problem is basic services, which people demand more and more as they settle down (...) They should establish commercial zones, industrial zones, they must be managed that way, even to be able to collect taxes, because an industrial zone is worth so much....

(C03) Well, according to the zoning plan, I believe that Cotacachi as an urban center is full, that is, there is no more space to expand, but if we talk about the parishes of San Francisco and Sagrario as urban, but they are truly rural because they lack nearly 60% of basic services, then there is significant growth within the two urban parishes (...) Yes, Sagrario and San Francisco are urban, yet they are inhabited by Andean people and communities, and there may be growth in those two parishes. And expansion in those two parishes might be a source of development.

The absence of optimism is a recurring theme in most of the conversations about the future. There is a mix of pessimism and fatalism (the belief that the situation is determined by many historical and external reasons and that changing it is impossible). This feature is prevalent across Ecuadorian society and appears to be connected to the historically marginalized indigenous culture. It is also a reflection of the international crisis of capitalism and globalization³⁷, as well as the occurrence of "catastrophic" concerns such as climate change and the recurrence of financial crises.

³⁷ The interviews were done before the COVID outbreak began. This implies that if new interviews were performed, the situation would be worse than before, since poverty has intensified and drug trafficking mafias have taken over the shore with more vigor. The issue of insecurity has grown dramatically.

(J07) The fact is that I will witness the same thing in fifteen years. Because, unfortunately, Jama is not a large canton in terms of population; it may be large in terms of extension, but not in terms of population, and there is no 20-year project to identify which zones are priority for production, which are priority zones for tourism, to invite hotel chains, for example, which zones are important for mariculture, which are not being taken into account and which exceeded in this zone, and in the topic of aquatic sports, which is spectacular (the sector of) Don Juan. So, if it is not predicted and stabilized or more stable in zones to work according to the projections, I regard it as tough and challenging. There are few residences, they earn practically little property tax, and shrimp farms outnumber dwellings. I am confident that if a municipal tax is levied for the benefit of shrimp farms, these sorts of solutions should be explored. The problem of mobile phone resulted in the creation of a law to collect fees for the use of antennas and basic stations in the canton of Jama, which also resulted in the creation of resources.

(J19) Look, a town like ours will not grow more than it is, it will not see an expansive population growth, because the limiting factor is work, that is, where opportunities are not generated, it will hardly come, no matter how beautiful that detail is, because geographically speaking it has beautiful geographic accidents to exploit, because we are blessed by some things, but it is impossible as long as work is not generated.

The "recourse to authority" is one feature that repeats constantly. The future appears to be dependent on the actions of public actors, such as future mayors:

(M16) Well, I have a lot of faith in the new administration that something can be done since, as I mentioned, Montalvo has developed fast in terms of population, but in terms of basic services and urbanization, we are far away. I hope that in the future, they will do all possible to bring the canton up to date.

(C02) (Q) What challenges will the canton of Cotacachi confront in the next ten and twenty years? (A): Now we don't know what type of authority will arrive. (Q) Why, and what authority challenges would you face? (A) If there is no relationship between the groups, for example, you could say that during the mayor's position, we would progress many things.

As previously stated, tourism is the favored future choice, at least in the cantons of Jama and Cotacachi; in the latter, the vision of the future crosses with the dread of mining, which has also been emphasized earlier in this thesis.

(C03) (Q) What problems does the canton of Cotacachi confront in the next ten and twenty years? (A) I feel that the most difficult problem is the struggle for the environment. (Q) Do you oppose mining? (A): Yes, we believe in the human being, the environment itself, because it cannot be only the mining issue when we also have environmental contamination, with the issue of sewage, with the issue of garbage, the environmental issue is a very big challenge, it implies generating a healthy city, a friendly city for the citizens, but in order to achieve that, we can only achieve the environmental impact. (Q): Is it ten or twenty years? (A): Ten years, and the problem, I believe, is ten to twenty years since it will rely on the governments that come, that is, on the government's choice on mining policy. But I believe that the challenges we face are productivity, tourism, and, as I previously stated, generating a friendly city. I believe we can generate a city of light with clean energy, generate practices that are truly implemented in the territory with these visions that we want, and promote specific tourism that is not disarticulated, It is a significant challenge because we see that community tourism has its own practice, as does urban tourism; each tries to go out, but rather to unify the tourism theme and strengthen the tourism theme that

is the strongest, as well as to generate various important actions regarding the productive handicraft theme, motivating the citizen to improve his quality of life in the theme, his own income.

(J07) What I was referring to was sustainable resort-type tourism, which has the most potential, and adventure tourism, which can combine sea and mountain, but in Pedernales it is more difficult due to the coastal profile they have, in canoes and it is a different tourism, because they have more of a surfing theme, of youth. Jama might be more of a leisure and relaxation destination (...) The peacefulness of the beaches, the trees, you mention some nearby forests, such as the stunning waterfalls, and archeology are components that might be effective for that.

(For example, in Cancun or Acapulco, the archaeology that travels to a hotel in Acapulco or Cancun, you end up going on an archaeological tour of the Mayas at the conclusion of the day. Imagine taking an archaeological tour of the Jama Coaque (...). And, of course, they should recruit locals; by law, there should be rules requiring that every work or project use a certain amount of local labor; as I previously stated, this is necessary in other nations. If you travel to any hotel outside of our nation, you will notice that the guests are all locals; there are no Venezuelan Colombians, for example in Colombia you are going to see only Colombians working in the hotels. That is what is also expected.

One respondent, a pre-candidate for mayor, and who was chosen in the next elections stated that preparing people for jobs is the path to a better future.

(J19) Well, Jama has the task that of the 28 percent that the reports tell us about the economically active people, it must have climbed by 12 percent in the five years of administration from 2019 to 2024, or we are going to disappear as such. (Q) Twelve of what? (A) Of the economically active people, to take off, I wish there were more, at least that is what my government strategy is striving for; how are we going to achieve it? By training individuals, educating them how to become partners, how to pay taxes, and therefore, there must be credit lines for them to take on. (Q) True, but you must also create a conducive climate. (R) Of course, logically, but in the environment, you have to teach people first because they do not know, for example, if you have a small business, I am going to open it to sell but if you want to go further, you do not know that you have to pay taxes, you have to get organized, you have to go to get the RUC and you have to go to do a lot of things and then sometimes having got it, you do not have the activity and you have to go to close, but that is, train the people, you have to teach them, because our people do not know.

Conclusion of small city factor

In conclusion, there is no planned "network of human settlements" in Ecuador. Cities and settlements interact with one another spontaneously.

We discovered three levels of settlements in the four cantons studied: the cantonal capital, which contains between 50 and 80% of the cantonal population; a second level of concentrated communities, many of which are "parish capitals"; and a series of minor distributed villages. The majority of parishes do not meet the current minimum conditions to be configured as parishes (per 2010 legislation).

The relationship between smaller settlements and their capital cities is mostly formed by the interaction with the cantonal administration and the services concentrated in those cities. In some cantons, the service includes a market function for their populations' inputs and products, though in some cases, this role can be external to the canton, with nearby cities; for example, in Montalvo Canton, residents of some dispersed sectors seek services in Babahoyo Canton and Balzapamba Canton in the province of Bolivar. The same is true for Cotacachi, which shares the coastal area with the provinces of Pichincha and Esmeraldas.

Relations with the territories are "activated" in certain cases solely in relation to periodic cultural events, such as patron saint festivals (for example, religious celebrations for the Virgin of Baños). In the long term, this signifies a lack of identification with the territory.

Internal human settlement interactions are generally poor. There are two exceptions: Canton Baños, with the Ulba parish, where there is almost a conurbation, and Cotacachi, which achieves a larger connectivity through citizen involvement strategies.

Internal connections should be strengthened as a priority for local activity, whether sponsored by the municipality or by social groups.

Regarding the cantons' external links, three sorts of relationships can be recognized, which contribute to the formation of distinct regions:

- Cultural relationships that indicate a greater territory than the cantons, like as the relationship between Jama and Pedernales, Cotacachi and Otavalo, and Antonio Ante. There are also cultural linkages with places that encourage local emigration, such as Cotacachi with Ibarra and Quito, particularly with university campuses.

- Administrative ties, which connect the canton to the next administrative level, the province. Of the four cantons, only in the instance of Montalvo do we have a closeness link with the canton that acts as the provincial capital (Babahoyo). In all other cases, the link does not imply territorial continuity, but the relationships are direct.

- Economic ties are more complex. There are several levels of articulation to markets, because there are local, provincial markets (usually the provincial capitals, though in Manabi there is another node, which is the port of Manta), central markets (Guayaquil and Quito, and Santo Domingo in the case of Jama), and global markets, such as shrimp in Jama, leather manufacturing in Cotacachi, and the positioning of Baños as an area of interest for international tourism.

Economic relationships are affected by fluctuations in the market and hence rely on the amount of supply and demand that may be produced. This subject is explored with detail in the economic part, but it is worth mentioning here the necessity to diversify output and markets in order to enhance the territory's position.

The section then examines the disparities in service access between the population in the cantonal capital (urban population) and the rural population (the rest). Access to services like as drinking water, sewerage, education, and health care is extremely difficult in the rural sector. Conditions are often better in Canton Baños and Cotacachi, where the population is less dispersed. Water and sewerage services networks, for example, are more difficult to execute in the rural sector. Alternative service models are required to improve living conditions. In this context, the population and housing census data are expected in order to determine advancements in coverage.

Although local governments' budgets have been reduced, the cantons of Baños and Cotacachi appear to have a better spending orientation.

The national government is in charge of public education and health care. In general, they are distributed according on the population and the distance between services. Baños and Cotacachi are better serviced in these areas, particularly in terms of health care complexity.

Access to housing is another aspect of unsatisfied basic needs. In this area, we see a tendency in the four cantons to partition houses into apartments. It is also worth considering the ownership structure: by separating into units, they are oriented toward renting. Canton Montalvo has the greatest rate of housing growth. On the other side, the Jama canton's home building inaction provides cause for alarm.

In the four areas, future possibilities were studied through interviews with competent informants. Concerning is the lack of optimism for change, as well as a certain resignation to the economic and social realities in the four cantons. Those questioned in the private sector are the exceptions. In the interviews, we also discovered a culture of dependency on the state to push infrastructure or social service initiatives, the comparison is shown in table 52.

Table 52 Summary: Role of small city

Element	Baños	Cotacachi	Montalvo	Jama
Urbanization of the cantonal capital	Higher urbanization	Medium grade	Minor degree	Minor grade, loses functions
	This factor is fairly subjective because it impacts on concerns of density, time rhythm, accessibility, road and basic services. The settlement's functioning is more "urban" in Baños and Cotacachi than in Montalvo and Jama, which have a more "rural feel"; in the case of Jama, it even appears to lose its functionality as a city (for example, the urban roadways preserve unpaved roads).			
	The dense and compact city helps the supply of services and functions offered by the city; nevertheless, when more rural cities are examined, fulfilling their role becomes more challenging, posing contrasts in the dynamics of development.			

Element	Baños	Cotacachi	Montalvo	Jama
Population weight of the rural sector	Low (30%)	High (80% rural)	Medium (49%)	High (80%)
	Cotacachi and Jama are predominantly rural. It is somewhat more than half in Montalvo and around one-third in Baños. This explains why Baños has better services. Despite the fact that Cotacachi has a significant rural component in terms of land and people, we discovered remarkable water coverage, which may be explained by improved municipal administration.			
	In terms of access to services and poverty, the rural population in Ecuador has large access gaps.			
Services and equipment available: Health	Basic hospital, health centers in parishes	General and basic hospital, health centers in parishes.	Health centers only	Health centers only.
	Cotacachi has improved health care, with a major hospital and many basic hospitals. There is just one basic hospital in Baños. This might be connected to the distance required to obtain the service (which is shorter in Baños). There are no hospitals in the two coastal cantons, just health centers (implying a weaker response capacity).			
	The provision of health services in two cantons reflects variations in development dynamics, facilitating sufficient treatment and speedier access to services.			
Services and equipment available: Education	23 (21) educational centers	75 (69) educational centers	(29) 31 educational centers	38 (46) educational centers
	The number of schools is proportional to the number of pupils and their distribution (particularly in rural regions). There are more schools in Cotacachi. The number is smaller in Baños, but because the population is more concentrated, it is considered adequate coverage.			
	The element of number of schools is not a sufficient indicator of development. In this research, an analysis of outcomes (e.g., people reaching university or completing high school) was not conducted.			
Regional connection with other cities outside the canton	Medium with Pelileo; stronger with El Puyo (eastern province).	Strong commercial and cultural connection with Otavalo	Medium connection with Babahoyo and Caluma	Strong connection with Pedernales, medium connection with Manta and Bahia
	Baños is considered part of a network of cities involving the provinces of Tungurahua and Pastaza; this has been a strength for regional tourism (visitors to Baños use it to "enter the Amazon", and thus extend the range of experiences. Cotacachi is linked to Otavalo for cultural reasons (they have a similar identity, with strong indigenous influence). Montalvo and Jama would have more			

Element	Baños	Cotacachi	Montalvo	Jama
	<p>obligatory connections to make up for shortages; the population of Montalvo is linked to Babahoyo and Caluma (neighboring cantons) to supply services; the population of Jama depends heavily on the services of the city of Pedernales (neighboring canton).</p> <p>The connection between cities in different cantons implies that the city relies on a network of cities, for example to access inputs or services. It could also be considered in some cases as a dependency issue, or a problem for the local population if a service is not accessible because it is located in another city.</p>			
Internal connection with rural or peripheral settlements	Good connection with settlements; improved with the road to Puyo	Strong connection with the rural Andean zone. Geographic dispersion in the coastal zone.	Focused on the supply of inputs. In other functions, rural is more closely linked to Caluma.	Cultural rather than economic or service linkage
	<p>Baños has a stronger relationship to its rural sector than the other cantons. In the instance of Cotacachi, three zones with varying degrees of integration may be differentiated. Montalvo and Jama have few linkages with the rural sector; hence these areas are linked more with exterior neighboring territories.</p> <p>The theory assumes that the relationship between the city and its rural sector should be dynamic, as a center that provides inputs and services, and as a market for the collection of products, in addition to cultural or identity ties. Weakness in this connection implies lesser possibilities for the development of rural territories.</p>			
Transportation and communication limitations or deficiencies	Good connection, except for the parish of Lligua.	Problems with the coastal area; it becomes easier to connect from other provinces.	There is a lack of connection routes to the precincts.	Ruta del Sol articulates almost all the precincts.
	<p>In the case of Baños, the towns' placement along the road has permitted territory connecting, similar to Jama, however the precincts want to unite with other cities. The dispersal of the coastal zone in Cotacachi means transportation challenges.</p> <p>Internal connectedness is critical for territorial development. The road structure in rural Ecuador is often poor, with several areas with little or no connectivity or with "summer" roads (only functional during the dry season). Better connection is critical for the transportation of people and goods.</p>			
Population access to basic services	Acceptable coverage of basic services	Acceptable, especially in rural areas; less than in Baños.	Low coverage, quality problems	Low coverage

Element	Baños	Cotacachi	Montalvo	Jama
	Coverage in Baños is connected to a greater population density (included in the canton's rural parishes). In the example of Cotacachi, good coverage is demonstrated, which might be attributed to societal pressure (from the Cantonal Assembly) and improved municipal management. In Montalvo, respondents clearly identify quality issues in services (which are also underserved).			
	Demazière and Aidalot examine the disparities in numerous areas between small cities and medium and large cities, implying injustices, particularly in respect to basic services (mobility, infrastructure, water, and sewage). This factor can explain disparities.			

2.4 Social Capital and governance

In this section, this study refers to two different theoretical frame themes: Social Capital and Governance.

Among the various concepts of social capital considered by this study in the theoretical part, this section refers to Bourdieu (2001, p.84), Coleman (2000), Ostrom (2016), and Barreiro (2003). The latter define this capital as a set of economic and social ties and relationships based on belonging and trust that allow people to act collectively and complement other capitals.

The capability (or lack thereof) of a government to perform its powers in a territory, i.e. to enact policies and regulate a society, with the cooperation and collaboration of that society, is referred to as governability. This is accomplished through the establishment of a number of institutions (defined as regulations that promote social and economic connections) and governance structures (articulation mechanisms between society and the State) (Crozier, Huntington, Watanuki, 1975); (North, 2014); (Huntington, 1968); Kooiman (2003).

Little quantitative information has been gathered about social capital in Ecuador, and in no case does it approach the cantonal representativeness necessary for the current research. Consequently, this research relies on qualitative information retrieved from interviews.

The dynamics of participation and associativity (which gives rise to a type of social capital) are very different in the four cantons. A higher incidence can be observed in the two highland cantons (Cotacachi and Baños de Agua Santa) than in the two coastal cantons (Jama and Montalvo), which coincides with the general perception of a greater culture of participation in the highland communities, especially in those with a greater representation of ancestral cultures, as is the case of Cotacachi.

Governance and governability follow a similar pattern. The highland cantons show stronger local institutionalism, although there is a big difference between Cotacachi and Baños, while the coastal cantons show weaker governance and governability.

2.4.1 Social capital and relationship networks

The cantons of Baños, Montalvo and Jama have lower levels of associativity. Although there are specific "unions" that are associated, the incentive to associate seems low, with few possibilities to achieve joint goals or have an impact on local development.

There is a strong contrast with the situation in Cotacachi, which has important local organizations that generate spaces for advocacy, especially the Cantonal Assembly, which at certain times became a very important mechanism for local governability and decision making.

Three different cantonal experiences

In the case of Baños, some interviewees speak of an "individualism" that would mean that, although there are organized groups, the actions are not communitarian. Although there are important organizations (especially in the area of transportation), they are not considered strong relationships in the community.

(B05) I would have considered that through that (the return after the eruption) we would have had greater associativity in Baños. Unfortunately, I come back and repeat, the Baneño is very close to his land, but he always sees the individual. The associative theme is very weak in Baños de Agua Santa, we can find associations like the sugar cane, the associations of the transporters, of the artisans, but when one begins to work with the different groups it is not that one finds an associativity for a joint development, either of the activity that is being developed, I believe that it is a little more personal.

(B07): Sometimes there are punctual cases, punctual topics, that interest the community and they participate, but from there, normally not. What is said in Baños, what people are interested in is making money and they dedicate themselves to that. The other issues are not, no, they are not very, suddenly of interest and no, that is why sometimes it implies an incidental citizen participation.

(B13) I think that this is a general situation, not only in Baños, we have become very materialistic, and here what interests me is my work, my wellbeing, but we are not talking about the whole community. Maybe that is one reason why people are not interested, I am only interested in what is mine and nothing else.

(J03) Before the earthquake we had associations, Dicapro, Dicator. We had associations before the earthquake. But it doesn't work, I don't like the associativity; I am a member of AgroTabuga, but I don't like it because people join the association just to make money, and without working, they think they can make money without working. So we had about thirty-

one members, and they are leaving, and then we have expelled members, because they don't collaborate, because one has to set goals, and nothing, and they want to become members but they don't give a single one, and it doesn't work, in other words, I join the association but I want to be like this, just to receive some benefit without working. They attend the meetings, but when the work comes, (...), that is to say, for example, if it is needed for a cleaning or improvement work for the community, because the contribution in each of the associations related to the community also has to be helped.

In Cotacachi

On the other hand, in Cotacachi Canton, the research found a culture of association, which may have originated in ancestral cultures.

(C06) As a civil society, there is the Assembly, the assembly is very important, which has energized the urban organization, the neighborhood federation. In Intag, associativity has another structure and productive associations, committees, environmental issues as well, but in the Andean zone there are the communities as the main organizational fact, then there are the water committees that are also very relevant and there are also associations of producers, some de facto, others de jure, the association of agricultural producers, association of Andean grain producers, there are tourism service providers, association of indigenous medicine providers.

This culture of associativity, which is stronger among the indigenous peoples of the highlands, expands to other social sectors of the canton.

(C16) Regarding associativity, right now I think it has entered into a very strong dispute with the private sector, that is to say that the vision of the provincial government and the mayor has a lot of influence, (...) now also of the parish councils, so if you are not much involved in social movements, one way to remove their silence is to go for the private sector, productive tourism, we took the initiative to form the Cantonal Corporation of Tourism, where private and community enterprises enter, because: what was happening? The chamber of tourism houses the associative ones, and the associative ones house the private ones, and we even found a legal way to combine and that the private and communitarian or associative tourist actors sit at a table to talk.

2.4.2 Leaderships and Citizen participation.

Regarding leadership and citizen participation, we found a similar situation to that observed in the area of associativity, social capital and relational networks: an important social process in Cotacachi, and weaker or initial processes in the other cantons. This is despite the fact that citizen participation has become mandatory in the country, due to local government regulations (COOTAD) and the Law of Citizen Participation, which requires the existence of Cantonal Assemblies (in the case of municipalities), and decision-making spaces such as the local participation council, which include citizen

delegates, among other participation mechanisms: observatories, oversight bodies, empty seats in the cantonal councils, participatory budgets and participatory planning processes.

In most of the interviews in the three cantons it was very difficult to identify citizen leadership. The degree of citizen participation in the cantons of Baños, Montalvo and Jama are "embryonic" and do not justify the application of the legal regulations mentioned above.

(B02) (q) Are there any local leaders or leaders who have been acknowledged for their contributions to the development of the canton? (a) As far as I know, there have been very few persons in control of the municipality who have done a good or bad job, but they always tried to do their best for the city; there are always critiques, but we have had good people in charge here.

The large number of candidates for mayor, councilors and other representative positions does not seem to be enough to form leaderships, that is, instead of finding leaders who opt for representation, lists are formed and it is expected that they assume leaderships. But they do not appear or participate after the elections.

(B13) A ver, como líderes, líderes a ver podemos reconocer, pero como líderes hay muy pocos, no hay muchos líderes podríamos decir así, lamentablemente ahí es donde estamos fallando porque todos deberíamos empoderarnos de esta situación. Podríamos decir el gran problema se ve siempre los líderes solamente asoman en la época de campaña o de cuando estamos ya cercanos a unas elecciones, pasa esa época y hay si estoy hablando hasta de los mismos partidos políticos desaparecieron y prácticamente solo volvemos a hacer actividad cuando ya empiezan nuevas elecciones ,cuando no debería ser eso sino como partidos políticos, como sociedad civil, como grupos organizados debemos estar siempre vigentes, durante todo un período ,es decir no dejar que las cosas nos den haciendo sino nosotros seamos los que también debemos impulsar cualquier desarrollo, cualquier proyecto a emprenderse a futuro

(B13) [Let's see, as leaders, leaders let's see we can recognize, but as leaders there are very few, there are not many leaders we could say so, unfortunately that is where we are failing because we should all empower ourselves in this situation. We could say that the big problem is that leaders only show up during the campaign season or when we are close to elections, that time passes and even the political parties have disappeared and practically we only become active again when new elections start, when it should not be that but as political parties, as civil society, as organized groups we should always be active, during a whole period, that is to say, we should not let things happen to us, but we should be the ones to promote any development, any project to be undertaken in the future].

Not having an influence would have its "friendly" side, in a certain internal peace in the cantons.

(B04) (q) I.e. Is there no influence of social groups in decision-making or public policy processes? (a): No, there is not. (q) And you consider that this is positive or not? (a) Yes. (q) Why is it positive? (a): Because of the peace we have, there are no encounters of one group against another group. Baneños against other Baneños. People coming from outside against people from here, or against someone, right? The city is very passive.

2.4.3. Effects of social capital on development

Social capital can have concrete impacts on the particular and private lives of individuals, for example, by generating a support network that is used in times of need, childcare, lack of income, etc. For the purposes of this thesis, in the interviews we focused on the public effect expected from the presence of social capital in a community: the possibility of influencing decision making or acting from civil society. The capacity to influence or decision-making power would be the main indicators that social capital exists and has an impact in a canton or region.

Again, we distinguish between the 3 cantons and Cotacachi.

In the three cantons:

In general, civic and political participation is very weak, with a lack of active engagement of citizens to contribute to decision-making or policy implementation, and a lack of accountability. This is despite the fact that the mayor's offices create opportunities for civic participation. All authorities interviewed stated that the municipalities followed citizen involvement regulations.

(B13) Well, the mayor's policy has always been to try to socialize in all the projects, to make known the institutions or interested parties from which a definitive direction is taken to undertake a project, that is, there is participation, but it would be important that this participation be greater every day so that all the projects and ideas that the different institutions have become a reality but according to the need, and not only according to the criteria of a single person or in this case perhaps only the idea of the municipality, but projects that come from the society itself. (Q) What is the potential management model for this model that you have named? (A) The majority involvement of all institutions, that they participate in choices, decision making, budgeting and project development, and that they are not just projects imposed on us.

Limited collaboration and cooperation between individuals, as there are no solid links and trust.

(B05) Very little, very little, unfortunately I repeat, it is not that the private entrepreneurial part of Baños has wanted to have an impact in the generation of development models, in the alternative generation of improvement for the canton, but I consider that the entrepreneurs of Baños have gone their own way and not even united as entrepreneurs, but independently on their own. I am talking about the topic "I am an entrepreneur and I generate my business, and I consider and look for my own markets and I have to leverage the public policy of what they are saying"; in terms of operating permissions, construction and so on, but there is no amalgam of public-private building for the change of the system.

(J02) We are currently making alliances. In this case, at the moment we have an alliance with IICA, we have supported the associativity with a previous project, because there were

associations but I did not know why they had met, but we supported them with internal procedures, the minutes and a little more, and in this next stage we made an agreement with IICA and Crisfé, they are training them to already have a market, and getting a market, so we hope that in a few months, and some groups will have a market without the need for an intermediary.

There is a feeling of isolation and fragmentation, resulting in low capacity or difficulty in mobilizing collective resources and efforts.

(B10) No recognized leaders within this, that is, each one here, without leaders. Here they make a directive for the October³⁸ festivities, (...) there is no leader to organize everything. For example, (...) the youth still do not have a leader identified. The same in the communities, there is a president who gets involved in everything here, but he changes every year and there is no leader who is in charge of everything.

(B01) (P): ¿Qué poder de decisión o influencia cree usted que tienen los grupos sociales en los procesos de construcción del territorio de la política pública local? (R) Ninguna. (P) ¿Por qué? (R) Porque no, no estamos organizados.

(B01) [(Q): What decision-making power or influence do you think the social groups have in the processes of construction of the local public policy territory? (A) None. (Q) Why? (A) Because no, we are not organized].

In Jama they even refer to a culture of clientelism and subsidy-seeking, which would be behind the establishment of associations:

(J03) Before the earthquake we had associations, Dicapro, Dicatur. We had associations before the earthquake. But it doesn't work, I don't like the associativity; I am a member of AgroTabuga, but I don't like it because people join the association just to make money, and without working, they think they can make money without working. So we had about thirty-one members, and they are leaving, and then we have expelled members, because they don't collaborate, because one has to set goals, and nothing, and they want to become members but they don't give a single one, and it doesn't work, in other words, I join the association but I want to be like this, just to receive some benefit without working. They attend the meetings, but when the work comes, (...), that is to say, for example, if it is needed for a cleaning or improvement work for the community, because the contribution in each of the associations related to the community also has to be helped.

It is much the same in Montalvo. Despite the fact that each neighborhood and commune have its own structure, there is indifference among the people, with little support for organizational acts or labor in common.

(M02) (Q) How is the situation of the associations? (A) Stable, as I said, we are among the directive, but we also have to fight with our community that does not like to assemble. If we tell them we are going to such and such a place to do some benefit around here, they

³⁸ Festivities of October in Baños, are the religious festivities for the Virgin.

don't like to walk, but we are still in the struggle (Q) I mean, there is a weakness (A) Yes (...) People are not committed.

(M06) Here, for example, we recently joined CORCOM, which is not even at the national level; each piladora is managed independently. It is likely that the rest of the people are the same, everyone works on their own.

(M08) It could be in a good condition, yes, but obviously it would be necessary to consolidate sometimes the population, due to some inconvenience they have or something they did not like if they were doing something in the associativity, they prefer to leave, each one on their own. I think we could improve a lot more.

Some interviewees mentioned as a difficulty for the setting up of associativity the fact that it is no longer mandatory to belong to organizations for the operation of the enterprises, or the implementation of certain professional services (which previously required to be part of Colleges or Unions).

(M17) Ahora también puede existir esto pero no están activos porque recuerde el gobierno anterior, uno de los condicionamientos para acceder a cualquier crédito o que le daban el apoyo del sector productivo era estar asociado, entonces ese fue un medio para que la gente se reúna pero es notorio que hubo un nivel bastante de fracaso de mantener una asociatividad porque ya teniendo el producto que era en este caso el crédito y de ahí cada cual hacia lo que mejor le correspondía hacer y no mantenía esta asociatividad, entonces activamente para decirle son 20 son treinta realmente nosotros no tenemos esos datos

(M17) [Now this may also exist but they are not active because remember the previous government, one of the conditions to access any credit or to receive support from the productive sector was to be associated, so this was a way for people to get together but it is notorious that there was a level of failure to maintain an associativity because having the product which was in this case the credit and from there each one did what was best for him to do and did not maintain this associativity, so actively to tell you there are 20 are thirty really we do not have these data].

It is crucial in Montalvo to develop the producer's association, which is still in its early phases. Although some of the individuals interviewed seem to appreciate the benefits and possibilities of associativity, they do not appear to be heading in that direction, maybe due to an examination of costs and benefits.

(M07) Pero, funcionaria la asociatividad si es que, en caso, si ya tuvieran donde tener el producto para no venderlo y no cogerse esos precios bajos si ayudaría. Por decirle, según la asociación hace sus propios silos, tienen su producto, pasa a la cosecha y lo venden. Eso es lo que hacen las corporaciones grandes, acaparan el producto, lo tiene en silos, pasan a cosecha y comienzan a vender, pero ante esas situaciones que puede hacer el agricultor, son cantidades bastante grandes que no las puede tener guardadas. Un bulto de arroz, tiene que sacarlo y eso es bastante. No tienen suficiente espacio para tener y guardar el producto, tienen que coger directamente del monte donde se siembra y llevarlo a la venta. Porque no pueden hacer el proceso de secado y de limpiar porque no hay. Ahí funcionaria la asociación y tuviera su propio instrumento de trabajo, eso sería lo ideal, para mejorar la economía del cantón. El gobierno o alguna institución que nos ayudara con esa herramienta de trabajo.

(M07) [However, it would be beneficial if they had a location to store the products so that they did not sell it and lose those low pricing. According to the group, they build their own silos, have their own product, harvest it, and sell it. That is what big companies do: they store the product, store it in silos, harvest it, and sell it. But in these cases, what can the farmer do? There are vast quantities that he cannot store. He has to take out a bag of rice, which is quite a large amount. They do not have enough space to keep the production, so they must carry it immediately from the area where it is planted to the sale. They are unable to complete the drying and cleaning processes due to a lack of room. That would be perfect for improving the canton's economy. This work tool might be provided by the government or another entity].

In Cotacachi

The perception in Cotacachi is that associativity is strong - both territorially and in the sectors of the economy -. Through the Cantonal Assembly there is a strong relationship with the public sector in the canton, and economic effects have been achieved through aggregate sales.

(C03) Local associativity is in good condition. (...)You have the Assembly model, for example, the associative issue is a strength, for example, we are motivating farmers to organize themselves, producers to organize themselves with the issue of planting products that have a strong international market, then... the farmers sell milk individually, We should organize ourselves so that the products can be consumed in the territory, such as milk, yogurt, cheese can be consumed in the canton and we can expend. The same is true in the producing area. (Q) And if the state of local associativity is so strong, which do you think are the organizations, the associations that are functioning and working well? (A): In the associative area we see, for example, the UNORCAC is an organization that has different productive and touristic focuses (...), but it helps in the Andean area, I also think the coffee association AACRI that exists in Intag. In Golondrinas, despite the fact that it has been part of our territory since 2006, there is an association of cattle farmers who do not work on their own, but we have identified them to do a coordinated work, the palm association, the cocoa association, so all this productive work has been made visible. From the social point of view, obviously there are different social groups that fulfill the function for which they were created.

On the economic side, the organization has been important in balancing prices, putting them on an equal level with the commercial intermediaries.

(C07) Organizations have played a vital role, for example, in beans, where a considerable portion of the population, if not the majority, plants beans. Before there were one or two intermediaries who paid whatever they wanted, but when an organization began to buy beans, the intermediaries put themselves on the same level, so economically, if they are going to pay about 40 this year, I will also pay the same, but before there was no organization, when people did not say, "Let's make an organization," there was a man named Camilo. For example, Don Camilo would come and if the price of beans was 40, he would say 20 and we had to give him in 20 because he was the only intermediary... in the same subject of coffee, for example, Don Camilo would buy the coffee on his own. So now it is true. Here in the area, we need more organic coffee production because organic coffee is sold at the best prices in the country. The problem is that there is no organic coffee, there is very little, the organic coffees for example pay very well, the conventional coffee has

problems because whoever buys it in the national or international market says "al fio"³⁹. And this has been the bottleneck because the farmer wants the money.

However, it must be recognized that, while the organization is powerful, participation requires the Mayor's political will.

(C05) In other words, the social organization in Cotacachi is strong, and the social network is robust in Cotacachi; nevertheless, the present authority, particularly the mayor, does not allow for the relationality that I said. For example - a month or so ago - I forget the date (...), he wanted to abolish the cantonal assembly, he says no, but in his ordinance, he wanted to include other organizations within the canton, or, better said, because it would be interesting to include other organizations, not to put the names that already exist in the canton. For example, instead of putting UNORCAC, I -(The Mayor)- put Andean organizations. That is clearly, what Correa was doing; he began to build another type of organization, more or less on par, and he stated that he had about two hundred organizations that wanted to belong to this new organizational tissue, and (...) we were in the protest that took place here.

2.4.4 Levels and measurement of social capital

Networks and relationships:

(B22) Siento que nosotros hemos perdido los valores de solidaridad, hemos pedido bastante con que no nos toquen el bolsillo cuando hay cosas que son realmente, que pueden afectar a la comunidad entera no les importa, pero si es que le afecta a su bolsillo entonces están todos ,por ejemplo si el municipio va a decir desde el próximo mes los bañeros tendrán que pagar 60 por ciento más de los impuestos, en alguna cosa te prometo que la gente va a estar pero si de pronto dicen la empresa china va a empezar a explotar los Llanganates y posiblemente nos quedemos sin agua, yo creo que a muy pocas personas les va a interesar ,ese es mi quizá soy un poco patético al pensarlo así, pero yo pueda que me equivoque, ojala me equivoque...

(B22) [I believe that we have lost the values of solidarity; we have asked enough that they do not touch our pockets when there are things that really affect the entire community; they don't care, but if it affects their pockets, they are all there; for example, if the municipality announces that the Bañeros will have to pay 60% more in taxes starting next month, I guarantee you that the people will be in something, but if suddenly they say that the Chinese company is going to start exploiting the Llanganates and possibly we will have no water, I think that very few people are going to be interested, that is my opinion, maybe I am a little pathetic to think so, but I could be wrong, I hope I am wrong....]

In Jama, many associations are formed around a public proposal or a non-governmental organization, but they fade away or disappear if the external actor does not continue to promote them, i.e., they are temporary, short-term relationships with clientelistic characteristics.

³⁹ is a colloquial expression meaning: to credit

(J02) (Q) When you were talking about associations, you said that there are associations but you don't know what they are for. There are many associations, the municipality has mapped unions of all types, tourism, fishing, livestock, farmers, coffee growers, papaya. How are these associations? (A) We (an NGO) have worked in some, not all, and we have seen that in some cases they did not know what they were associated for, not even the name of the association, or if there was an internal regulation. We worked on that, on remembering again what they were associated for, that is what we are working on, strengthening in some sectors. We are working with some 15 to 20 associations, in agreement with IICA, which we have strengthened at the organizational level, and now they are already in the next steps, which is marketing, and we hope to see results.

(J26) They think that partnering is.... an institution comes and associates them and gives them resources and they are going to manage the resources, but they do not like it when I bring them as partners, you have to work, you have to capacitate, you have to do this, you have to do that, when they start to work in that way, in that form, they start to move away, they are tied to the resource, that is, if there are resources, if there are gifts they are, that is, they have been used to a paternalistic management, that is, the people of Canton Jama are used to paternalism, to give me, give me, give me and I spend, I spend, they give me and I continue spending. But they do not believe or do not like it when they are given seed capital so that they can grow. So, this is the part we have been working on and it is our future challenge to continue working on this issue.

There is limited participation, which may be a result of a lack of mutual trust. Participation is more likely to be motivated by a desire for gifts, help, or subsidies.

(J17) Hacia el interior de los campos entre familias hay el famoso prestamano, pero Manabí en general y Jama en particular tiene un grave problema de individualismo, aquí hay muy poca cultura de la minga, muy poca cultura de la solidaridad muy diferente a la sierra centro, al sierra sur que son gente muy arraigada a ese costumbre, aquí no tenemos la cultura de la asociatividad, del trabajo comunitario. Manabí tiene aproximadamente 1800 organizaciones sociales y de esas 1800 acaso un 5 por ciento tienen actividad que se puede ver a través del Sri, más allá no. Bueno de la revolución ciudadana sería un inicio de la solidaridad aquí en la provincia y se hizo por una sola razón para poder regalar, para poder dar las dádivas que yo le digo, o sea ustedes se hacen aquí un grupo humano, son asociación y el gobierno de ustedes les regala esto, entonces si le veo dejo mal precedente ahí y quedo como resultado no hay aquí una organización social fortalecida, no funciona una asociatividad ha sido un fracaso la sociedad aquí tratar en forma grupal o sacar beneficios grupales porque no hay realmente un objetivo como grupo, si usted ve todas las propiedades tienen una cerca por chiquita o grande que sea, en la sierra no ve eso.

(J17) [Towards the interior of the fields - between families - there is the famous "prestamano" but Manabí in general and Jama in particular has a serious problem of individualism, here there is very little culture of the minga, very little culture of solidarity, very different from the central highlands, the southern highlands that are people very rooted in this custom, here we do not have the culture of associativity, of community work. Manabí has approximately 1800 social organizations and of these 1800 perhaps 5% have activity that can be seen through the Sri, but not beyond that. Well, the revolución ciudadana would be the beginning of solidarity here in the province and it was done for one reason only, to be able to give away, to be able to give the gifts that I say, that is, you become a human group here, you are an association and your government gives you this as a gift, So, if I see a bad precedent there and as a result there is no strengthened social organization here, there is no associativity, it has been a failure for the society here to try in a group way or to get group benefits because there is not really an objective as a group, if you see all the properties have a fence no matter how small or big it is, in the highlands you don't see that].

In the case of Baños, social capital is declining, particularly at the level of chambers of commerce or tourism; nevertheless, the associativity of small businesses connected to handcraft manufacturing remains. The Baños business structure also provides multiple problems to the study's hypothesis: on the one hand, 90% of the firms studied are microenterprises; on the other hand, the company organization is family-based. These two findings cause us to reconsider the theoretical relevance of associativity's ability to generate economies of scale external to the enterprise and specific to the territory, as well as its effect as crucial capital, a topic that is underappreciated in Baños. The Chamber of Commerce, which corresponds to the second level of association, is effectively closed, and the Chamber of Tourism is unable to build a large collective of small and medium-sized businesses that cooperate and compete.

(B16) It is a sociological aspect of Baños, if there is individualism, people want to prosper on their own without affecting others, then there is an interest in getting ahead in their company or business and that affects them a lot in Baños, and because it is a small town and attracts many tourists, there is a level of competition where individualism tries to prevail. In terms of chambers of commerce, the transport cooperatives that lead a good transport market in the province have a high degree of associativity. For example, the Baños cooperative is believed to be one of the best organized in the highlands, covering the entire country up to Lago Agrio, Sucumbíos, Sachas (East), to the extreme coast of Salinas, Santa Elena, San Lorenzo, Ibarra. So the transport sector is like a middle sector, the one that stands out a little bit alone is the one that operates in a collaborative associative style with extremely contemporary transport units. The Amazonas Cooperative and the Express Baños Cooperative are also among the top three. Another area where good associativity can be seen is in the merchants inside the terrestrial terminal, but at the level of restaurants and hotels, the tourism chamber has had power struggles because each one wants to stand out, which is a weakness at the tourism chamber level.

The capital generated through stakeholder relationships is diminished in contrast to the comparative advantages offered by the natural environment. As a result, this institutional component is distinct. This is another area where generalization is very difficult because each territory must be examined individually.

Finally, it should be remembered that there was once a certain requirement to join groups for "trade union" matters, such as professional associations or chambers of industry, commerce, or tourism. However, in 2012, this requirement was repealed, with merely State authorization and registration required in many circumstances.

(C10) Sabe que el decreto famoso el 18, de 2012 casi termina con todas las organizaciones; desde entonces si hay un poco de desinterés de la gente, porque las asociaciones terminaron, desde que quitaron algunos elementos importantes que las asociaciones tenían, entonces la gente dice ya no, ya no podemos ser de asociaciones, ¿para qué? Ya no tengo ningún beneficio. Entonces las asociaciones tuvieron su auge en su momento, hay asociaciones que están en vigencia de por vida porque como los artesanos por costumbre y tradición se están haciendo, pero no cosas para el mejoramiento sino cosas internas por dentro, no cierto, como el aniversario, el baile de fin de año, capacitaciones de pronto, y los talleres y cursos de titulación

(C10) [You are aware that the famous decree 18 of 2012 nearly ended all organizations; since then, there has been a little disinterest among the people, because the associations ended, because they removed some important elements that the associations had, then people say no more, we can no longer be associations, why? I no longer have any advantages. So associations had a boom at the time, there are associations that are in force for life because as artisans by custom and tradition they are doing, but not things for improvement but internal things within, (...) like the anniversary, the end of the year dance, training, workshops, and degree courses].

2.4.5 Resilience and organized action

Catastrophic occurrences can occasionally inspire significant social mobilization. Two specific events stand out in the history of the cantons involved in this study: the eruption of the Tungurahua Volcano in 1999, which resulted in the temporary relocation of the population of Baños and a process of return that marked their history; and, more recently, the Manabi earthquake, whose epicenter was in the neighboring canton of Jama (Canton Pedernales), in 2016, which also entailed some institutional and settlement dynamics modifications.

For the sake of this thesis, we will concentrate on the concepts of resilience and coordinated action.

The displacement of the population of Baños in 1999 is considered by the residents as the central milestone in their recent history. The evacuation and emergency response, which was considered at the time by the government as the most appropriate measure to ensure the safety of the population, was later evaluated as an extreme and inadequate measure by the inhabitants.

(B01) We took advantage of the fact that he spoke negatively about the volcano, and at the time, I was president of the Baños Tourism Chamber. I worked for the chamber for two years, and we reverted that. We were correct if he stated it was wrong. We went out to the country to inform him that our main attraction was the Tungurahua volcano, and everything changed from there (...) It was marketing's hand that formed the Baños Chamber of Tourism at the time. The tourist chamber was the city's pillar throughout those two years. The tourism chamber of Baños has worked tirelessly for two years to promote tourism and bring tourism back to Baños.

Following the return, the Baneño community became "friends of the volcano," and capacity building activities, such as early warning mechanisms, citizen brigades, evacuation routes, and temporary shelters, were established to live with the risk. The eruptions' potential as a tourist attraction was also utilized.

(B02) Well, it is a difficult date to remember, but it has strengthened us as residents to become stronger, more humanitarian, and more supportive, so the precaution that the authorities have initiated here is greater control, monitoring of the volcano itself,

evacuation drills, we are trained to evacuate in the event of an evacuation, God willing that this does not happen to us, we can evacuate immediately (...), we already have designated areas where we can conduct mass concentrations, and we have very good control over time. However, it is true that people often overestimate their abilities, but there has been research, analysis, and local evacuation practice.

During the crisis, the Baños community displayed solidarity and unity. The cleansing and rehabilitation of devastated regions required leadership and organizational systems, with the assistance of non-governmental organizations.

Adaptation resulted in the expansion of the tourism sector, including volcano tourism, which comprises routes and guided tours, thermal waters of volcanic origin, and observation locations in the case of an eruption, as well as adventure tourism, which takes advantage of the transition between the highlands and the Amazon. Local economic diversification helps to reduce the community's susceptibility to future crises.

(B03) Cuando nosotros regresamos aquí a Baños había actividades (volcánicas) más grandes, una de esas fue en el 2006, que la gente respondió ante esa emergencia, (...) la gente poco a poco se iba capacitando. Mire que esa vez cayó cascajo, le cayó casi hueco, todo el mundo salía con sus ollas algunos se tapaban y si iban por la vías de evacuación. Eso ya pasó en la noche, al día siguiente se dio esta situación que se cerró hasta la vía y todo y el siguiente día empezaron a hacer mingas y querían seguir trabajando; y nos ha dado mucha fuerza aquí en Baños, claro que sí hubo pérdidas materiales, como también pérdidas humanas pero no aquí en Baños si no hay fuera en la provincia del Chimborazo, lo cual nos dio más fuerza, yo creo a Baños también para salir adelante. La gestión de riesgos, eso ya aparte, se dio bastante. Comenzamos a ser resilientes, empezamos a capacitar ahora toda la población como es la respuesta ante una emergencia, siempre ocupábamos y preocupamos como decíamos las tres: la preparación, la respuesta y la reconstrucción... y en una de esas en la preparación, fue la capacitación... fue capacitar a todos para la respuesta, también todo lo que ha pasado en estos años, si no la gente turística en los hoteles tenían, o sea comenzaron a tener una educación que al turista tenían que indicar eso sí, en el caso de una actividad nueva del volcán Tungurahua suenan las sirenas dónde van evacuar donde tienen que ir y todo el asunto, ya comenzamos a auto educarnos para enfrentarnos a esta amenaza que teníamos...

(B03) [When we returned to Baños, there were larger (volcanic) activity, one of which occurred in 2006, and the people responded to that emergency, (...) gradually, people were being taught. Look, as the rubble fell, it virtually hollowed out everyone, and everyone walked out with their pots, some of them covered themselves, and if they went through the evacuation routes. That happened at night, and the next day, the road was closed and everything, the next day they started doing mingas and wanted to keep working, and it has given us a lot of strength here in Baños. Of course, there were material and human losses, but not in Baños, but in the province of Chimborazo, which gave us more courage to continue forward, I feel. Aside from that, risk management was critical. We began to be resilient, and we began to train the entire population on how to respond to an emergency. We were always concerned and worried about the three: preparation, response, and reconstruction... and one of those in preparation was training... it was to train everyone for the response, as well as everything that had happened in these years, if not the tourists in the hotels. That is to say, they began to have an education that required them to inform tourists that, in the event of a new activity of the Tungurahua volcano, the sirens sound, where to evacuate, where to go, and the entire thing, we began to educate ourselves to meet this threat that we had...]

The magnitude 7.8 earthquake that shook Ecuador's coast in 2016 caused devastation on the Manabi region, including the Jama canton. The effects of home destruction in Jama and its towns resulted in population migrations of relocation, such as the expansion of the El Matal area and the transfer of a portion of the urban population.

On the contrary to the experience of Baños, the crisis response did not create strong leadership or stronger organization. Instead, a reactive form of action was observed, this way of reacting relies on external solidarity in the form of state subsidies or assistance from non-governmental organizations. When the interviews were performed two years after the earthquake, there were few local organizations created to receive assistance, but with little impact on local growth.

(J01) Yes, the earthquake brought people together locally, yet many things are in the power of strangers; what did the canton do? The MIES arrived from outside, as did the social actors, and it was not handled by people from here, which generated the normal problem: here came the expression of the MIES, here came the construction of the MIDUVI, people from Portoviejo with no willingness to help and no desire to work. They came here because they were too lazy to go and see the constructions upstairs, so they stayed in the swimming pool and drank beer. People from here and the municipality eventually coordinated, but I saw it as anarchy for those who came from outside.

During the emergency, the Jama community responded fast to provide relief to people in need via collection centers and temporary shelter camps. There was also a basic level of community involvement in reconstruction planning. Nevertheless, the disastrous event has resulted in no institutional reforms.

(J10) To talk about associations, that was one of the weaknesses we always had, but after the earthquake, with the expectation of the people who were anxious to receive help, those who came, NGOs, more than anything else, came to ask about the organizational issue, unfortunately it was very limited. From then on we started to become aware that with organization we could achieve better things, and so it has been, to the point that we started to help create associations, not in large quantities but we do have around 20, 22 or 25 associations (...) approximately, they are of agricultural, artisan and fishing production.

(J14) I believe that because of the reconstruction, despite the challenges, it was the only period when there was shoulder to shoulder, but the society is not conducive to associativity from then on. Everyone wants to be a part of an organization, but in order to continue, one must be ahead of what's expected. Field schools for young leaders, in my opinion, should exist. New leaders should be instructed because there are hardly none left, and those who are left are 70 years old or older.

2.4.6 Actors and Institutions

Baños

Tourist stakeholders in Baños canton stand out, including tourist groups such as the

Baños Chamber of Tourism and the Pondoá community tourism association, a one-of-a-kind community tourism association near the volcano that tries to encourage conscientious tourism that is more tied to the solidarity economy. The localities also have tourism service providers. Tourism service providers with significant infrastructure investments coexist in the region, as do small providers with hostels that serve to backpacker travelers. There are also informal actors whose tourist operations have not yet been authorized. These major and small actors do not collaborate and do not form networks of mutual assistance, especially during peak seasons and weekends when there are more tourists in the area.

Sugarcane artisans' organizations, agricultural workers' associations, and community associations have developed an economic dynamic around tourism and sugarcane derivatives, particularly melcochas, candies, and sugarcane liquor. Farmers, on the other hand, say they rely heavily on intermediaries to market their products. The third category, community associations or cabildos, has a tight relationship with the mayor's office, particularly for the improvement and maintenance of road and community infrastructure; they are actors associated with agricultural or community-based tourism service offerers. There are transport groups, the Baños cooperative, and the Baños drivers' union, all of which have considerable weight because of the flow of tourism and business linkages with Ambato and Puyo. Transportation businesses are attempting to increase service provider competence and establish a significant national presence.

There are also social groups and citizen representatives, such as the neighborhood federation, this organization look Baños as a chaotic and overcrowded urban hub. The Catholic Church is also an important actor, fostering urban-rural connection around the city's symbol, the Virgin of Agua Santa. This actor acknowledges that religious tourism is an essential source of resources for the residents, the priest also mentions that the practice causes familial and societal difficulties.

Among others, there is the Ecominga Foundation, and numerous foundations and ecological organizations, since Baños is a vital natural environmental resource for the province and the country. UNESCO has unsuccessfully proposed the region for Geopark designation. Natural heritage-related social actors are attempting to establish Baños as a sustainable tourist destination.

The Red Cross and the Ladies of the Red Cross are also significant actors whose goals include natural and anthropic risk management and prevention.

Other actors that have not necessarily been legalized keep an informal but no less essential relationship, tied to the cultural sector or new agroecological agriculture trends. Finally, there are different types of tourists, such as backpackers, leisure tourists, thermal tourists, and religious tourists, who all appreciate the amazing nature of the canton. There is also a significant proportion are young international visitors who drive a nocturnal urban dynamic that causes significant social changes in the canton's capital.

Influential public stakeholders include the 4 parish councils of Baños, the Mayor and the Municipal Council elected by popular vote, and the Provincial Council and the Prefecture of Tungurahua also have significant regional influence. These actors have historically supported the productive diversification of the province. The political tendencies of the actors elected in the last 10 years, at the municipal and provincial levels, fluctuate between the left and the right. The tourism direction was established by the local government (Municipal Autonomous Decentralized Government) to assist service providers with promotion, generation of local competencies, and collection of data on visitor reception and flow. The parish administrations want to see growth in tourism and agriculture in their parishes. The Provincial Government has created recreational areas in Baños and has worked to promote cantonal and regional tourism.

An interview participant stated the interaction between the municipality and the parish administrations as follows:

(B16): The parish governments have lately had a good role and a good connection with the mayor, who has defined better development projects, particularly in this recent time. There were some constraints with the previous mayors. However, there has been greater flexibility with the presidents of the parish GADS under the present administration, yet there are various administrative challenges inside the city. However, there has been a stronger development at the cantonal and parochial levels. The ideal scenario would be for the municipality to use the participatory budget to allocate more funds to the development of parish governments, primarily to productive development, and, above all, to create a place for agricultural markets, but only for farmers.

At the national level, there are also deconcentrated actors: health, education, and tourist departments situated in cantonal capitals.

Territory actors may accumulate significant social capital for future development. Several organizations' representatives talk of a decline in relational capital in Baños, particularly after 2008, when the Constitutional Court repealed the necessity to join professional groups and chambers of production. Social capital is not considered a resource because natural resources, space and family resources prevail in the acquisition of territorial assets.

In summary, with a weakening of social capital, the possibility of participation of social actors in local public policy decision-making is limited. Although there are instances of interaction between social groups and the Mayor - this linkage is more individual - or related to what each community manages to obtain from this approach in the short term. In general, these groups do not feel that they have an impact on strategies to solve the problems faced by the city and the canton as a whole. There is no knowledge and involvement with respect to the development plans and objectives that the canton has visualized in the medium and long term.

Unfortunately, there is no shared vision for strategies that are essential to the canton's development. It has not been possible to generate a common vision of the cantonal development proposal in the long term, involving the different actors that live in Baños.

There are also actors who are very critical of the growth of tourism in the canton, considering that it has been disorderly and has generated profound problems such as drug addiction and alcoholism, with great social costs for the population. These actors are part of alternative local citizen networks that seek a space for representation in the canton's decisions.

There are no universities located in Baños. PUCESA, UNIANDES, ESPOCH, and UTA are universities that support the canton and are recognized by local stakeholders. Their linkage strategies with Baños include university studies, internships, local capacity building, and human capital training facilities.

The 2010 economic census was utilized for business statistics, and while 1,534 enterprises were registered, only seven were associative or cooperative in nature. There are 374 tourism-related businesses, just one of which is an associative one. There are 664 firms in marketing; the majority of them are small or individual businesses.

To summarize briefly, the mere existence of organizations does not imply the presence of territorial social capital in Baños canton. Social capital requires establishing relationships based on trust, solidarity, reciprocity, shared vision, and other issues that have to be developed in the canton. Individualistic behavior prevails, which has yielded positive results but is far from the social capital that existed in Baños during the time of the volcano eruption.

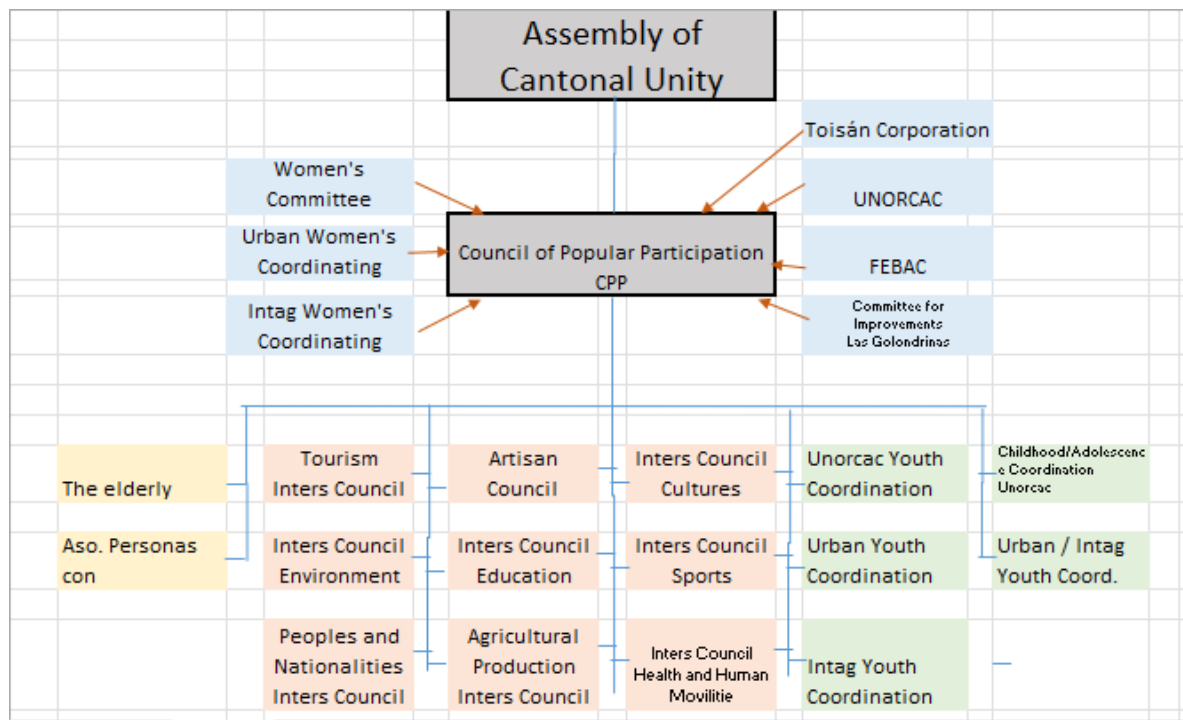
Cotacachi canton

One of the key territorial stakeholders is the UNORCAC: Union of Peasant Organizations of Cotacachi, remembering that indigenous people make up a substantial part of the population. The Organization supports many productive and touristic projects that renew the social organization, as well as the agroecological production initiative, which is one of the canton's most significant food security efforts. One of the most important dimensions in which UNORCAC has collaborated is the economic one, with the goal of creating jobs and livelihoods for the linked population, which is ethnically indigenous. Among the UNORCAC businesses are the companies Jambi Mascari, Runa Tupari (which, according to several interviewers, ceased operations in 2018), Jambi Kiwa, the weekly agroecological fair, an important proposal for food sovereignty and security for the canton and which means the consumption of healthier and more nutritious food. All these initiatives are linked to the second-degree Organization UNORCAC.

The organization's institutional political character has also improved because of its participation in the Assembly of the cantonal unit, of which it is a member. The Assembly of the Cotacachi cantonal unit, a third level organization in the canton, is a participation system made up of second level organizations that was born as a civil society initiative in 1996, with high decision-making capacity within the cantonal organization. The Cantonal Assembly is a political actor that participate with the municipal council, that provides a forum for management and participation in planning and local development in Cotacachi. The Assembly has a high degree of participation and decision-making power in the Municipal Council. Finally, it accesses a budget to develop diverse holistic development plans and initiatives that benefit the territory.

The cantonal Unit Assembly represents both urban and rural entities, and it convenes the Council of Popular Participation, which includes UNORCAC, FEBAC, Toisan Corporation, Golondrinas Improvement Committee, UNORCAC's Central Women's Committee, Urban Women's Coordinator, Intag Women's Coordinator, UNORCAC's Youth, Urban Youth Coordinator, Intag Youth Coordinator, UNORCAC's Adolescent Coordinator, UNORCAC's Adolescents, Urban and Intag Children and Adolescents Coordinator, UNORCAC Children and Adolescents Coordinator, Urban and Intag Children and Adolescents Coordinator, Senior Citizens, the association of people with disabilities, parish participation systems, intersectoral councils (tourism, crafts, environment, education, culture, sports, peoples and nationalities, agricultural production, health and human mobility, etc.), the association of people with disabilities, the parish participation system, and the intersectoral councils (tourism, handicrafts, environment, education, culture, sports, peoples and nationalities, agricultural production, health and human mobility, etc.). Above all, the Assembly's potential to bring stakeholders together is exceptional, serving as a model for local governance for the country, see figure 86.

Figure 86 Structure of the cantonal assembly - Cotacachi



Source: Cantonal Assembly directives

A second significant stakeholder in Cotacachi canton is the tourism sector, because of its degree of organization and its potential for mobilization and advocacy. There has been private investment to position Cotacachi as an international tourist destination, tourism linked to agriculture, and tourism linked to the environment attractions, such as Cuicocha Lake or the protected area Cotacachi-Cayapas with the high biodiversity it possesses. For these stakeholders, it is critical that the public sector collaborate in dynamizing tourism in the canton, as well as that sectors such as mining do not jeopardize the canton's natural attractions. According to those surveyed, mining requires stronger control and discouragement of this expanding investment in the canton's Intag region.

The local public stakeholder - the municipality - has the public tourism enterprise and has generated tourism services, such as swimming pools in Nangulvi, infrastructure maintenance and has promoted this activity in the canton, together with the Cantonal Assembly, UNORCAC, and several NGOs (Development Plan 2015-2020). Cotacachi was designated a Magical Town by the Ministry of Tourism for the attractions and services it has established in connection with the canton's cultural heritage.

There are additional suppliers of community tourism services: enterprises affiliated to what used to be the Runa Tupari tourism operator. There are also community providers located near the Nangulvi pools or other natural attractions around Intag. These are local associations that link diverse activities: handcrafted items and community tourism and

agriculture with complementary livelihoods that attempt to diversify the lives of rural families.

The artisan sector is related to leather and is another important urban economic sector. Artisans work in leather items producing handbags, sweaters, belts, and other leather products that are in high demand by tourists who visit the canton. Those people related to leather industry see competitiveness as a major challenge, given that territories such as Ambato are more competitive in terms of prices. This activity promotes the canton's urban and commercial economy and becomes part of the activities that strengthen Cotacachi's tourism industry. The activity helps create links with Colombia, Cuenca, or Ambato by importing inputs, and it is wanted by national and international consumers and tourists that visit the urban center. Because the demand of leather is limited; it is not feasible to buy a wallet or a sweater on every visit, the supplier should innovate at a faster rate or be more competitive in price to increase the rate of purchase of manufacturing.

Other essential actors of the territory are young people, who may be involved in handicrafts, tourism, or cultural activities, the latter is another important activity in the canton, as it is considered an important place for musical development in Ecuador, along with Otavalo. Additionally, the youth have taken a position in favor of the communities battling against the insertion of mining firms in protected regions of the canton that are naturally biodiverse. They also feel that the leather fair should be rethought, with business rounds proposed or the activity included into a Cotacachi brand that offers greater value to both tourists and handicrafts. Young people are also critical of tourism progress. They believe that several tourism products should be integrated in order to consider Cotacachi as a tourist destination, where several attractions and services are organized and offered to tourists, in route generation. The young people want tourists to stay one night or longer at the location so they could experience tourism products produced with cultural and environmental sustainability approach.

Within the agricultural activity, it is possible to find large producers of flowers or broccoli, as well as small farmers organized through the UNORCAC organization. This association produce agroecologically and have a direct marketing channel with consumers in one of UNORCAC's headquarters, they implement a short circuit marketing scheme. Intag also has small family farmers that cultivate maize or beans, organic coffee, and avocados, as well as cabuya and loofah producers and cattle farmers.

Another key stakeholder for the importance and consolidation of rights is the Cotacachi Association of People with Disabilities, which has successfully positioned itself in the canton through an inclusive tourism strategy for people with disabilities. Daniel Sarzosa is an important figure in the canton and Ecuador, as well as a human rights activist and support for people with disabilities. In the municipal administration, he was the Executive Secretary of the Cantonal Council for the Protection of Rights.

The mining industry, or more specifically mining corporations, was not personally interviewed, but the contacted stakeholders clearly identified it. They state that mining activity has increased over time and that this exploitation is hazardous to the canton's environmental resources, which are highly valuable for the country. Copper, molybdenum, silver, marble, and zinc are all found in Cotacachi (Plan 2015). The mining region, according to one source, is located in the Toisan mountain range, Garcia Moreno parish, in an area of primary forest and water supplies, where around 20,000 hectares have been concessioned.

It is stated that, over time, more businesses have begun the exploration and exploitation process, despite opposition efforts intended to stop mining exploration, particularly in the Intag area, where open-pit mining is desired by enterprises. According to interviewees, the national guide for mining is one of the possible activities to generate resources for the country, but it limits the capacity of local actors in the canton to prohibit these investments. A discrepancy of long-term policy goals between local and national levels. Cotacachi is one of the most representative cantons in terms of civil society participation and participatory budgeting. Cotacachi was one of the first cantons to appoint an indigenous mayor and is an example of participatory and sectoral planning at the urban and rural levels. The current mayor, Auki Tituaña⁴⁰, is one of the mayors who has participated in these processes and is currently promoting a process of parish participation, which has resulted in some conflict with the Assembly of Cantonal Unity and a heated debate about participation and local representation.

Migrants from outside the country are also actors who have not been interviewed but are recognized in the local population as residents who have generated changes in the canton's geography. Several consequences of their arrival include an increase in the price of land in the urban area, new construction of houses with architecture that bears no relation to the local architecture, a dynamic of mobility that involves periods of permanence in the canton and long periods of mobility.

The provincial government is an actor that represents a regional level of government. In other words, it connects policies for productive development and urban-rural articulation, which is important for its competencies in rural road maintenance, food security, and irrigation management. Provinces have strong administrative competencies, nevertheless they cannot perform greatest changes because they generate very few resources of their own, making them highly dependent on the national level budget.

Finally, the canton's historical advances in participation strategies for achieving political incidence and public action are highlighted, as well as how this model, which began with participatory budgets in Porto Alegre, Brazil, was consolidated and strengthened since the mid-1990s.

⁴⁰ The mayor Auki Tituaña was changed in last subnational election.

Jama canton

Initially, the actors that are members of different kinds of social organizations, such as productive, neighborhood, and community groups, as well as NGOs, have helped the canton, and their number has expanded since the April 2016 earthquake.

The 52 communities have their own Management Committees, which are local examples of risk management and prevention of natural and anthropic risks and carry out care-related measures before events of disaster.

There are few operational production organizations; one that generates greater social dynamics via interaction is that of artisans, who support training processes to improve artisanal economic activity services. Among the profitable businesses are fishing, agriculture, coffee, tourism, textiles, and food. The earthquake, according to these organizations, has accelerated the development or strengthening of local associations.

Artisanal fishermen play a significant role. Fishing has declined significantly as a result of the presence of deep sea fishing, which, according to these economic actors, is not properly regulated, and even this activity is developed in the context of submerged activities, which unfortunately affect the canton as well as other cantons in Manabi.

Other Jama actors are involved in cultivation of shrimp and export. The economic dynamics concentrate on political and economic power factors linked to a family, which has exercised a kind of cacicazgo through the years and has a significant influence on cantonal decision-making, an issue or problem recognized by the local community. Until 2019, a member of this family held the most significant position in politics at the municipal level. Because Jama has no rural parishes but communities, political authority is concentrated at the city level, creating an imbalance.

The analysis of the public actor in Jama requires a study of the geographical space. Jama was formed as a canton in 1998 and is primarily rural, with no rural parishes but only communities, implying that the Municipal level is the most important level of local government in the canton, with visibility in all communities and the urban area.

The provincial government is also a crucial actor, particularly in terms of rural road maintenance and irrigation, as well as productive development, but the Municipality is the most visible and people's closest public actor.

With the sectional elections in Ecuador in May 2019, there was a significant change in the figure of the mayor. Traditionally, for several periods, the mayor came from the family circle linked to the production of captive shrimp. This circle was broken in May when an outsider - the vice mayor - who had no relationship with the Cevallos family, was elected mayor for the current period 2019-2023.

The dynamics of actors changed considerably following the 2016 earthquake, which

reached 7.8 on the Richter scale. In addition to community risk management committees, several organizations of producers, fishermen, social, neighborhood, artisanal, and tourism service providers were formed or recreated. These organizations are still active, and some have received funding from international cooperation or universities. However, due to the lack of markets or demand in the years following of the earthquake, some people are still waiting to start their commercial activities. It will be necessary to wait until the medium term to see if these groups have built a local social capital capable of restoring the canton's economy.

Despite the importance of the Chamber of Tourism, it is difficult to bring together small and even medium-sized tourism service businesses. These actors should put pressure on municipal and national public actors to use their capacity to provide basic services that have yet to be consolidated, such as waste collection and management, noise regulation from shrimp larvae laboratories, which generate noise pollution, or improper rubbing and burning, which pollutes the environment.

Among the social actors are newly created neighborhood associations. Despite the fact that the city center's road and social infrastructure are restricted, the organizations ensure that public works are carried out for the entire area. There are extremely few paved streets in the city center.

National and international non-governmental organizations (NGOs) are catalysts for social organization in Jama, but not all of those who have participated in this task have local offices; once again, it will be necessary to wait for the medium term to identify their achievements in the promotion of sustainable organizations and in Jama's social construction.

The Universidad Simón Bolívar is a further actor that has contributed to the development of social capital, particularly via the support of a fishermen's association in the gestation of a fish processing enterprise that was half operational at the time of the fieldwork.

Actors such as BanEcuador or CFN - that could energize the territory through financial services - are not located in the canton but in Pedernales. In Jama there are no private banks, only the Calceta savings and credit cooperative that activates the local economy, although with the limitations that a financial institution of this type may have. Several entities linked to the provision of public services have left the canton and have positioned themselves in Pedernales.

Another significant social actor is the Mano Manaba Foundation, an innovative and imaginative library established to promote gender equality for boys and girls in the canton. The effort was created by two Ecuadorians who did not reside in Jama but were in the region during the earthquake. The objective was to establish a setting that children of a certain age would find safe and educational via reading and play. One of the

initiative's creators emphasizes its significance, which is seen as successful by both local and international actors.

According to the national economic census, there are 206 firms in the canton of Jama, with 7 of them being public establishments. The number of enterprises related to retail trade, automobile maintenance, and motorbikes - particularly those that allow movement within the canton, which is primarily made up of rural settlements - accounts for 51.9% of Jama's businesses. The second most important group, accounting for 11.1% of all enterprises, is accommodation and food services.

A problem that several actors identified through interviews is the drug trafficking network in which the canton is involved and that includes distribution related to artisanal fishing. Drug trafficking is an entrenched problem in the canton. Recently, in the month of June 2020, an airstrip was discovered in a rural area of the canton - Boca de Bigua - and 273 kl of cocaine, weapons, vehicles, and logistical equipment for international supply were confiscated. According to media sources, this was one of the biggest airstrips in the country, and it was associated to drug trafficking (El Telegrafo, 2020).

To summarize, Jama has a huge network of community, social, and economic organizations, and it remains to be seen if this network will be able to build territorial resources that contribute to its growth in the medium and long run.

Montalvo canton

Montalvo has a cantonal capital, a rural parish, and 20 rural precincts. The cantonal capital has 35 citadels or neighborhoods. A large proportion of the canton's actors are involved in the major activity that energizes the territory: agriculture, as well as tourism, particularly regional tourism. The economic configuration is primarily agricultural, while the spatial configuration is a little more diverse, with enterprises associated with rural tourism, tourist complexes associated with one of the canton's natural attractions, the Rio Cristal, as well as actors associated with the tertiary sector of services.

A first group of actors in the canton are related to agricultural production, including corn and rice producers, as well as agricultural associations that were legalized by the Ministry of Agriculture and Livestock or by the Superintendence of Popular and Solidarity Economy.

Women's associations that strive to add value to production are another group that aspires to have a place that allows them to find their way in the development of livelihoods. This organization attempts to carry out operations that add value to the region's key goods, such as rice. They perceive that funding small investment projects is a key issue that has not been handled, and that there are no facilities to give training,

particularly for young people with these various viewpoints on tourism and the manufacture of semi-finished items that produce revenue.

According to the Canton Development Plan (2015-2020), there are organizations associated with collecting centers, artisans, butchers, cocoa growers, carpenters, tricycle manufacturers, tourism, dressmakers, and elderly citizens. Although the plan recognizes the potential for developing productive associations in the canton, it raises the issue of social organizations' lack of development and training (P. 67).

Other enterprises in the canton include piladoras and hard corn producers, who were interviewed and are committed to adding value to the primary product. There are also other businesses that provide agricultural inputs for production, which are also tied to the poultry sector. The corporations claim that they have not been invited to accountability meetings and that the local government has not created channels of communication and supervision with these entities. They agree with others in concentrating on the canton's key issues, such as poor water quality and trash dumping in waterways, notably the Rio Cristal, which is vital to the region. The interviewed entrepreneurs are canton residents who add value to basic production.

One of the issues raised by these actors is the lack of productivity in rice production due to the absence of genetic renewal in seeds. Another issue is a lack of crop diversification throughout the year and the concentration on two crops during the year: corn and rice, which eventually wears out the soil, resulting in a loss of productivity and vulnerability of the sector. Due to difficulties in updating and collecting this information from the rural or urban cadastre, it is not possible to discuss tenure. The interviews do demonstrate, however, that many small farmers have been compelled to sell their property in order to repay late debts due to low land production and low market prices for production.

The 2000 census has the following data regarding land tenure in Montalvo Canton, see table 53.

Table 53 Units of agricultural production, Montalvo

UAP size	UAP number	UAP number %	Area hectares	Area percentage	Area per UAP
≤ a 10 ha	1,393	60%	5,755	17%	4
10 a 50 ha	820	36%	15,786	47%	19
> a 50 ha	94	4%	11,906	36%	127
Total	2,307	100%	33,447	100%	

Source: National Agricultural and Livestock Census, 2000 and produced by IEE, MAGAP/CGSIN, 2013. In Montalvo PDyOT 2015-2020

Although 60% of the UAPs are less than or equal to 10 ha, they account for 17% of the surface area, while 83% are concentrated in productive units ranging from 10 to more

than 50 ha, and 94 UAP, equivalent to 4%, are larger than 50 ha, accounting for 36% of the surface area dedicated to agricultural production in the canton.

In the cantonal capital, there are essentially two hotel owners, one of which has been unable to upgrade its infrastructure and believes that local authorities have provided little assistance for this economic activity. The other, although being able to upgrade its facilities, confronts the same issues as other residents: an inadequate supply of drinking water and a lack of a vision for developing tourism items that may strengthen this regional tourism industry.

The elected representatives or parish council of La Esmeralda, the canton's lone rural parish, are also important actors; the parish council was established in 2012. After the mayor's office, the Board is the second territorial government actor, and the rural parish level is the final instance of subnational government in the state's decentralization process. They are responsible for parish development planning and management, in collaboration with the cantonal and provincial governments, promoting citizen organization in communes, precincts, and rural settlements. Rural parishes also encourage the development of community productive activities, biodiversity preservation, and environmental protection (Article 267 of the Ecuadorian Constitution). Parish Council carries out its competences in collaboration with other levels of government. In terms of funding, it is the level that gets the least fund transfers from the national government.

One of the issues raised by parish council members is the need to upgrade the road infrastructure in order to sell the parish's products, which are primarily agricultural and tropical in nature: oranges, cocoa, bananas, orito, and papaya. They recognize the need to increase production and work to give skills and opportunities, particularly for the canton's young people. They identify water as one of the parish's most significant resources, pointing out that the water in the parish is of higher quality than that consumed in neighboring settlements and the cantonal capital of Montalvo. Because of the importance they place on proper water resource management in La Esmeralda, they are concerned about the incursion of mining companies of Chinese origin, particularly the company Yankuang Ec. The Cantonal Development Plan (2015-2020) mentions the existence of 15 mining concessions in the canton, 2 registered and 13 in process. These are dedicated to the extraction of construction materials such as sand and gravel, fine sand, coarse sand, ball stone, ballast, among others. The residents are concerned about what such extraction is causing in the loss of materials in the riverbeds.

On the other hand, another problem mentioned is related to the management of inorganic solid waste that is channeled directly into the river by the residents of the communities.

Although there are some productive associations within the canton, centered on the agricultural sector or local transporters, there is no organizational strength or strong social capital built in the territory; however, there are more individual producers of hard corn

and rice, as well as several rice milling companies and private companies, as well as one public company involved in corn collection. According to the development plan, the construction and strengthening of productive and social groups and organizations is both a possibility and a problem for the canton's relational formation.

Another crucial territorial actor is the parish priest, who is young, dynamic, and has a vision of what Montalvo can become in the future. He has attempted to form parishioner groups or grassroots ecclesial movements that seek to improve various aspects such as solidarity or concrete work with priority groups, a type of volunteering. He is aware that the canton's residents are not cohesive and seek a more individualistic trend of behavior that does not participate in the solving of the canton's public challenges. The church's programs in the canton are related to the social sector, such as building family relations, assisting families in need, cleaning the city during patron saint festivals, or organizing these festivities.

Like other rural cantons, this is a canton where religiosity is strong in the population and where the parish priest has an important leadership role that permits mobilizing people to achieve social benefit causes. The feasts of San Antonio, the Lord of Health, and the Divine Child are prominent patron saint celebrations which attract tourists from the coast and the highlands. The church brings together a significant number of people, both in daily celebrations such as mass, as well as weekly and patron saint festivals.

The parish priest is an external actor who was placed there by the corresponding ecclesiastical authority. This circumstance, as well as his representation of such a strategic sector, allows him to be very critical of the canton's social situation and the weaknesses it has in terms of social infrastructure, particularly regarding diseases caused by poor water quality and obsolete sewage, which becomes dysfunctional when it rains, or the lack of a specific market space, which also has implications for garbage.

Other key stakeholders include residents in unplanned human settlement zones, the heads of families that live in the informal settlements, and those who work in piladoras. They claim that these communities are made up of migrants looking for work or freshly formed families who have been forced to reside in these citadels. According to these stakeholders, there have been no substantial modifications or improvements in the cantonal capital throughout time. They claim that many individuals want to move to Montalvo since it is a peaceful canton with no crime. However, they point out weaknesses in the layout of streets or in access to basic services in these citadels. This issue is also shared by other stakeholders. They are very critical with the weaknesses in the functioning of the associations and their low level of commitment and advocacy to support each other and help solving the multiple problems faced by the slums.

On the side of the legalized or planned neighborhoods, there is a demand for more orderly management of the neighborhoods by the Municipality, improvements in garbage collection and provision of basic services. There is a generalized complaint due to

informality and other problems that were already pointed out by other cantonal stakeholders. Among the associations of producers, it is important to mention the cocoa production association that delivers the product in baba in Guayaquil. They are specialty cocoa producers. The association of autonomous producers of Miraflores is a group that has innovated in terms of production techniques. This 12-year-old organization includes 60 members who use organic production techniques and are committed to the manufacture and sale of cocoa. They are concerned about river pollution because of concessions to Chinese enterprises that receive stone material from rivers now that they are in a more sustainable and ecologically friendly production regime. In addition to cocoa manufacturing, this firm manages to develop two more links: pulping and marketing.

Community leaders also see the quality of drinking water and garbage collection as major issues, as well as the challenges faced by small cocoa, banana, and fruit producers in terms of access to technology or training to improve productivity or production services that can help them enter the market. They also highlight pollution issues, particularly in the Rio Cristal, caused by mining corporations who extract material from the river and contaminate it. They imply that producers have a low proclivity to create alliances since few organizations perceive the outcomes or results of the association. This becomes useful to the canton's individual production and commercialization strategy, which benefits more the agro-industry, the axis of the territory's economic dynamization.

There are six water bottling companies for consumption in the city, one of which (Su agua) is owned by a person linked to a piladora company in the canton: the Santa Ana company, which accesses a water subsidy, treats and markets the product, which is in high demand. These people have set up their companies due to the need for quality water consumption, but they abuse this market distortion that benefits them and take advantage of this opportunity of lack of water in the city.

The canton had two financial institutions: Banco del Pichincha - recently closed - and Cooperativa de Ahorro y Credito San Antonio, which has its headquarters in the cantonal capital and has established additional agencies in many Los Rios cantons. They finance agribusiness production operations and acknowledge that there is no crop diversification, only intensive agriculture. One of the key points in terms of financial actors is the economic situation in which credit debtors suffer due to the impossibility of repayment due to the drop in agricultural product prices, which, according to some interviews, has resulted in borrowers inexorably losing their agricultural land.

Other important actors are linked to the services sector, such as tricycle drivers, who have a unique perspective on the deficiencies they see in the state of the streets or the cost of moving to the informal settlements in the headwaters with dirt roads or serious problems with garbage collection and sewerage, especially when it rains.

The public actor, i.e. the cantonal local government - the municipal GAD - is facing a number of difficulties as a result of deficiencies discovered in past mandate decisions in the territory. They form a freshly elected administration with the intention of effecting various changes in the conduct of the canton's public policy, but with little hope of accomplishing significant alterations due to the limited budget. They highlight inadequate management in prior local governments. This new government is opposed to the pollution created by mining operations in the canton in terms of economic activity.

Additionally, in relation to the low level of associativity in the canton, they point out that producers experience low productivity due to the degradation of the land. With the perspective of forming and strengthening associations and organizations in the canton, they have prioritized the variable of organization and formation of the cantonal social network, so that in the cantonal plan of 2015-2020 it is mentioned within the Cantonal Management Model, that is, within the actions to be carried out by the municipality. They have introduced a strategy of articulation within the economic component of the planning. It consists in the creation of new associations and community groups related to small producers.

The economic census includes 671 businesses. More than half (366) work in small business and domestic transportation. There are 79 establishments in food service activities, with just one in accommodation. The company ownership structure is primarily person or natural, with relatively few occurrences of private corporations (limited or anonymous) being formed, resulting in a more familiar style of business management and maybe of a smaller scale, 88% of enterprises in Montalvo are family firms. Agribusiness firms are the largest in terms of size because, while they are natural enterprises, the agribusiness line of business demands them to be larger in order to achieve economies of scale.

The other public actor is associated to the province of Los Rios, the Provincial Government. In this context, Montalvo is perceived as a weekend recreation center of Babahoyo, linked to attractions such as the Rio Cristal, hiking or bike trails; however, they coincide in the absence of city and canton planning, as well as in the focus of the problems that other actors discuss about the productive importance of the two products already mentioned.

2.4.7 Governability and governance

Baños

Municipal Government

The population of Baños was elevated to canton of the province of Tungurahua in 1944. Its municipality in the year 2020 has 316 between officials and workers. Its structure is visualized in the figure 87 scheme:

Figure 87 Organizational structure of the decentralized autonomous municipal government Baños canton

		Planning Council	Municipal Council	Permanent Commissions				
			Mayor's office					
	Cantonal Board for the Protection of Rights	Cantonal council for the protection of rights			Fire department			
		Legal advisory office						
	Administrative Direction Administration and human talent	Financial Direction			Council secretariat	Institutional communication		
	Public contracting and public Systems	Accounting						
	Occupational health and safety	Treasury			Documentation and general archiving			
		Revenue						
		Storage						
Direction of Territorial Planning and Administration	Projects and cooperation direction	Public construction direction	Direction of environmental sanitation	Tourism and sustainable development direction	Property registry	Municipal police station unit	Spa Unit	
Valuation and cadastre	Social action	Fiscalization and supervision	Drinking water and sewerage Hygiene, ornamentation and agricultural development	Education, culture, sports and recreation				
Risk management and public safety		Construction and maintenance of civil works	Environment					
		Machinery and repairs	Sanitary landfill					

Source: Baños municipal decentralized government

The information displayed here is derived from the transparency information that municipalities are required to post on their websites in accordance with the transparency law (LOTAIP); the items are recognized in the budget classifier. This is explained by local government competencies - which in the case of municipalities - are primarily focused on public services such as water, sewerage, urban highways, and solid waste. Investment spending exceeds current spending by a wide margin; investment includes public works. The canton's current earnings include money from fees or taxes, see table 54.

Table 54 Revenues and expenditures, Baños municipality, 2015-2017

Item/year	2015	2016	2017
Revenues	25,343,430.00	19,732,027.00	20,466,725.60
Current	4,769,545.00	4,977,732.00	4,900,475.87
Capital	6,535,396.00	6,057,250.00	6,446,141.73
Public financing	14,038,489.00	8,697,045.00	9,120,108.00
Expenditures	25,343,430.00	19,412,913.90	20,348,099.30
Current	4,640,555.00	4,326,870.19	4,139,708.27
Production	30,000.00	17,290.25	28,000.00
Investment	18,741,622.00	13,523,748.90	14,033,067.60
Capital	859,953.00	612,413.62	836,824.16
Amortization payment of debts	1,071,300.00	932,590.91	1,310,499.30

Source: Baños government website, transparency page. Summary of item g), information under review due to inconsistencies identified between the budget tables and summary tables presented on the transparency web page.

The first essential data is the fall in the budget, which was 25 million in 2015 and is drastically lowered to 19 million in 2016. This is explained by the public financing component (which falls significantly between 2015 and 2016), which may be related to the country's economic crisis caused by a drop in oil prices, implying that the Banco del Estado reduced its credit financing options, as well as the "capital" revenues, which are destined for investment. In actual terms, capital revenues in 2017 are similar to those obtained in 2015, but in relative terms, they comprised 25.8% of total revenues in 2015 and 31.5% in 2017.

The disparity between receipts and expenditures can be attributed to the cuts that have occurred since 2016, according to the "Fiscal Equity Law." Given the volatility of the central government's earnings from taxes and oil prices. This law took effect, allowing the Ministry of Finance to alter transfers to local governments based on actual receipts over the course of each four-month period. This resulted in the need that revenue predictions for the fiscal year be changed at least three times throughout the course of the year. As a result, the revenue estimate differs from the expense projection.

In terms of budget composition, there are three elements that complete the budget in 2015: An available balance of 42%, public financing of 54%, and the difference in accounts receivable. According to the information on the canton web page, investment spending in 2015 was spent on payments to employees for investment, investment products and services, public works, transfers, and investment grants. Neither the destination nor the proportion of expenditure may be specified for these items.

The three revenue components were replicated in 2016, however the quantity of accounts receivable increased. 73% of investment expenditures were committed to public works, while 13% was allocated to investment staff expenses. The statistics do not allow for a more thorough examination of the works.

The items are again repeated in 2017, and accounts receivable continue to rise. On the investment side, 76% was spent on public works, while 13% was spent on investment personnel expenses.

When the previous statistics are combined with the following public procurement data, works such as drinking water or investment in public areas, particularly in the Rio Verde parish, are validated.

Municipal Investment (2014-2019)

In order to establish the canton's investment level and destination, a proxy variable was utilized. This was used to determine the public procurement items carried out by the municipal actor over the specified time. The research includes data from the public procurement portal. The total reported is US\$20,697,000, which includes all contracts that were not finished or deemed void throughout the contracting process, including those that are being awarded or have not yet been awarded. This item is an important approximation because since 2007 the public procurement law requires decentralized governments and public entities to make any type of contract for the acquisition of goods and services through the public procurement portal⁴¹. The table indicates that the highest investment item is the new municipal thermal complex and items for the promotion of the tourism sector, see table 55.

Table 55 Municipal investment, Baños

Municipal investment in canton Baños years 2014-2019			
Nº	Investment	Reference budget	%
1	Management	\$697,623.05	3.37
2	Water	\$1,779,944.05	8.60
3	Sewage	\$494,351.34	2.39
4	Camal	\$88,996.93	0.43
5	Celec (electricity)	\$4,758.58	0.02
6	Cemetery	\$371.888,93	1.80
7	Communication	\$68,637.00	0.33
8	Waste	\$800,393.13	3.87
9	Public Space	\$3,560,814.05	17.20
10	Machinery Maintenance	\$1,263,807.86	6.11

⁴¹ It is possible that some investments are made directly by the municipality, which would imply that many of the investments do not appear in this portal, this information can be obtained from within the GAD.

11	Market	\$92,961.61	0.45
12	Planning	\$1,757,199.60	8.49
13	Social	\$2,400.00	0.01
14	Tourism	\$1,322,304.01	6.39
15	Roads	\$1,921,880.99	9.29
16	Termal complex (tourism)	\$6,469,885.64	31.26
Total		\$20,697,846.77	100.00

Source: Public Procurement Portal of Ecuador (2014-2019)

- It is worth noting that the attraction of the thermal complex is a one-of-a-kind case, because the Municipality of Baños was one of the first in the country to manage a tourist attraction that provides permanent income to the Municipality. The revenue from thermal complex exceeds some of the local taxes and provides the Municipality with a level of stability not seen in other municipalities. The method for establishing this kind of service has recently been reproduced in other places around the nation, including Puyo, San Miguel de Bolivar, and Echeandia, which have constructed municipal water parks, as well as Jumandi (Napo) and Chachimbiro (Imbabura). The investment in the complex's upgrading may yield a return in municipal revenues; however, an estimate of the return on the planned investment was unavailable. The majority of the elements listed do not require explanation, but we separate them down for a better understanding of the investments. The planning item comprises the revision of the Development and Land Management Plan, which will cost \$99,000 USD.
- With USD 62,472, the item includes supervision of urban rehabilitation, facade repair, urban regeneration, central plaza, parking, boardwalk and vistas, and access to the Delicia sector, Rio Verde parish, Baños de Agua Santa canton.
- With USD 1,595,727 the item includes urban renovation, facade enhancement, urban regeneration, central plaza, parking lots, boardwalk and vistas, and access to the Delicia sector, Rio Verde parish, Baños de Agua Santa canton.
-

Between 2014 and 2017, the amount contracted in communication is divided into 9 sub-items, the majority of which are communication campaigns of the local Decentralized Government administration and studies for the introduction of a collective brand for union training.

It's surprising that a very little sum, 0.01 percent of the investment amount published on the public procurement portal, is classified as "social." In COOTAD, the legislation requires that at least 10% of the local government's non-tax earnings be channeled to "priority attention groups," implying social investment. It should be noted that such an investment might have been made directly, without the need of a public procurement procedure.

Cotacachi

Municipal government budget:

The information of table 56, below, was obtained from the municipality of Cotacachi's website, specifically from the transparency page, item (g) budget of the municipality, this is a regulated process by law (LOTAIP) to submit information about themselves. Each item was evaluated using the budget classifier. According to the data, there is a large increase in the public finance income item after 2016, resulting in a 53.4% increase in total municipal revenue between 2016 and 2017. The funds were utilized to build safe water systems in various cantonal settlements and to repair a degraded water system, as well as to build and modify the museum of cultures, which had to be closed during the pandemic. Current revenues increased in 2017, as did the production of fees or taxes.

On the expenditure side, although there is an increase in public financing between 2016 and 2017, the increase in investment expenditure is observed only since 2018, implying that the financing could have been directed towards public works related to municipal competence: water, sewerage, urban roads, solid waste. However, the municipality may have had to adapt its spending and management capacity to invest and materialize the funds in construction. This is shown in the 2016 investment spending on public works, when a far bigger expenditure was planned than was indeed executed.

The rise in income - without a corresponding increase in expenditures - resulted in a budget surplus, which was notably large between 2017 and 2018.

Table 56 Cotacachi Municipality Budget

Items	2015	2016	2017	2018
Revenues	8,579,941.09	8,702,184.9	13,357,091.05	15,394,674.7
Current	3,853,586.02	3,968,941.39	4,069,070.91	5,152,474.94
Investment	4,631,578.74	4,733,243.51	4,690,801.17	6,013,287.33
Public Financing	94,776.33	0	4,597,218.97	4,228,912.43
Expenditures	8,772,819.13	9,532,837.3	8,685,887.56	11,140,071.1
Current	2,018,592.3	2,055,513.24	2,169,246.92	2,219,553.87
Investment	5,905,703.65	6,496,296.99	6,013,716.57	8,546,283.2
Capital	786,311.18	858,807.82	426,715.01	306,534.23
Amortization payment of debts	62,212	122,219.25	76,209.06	67,699.83
Difference	192,878.04	830,652.4	(4,671,203.49)	(4,254,603.57)

Source: Cotacachi Government website, transparency page. Summary of item g), information under review due to inconsistencies identified between budget documents and summary tables presented on the transparency web page.

Investment revenue, which is justified in the budget by capital transfers and grants, as well as internal financing (which might be the previous period's budget balance), rises in 2018, confirming the premise of municipal management adjustment.

In any case, a first observation is the growth in the canton's budget in terms of income, a significant fact if it is noticed that it is provided during periods of economic trouble for the country, after 2014, when oil prices fell drastically, as described above.

Besides it, there is evidence of a decrease in overall budget expenditures between 2016 and 2017, followed by a rise in 2018, a year in which investment spending climbs significantly, with a 42.1% increase over the previous year. This rise in investment also explains the growth in current costs in 2018, which is made up of staff expenses, which has also increased between the two years, and consumer goods and services, which is an important item in both 2017 and 2018.

Capital revenues do not fluctuate much throughout the first three years; only in 2018 do they vary drastically, 28.1% compared to the previous year. These capital receipts pertain to public-sector capital transfers, which, when combined with public funding obtained in 2017 and 2018, should have put investment pressure on the municipality's management.

The significant gap in revenues and expenditures in 2016 may be attributed to the "Fiscal Equity Law," which was approved in the country in response to a drop in revenue from oil sales. This law empowered the Ministry of Finance to adjust the transfer to local governments, according to the existence of actual revenues of the national budget in the course of each four-month period. As a result, the expected revenues for 2015 and 2016 do not meet the estimated expenditures.

For 2017 and 2018, the situation is reversed, with a surplus recorded as a result of an increase in capital receipts in 2018 and public funding reported in both years. Although the GAD uses the phrase "surplus," it is really a deficit in budget execution in both years: 2017 and 2018.

In terms of budget composition, three categories appear: a major and consistent item of current revenues between 2015 and 2017, and expanding in 2018 compared to prior years, growing at a rate of 26.6% compared to 2017. A significant item of public funding between 2017 and 2018, and a generally consistent item of investment expenditures between 2015 and 2017, expanding in 2018. With this information, it is worthwhile to identify the municipal investments made through the public procurement portal in order to identify its management and local public investment commitments.

Municipality Investment (2014-2019)

To determine the canton's and destination's level of investment, the same proxy variable was considered, which consists of determining the items of public procurement made by the municipal actor among 2014 and 2019. This information was obtained from the public procurement portal, and the items that appear below correspond to contracts that are in the process of being awarded, or that were awarded; all processes that were declared deserted or were canceled for any reason are excluded.

The information of table 57 comes from the Ecuadorian state's public procurement portal, because the Public Procurement Law requires public entities, including decentralized governments, to carry out any type of contract for the acquisition of goods and services through this portal, in order to ensure transparency in the contracting processes and access to all types of natural or corporate bidders.

The lowest sums must also go via the public procurement system, but they were not included in this study since they are so minor in comparison to the cash needed for public works.

Table 57 Municipal investment in Cotacachi canton, 2014-2018

Total Referential Budget Amount (excluding VAT)		
Category	Grand total	Percentage
Management	613,072.36	5.77%
Water	2,107,036.81	19.82%
Sewerage	1,384,643.49	13.02%
Celec (electricity)	73,333.34	0.69%
Communication	550,411.91	5.18%
Garbage	358,227.26	3.37%
Public Space	2,723,732.89	25.62%
Machinery Maintenance	412,976.55	3.88%
Market	6,322.57	0.06%
Planning	274,413.20	2.58%
Social	951,516.75	8.95%
Tourism	91,757.53	0.86%
Roads	1,083,519.44	10.19%
Grand total	10,630,964.10	100.00%

Source: Ecuador's public procurement portal (2014-2018).

According to the information obtained, the majority of public procurement investment has been destined to generate or improve public spaces in the canton, which is more related to markets, recreational areas or parks for children and youth, the construction of sports spaces, or the improvement of sports infrastructure. Work connected to butchery is also covered, as are vehicles for monitoring forest areas for fire prevention or maintenance services for green spaces.

The second most significant issue is the investment in clean water for diverse communities and drinking water for the urban areas of cantonal parishes, which is another of the cantonal level's main competencies. This investment includes the building of safe water systems for the canton's parishes, the procurement of supplies for water treatment, storage tanks, or the upgrade of existing systems, and the development of successive phases of safe water systems.

The third category is sewerage, which includes the construction of sanitary batteries in various neighborhoods, or the construction of sewerage systems in various communities,

control of sewage and clear water, pipe replacement, studies for the operation of sewage treatment plants, expansion of sewage systems, maintenance of the sewage network, construction of drainage systems, expansion of the sewage treatment plant, or the study of the sewage master plan for the city of Cotacachi. Consultancy for the readjustment of sewage systems in parish centers, and the construction of a sewage system for the city of Cotacachi and the parish of Quiroga. As a result, the most significant investment items are associated with the provision of essential services, while the fourth item is associated with social investment, which includes community training on violence, risks, empowerment, gender focus, or vacation workshops.

Jama

Budget of the municipal government

Canton Jama's budget in table 58 indicates a significant drop in revenue from 2016, the year of the earthquake. Current revenues, which include tax payments or fees, have dropped the greatest, as seen in the table below. Because of a drop in oil prices and the central government's cash issues, public finance begins to decline the next year.

Table 58 Jama canton, municipal budget

Items	2015	2016	2017	2018
Revenues	15,861,355.90	14,253,743.90	12,249,735.50	9,624,741.63
Current	1,953,787.74	1,786,256.00	1,093,645.80	1,085,332.32
Capital	3,195,269.17	4,095,800.97	7,162,428.69	4,707,519.25
Public Financing	10,712,299.00	8,371,686.95	3,993,661.01	3,831,890.06
Expenditures	15,861,355.90	14,253,743.90	12,249,735.50	9,624,741.63
Current	1,730,416.89	1,489,167.13	1,509,995.02	1,599,866.98
Investment	12,426,338.69	11,372,574.20	9,256,350.80	5,515,800.80
Capital	523,919.00	64,500.00	614,066.23	152,900.00
Debt repayment amortization	1,180,681.32	1,327,502.56	869,323.45	2,356,173.85

Source: Jama Government website, transparency page. Summary of literal g), information under review for 2018 due to the fact that the publication of the closing of the fiscal year.

This table emphasizes the budget's excessive dependence on debt, as indicated in public funding. Thus, funding accounted for 67% of the budget in 2015. The percentage reduction in this sum in 2016 is 58%. The reduction in 2017 (which is more than half the difference between the two years) represents 32% of the revenue budget.

Another interesting data is the increase in current revenues in 2017, which increased from 4 million to 7 million between 2016 and 2017. This might be connected to special

funds granted by increased solidarity taxes imposed in all the country as a result of the earthquake of 2016.

The increase in debt payback amounts indicates that debts are being repaid. It would be necessary to investigate the impact of these loans on budget execution, but it appears that devoting more than one-third of expenditures to debt service is not sustainable in the long run.

Municipal Investment (2014-2019)

The same calculation was performed for this canton as for the others: compute and categorize the quantities of decentralized government public procurement from 2014 to date.

According to the results of this exercise, in table 59, the GAD's main investment items are related to the competencies of public services that municipal governments must offer to the population: sewerage and waste management, two services that the population indicates are deficient and for which 40.2% of the amounts linked to public purchases are contracted, as shown in the table below:

Table 59 Municipal investment, Jama

Municipal investment in canton Jama 2014-2019

N°	Investment	Reference budget ⁴²	%
1	Management	\$1,025,363.56	12.38
2	Sewage	\$1,798,146.87	21.72
3	Cemetery	\$113,511.28	1.37
4	Communication	\$309,523.14	3.74
5	Solid Waste	\$1,539,079.72	18.59
6	Public Space	\$1,243,659.70	15.02
7	Maintenance Machinery	\$649,474	7.84
8	Planning	\$429,964.18	5.19
9	Social	\$3,000	0.04
10	Roads	\$1,167,780.36	14.10
TOTAL		8,279,502.81	100.00

Source: National government public procurement portal. 2019

⁴² The Public Procurement Page contains all the processes, including deserted ones, finalized by mutual agreement. This implies that in some cases a process with the same amount is duplicated or triplicated.

It is possible to observe the municipal management scheme while looking at the components of the planning item. The following details and elements are visible:

- Consultancy for the canton's development and land management plan (USD 66,000)
- Consultancy for cadastre update (USD 12,785)
- Purchase of equipment for the canton's urban land register (USD 65,385)
- Consultancy for urban land cadastre update (USD 255,713.50)
- Consultancy for the canton's mobility master plans contracting (USD 30,000)

The social security records contain only two items: a soil analysis prior to the building of a Millennium Educational Unit.

In communication, there are works of fiber optic cabling for the municipal building that was built after the earthquake, a consultancy for the coactive management of collections with cell phone company and internet within the canton. Only 42,324.14 USD were allocated to advertising campaigns for the canton management and tourism promotion of the GAD and the canton Jama respectively.

Montalvo

Budget of the municipal government

The information presented in table 60, below, is available on the Municipality's web page in the transparency tab; normed by law (LOTAIP), in the literal (g) corresponding to budgets; the items are identified according to the budget classifier.

Table 60 Montalvo municipality budget

Items	2015	2016	2017	2018
Revenues	6,630,106.03	5,238,489.97	4,735,382.27	5,220,896.76
Current	2,068,685.11	1,893,592.5	1,918,460.58	1,916,175.57
Investment/Capital	4,561,420.92	3,344,897.47	2,816,921.69	2,711,701.19
Public financing	0	0		593,020
Expenditures	4,339,626.65	5,256,809.87	4,595,420.26	4,660,074.32
Current	1,314,146.33	1,371,747.81	1,450,656.91	1,518,544.94
Production				
Investment	2,596,349.55	2,763,692.27	2,643,024.26	2,626,704.46
Capital	40,044.62	440,871.67	27,682.86	7731.12
Amortization payment of debts	389,086.15	680,498.12	474,056.23	507,093.8

Source: Montalvo government website, transparency page. Summary of item g), information under review due to inconsistencies identified between the budget tables and summary tables presented on the transparency web page.

The budget contains two crucial items. The first is that the executing items have been examined, i.e., what the municipality has really spent. This is to demonstrate its spending power. Small municipalities have less spending ability than bigger municipalities; it is not the goal of this research to compare budgets with larger municipalities, but the disparity between revenues and expenditures may be displayed in the table above. This might be due to administrative management that does not allow for the completion of 100% of the budget. Second, even if they do not spend the full amount in a year, they are not required to return those funds to the state budget.

It should be noted that the State budget includes both permanent and non-permanent income. Permanent resources are allocated to current and investment expenditures, whereas non-permanent income can only be utilized for investment or capital expenditures, as indicated in COOTAD's territorial equity model in articles 188 and 189 of this legislative document.

In terms of the most essential components, investment or capital revenues are the greatest; these are tied to the national budget's non-permanent income, namely those derived from oil exports, which are fundamentally declining as of 2016.

Current revenues are those derived from permanent income, such as taxes collected at the national level, and may be used for both investment and current spending.

When it involves expenditures, current expenditures are those related to the administrative or operational management of the municipality and illustrates a slight increase, whereas investment expenditures are for public works and services provided by the municipality under its constitutional powers and show a downward trend. In 2018, investment expenditures accounted for 56.3% of total expenses, while current expenses accounted for 32.5%. Higher items, for example, than in the case of Baños canton. Both capital and amortization expenses increase with time, and it is estimated that the municipality allocates at least 10 to 11% of its budget to public entity indebtedness.

Because the data supplied do not allow this study to reveal anything about the quality of expenditure or the type of investment created year after year, it is recommended that proxy variables for the type of investment made be identified, which is done below.

Municipal investment (2014-2019)

An approximation variable was used with the public procurement items that appear in the information on the public procurement website to establish the amount of investment of the canton and the destination, that is, particularly the investment of the local public entity.

Table 61 Municipal Investment, Montalvo, 2014-2019

Items	Reference budget Total in dollars excluding VAT	Percentage
Management	33,600	1.5%
Water	81,408.81	3.7%
Sewage	291,255.72	13.1%
Camal	106,283.59	4.8%
Communication	0	0.0%
Waste	107,056.8	4.8%
Public Space	163,538.56	7.4%
Machinery Maintenance	506,507.83	22.9%
Market	77,458.7	3.5%
Planning	561,572.97	25.3%
Social	80,357.15	3.6%
Tourism	49,856.2	2.2%
Roads	157,450.36	7.1%
General Total	2,216,346.69	100.0%

Source: Public Procurement Portal of Ecuador (2014-2019)

According to table 61, only amounts whose works or products have been completed or are in the process of being executed, with contracts awarded or whose works or products are in the process of being received were considered in this reference budget. Specifically, everything that has been contracted at the public level and that effectively accounts for the municipal government's effective management. Processes that have failed or been abandoned have been omitted. The planning item comprises consultants to enhance and modernize the territorial information system by upgrading the urban cadastre, which involves the procurement of equipment, and is a key item originating from the Banco del Estado, banking for national public development.

The principal items under public procurement are connected to machinery planning and maintenance, as well as sewage works. These items are connected to the municipality's public service to rural areas. Curiously, neither water - which has been identified as a deficient service by residents - does not appear to be one of the priority objects publicly managed by the municipal government, nor does tourism, which has regional importance on weekends, appear to be a key investment in relative terms. Therefore, it is a canton with significant resources for agribusiness and whose budget is poorly adjusted to the needs of productive diversification and income management that could generate a better dynamic.

A larger description of the main components is as follows:

- Strengthening and modernizing the cadastre and territorial information system, as well as the procurement of necessary equipment.

- Given that it is a municipality in a rural region, maintenance of heavy machinery and the procurement of heavy machinery is becoming increasingly expensive.

- The works include the extension and repair of the sanitary sewage system, as well as the construction of sidewalks and curbs, which are included in the same contracts, as well as works for the improvement of the rainwater system and others linked to system improvement.

-Water, for example, comprises chemicals used in the treatment of the drinking water system and the installation of water intake infrastructure, which may be connected to dam and pipeline construction.

-Public space refers to the preservation and renovation of physical spaces in cantonal sectors, the creation of the linear park in the region of the city of Montalvo's boardwalk, the rehabilitation of the central park, or the acquisition of signs for urban perimeter streets.

-Finally, the roads area comprises the building of curbs and sidewalks in various streets of multiple citadels in the urban area of Montalvo, as well as the design of an urban mobility plan and roadways in the urban boundary.

- In the canton, social expenses include the realization of cultural events or artistic festivities for Christmas or cantonal holidays, which are unrelated to the purpose for which COOTAD established a percentage of non-tax revenues destined to social investment in "priority attention" groups.

Conclusion of social capital and institutionality section

In conclusion, the research of social capital and institutional conditions in the four cantons reveals significant disparities in historical and social processes.

The canton of Cotacachi has greater degrees of associativity, integration, and public engagement, and it develops its own methods and organizations to support governance in development processes. The development of a community culture, the political relevance of the indigenous movement in the canton, and the construction of places for co-governability, such as the Cantonal Assembly, all contribute to this degree of involvement and social capital.

A more individualistic culture is evident in Baños and Montalvo, where market integration is more essential than social structure. This suggests weaker institutions, less engaged participants in social organizations, and a low incidence of public action. Despite the fact that the laws requires some participation mechanisms that are effectively implemented, such as the participatory budget or the establishment of Cantonal Planning Committees, or participatory planning procedures, this is the case.

There is also a clientelist culture around the "caudillo" in Canton Jama, implying a certain social and political disengagement of the people. Following the earthquake catastrophe, there is a bigger number of social groups in the territories as a result of official policies and collaboration, but they maintain a clientelist mentality, i.e., they gather to attempt to obtain advantages, not to promote their own development processes. This is also reflected in the municipality's institutional weakness, which the caudillo sees as a place for clientelist action.

Better governance and participation procedures may not always imply better living conditions or higher progress, at least not economically.

This study reflects a more mature municipality in Baños with a broad range of actions. Montalvo has a greater budget due to its population, however this does not translate into improved service coverage. Montalvo's social organization deficit adds to poor institutional performance. The comparison among the cantons is shown in table 62.

Table 62 Summary of social capital and institutional quality

Element	Baños	Cotacachi	Montalvo	Jama
Citizen participation as perceived	Low	High	Low	Low
	In the instance of Cotacachi, citizen participation had a significant influence on the local territorial process. There is no notable occurrence in the other cantons. Local leadership is not recognized.			
	The element of citizen participation is critical in the development of territorial dynamics. The greater the level of participation (which means, for example, more knowledge and decision-making), the more "socialized" the process of development and identity construction.			
Developed governance spaces	Meets standard	Cantonal Unity Assembly, Participative Budget, oversight mechanisms	Meets standard	Meets standard
	Although the participative budget participation scheme and a Cantonal Unity Assembly are required, their presence (in the cantons) does not always indicate a co-governance structure. Cotacachi's "Cantonal Unity Assembly" has been formalized since 1993, and co-governance procedures have been established since then. Its operation is dependent on the political will of the mayors (but not necessarily to the same degree).			
	The inclusion of instruments for co-governance promotes local development processes. The absence of these systems may indicate a lack of governing capacity in the territory.			
	Medium	High	Low	Low

Element	Baños	Cotacachi	Montalvo	Jama
Competence to carry out local public policies	Cotacachi has superior conditions for the execution of local public policy, whereas Baños comes in second. Except for the "inertial" operation of local governments in accordance with their competencies, it is impossible to determine local policies in the coastal cantons.			
	Local public policy implementation is a clear sign of the presence of a local "government" that drives or catalyzes territorial development processes. The absence of this capability indicates "reactive" territory, in which events occur more through "dragging" of the surrounding environment.			
People's citizenship education	Medium	High	Low	Low
	The risk management training procedure stands out in Baños as part of the resilience plan connected to the possibility of volcanic eruption. Citizenship training activities in Cotacachi are linked to the operation of participatory and associative spaces (indigenous, women, youth...). We found no comparable procedures in Montalvo or Jama.			
	Improved citizenship promotes democracy, contribution, and participation, while also improving living standards in the medium term. Making citizenship training initiatives is a policy that is required in the territories.			
Women's associations	Low	High	Low	Medium
	The involvement of women in local development processes, whether through associations (as in Cotacachi) or businesses (as in Jama and Baños), varies per canton. Cotacachi has the most active women's groups, followed by Jama (artisan associations and textile manufacture). There are several specific firms managed by women in Baños, but with a low level of organization.			
	Women's roles in development are becoming more prominent in local culture. According to Martha Nussbaum, empowerment and agency lead to better development.			
	Finally, better governance and participation procedures may not always imply better living circumstances or higher progress, at least not economically. We can see a link between budget management and project management, which Cotacachi and Baños both stand out.			

Conclusions

- 1) Why investigate the system or complexity? The first step is to understand the territory's multiple connections and interrelationships, as well as the transformations and dynamics that surround them. Endogenous or exogenous actors configure and reconfigure the territory's space, both from a resource perspective and from another perspective of social construction of territory. The territory is a living organism, a social structure that is constantly reshaping itself. Territorial actors should understand these dynamics and how they work, as well as the numerous dimensions that interact in a systemic, non-linear approach; in a chaotic, non-rational manner. Territories are the field for the relationships that construct, deconstruct, and reconstruct them.

Territorial development cannot be defined in such a context through a single dimension, but rather through a system of several interacting factors, this thesis embraces the understanding of system and interrelated factors that generate differences in development dynamics.

The interdependence of these factors reflects the transformations and changes that imply the well-being of the inhabitants of the territory. The factors studied interact with one another; the economic sector has an impact on the demographic factor, population growth and migration; the small city plays a role in the generation of an economic and social dynamic of the territory and is essential within it because it dynamizes markets, functions, institutions, flows of goods and services, trade, installed infrastructure, and cultural activities; and the rural-urban relationship determines a conformation that influences the economic dynamics; social capital explain dynamics of territorial development in just one canton.

- 2) Each territory's network of relationships is unique because it reflects different historical trajectories, cultural, axiological, environmental, and socioeconomic conditions. The complexity of the territories presents the challenge of working on the factors that makeup them in a systemic manner, including economic and demographic factors, social capital, and the role of cities as territorial dynamizers.

In each territory, there are factors with more weight for explaining their own dynamics, but we always find synergistic relationships, positive or negative, with the other factors. Which factor explains the produced change or the maintained trend? The answer is determined by the type of territory:

- a) In Baños, resilience to volcanic eruption is critical, leading the population to better utilize its landscapes as tourism resources, despite the threat of eruption.
- b) The element of community organization stands out in Cotacachi, which is analyzed as "social capital".

- c) In Montalvo, the labor supply element is central, with an exploitation model oriented to the rice and corn markets.
 - d) In Jama, an exploitation model (shrimp farms) with a low impact on productivity and employment is combined with a catastrophic event (the 2016 earthquake), which in this case cannot be assumed positively.
- 3) It is difficult to be conclusive about the demographic factor: does the population factor explain development dynamics? Is this a result of development dynamics? It appears that economic and social activity drives population dynamics. The cultural tendency to have fewer children and not formalize relationships, the attractiveness or not of the territory, the living conditions of the territory, migration due to environmental and climatic problems are all factors that influence population dynamics. Ecuador lacks explicit population policies, repopulation policies for territories that are losing population, or population attraction policies aimed at dynamizing the territory. These strategies can be endogenous or exogenous, depending on whether they are planned actions to develop activities from within the canton or from outside, and they seek to take advantage of the resources available on the territory.
- a) The dynamics of births and deaths that give rise to "natural or vegetative" growth are quite similar; Canton Montalvo stands out as having higher fertility. However, this fertility could be attributed to a specific cultural circumstance (referring to the behavioral patterns of the "montubia" society on Ecuador's coast). Population dynamics include urban-rural movements and interactions, as well as migration. Migratory displacement is the result of a set of circumstances that are unfavorable to attraction, access to means of production, and employment opportunities.
 - b) In terms of migratory expansion, two cantons (Jama and Cotacachi) have a population dynamic that attracts less immigrants. In the first example, this is mostly owing to a lack of training options (particularly in the third grade, university, or technology), as well as a lack of career chances. The most essential component in the two scenarios with a positive migration rate is the availability of job, even if it is not skilled employment.
 - c) In some places of Ecuador, a depopulation process is beginning; this is occurring in one of the four cantons studied - when the data is updated to 2022 - it is concerning that the population growth rate in three cantons is lower than the national rate. Concrete public activities must be established to encourage, first, the prospect of living in one's own region rather than moving, and second, the attraction of new migrants. One possibility for the former would be to create university training spaces (extensions) based on a concrete examination of living possibilities for local residents. The second goal is to promote local businesses that are effectively linked to local, national, or worldwide value chains.
 - d) Population analysis within the territory can assist in identifying public policy initiatives that lead to more balanced territorial development, particularly when younger age groups are nearing a demographic bonus in the future. The demographic bonus implies a larger population of working age, and in order to

sustain the dependent population in the territory, intentional management of public, private, and social actors is required to ensure that this population receives good services and employment opportunities, thereby reducing the intention to migrate to intermediate or large cities. The presence of the "demographic bonus" appears to be a trend toward which the four cantons are moving: they are not yet in the bonus period. To take advantage of the "demographic bonus," governmental policies and public action are necessary to foresee this circumstance and build skills in the population as well as work possibilities in reasonable conditions. Because the cantons are prone to "missing the train," and it would be a neglected opportunity.

- 4) The economic factor drives the other dynamics; it is the axis around which the other factors' dynamics circle. In the cases investigated, economic diversity is more important than productive specialization. Higher diversity has ramifications for both attractiveness and employment; nevertheless, higher specialization is associated with rural employment in agricultural activities, where the labor force is characterized as having a low level of education. Only one case study demonstrates that tourism has a greater specialization than agriculture.
 - a) Regional or international tourism is the most preferred economic activity among canton residents; in all of them, the activity is based on the attractions or comparative advantages that each territory possesses. However, they are concerned that increased mining activity may jeopardize tourism growth and endanger cantonal development.
 - b) It is clear that growth does not mean development, and that the type or quality of growth is crucial for the territory; thus, the activities that create GDP must be viewed in connection to both environmental sustainability and the canton's social development. The subnational or meso economy is heavily influenced by national and macroeconomic policy. The cantonal GVA numbers indicate the link between the national economy's recession and the drop in oil prices, as well as the pandemic.
 - c) When the analysis of GVA is complemented with the level of employment, the importance of the agricultural sector and its subsectors is visible: fishing, aquaculture, export, production for the national agro-industry or small production for national consumption in small cantons, with these products - which constitute the basis of these cantons' economies -. It is not possible to speak of the creation of specific assets, one of the territorial development proposals.
 - d) Agroecological production, which has integral benefits for health and environmental sustainability and is a value proposition of peasant family farming, is limited in three of the four cantons, it appears particularly in Cotacachi, where there is institutionalized social capital and a greater role for women in leadership.
 - e) It is not feasible to talk about value addition or productive links, which have an influence on the availability of higher level of education employment chances, other job prospects necessitated by the various links, or the existence of local production systems. Few experiences include productive links and chains.

- f) Small cantons have extremely limited entrepreneurial ability. In all cases, there are more individual family firms or micro-enterprises dedicated to retail trade and engine repair or motorcycle maintenance, or with little capacity to produce employment.
 - g) In consideration of what has been said about the economic factor, the most dynamic cantonal economy is critical to attracting population and in the consolidation of employment. The specialization or diversification of cantonal economic activities also has an impact on the dynamics of the other factors, which are always dependent on the canton and its economic structure.
- 5) In terms of market connections, the role of the small city and its multiple functions as a supplier, as well as a link with other territories at the regional, national, or even international level, becomes relevant. Economic dynamics also have an impact on the small city's commercial relations; the more diversification, the more important the city is and the more connections it has. On the contrary, economic stagnation has a negative impact on the dynamics of the small city, resulting in a decrease in economic activity and the services it provides.

The small city is a population nucleus that facilitates the flow of economic and social relations, in some cases regional, in others international; it is a supply center and a space for cultural expressions. It is a center for the agglutination of rural communities, smaller cities, or human settlements. It has different functions depending on the population and the services it offers. The cantonal capital houses both the decentralized public administration agencies and the deconcentrated public administration agencies. Constructed spaces such as squares, churches, and historic buildings contribute to a sense of place that can boost tourism, particularly regional tourism.

- a) The presence of a system of human settlements or polycenters of various sizes interconnected and designed with intentionality was not visualized; cities interact naturally based on the connections that are formed.
- b) The city is not static; it regenerates or dies, agglutinates or loses population. Its constant reconfiguration is dependent on the actions of many internal and external actors. Along similar lines, there is worry about the urban process in Jama, which appears to be in a state of suspension (at the time of the research); and the same in Canton Baños, whose city appears to have no space to expand (even to the point of becoming conurbation with the nearest parish).
- c) The city is an essential center for connecting with rural populations. This link is activated with varying frequency in the cantons, highlighting primarily market relations (the city as a center of collection, distribution, and consumption of rural products, as well as a provider of support services and inputs), cultural relations (festivals, championships, events that seek to generate integration and identity), and some administrative services (including, but not limited to, justice, secondary education, health referral, and territorial government).

- d) Even when Ecuadorian legislation establishes regulations regarding the installation of hospitals or education centers in relation to population size, the rule is not always followed, implying that the importance of cities is based on their ability to establish relations with other cities and the rural environment, as well as their management.
- 6) In terms of social capital, which represents all forms of interactions and groups that share a similar identity and goals, it is found that current social capital does not appear to be important in three of the cantons. Social capital is present at various degrees in all territories; it is more tied to the economic and social territorial dimensions: producer's associations, artisans' organizations, cultural associations. It appears that diverse levels of institutionalization of social capital exist in small cantons, with just one example exhibiting the most advanced level of political incidence. The higher the capacity for active decision-making, the greater one's ability to affect social capital. This link between participation and political influence is not linear; it is determined by the extent of institutionalization and the quality of involvement. Only one canton has institutionalized social capital: Cotacachi. Social capital is poorer in areas that attract population. When physical or economic resources exceed the capital that can be generated by the networks, relational capital becomes less attractive.
- a) It has an influence on the institutional factor in Cotacachi, but not certainly in the other cantons.
- b) When social capital is insufficient, institutions suffer, and social engagement in organizations falls, affecting the ability for action and support for resolution of problems in these civil organizations. Finally, the creation of relational capital follows distinct pathways in the cantons' historical and social processes. The cantons of Jama and Montalvo have a very little potential for lobbying.
- c) This social capital differentiates itself in the other cases. This capital is less essential in cantons when the population rises faster than the national average; the comparative advantages of the cantons exceed the benefits of the network of relationship and solidarity. Social capital contributes to social dynamics in all circumstances; but, in one example, it is institutionalized and seeks participation and provides different actors a voice in cantonal decision making.
- d) Organizational social capital supports the governance of development processes, but it does not always result in changes in population dynamics or even economic dynamics. Population trends are more influenced by economic factors than by the canton's existing relational capital. The dynamics of social capital fluctuate between territories and have varying degrees of political incidence.
- e) Relational capital is not always the driving force behind cantonal economic dynamics. Despite the existence of productive organizations, economic dynamics are dominated by business interests.

- f) The absence of social capital does not always imply a lack of institutionalization. Social organizations in Baños show little strength; nevertheless, the municipality of Baños performs effectively.
 - g) Weaknesses in the institutional framework can also be identified when the caudillo or leader abuses his position and restricts the building of social capital. Jama would be in this situation if the government's connection with the groups is more clientelist and tied to opportunism.
- 7) The institutional factor recognizes the public actor and public organization as a catalyst and mobilizer of local energies charged with assuming leadership of the territorial development process. It is also the actor with the highest financial resources (more than 90% of its resources are derived from national transfers) and the most investment potential. As a result, it is interesting to see where it lays its financial priorities, whether in what the canton requires or in other measures.
- a) When the GAD establishes spending or investment objectives that differ from those established by citizens, a conflict occurs; the standard demands local government to plan with the community and to have a participatory budget. The discrepancy in participation levels has been noted as an issue in the cantons. The cantons with smaller involvement tend to be more dissatisfied with the investment choice and its destination, although we did not identify serious conflicts.
 - b) In Cotacachi, social capital is institutionalized and trends toward a framework of co-governance, implying that organized social actors have significant weight in public decisions in favor of the canton, as seen by the development of public service provision, especially in rural areas.
 - c) Is it possible to speak about de- or re-territorialization in the territories under consideration? This conclusion cannot be reached using the indicators investigated; further concentrated research on this topic is likely required. Nevertheless, research determined that, from an economic standpoint, two cantons are impacted by power relations - one involving national agribusiness, the other involving political and social power.
 - d) Ecuador is experiencing (even now, in 2023) a state institutional crisis. This crisis is reflected in a crisis of local governments, defined primarily by their reliance on central government resources, a lack of funding to satisfy basic needs (by public investment), and a lack of the ability to manage development processes, despite the fact that planning and involvement procedures are important (at least in law, but not often in practice in the cantons, with the exception of Cotacachi).
 - e) Some cantons also have a clientelist culture (the people are considered as the politician's customers) and caciquism (the territory and its inhabitants operate in relation to the authority as if it were absolute - king or cacique). All of this exacerbates the institutional problem, one case was identified in this research. Not to mention the corruption concerns that were not addressed in this thesis but are well-known. The prevalence of these departures from the institutional framework means that residents in cantonal territory have less opportunities for development.

- 8) Territorial studies of small cantons must include a review of dynamics, which requires explicitly incorporating the time component in the research. The study of dynamics covers a wide range of characteristics whose investigation is ongoing; it cannot be limited to a particular four-year administration term in Ecuador. It entails the continual observation and systematization of the canton's essential processes.
- a) Nearby universities, institutions, the cantonal administration, and the territory's social capital should be engaged in creating this knowledge about crucial factors including the economy, social capital, the function of cities, and demographic predictions. Fostering this knowledge environment makes it simpler for information to assist in identifying the canton's primary concerns and develops a knowledge energy that mobilizes numerous forces and energies: university, school, business, technical, and social.
 - b) For the examination of territorial dynamics, the complexity method, multi-causal research, and multidisciplinary work teams are required.
- 9) Development planning suffers from a weakness. Instead of being strategic and prospective, planning is more reactive and generalist. Long-term planning necessitates clarity in diagnosis and evaluation of historical data; working on the future is impossible without knowledge of the past or the changes experienced by the canton over time. We identified a significant deficiency in local research and information compilation, as well as a lack of national data. GVA analysis, for example, is not available before 2007.
- a) It is expected that the 2022 census data will allow a better approximation. The delay in the execution of the census, which should have been carried out in 2020, and in the dissemination of the data, since more than a year has passed and only general census data are available, hinder the analysis, which should be based on projections.
 - b) Annual data from official sources such as the Central Bank, as well as census data, can be used in the projections required for prospective planning.
 - c) It would be important for local governments and universities to promote data bases to facilitate research and analysis.

Annex:

Annex 1 : table of variables

Table 63 Table of variables

Factor	Method	Variables	Indicator/ Index	Interpreting
Demography	Quantitative	population growth	population growth rate	Canton analysis: attraction, expulsion, natural growth and comparison
		birth and death	birth and death rates	Canton analysis: proxy for access to basic services and comparison
		homes, number and sizes	annual growth rates, percentages	migration indicators, changes in family sizes and services access, analysis and comparison
		immigration, emigration, origin	annual growth rates, percentages	Canton analysis: attraction, expulsion, regional and international migration and comparison
		Urbanization	percentages, population density, urbanization rates	urban-rural dynamics, urban growth, geographic dispersion per canton, analysis per canton and comparison
		Pyramids and demographic transitions	percentages	distribution of the population by age group, analysis per canton and comparison
	Qualitative	Attractor and Ejector factors	n/a	perceptions of public, private and social actors of the canton and province
		urban-rural population dynamics (growth, migration)	n/a	perceptions of public, private and social actors about the canton
		Fertility	n/a	perceptions of public, private and social actors about the canton
		Road axes and population growth	n/a	perceptions of public, private and social actors about the canton

Factor	Method	Variables	Indicator/ Index	Interpreting
		Risks and population	n/a	perceptions of public, private and social actors about the canton
Socio-economic	Quantitative	Employed population by activities	annual growth rates, percentages	main economic activities by occupation, analysis and comparison
		Gross Value Added (GVA) by economic activities	Relation between GVA and occupation	main economic activities by occupation, level of economic activity by canton, analysis and comparison
		Levels of productive specialization	location quotiens, location coefficients, herfindal index	specialization of the canton, regional analysis and comparison
		Companies and establishments	Percentages	Type of enterprises, sizes, analysis and comparison
	Qualitative	Productive potential of the canton	n/a	perceptions of public, private and social actors about the canton
		Productive specialization	n/a	perceptions of public, private and social actors about the canton
		Employment	n/a	perceptions of public, private and social actors about the canton
		Partnerships	n/a	perceptions of public, private and social actors about the canton
		Value addition	n/a	perceptions of public, private and social actors about the canton
		Final markets	n/a	perceptions of public, private and social actors about the canton
		Activities: mining as a fear, tourism as an aspiration	n/a	perceptions of public, private and social actors about the canton

Factor	Method	Variables	Indicator/ Index	Interpreting
Institutionality and social capital	Quantitative	Decentralized autonomous government: Budget and investment	Percentages	Financial dependence and capacity to create internal resources
	Qualitative	Map of Actors	n/a	Territorial stakeholders according to territorial development plans
		Stakeholder participation in territorial planning processes	n/a	perceptions of public, private and social actors about the canton
		Association	n/a	perceptions of public, private and social actors about the canton
Role of the city	Quantitative	Type of housing	annual growth rates, percentages	Proxy for attraction, migration, analysis per canton and comparison
		water connection to the house	annual growth rates, percentages	Access to basic services that also connect to the food security situation. Analysis per canton and comparison
		type and location of health infrastructure	Percentages	Access to health services. Analysis and comparison
		type and location of education infrastructure	Percentages	Access to education services. Analysis and comparison
		educational level of the population	Percentages	Educational level related to cantonal economic activities. Analysis and comparison
	Qualitative	city relations	n/a	perceptions of public, private and social actors about the canton
		relations with universities	n/a	perceptions of public, private and social actors about the canton

Factor	Method	Variables	Indicator/ Index	Interpreting
		articulations of cities, connections, and services	n/a	perceptions of public, private and social actors about the canton
		projection for the future	n/a	perceptions of public, private and social actors about the canton

Annex 2. Population by age ranges

Population by age ranges and growth rates in the canton Baños

Table 64 Population by age rangers, Baños

Canton Baños Age groups	Man		Women		Growth
	Census 2001	Census 2010	Census 2001	Census 2010	Total 2001
Under 1 year of age	141	138	118	139	0,75
From 1 to 4 years old	587	737	621	697	1,91
From 5 to 9 years old	842	919	786	890	1,17
From 10 to 14 years old	803	907	807	945	1,56
From 15 to 19 years old	797	992	769	926	2,25
From 20 to 24 years old	686	989	775	926	3,01
From 25 to 29 years old	634	833	669	831	2,72
From 30 to 34 years old	557	718	588	752	2,78
From 35 to 39 years old	504	676	539	706	3,13
From 40 to 44 years old	462	581	434	614	3,20
From 45 to 49 years old	339	520	345	549	4,96
From 50 to 54 years old	305	450	317	422	3,75
From 55 to 59 years old	268	359	267	371	3,45
From 60 to 64 years old	281	296	266	304	1,03
From 65 to 69 years old	227	288	223	301	2,99
From 70 to 74 years old	203	243	163	240	3,08
From 75 to 79 years old	157	162	129	148	0,90
From 80 to 84 years old	121	129	110	112	0,47
From 85 to 89 years old	73	57	62	64	-1,22
From 90 to 94 years old	25	34	35	35	1,55
From 95 to 99 years old	29	4	48	10	-18,94
100 years old and over		2		2	
Total	8041	10034	8071	9984	2,41

Source INEC 2001-2010

Population by age ranges and growth rates in the canton Montalvo

Table 65 Population by age rangers, Montalvo

Canton Montalvo	Man		Women		Growth
Age groups	Census 2001	Census 2010	Census 2001	Census 2010	Total 2001
Under 1 year of age	182	189	188	211	0,86
From 1 to 4 years old	941	1004	845	907	0,75
From 5 to 9 years old	1147	1304	1054	1255	1,67
From 10 to 14 years old	1198	1407	1066	1233	1,7
From 15 to 19 years old	1038	1210	950	1144	1,87
From 20 to 24 years old	921	948	944	1001	0,48
From 25 to 29 years old	771	848	786	956	1,63
From 30 to 34 years old	674	855	704	881	2,56
From 35 to 39 years old	631	817	600	812	3,11
From 40 to 44 years old	580	739	523	674	2,75
From 45 to 49 years old	420	649	420	661	4,93
From 50 to 54 years old	464	502	379	499	1,9
From 55 to 59 years old	292	439	279	426	4,61
From 60 to 64 years old	301	406	266	330	2,89
From 65 to 69 years old	231	312	228	327	3,67
From 70 to 74 years old	218	287	151	218	3,48
From 75 to 79 years old	150	157	113	141	1,38
From 80 to 84 years old	81	135	76	104	4,66
From 85 to 89 years old	50	57	54	54	0,72
From 90 to 94 years old	41	26	25	24	-3,08
From 95 to 99 years old	45	6	40	7	-20,86
100 years and over		1		1	
Total	10376	12298	9691	11866	2,06

Source INEC 2001-2010

Population by age ranges and growth rates in the canton Jama

Table 66 Population by age rangers, Jama

Canton Jama	Man		Women		Growth
Age groups	Census 2001	Census 2010	Census 2001	Census 2010	Total 2001
Under 1 year of age	159	197	151	177	2,09
From 1 to 4 years old	843	1130	817	1188	3,71
From 5 to 9 years old	1110	1419	1096	1416	2,79
From 10 to 14 years old	1201	1497	1205	1402	2,07
From 15 to 19 years old	1127	1334	1046	1251	1,93
From 20 to 24 years old	985	1109	1014	1163	1,42
From 25 to 29 years old	755	914	824	934	1,75
From 30 to 34 years old	688	806	744	813	1,36
From 35 to 39 years old	743	667	656	649	-0,68
From 40 to 44 years old	591	630	539	572	0,69
From 45 to 49 years old	503	553	446	493	1,08
From 50 to 54 years old	433	476	325	390	1,48
From 55 to 59 years old	273	371	260	287	2,34
From 60 to 64 years old	246	266	201	169	-0,30
From 65 to 69 years old	211	157	156	165	-1,45
From 70 to 74 years old	144	150	130	132	0,32
From 75 to 79 years old	111	76	101	82	-3,27
From 80 to 84 years old	68	60	73	66	-1,25
From 85 to 89 years old	48	21	57	34	-7,18
From 90 to 94 years old	32	8	35	16	-11,41
From 95 to 99 years old	41	8	42	4	-21,49
100 years and over		1		0	
TOTAL	10312	11850	9918	11403	1,55

Source INEC: 2001 y 2010

Population by age ranges and growth rates in the canton Cotacachi

Table 67 Population by age rangers, Cotacachi

Canton Cotacachi	Man		Women		Total		Growth
Age groups	Census 2001	Census 2010	Census 2001	Census 2010	Total 2001	Total 2010	Rate
Under 1 year of age	470	405	453	391	923	796	-1,64
From 1 to 4 years old	2088	1830	2086	1765	4174	3595	-1,66
From 5 to 9 years old	2499	2533	2554	2490	5053	5023	-0,07
From 10 to 14 years old	2514	2488	2234	2470	4748	4958	0,48
From 15 to 19 years old	1774	2038	1641	1943	3415	3981	1,7
From 20 to 24 years old	1444	1632	1384	1578	2828	3210	1,41
From 25 to 29 years old	1116	1370	1126	1409	2242	2779	2,39
From 30 to 34 years old	1067	1185	1042	1167	2109	2352	1,21
From 35 to 39 years old	1011	1068	1016	1080	2027	2148	0,64
From 40 to 44 years old	770	986	799	944	1569	1930	2,3
From 45 to 49 years old	701	873	778	864	1479	1737	1,79
From 50 to 54 years old	745	634	699	676	1444	1310	-1,08
From 55 to 59 years old	596	674	579	702	1175	1376	1,75
From 60 to 64 years old	533	661	517	634	1050	1295	2,33
From 65 to 69 years old	450	606	484	617	934	1223	3,00
From 70 to 74 years old	362	423	359	438	721	861	1,97
From 75 to 79 years old	268	311	297	347	565	658	1,69
From 80 to 84 years old	172	236	195	234	367	470	2,75
From 85 to 89 years old	94	96	101	132	195	228	1,74
From 90 to 94 years old	66	29	51	47	117	76	-4,79
From 95 to 99 years old	33	11	47	15	80	26	-12,49
100 years and over		1		3	0	4	
Total	18773	20090	18442	19946	37215	40036	0,81%

Source: INEC: 2001 y 2010

Annex 3. Population decrease

Cantons with population decrease or very low growth rates and high unmet basic needs

Table 68 population decrease

Province	Canton	Population 2001	Population 2010	Projection Population 2020	Growth rate 2001-2010	Unsatisfied basic needs Percentage
Azuay	Girón	12,583	12,607	13,037	0.02	63.4
	Nabón	15,121	15,892	17,292	0.55	8.8
	Pucará	20,382	10,052	10,584	-7.85	91.4
	San Fernando	3,961	3,993	4,156	0.09	56.8
	Santa Isabel	18015	18,393	20,935	0.23	66.5
	Oña	3,231	3,583	4,128	1.15	83
	El Pan	3,075	3,036	3,091	-0.14	62.1
Bolívar	Chillanes	18,685	17,406	16,850	-0.79	85
	Chimbo	15,005	1,5779	17,738	0.56	73.9
Cañar	Biblián	20,727	20,817	23,741	0.05	71.1
	Deleg	6,221	6,100	6,782	-0.22	74.8
Carchi	Espejo	13,515	13,364	13,817	-0.12	63.7
	Mira	12,919	12,180	11,969	-0.65	74.7
Chimborazo	Colta	44,701	44,971	44,838	0.07	93.3
	Chunchi	12,474	12,686	12,795	0.19	75.1
	Penipe	6,485	6,739	6,955	0.43	73.7
El Oro	Atahualpa	5,479	5,833	6,436	0.70	59.3
	Chilla	2,665	2,484	2,379	-0.78	84
	Las Lajas	4,781	4,794	4,963	0.03	71.7
Imbabura	Pimampiro	12,951	12,970	13,269	0.02	71.3
Loja	Chaguarpamba	7,898	7,161	6,620	-1.09	85.1
	Espíndola	15,750	14,799	14,209	-0.69	90.2
	Gonzanamá	14,987	12,716	10,953	-1.83	85.6
	Paltas	24,703	23,801	23,471	-0.41	83.1
	Puyango	15,505	15,513	15,925	0.01	77.2
	Sozoranga	7,994	7,465	7,121	-0.76	90.5
	Quilanga	4,582	4,337	4,197	-0.61	84.5
	Olmedo	5,707	4,870	4,220	-1.76	89.9
Los Ríos	Ventanas	71,145	66,551	75,146	-0.74	84.3
Manabí	Flavio Alfaro	25,390	25,004	23,822	-0.17	94.4
	Junín	18,491	18,942	18,820	0.27	86
	Pichincha	29,945	30,244	29,599	0.11	93.1

Province	Canton	Population 2001	Population 2010	Projection Population 2020	Growth rate 2001-2010	Unsatisfied basic needs Percentage
	24 de Mayo	28,294	28,846	28,514	0.21	94.9
Morona Santiago	Limón Indanza	10192	9,722	10,349	-0.52	79.2
	Palora	6,317	6,936	7,719	1.04	66.5
	Santiago	9,841	9,295	11,087	-0.63	72.4
Tungurahua	Mocha	6,371	6,777	7,336	0.69	68.8
Zamora Chinchipe	Nangaritza	4,797	5,196	8,014	0.89	77.4
	Yacuambi	5,229	5,835	7,121	1.22	89.9
	Centinela del Cóndor	7,230	6,479	8,313	-1.22	74.4
Orellana	Aguarico	4,658	4,847	3,629	0.44	93.2
Total: 15	41	578,002	559,015	581,940	-0.37	

Source: Own elaboration based on Population and Housing Censuses INEC 2001, 2010

Annex 4: Enterprises

Table 69 Cotacachi enterprises

Cotacachi Canton (2-102). activity and form of establishment. ISIC 4.0 Classification										
Main Activity	Non-profit Institution	Private Institution or Company	Public Company	Government	Savings and Credit Cooperative	Cooperative	Association	Natural Person Company	N D	Total Result
Manufacturing industries		1		1				83	2	87
Electricity, gas, steam and air conditioning supply.			1							1
Wholesale and retail trade; repair of motor vehicles and motorcycles.			1	1			1	525	21	549
Transportation and warehousing.			1			1	2	4		8
Accommodation and food service activities.		1					1	92	1	95
Information and communication.				1				42		43
Financial and insurance activities.				1	2			1	3	7
Real estate activities.									1	1
Professional, scientific and technical activities.				1				20		21
Administrative and support service activities.								3		3
Public administration and defense; compulsory social security schemes.			1	9				1	2	13
Education.		1		10				6	1	18
Human health care and social assistance activities.	1			2				10	3	16
Arts, entertainment and recreation.			1	3				8		12
Other service activities	2			2			2	50	2	58
Not reported									3	3
Total Result	3	3	5	31	2	1	6	845	39	935

Source: INEC, Economic Census 2010

Canton Baños enterprises:

Table 70 Baños enterprises

Activity	Type of business	Total
Food commercialization	Natural person company	303
Transportation	Cooperative (production, consumption, services)	3
	Natural person company	4
Tourism	Association	1
	Natural person company	373
Total (of these three groups of activity)		684

Source: INEC, economic census 2010

Canton Jama Type of enterprises and paid and unpaid personnel

Table 71 Jama enterprises

Sectors	Form of parent establishment	Indicates having paid personnel		Indicates having unpaid personnel	
		Companies	Num Persons	Companies	Num Persons
Manufacturing	Natural person company	18	30	3	6
	Institution or private company	1	1	1	1
	Government	1	1		
Commerce	Company of natural person	100	156	10	18
	Institution or private company	1	5		
	(empty)	1	2	3	4
Services	Non-profit institution	3	3		
	Company of natural person	48	92	14	33
	Institution or private company	1	8		
	Foreign-controlled company	2	23		
	Public company	3	4	5	14
	Government	3	3	3	194
	(empty)	4	6	3	4
Total Result		183	303	48	305

Source: INEC, Economic Census 2010

Canton Montalvo Activity and type of company

Table 72 Montalvo enterprises

Activity	Type of business							Total Result
	Non-profit institution	Private institution or company	Public company	Government	Savings and loan cooperative	Natural person company	(empty)	
Agriculture, livestock, forestry and fishing.							1	1
Manufacturing industries.						49		49
Electricity, gas, steam and air conditioning supply.			1					1
Water distribution; sewerage, waste management and sanitation activities.						1		1
Construction.				2				2
Wholesale and retail trade; repair of motor vehicles and motorcycles.	1	1			1	353	10	366
Transportation and warehousing.		1				3		4
Accommodation and food service activities.		1				78		79
Information and communication.						29	1	30
Financial and insurance activities.					1		3	4
Professional, scientific and technical activities.	1					3		4
Administrative and support service activities.						4	1	5
Public administration and defense; compulsory social security schemes.	3		4	4		2	1	14
Education.		3	3	1		4	1	12
Human health care and social assistance activities.				1		14	2	17
Arts, entertainment and recreation.						7	2	9
Other service activities.	8					45	8	61
#N/A							12	12
Total:	13	6	8	8	2	592	42	671

Source: INEC, economic census 2010

Preguntas guía para las entrevistas de diagnóstico de Baños

Caracterización socio-económica del cantón:

1. El plan 2014-2019 culmina el próximo año, cómo avanza el avance en la implementación del plan?
2. ¿Cuáles cambios me puede ud. contar a partir de los 90, que han influido en la dinámica social y económica del cantón?
3. ¿Cuáles son las actividades que generan más dinámica territorial?
 - a. en términos de empleo
 - b. en términos de ingreso
4. De acuerdo al plan de desarrollo la agricultura es la actividad más importante, la segunda el comercio y la tercera manufactura. Pero en esta medición no se identifica al turismo aunque se menciona en varios documentos su importancia ¿Qué rol juega y cuál es la importancia del turismo como actividad económica en el cantón?
 - a. ¿Cómo se da la transformación del turismo religioso al turismo actual: regional e internacional?
5. La mayoría de su territorio es un área protegida, ¿Existen conflictos de uso de suelo?
 - a. (si la respuesta es afirmativa) ¿Cuáles son las presiones identificadas? ¿Cómo se controla y regula?
6. ¿Cómo se mira el futuro respecto del crecimiento del área urbana?

Institucionalidad

7. El cantón tuvo como un objetivo estratégico de su plan: 2014-2019 el establecimiento de un sistema de gobernanza institucional incluyente: gobierno-sector privado-sociedad civil, ¿Cómo funciona el sistema? Cuál es su modelo de gestión?⁴³
8. ¿Qué poder de decisión o influencia han tenido los grupos sociales en procesos de construcción del territorio o en política pública local?
9. ¿Existen animadores locales en el cantón, personas o líderes reconocidos en la actualidad? ¿En qué sectores?
10. ¿Cuáles son las costumbres más arraigadas de los pobladores y que tienen relación con el desarrollo del cantón?
 - a. Formas de actuación cívica y normas de cohesión social: ¿Mingas? ¿Presta manos? ¿Normas de solidaridad?
11. En los 90, se obligó a los pobladores a desalojar la ciudad por la erupción del volcán Tungurahua, ¿qué cambios institucionales se pueden identificar en la gestión del

⁴³ En el componente político-institucional

municipio, en la gestión del gobierno provincial la gestión del riesgo, y en la asociatividad local, a partir de esa situación?

12. ¿Qué implicaciones tuvo el proceso de desconcentración del estado (zonas, distritos, circuitos) en la gestión institucional pública del cantón?

Integración con mercados:

13. La vía estatal cruza por esta franja principal poblada, es decir, la producción se dirige hacia Pelileo-Ambato principalmente, y luego a dónde va? Cuál es el/os mercados finales?
 - a. ¿Dónde venden los productos manufacturados? ¿Importan? ¿Exportan?
 - b. ¿Dónde venden los productos agrícolas? ¿Importan productos? ¿Exportan?
14. Algún producto se vincula con exportación fuera del país y cuáles son las expectativas futuras de exportación?
15. Cuántas cadenas productivas identifica en el cantón?
16. Cómo se abastecen de los insumos de las cadenas de productos manufacturados?
17. Respecto del sector turístico, de dónde vienen los turistas? Cuáles redes de comercialización interna-internacional se han creado para ofrecer los servicios turísticos?
18. ¿Las redes de comercialización son locales de Baños o de otras provincias?
19. ¿Cómo se articula la academia (universidades y centros de investigación) en el proceso de desarrollo local de Baños?

Red de asentamientos humanos

20. ¿Con cuales ciudades fuera del cantón se articula Baños? ¿De qué manera?
21. El plan muestra que la dinámica poblacional implica una presión de crecimiento poblacional en el área urbana mientras la población de las parroquias rurales no crece y una muestra decrecimiento, ¿qué explica esta dinámica?
22. ¿Cómo se da la dependencia y relación entre las ciudades, localidades y la parte rural?
23. ¿Qué tipo de relaciones sociales y económicas se dan entre las localidades Guarumal? San Francisco? La Ciénega? La Soledad? El Topo, La Estancia? Colonia Unión?
24. ¿Cómo se distribuyen las funciones administrativas y de producción? (localización de empresas, de funciones públicas; acceso a servicios)
25. Qué vinculaciones de tipo cultural se da entre los centros poblados
26. El plan menciona un crecimiento inteligente del cantón. Qué pasos se han dado? ¿A qué se refieren en específico?

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Resume

The thesis examines the territorial dynamics of four small cantons of Ecuador with populations ranging from 20,000 to 50,000 people. There is a great disparity between cantons in the country; small cantons generate little production and are the poorest ones. Consequently, research into the factors that cause territorial dynamics in small cantons and can enhance territorial development processes is crucial.

Two coastal cantons (Jama and Montalvo) and two highlands' cantons (Cotacachi and Baños) were researched. The cantons were selected from a total of 221, based on their rate of population growth between the 2001 and 2010 censuses: Two surpass the national average in terms of population growth, two have slower growth rates than the national average. The territories have significant differences in terms of their economic and institutional conditions.

The study of territorial dynamics is an understudied topic in cantonal planning processes, despite its importance in each canton's distinctive territorial development commitment. This absence gave rise to the following research question: What are the factors that might explain disparities in territorial development dynamics in small cantons?

And the hypothesis: The factors that explain differences in territorial development dynamics in small cantons include demographic, economic, and related to the importance of small cities, social capital, and institutionality.

As a conclusion, the four factors generate distinct dynamics in the cantons. Complexity is an appropriate framework for the study of territories because of the linkages of numerous factors that result in distinct territorial dynamics. According to this perspective, territories are complex systems which in turn, links factor subsystems. Finding the factors that stimulate these dynamics - unique to each territory - allows for the implementation of developmental efforts that break the cycle of poverty and depopulation.

The interdependence of the studied four factors reflects the transformations and changes that imply the well-being of the inhabitants of the territory. The factors studied interact with one another; the economic sector has an impact on the demographic factor, population growth and migration; the small city plays a role in the generation of an economic and social dynamic of the territory and is essential within it because it dynamizes markets, functions, institutions, flows of goods and services, trade, installed infrastructure, and cultural activities; and the rural-urban relationship determines a conformation that influences the economic dynamics; finally, social capital explain dynamics of territorial development in just one canton.

This is a mixed-methods study that allows the researcher to investigate several territorial issues within small cantons, using not only a quantitative approach but also appreciating

the perspectives of the population, forming a triangle, and meeting various interests and representations.