The sociopolitical patterns of agricultural modernization in China : stepping on transition pathways

Marie-Hélène Schwoob

Institut d'études politiques de Paris

ECOLE DOCTORALE DE SCIENCES PO

Programme doctoral Science politique, spécialité Asie

CERI

Doctorat en Science politique

The sociopolitical patterns of agricultural modernization in China

Stepping on transition pathways

Marie-Hélène Schwoob

Thèse dirigée par Richard Balme,
Professeur des Universités à l'Institut d'Etudes Politiques de Paris

Soutenue le 29 septembre 2015

Jury :

M. Richard Balme, Professeur des Universités en Science politique à l'Institut d'Etudes Politiques de Paris

Mme Jean Oi, William Haas Professor in Chinese Politics, Department of Politics at Stanford University (rapporteure)

M. Jean-François Huchet, Professeur des Universités en Science économique à l'INALCO (rapporteur)

M. Sébastien Treyer, Docteur, ingénieur du génie rural, des eaux et des forêts, Directeur des programmes à l'IDDRI

Mme Cornelia Woll, Professeure en Science politique à Sciences Po Paris

M. Yongping Wu, Professor and Associate Dean at School of Public Policy and Management, Tsinghua University

I - Acknowledgments

None of this work could have been possible without the precious help of people I would like to express my profound gratitude to.

My first thanks go to my financial partners, without whom I would never have been able to embark upon the arduous path of PhD candidates. The Region Ile-de-France was among the firsts to see potential in my work and supported me unconditionally during the whole first three years of my thesis through its Allocation Doctorale Hors-DIM. The French Ministry of Foreign Affairs (Programme Hubert Curien Cai Yuanpei 2011-2015 and 2014 Zhang Heng program) and Asia Centre – I would like to deeply thank Jean-François Di Meglio in particular for his constant encouragement – helped me a lot as well by funding my regular fieldtrips to China, without which I would never have been able to gather so much research material.

Landing in China is just the first step of one's research and not much would have come out of my stays without the support of a number of people I had the chance to meet over there. Conducting research in China is not an easy task. All the obstacles one has to overcome would be disheartening without the incredible cheering-up effect of meeting people who are willing to help, because they care, because they share one's concerns or just out of kindness and openness of mind. In particular, my deep thanks go to Carole Ly, Alain Bonjean, Sylvie Dideron, Gabrielle Harris, Yang Jun, Qiu Huanguang, Zheng Huan, Wu Zhifen, Alex Bulcourt, Michel Humbert, Xavier, April, Clotilde and Fanny and all the others for their kind help and support. I would also like to sincerely thank the professor Wu Yongping and the School of Public Policy and Management of Tsinghua University for the opportunity they gave me to come to China as part of the Science Po-Tsinghua Initiative for Public Policy, and to exchange on advanced policy research topics with excellent scholars and Ph.D. candidates who challenged and enriched my ideas.

My gratitude, of course, also goes to my research director, who dedicated a lot of his valuable time to the supervision of my work. Richard Balme knew how to make himself available and gave me countless feedbacks and suggestions that always enlightened me when

I did not know where to go anymore. Not only were our discussions incredibly valuable for my research, but there were also very pleasant, something for which I am much grateful.

I had the chance to see my work supervised by another brilliant mind. Sebastien Treyer, Director of Programs at Iddri, has informed and shaped my research questions by linking them to the global debates on food security and agricultural development. I will never thank him enough for having shared his knowledge and for having given me the opportunity to work at Iddri, where I learned an incredible amount, enjoyed a remarkable work environment and met an amazing community of researchers with whom I developed wonderful friendships.

How to talk about friendship without mentioning the ones I made with my fellow Ph.D. candidates and the other sinophiles? Even four hundred pages would not be long enough to describe the beauty and the strength of all these shared moments of joy and sorrow, all these laughs and all these worries. In China and Europe, they made us closer and shaped our personalities, leaving us with incredible memories that will be called up in our minds for years to come.

This thesis is dedicated to my family and especially to my parents, for whom my admiration keeps on growing every day. Their endless love, support and encouragement give me strength and balance and make my life a wonderful experience.

II - Table of contents

III - List of tables and figures

IV - List of abbreviations

AQSIQ	Administration of Quality Supervision, Inspection and Quarantine
CABTS	China Agricultural Broadcasting and Television School
CAU	Chinese Agricultural University
CCP	Chinese Communist Party
COFCO	China National Cereals, Oils and Foodstuffs Corporation
CSA	Community-Supported Agriculture
DP	Direct Purchase
FAO	Food and Agriculture Organization of the United Nations
ha	Hectare
ID (card)	Identification (card)
KMT	Kuomintang
MNE	Multi-National Enterprises
MOA	Ministry of Agriculture
Mofcom	Ministry of Commerce
NATESC	National Agricultural Technology Extension and Service Center

NDRC	National Development and Reform Commission
NGO	Non-governmental organizations
NPK	Nitrogen Phosphor Potash
PRC	People's Republic of China
RMB	Renminbi
SOE	State-Owned Enterprise
TVE	Township and Village Enterprise
VAT	Value-Added Tax
WB	World Bank
WWII	World War II

V - Abstract

This dissertation takes as its point of departure the recent renewal of the interest of the Chinese state in agricultural development. The rising emphasis put on the agricultural sector since the beginning of the 2000s was not only virtually established through central policy guidelines, but also visible in the impressive rise in public expenditures dedicated to the modernization of the sector. This dissertation aims at providing answers to the questions which naturally arise from this first observation: What effect does the restoration of the state's involvement in agricultural production activities have on local patterns of relationships between state and non-state actors in rural areas? How does this new involvement of the state and local patterns of relationships both shape the frames of reference of public action in the agricultural sector? How do these frames of reference in turn crystallize a pathway for agricultural modernization with strong lock-ins and path-dependencies?

The approach of this research is twofold: political and sociological. The political approach focuses on the analysis of agricultural modernization policies between 2004 and 2014, with the aim of understanding the frames of reference promoted by the central government. The sociological approach, on its side, wishes to explore the implementation of this (these) frame(s) of reference at the local level, mainly in four targeted areas: Shandong,

Jiangxi, Ningxia and Beijing. Drawn on fieldwork and interviews, this part of the analysis investigates the modalities of the reinvolvement of government officials in rural areas through agricultural production programs and examines the pattern of relationships and the roles played by political and economic stakeholders in the process. The analysis of the sociopolitical frames built in the course of the modernization of agricultural production enables to identify and describe the features of the agricultural modernization pathway China is engaging on. In particular, the established patterns of power in rural areas and the strong reliance that local officials developed on private industrial entrepreneurs that serve as corporatist structures led to the establishment of resilient roadblocks that now impede transition towards social and environmental sustainability of agricultural production, highlighting the fundamental importance of sociological analysis for agricultural transitions.

Introduction

I - Background and area of interest: rising food and agricultural issues

China, a developing economy as well as a major food importer and exporter, provides us with an extremely interesting example of the complexity and the rising challenges of agricultural modernization in developing and emerging countries. These latest, under pressure to increase the performance of their agricultural sector as a prerequisite to their economic growth, are also asked to better take into account environmental protection and have to deal with the advantages and disadvantages of globalized trade.

China, which has to feed almost 20 percent of the world population with only 7 percent of the world arable land, needs sufficient amounts of food at a tolerable price, as the share of food is still high in total consumers spending[1]. However, the country is now facing a running decrease and a degradation of arable land and water resources available for farming, as well as a rising number of natural events with adverse consequences on food production.

Meanwhile, the growing urban middle-class is asking for new types of food diet. The resulting stimulation of the national oil and meat consumption has effects on the demand for land intensive products, such as feed[2] and oilseeds. Since the country became a net importer of food in 2004, its agricultural balance has become heavier every day. Considering the demographic weight of China, the stakes go well beyond the Chinese territory. The growing food insecurity of the country could have disastrous consequences on global food markets and, in the end, on other importing countries. The risks are also substantial for China. Despite the fact that its massive trade surplus theoretically balances rising food imports, relying on global markets for food would put the country's population at greater risk in terms of price volatility. As a consequence, tackling issues related to food security has turned into a real priority for the Chinese government.

In addition, both social stability in rural areas and rural development as an important lever for the national economic growth are threatened by the ever-widening economic gap

[1] According to the National Bureau of Statistics, food expenditures still accounted for about 35 percent of urban and rural budgets in 2012, and could reach 43 percent for poor rural households (calculations done with data from the National Bureau of Statistics).

[2] Primarily made of soybean and maize, feed is needed to supply the needs of a booming industrial livestock sector.

between rural and urban areas, which has become a matter of deep concern for the Chinese government. Food security and agricultural development policies are seen as tools to alleviate poverty in rural areas, which turned into a solution for both of the above-mentioned issues: rural underdevelopment and food insecurity.

The government, urged to implement effective agricultural development and food security policies, has reshaped its political agenda since the beginning of the 2000s, putting agricultural modernization and food security back to the heart of its objectives. This is a major shift in political priorities, considering that over the last decades of the 20th century, the focus was essentially put on urban and industrial development[1].

Agricultural modernization is usually associated with one main goal – increasing production – and with technological solutions, which have been at the core of the Green Revolution since the middle of the 20th century. However, since China already conducted its Green Revolution – basically meaning that farmers possess the technical means (such as pesticides and fertilizers) to improve productivity and already use them extensively[2] – levers of action to increase agricultural production are now essentially to be found in agricultural structures and practices (Table 1). The Chinese farming structure is indeed still characterized by small-scale agriculture[3] poorly suited for mechanized agriculture and economies of scale. Therefore, "reorganizing" stakeholders taking part in agricultural production has become a necessity to carry out China's "new agricultural modernization", of which this research will try to depict the frames.

---

[1] Industrialization, in particular, was considered (both by the government in the 1980s and 1990s and by scholars who attempted to explain the rapid economic growth of China) as an important lever for growth both in urban and rural areas. Industrial capacities enabled the country to benefit from its comparative advantages such as cheap labor going out of the farming sector. In rural areas, emphasis was put on the development of TVE (Township and Village Enterprises). As J.C. Oi argues, "off-farm jobs [were] the source of rural income increases [in the 1990s]" (OI, Jean C. Two Decades of Rural Reform in China: An Overview and Assessment. *The China Quarterly*, September 1999, n° 159, Special Issue: The People's Republic of China after 50 Years, p. 616-628.) See, also: LIN, Justin Yifu, CAI, Fang, LI, Zhou. *The China miracle: development strategy and economic reform*. Paris: Economica, 2000.

[2] In 2008, China's fertilizer consumption per hectare passed the 500 kilograms mark and has remained above since. Worldwide, the average consumption was 133 kilograms per hectare in 2011. Source: World Bank Database.

[3] According to the National Bureau of Statistics of China, the average size of cultivated land per farmer is less than one hectare. By comparison, the average farm size in France was 55 ha in 2010 (Source: Recensement Agricole 2010).

This "sociological side" (the "reorganization" of producers), which recent agricultural modernization policies have to focus on, is likely to have a strong impact on patterns of relationships in rural areas. This research topic attracted our attention as a still relatively unexplored research issue in political science.

Production factor	Possibility to act as a lever	Main obstacles preventing the possibility to act as a lever
Arable land (quantity)	No	Urbanization, desertification
Arable land (quality)	No	Pollution, desertification, unsustainable agricultural practices and over-exploitation
Pesticides, fertilizers (qtity/ha)	No	Current situation of over-consumption
Pesticides, fertilizers (spreading techniques)	Weak	Lack of vocational training, imperfections of extension services, highly subsidized industries
Irrigation	Weak-Strong	Desertification, lack of investment capacities for local small irrigation and watersaving infrastructures
Mechanization	Strong	Lack of investment capacities for small farmers, mountainous and hilly areas
Organization, cooperation and economic rationalization	Strong	Social, institutional and political roadblocks
Science and technology (GMO and hybrid varieties)	Strong	Intellectual property issues, civil society concerns, investment barriers for small farmers, question marks for the sustainability of the model

Table 1: Levers of actions to increase agricultural production in China

The reinvolvement of the state in the agricultural sector after a period of low interest for rural areas resembles the ebb and flow of moving water. In order to characterize these moves, it was first necessary to better understand what the notions of "state" and "government" meant in general and what they meant for China in particular The second part of this introduction ("Characterizing the ebbing and flowing state") will explore these questions and lay the foundation of the theoretical approach chosen for this research. As we will see, investigating the frames of the Party-state in China will make it necessary to explore the pattern of power and relationships between state and non-state actors. Just like the time and amplitude of tides depend on the shape of the coastline, similarly, public policies produced and implemented by state agencies never apply on a "neutral" substrate. The new agricultural modernization the

government is willing to conduct is going to affect a wide number of people in rural areas, who form the "sociological coastline" of change.

Such an analysis of patterns of power in rural areas is not only key to examine the evolution of the frames of the Chinese state. It is also fundamental to shed light on the modalities of *change* occurring in the course of agricultural modernization, as change and actors strongly act upon each other. Elements on the stakeholders taking part, to a greater or lesser degree, in the agricultural modernization process and how they take part in it, will lead the organization of this dissertation and ultimately guide the reflection on what is *change* in the course of agricultural modernization. As we will see, agricultural transitions go way beyond technological evolutions and are increasingly linked to how stakeholders take or do not take part in it – especially since sustainability has become a fundamental component of agricultural modernization. In order to better phrase the research question underlying this dissertation, it is necessary to give more details on the kind of change that will be discussed here. The third part of this introduction ("Characterizing change") will aim at providing material to answer this matter, bringing the notions of transition, pathways and sustainability on the table.

The exploration of these two preliminary theoretical questions – the nature of state and non-state actors and the nature of change –constitute a necessary preliminary step to phrase the question underlying this research on stakeholders and change.

II - Characterizing the ebbing and flowing state

A - The evolution of the Chinese state

1) What is the contemporary state?

The traditional weberian conceptualization of the state as the holder of the monopoly of the legitimate use of physical violence has been strongly called into question over the past several decades. This one-dimensional definition is indeed in sharp contrast with observations made by political scientists, who demonstrated that the features of multidimensional modern states were in fact constantly evolving. In particular, during the last decades, the structure and the organization of modern states have been put under the pressure of both political dynamics (such as the establishment of supranational institutions or regulations, or, at the opposite,

infranational decentralization) and economic dynamics (such as the globalization of capitalism).

From the middle of the 1970s to the middle of the 1990s, a body of literature expressed worries about the downsizing of the state in favor of private economic actors. Some argued that modern states, because of the spreading of capitalism, had lost their capacity to control economic players – such as the 2008 financial crisis seems to demonstrate – while economic players had considerably strengthened their capacity to seize governing power. Governments, having to perform new efficiency and managerial duties they would have felt unequipped to accomplish, would have called for a greater participation of private stakeholders, particularly skilled in management and efficiency tasks as they developed such expertise in competitive markets where they daily operate. As Peters and Pierre phrase it: "The State has become delegitimated […] in part because state actors are excessively clumsy, bureaucratic and path dependent and in part because of the control of information and implementation structures by private actors. It appears that whatever the State does it does poorly, while the private sector is more effective."[1]

Scholars, at that time, first took the increased participation of private players as a clear sign of a "retreat" or a "hollowing out"[2] of the state. For them, the delegation, to agencies and enterprises, of functions traditionally carried out by the government such as health or education, demonstrated the downsizing of the scope and forms of public intervention. In addition, the increasing reliance of governments upon non-public actors, combined with their incapacity to implement command and control mechanisms over these latest, would significantly weaken the power of the state. Private actors, on their side, would progressively have gained "real influence over public policy"[3] through their increased involvement in sectors previously dominated by the state. Some scholars even talked about a "collapse of the

[1] PETERS, Guy B., PIERRE, John. Governance without Government? Rethinking Public Administration. *Journal of Public Administration Research and Theory*, April 1998, vol. 8, n°2, p. 225.

[2] PETERS, Guy B. Managing the Hollow State In ELIASSEN, Kjell, KOOIMAN, Jan. *Managing public organizations: lessons from contemporary European experience*. London : Sage, 1993, p. 46-57 ; RHODES, Rod A. W. The Hollowing Out of the state: the changing nature of the public service in Britain. *Political Quarterly*, April 1994, vol. 65, n°2, p. 138–151.

[3] PETERS, Guy B., PIERRE, John. Governance without Government? Rethinking Public Administration. *Journal of Public Administration Research and Theory*, April 1998, vol. 8, n°2, p. 225.

state"[1] whenever functions considered to be core ones (such as the "legitimate use of physical force") were handed over to private firms.

The theory of the retreat of the state was amplified by elements coming from the study of globalization and of its effects on the modern state. For a number of scholars, whose research has addressed these questions, globalization would have resulted in the irrelevance of the "nation state"[2] and enhanced the capacity of multinational companies to seize governing power. In a global world ruled by neoliberalism and "governance without government" [3], spaces dissociated from national territories were created and conquered by economic actors, who gained extended freedom and significant power in the process. By enlarging the field of action of enterprises, globalization did not only destabilize previous patterns of power between the state and private players – for David Korten, corporations would have "emerged as the dominant governance institutions on the planet"[4] – but also put back into question the established practice of considering the territorial dimension of the "state" as a legitimate central focus for political analysis. In their research, Beck and Grande[5], Badie[6] or Favell and Guiraudon[7], among others, question this practice and try to find out new grids for research.

---

[1] See, for instance: BOTHA, Christo. From mercenaries to "private military companies": the collapse of the African State and the outsourcing of State security. *South African Yearbook of International Law*, 1999, vol. 24, p. 133-148.

[2] "*La culture, les représentations, les mouvements sociaux (y compris environnement et droits de l'homme), les classes sociales, le capitalisme [...] s'évaderaient des États-nations. L'échelle mondiale et/ou européenne serait ainsi le nouveau niveau de structuration des grands conflits (culturels et sociaux) des intérêts, et de leur régulation. [...] La capacité des États à structurer et réguler leur société serait de fait fort réduite.*" [Culture, representation, social movements (including environment and human rights), social classes, capitalism […] would break out nation states. As a consequence, the global scale and/or the European scale would have become the new areas where major conflicts of (cultural and social) interests would be shaped and regulated. […] As a consequence, the capacity of states to shape and regulate the society would be considerably downsized.] (KING, Desmond, LE GALES, Patrick. Sociologie de l'Etat en recomposition. *Revue Française de sociologie*, 2011, vol. 52, n°3, p. 457).

[3] ROSENAU, James N., CZEMPIEL, Ernst-Otto. *Governance without government: order and change in world politics*. Cambridge: University Press, 1992.

[4] KORTEN, David C. *When Corporations Rule the World*. London: Earthscan, 1995, p. 54.

[5] BECK, Ulrich, GRANDE, Edgar. *Cosmopolitan Europe*. Cambridge; Malden, Mass.: Polity, cop. 2007.

[6] BADIE, Bertrand. *La fin des territoires : essai sur le désordre international et sur l'utilité sociale du respect*. Paris : Fayard, 1995.

[7] FAVELLE, Adrian, GUIRAUDON, Virginie. *Sociology of the European Union*. Houndmills; New York: Palgrave Macmillan, 2011.

Over the last two decades however, a group of scholars started taking a stance against theories acknowledging a retreat of the state. Philipp Genschel and Bernhard Zangl, from the *TranState* program, argue for instance that even though its role has changed, the state remains absolutely central. While the authors recognize that the state increasingly shares political authority with non-state actors, these latest, they argue, keep on depending on the state, as the authority granted to them is "fragmented and incomplete": "*[Les acteurs non étatiques] ne sont souvent pas en mesure d'agir efficacement ou légitimement tant que l'État ne leur a pas donné les ressources d'autorité qui leur manquent: pouvoirs décisionnels, capacités organisationnelles, légitimité démocratique et juridique. De sorte que l'implication de l'État dans l'exercice de l'autorité reste presque universelle; il n'y a pratiquement pas de domaine de politique publique où il n'est pas présent d'une manière ou d'une autre."*[1] To sum up, for the authors, even though the state is no longer vested with the monopoly of public authority, it keeps on *administrating* it[2].

Some analysts of the reconfiguration of the modern state reached conclusions on the ability of this latest to reinforce its power or capacity, in general or in certain sectors. For John Ikenberry for instance, "states continue to be critical organizational vehicles for modern political order [and] state capacities continue to evolve, declining in some areas and rising in others"[3]. Among other things, the author argues that one way that empowers the state to work effectively with society is its ability to institutionally limit the coercive powers of governments[4]. Joo-Youn Jung, in her work on post-crisis Korea, finds out that the interventionist state was able to reinvent itself in the course of globalization by shaping a

[1] [[Non-state actors] are often not able to act in an efficient or legitimate way as long as the state did not grant them with the sources of authority that they lack: decisional power, organizational capacities, democratic and legal legitimacy. As a consequence, the involvement of the state in the exercise of authority remains almost universal; there is almost no public policy area where the state is not present, in one form or in another.] (GENSCHEL, Philipp, ZANGL, Bernhard. L'État et l'exercice de l'autorité politique Dénationalisation et administration. *Revue française de sociologie*, 2011, vol. 52, n°3, p. 529).

[2] "*L'Etat n'exerce plus le monopole de l'autorité politique, il l'administre*." (GENSCHEL, Philipp, ZANGL, Bernhard. *Ibid*.).

[3] IKENBERRY, G. John. Conclusion In PAUL, Thazha Varkey, HALL, John A., IKENBERRY, G. John (eds.). *The nation-state in question*. Princeton, N.J. : Princeton University Press, 2003, p. 351.

[4] IKENBERRY, G. John. *Ibid*., p. 368.

reform agenda and institutions aimed at keeping bureaucratic intervention in place[1]. Béatrice Hibou, on her side, claims that the delegation of certain powers to private stakeholders is in fact a way for the state to create new frames for political action, from which it will then benefit. "*L'État non seulement résiste, mais continue de se former à travers la renégociation permanente des relations entre 'public' et 'privé' et à travers les processus de délégation et de contrôle ex-post. Autrement dit, la 'privatisation' de l'État n'implique ni la perte de ses capacités de contrôle, ni sa cannibalisation par le privé, mais son redéploiement, la modification des modes de gouvernement sous l'effet des transformations nationales et internationales.*"[2] Likewise, many scholars acknowledged the ability of the state to react and to keep on building state capacities, either through administrative reforms or through the establishment of new instruments or new governance techniques. By, among others, redistributing power to subnational territories, reinventing and adapting classical weberian bureaucratic methods or by implementing New Public Management solutions[3], the modern state constantly reinvents itself.

Most of the above-mentioned research on the reconfiguration of the modern state stems from the analysis of developments occurring in Western areas or in developed countries. However, in the age of economic liberalization and globalization, the frames of public action in China are challenged in similar ways. Since the beginning of economic liberalization in 1978, private players started playing new roles and have increased in importance. With the integration of China in the WTO in 2001, trade has picked up sharply and business networks became more intricate and more international. These developments created a favorable dynamic for institutional change and for a pluralization of the political process, as were observed in other countries.

---

[1] JUNG, Joo-Young. Reinventing the Interventionist State: The Korean Economic Bureaucracy Reform under the Economic Crisis, *Pacific Focus*, 04/2008, Volume 23, Numéro 1, p. 121-138.

[2] [Not only does the state resist, but it keeps on developing through the continuous renegotiation of relationships between 'public' and 'private' and through delegation and ex-post control methods. In other words, the 'privatization' of the state implies neither the loss of its control capacities, nor its cannibalization by private circles, but rather its redeployment, the evolution of governance modes under the influence of national and international transformations.] HIBOU, Béatrice. Retrait ou redéploiement de l'Etat ? *Critique internationale*, 1998, vol. 1, p. 151-168.

[3] BEZES, Philippe. Construire des bureaucraties Wébériennes à l'ère du New Public Management ? *Critique Internationale*. 2007, vol. 35, n°2, p. 9-29.

2) How to talk about the Chinese state? Decentralized bureaucracy and the Party

Before going further into details on the evolution of the Chinese political system, it is important to give preliminary remarks on this ambiguous concept. Can we talk about "the Chinese state" just as other scholars talked about modern states in Western areas? Given the intertwined nature of the Communist Party and governmental bodies, it is often not clear whether the Chinese state refers to an administrative structure or to the Communist Party organization. The Chinese political system is indeed characterized by governmental institutions dominated by the Communist Party. This latest has monopoly power over this administrative structure, through channels made of hundreds of thousands of Party employees, who control the appointment, promotion and removal of officials in the ramifications of the administrative government. This dual structure and the ability of Party institutions to control the selection of leaders allow the Party to exercise routine political authority.

The administrative structure, on its side, is characterized by a vertically and horizontally shaped organization that is highly decentralized. The decentralization of the Chinese government mostly took place in the 1980s and 1990s, mainly in the form of fiscal decentralization between 1980 and 1993. The process raised numerous questions and stimulated abundant research on power redistribution between the central government and local governments. Whether researchers talked about an empowerment of local governments or claimed, on the opposite, that the central authorities are still strong if not stronger, they at least agree on the fact that decentralization led to an important fragmentation of the Chinese political process. The most famous work on this issue is probably Lieberthal and Lampton's theory on fragmented authoritarianism [1]. In this analysis, Lieberthal acknowledges a remarkable decentralization of the political decision-making in the aftermath of post-Maoist economic reforms. The author highlights the fact that the central government, in order to get policies it designs and promotes effectively implemented, needs to constantly negotiate with the other administrative levels. Negotiation actually happens because, under the central level, the authority is "fragmented and disjointed", both among the different competences and

[1] LIEBERTHAL, Kenneth, LAMPTON, G., David M. (eds.) *Bureaucracy, Politics and Decision-Making in Post-Mao China*. Berkeley, Calif. : University of California Press, 1992.

functions (条, *tiao*: "branches") and among the different tiers/levels of administration (块, *kuai*: "areas").

Once this fragmentation of the political process is acknowledged, the logical question that follows is: how are policies designed in a coherent way and, above all, how are they effectively implemented by the multiplicity of local governmental authorities? Questions about the effectiveness of policy implementation are not specific to China and an abundant literature based on Western case studies has developed on the topic. At the beginning of the 1970s, Pressman and Wildavsky, by focusing on the real impacts of policies rather than on their conception, opened up an entire field of research in public policy[1]. Scholars who engaged in this new field of political science analyzed both implementation processes and implementation structures[2] and considered top-down approaches (how policies are implemented, from central states to bottom levels), bottom-up approaches (how local levels react and interact with central states) as well as vertical approaches (how public action is always, in the end, multi-level and transversal).

Scholars – a number of whom are cited below - abundantly focused on the question of how an authoritarian country such as China, supposedly challenged by legitimacy issues, was able to implement policies in such a vast, diversified and decentralized country. Two questions can be raised concerning this issue. The first one relates to compliance: what are the mechanisms used by the central government to make sure that decentralized local states make effort to comply with central policy guidelines? The second one is linked to coordination issues at the local level.

The vast majority of scholars dedicated efforts to answering the first question. A number among them argued that decentralization led to a real empowerment of local

[1] PRESSMAN, Jeffrey L., WILDAVSKY, Aaron B. *Implementation: how great expectations in Washington are dashed in Oakland or why it's amazing that federal programs work at all, this being a saga of the economic development administration as told by two sympathetic observers who seek to build morals on a foundation of ruined hopes*. Berkeley, Calif. ; Los Angeles ; London: University of California Press, 1973.

[2] Mayntz states that there are basically three causal mechanisms determining implementation: 1) the structure of political programs to be implemented 2) the administrative system in charge of implementing programs 3) the political, economic and social weight and resources of targeted groups (MAYNTZ, Renate. Die Implementation politischer Programme In *Implementaion politischer Programme Empirische Forschungsberichte I Empirische Forschungsberichte*. Königstein: Verlagsgruppe Athenäum, Hain, Scriptor, Hanstein, 1980, p. 236-249).

governments. According to Jean Oi, the fiscal reform has assigned local governments considerable property rights over increased income, pushing these latest to be spearheads of the reform drive in China[1]. According to a number of scholars however, the greatest power given to local governments has been likely to make policy implementation more complicated. Richard Baum and Alexei Shevchenko, for instance, acknowledged a growth of the local state, which was invested with greater power through a "downward transfer of property rights and fiscal responsibility [that] prompted local governments everywhere to expand their organizations and staff"[2]. Xueguang Zhou goes a step further by stating that decentralization allowed local governments to form local alliances and to deviate from the goals of the central government during the phase of policy implementation[3].

On the opposite, other scholars demonstrated that the central government had been able to develop mechanisms to keep and sometimes strengthen its control on local governments. Jiang Shigong, for instance, argues that decentralization in China was deliberate. For the author, decentralization allowed local governments to cultivate initiative and competition and was coupled with centralized command and control through the Party organization as well as a vertical chain of command of the government bureaucracy[4]. Landry argues that economic and fiscal decentralization actually strengthened the regime by reducing "the incentives within the Chinese leadership to depart from the political status-quo"[5]. In the model of decentralized authoritarianism, the author explains that the key to understand the coherence of the Chinese political system and the durability of the core elements of the authoritarian state lies within the internal institutions of the Communist party, and especially in the Party's monopoly of appointments and removals if officials. For Landry, this monopoly

[1] OI, Jean C. Fiscal Reform and the Economic Foundations of Local State Corporatism in China. *World Politics*, October 1992, vol. 45, n°1, p. 99-126.

[2] Baum and Schevchenko, however, recognize that reforms are far from having reduced the role of the central government to a "mere spectator" (BAUM, Richard, SHEVCHENKO, Alexei. The State of the State In GOLDMAN, Merle (ed.) *The Paradox of Reform in China*. Cambridge MA: Harvard University Press, 1999, p. 337-339).

[3] ZHOU, Xueguang. The Institutional Logic of Collusion among Local Governments in China. *Modern China,* January 2010, vol. 36, n°1, p. 47-78.

[4] JIANG, Shigong. Written and Unwritten Constitutions: A New Approach to the Study of Constitutional Government in China. *Modern China*, January 2010, vol. 36, n°1, p. 12-46.

[5] LANDRY, Pierre F. *Decentralized Authoritarianism in China*. Cambridge University Press, 2008, p. 27.

is "a key weapon for maintaining organizational discipline and for structuring principal-agent relationships between local Party institutions and the officials that seek to manage in a manner that enhances the cohesion of the political system"[1]. This appointment and removal system is composed of evaluation mechanisms aimed at assessing the outcomes of policies implemented by government officials. For instance, the reaching (or non-reaching) of targets assigned to local officials – some weighting more in the evaluation than others, such as local GDP – determines the upgrading, downgrading or dismissal of these latest.

3) The shaping of the state by non-state actors

The Chinese state is, as we just saw, defined both by its bureaucracy and by the control mechanisms that the Party holds on it. However, states cannot be thought of independently from non-state actors. In fact, states are very much characterized by the relationships they have with non-state actors and the evolution of the environment in which the Party-state operates greatly contributes to shape the frames of public action. According to Burns, "the environment within which the Party now operates has changed fundamentally"[2] and keeps on evolving today. To better understand the evolution of this environment is to better understand the frames of the Chinese state.

a) A rising civil society?

Among the changes in the environment within which the Party-state operates, a number of studies point at the rise of civil society actors. In particular, the development of Chinese NGOs[3] in the 1990s triggered the emergence of such an issue area. A number of scholars indeed took the development of these organizations as a "symptom" of an emerging civil society. However, most of the scholars who analyzed these developments concluded that Chinese NGOs were not likely to evolve into a real counterpower likely to threaten the Party-

[1] LANDRY, Pierre F. *Ibid.*, p. 18.

[2] BURNS, John. The People's Republic of China at 50: National Political Reform. *The China Quarterly*, September 1999, No. 159, Special Issue: The People's Republic of China after 50 Years, p. 580.

[3] "Ministry of Civil Affairs (MCA) statistics show that before 1978 there had been only about 6,000 social organizations in China. By the end of 2006 their number had reached 186,000. The number of PNEUs, which did not exist before the reforms, reached 159,000" (LU, Yiyi. NGOs in China: Development Dynamics and Challenges In ZHENG, Yongnian, FEWSMITH, Joseph (eds.) *China's opening society: the non-state sector and governance*. London ; New York : Routledge, 2008, p.83-105).

state. Peter Ho even argues that the Party-state purposely developed non-governmental organizations in order to take care of activities neglected by local governments, such as environmental and social issues: "At the Ninth People's Congress in March 1998, the General Secretary of the State Council, Luo Gan, declared that 'government has taken up the management of many affairs which it should not have managed, is not in a position to manage, or actually cannot manage well', which has hindered the efficiency and effectiveness of the government. It was therefore necessary, said Luo Gan, to expand the activities of 'social intermediary organizations' "[1].

Lu Yiyi, on her side, believes that Chinese NGOs are constrained in their development and activities by strict regulations and the fact that they are highly dependent from the government. She adds that NGO practitioners generally lack motive and skills[2]. Jean-Philippe Béja reaches similar conclusions: according to him, NGOs often seek government approval and their activities are considered as "technical assistance". As he states it: "[NGOs] seek the lobby of the government to enact public policies which will help resolve specific problems. Instead of putting problems in political terms – in terms of choices that can be debated in public by citizens – governments tend to put them forward as technical problems and tend to create structures of consultation to solve them."[3]

A number of scholars, more recently, have put aside the analysis of NGOs in order to focus on the emergence of other forms of civil society in China, theoretically less controlled by the government, such as *ad hoc* mass demonstrations or social networks on the Internet. However, an important number of researchers who addressed these issue areas, far from reaching conclusions on a possible retreat of the Chinese state, depicted, on the opposite, the great adaptability of this latest. Yanqi Tong and Shaohua Lei, for instance, argue that the Party-state was able to maintain its legitimacy and to absorb the shock of the upsurge of protests prompted by socioeconomic transformations thanks to its flexibility and to its

[1] HO, Peter, EDMONDS, Richard Louis (eds). *China's embedded activism: opportunities and constraints of a social movement*. London; New York: Routledge, 2008.

[2] LU, Yiyi. *Non-Governmental Organizations in China: The rise of dependent autonomy*. London; New York: Routledge, 2009.

[3] BEJA, Jean-Philippe. The changing aspects of Civil society in China In ZHENG, Yongnian, FEWSMITH, Joseph (eds.) *China's opening society, The non-state sector and governance*. London: Routledge, 2008, p. 71-88.

multilevel responsibility structure[1]. Xi Chen, on his side, claims that the "routinized contentious bargaining" between the government and civil society players was key in maintaining the regime's resilience[2]. Séverine Arsene goes a step further in showing how the regime was able to develop strategies to control or supervise an apparently autonomous space for deliberation and political critic – Internet – and how this space was in fact used to reinforce its legitimacy[3].

The literature on Chinese rural areas has abundantly focused on social movements[4]. However, the emphasis put on this aspect of the rural society casts a shadow on the fact that rural residents are also economic players and can take part in political – and economic – activities in other ways than through protests, mass movements or petitions. Social movements in rural areas appear as events limited both in time and in space and cannot be taken as the sole signs of a more or less coordinated emergence of civil society in rural China. Although the analysis of protests is crucial to shed light on contemporary tensions and conflicts between the government and social stakeholders, the strong control exercised by the Party-state over information – in particular, over information linked to protests – considerably limits the possibility of a coordinated emergence of civil society through mass demonstrations. Social players way more often act as individuals driven by their own daily concerns and bounded by the uncertainty of choices and of corresponding risks. The "individualism" of strategies developed by social players was already noticed by a number of scholars. In particular, the "individualization" of the Chinese society was particularly well described in an article of Bryan Tilt depicting the daily "tactics" of Chinese citizens to cope with environmental hazards[5]. Likewise, rather than focusing on the sparse occurrences of

[1] TONG, Yanqi, LEI, Shaohua. *Social protest in contemporary China, 2003-2010 : transitional pains and regime legitimacy*. Abingdon, Oxon ; New York : Routledge, 2014.

[2] CHEN, Xi. *Social protest and contentious authoritarianism in China*. Cambridge ; New York : Cambridge University Press, 2012.

[3] ARSENE, Séverine. *Internet et politique en Chine. Les contours normatifs de la contestation*. Paris, Karthala, coll. « Recherches internationales », 2011.

[4] See, among others: LI, Lianjiang, O'BRIEN, Kevin J. Protest Leadership in Rural China. *The China Quarterly*, March 2008, n°193, p. 1-23; GUO, Xiaolin. Land Expropriation and Rural Conflicts in China. *The China Quarterly*, June 2001, n°166, p. 422-439; PERRY, Elizabeth J., SELDEN, Mark (eds). *Chinese Society: Change, Conflict and Resistance*, London: Routledge, 2000.

[5] TILT, Bryan. Industrial Pollution and Environmental Health in Rural China: Risk, Uncertainty and Individualization. *The China Quarterly*, June 2013, vol. 214, p. 283-301. The eagerness to pursue individual interests in rural areas – such as securing better jobs, housing or commodities – were also

mass protests in rural areas, this research wishes to concentrate on more subtle but way more frequent forms of conflict in rural areas: processes of bargaining, mediation, exploitation, instrumentalization and innovation, that constitute the "daily life" of agricultural production activities and shape the frames of agricultural modernization. Could the rise of rural civil society not only take the form of social mobilization, thoroughly explored[1], but also engage in more subtle paths of conflict and negotiation in the course of agricultural modernization? By exploring this question, this dissertation hopes to better characterize the pattern of power and relationships between state and non-state actors in rural areas.

b) A new role for economic actors?

Another group of people likely to challenge the established power of the Chinese Party-state and to reshape its frames is made of economic actors. Since the onset of the economic liberalization in 1978, the role of enterprises and private entrepreneurs has become more important and more independent. However, most of the research on this issue has come to the conclusion that economic liberalization poorly challenged the power of the Chinese regime. For Bruce Dickson, private entrepreneurs form a "noncritical sphere"[2] because it is not in their interest to confront the power of governmental authorities. Jean-François Huchet takes over this idea. As he explains: "Private entrepreneurs are usually nonconfrontational when the economic situation is good[, and in the case of a crisis,] their capacity to dissent and the impact of a potential exit would probably be limited given the grip the party maintains on any organization (including those within its ranks), the financial weakness of private enterprises,

---

mentioned in earlier work such as Oi's work on clientelism (OI, Jean. Market Reforms and Corruption in Rural China. *Studies in Comparative Communism*, Summer/Autumn 1989, vol. 22, n°2/3, p. 221-233).

[1] Whether conflicts stem from taxes (BERNSTERIN, Thomas P., LI, Xiaobo. Taxation without Representation: Peasants, the Central and the Local States in Reform China. *China Quarterly*, September 2000, n°163, p. 742-763), land expropriation (GUO, Xiaolin. Land Expropriation and Rural Conflicts in China. *China Quarterly*, June 2001, n°166, p. 422-439; ZWEIG, David. The 'Externalities of Development': Can New Political Institutions Manage Rural Conflict? In PERRY, Elizabeth J., SELDEN, Mark Selden (eds.). *Chinese Society: Change, Conflict and Resistance*. London: Routledge, 2000), environmental issues (JING, Jun. Environmental protests in rural China In PERRY, Elizabeth J., SELDEN, Mark Selden (eds.), *op. cit.*) or village governance (LI, Lianjiang Li. Elections and Popular Resistance in Rural China. *China Information*, 2001, vol. 15, n°2, p. 1-19).

[2] DICKSON, Bruce J. *Red capitalists in China : the party, private entrepreneurs, and prospects for political change.* Cambridge, UK ; New York : Cambridge University Press, 2003.

and the importance of the public sector to the national economy."[1] For the author, the "grip the party maintains on any organization" is linked to the capacity of Communist leaders to "co-opt certain parts of society"[2]. This capacity to forge coalitions of actors[3] constitutes what the author names the "corporatist strategy" of the Communist party.

Jean Oi also reaches the conclusion that state-business nexus form the basis of a corporatist strategy perpetuated by the Chinese state[4]. For her, fiscal decentralization assigned local governments with property rights over higher incomes and created strong incentives for local officials to pursue economic development in their area of jurisdiction. In addition, local governments would have been granted with powerful tools to keep control over enterprises. As a result, for Jean Oi, "the workings of a local government that coordinates economic enterprises in its territory as if it were a diversified business corporation […] with officials acting as the equivalent of a board of directors"[5] proves the existence of what she names "local state corporatism".

Unger and Chan, as well, developed an interesting theory of corporatism "with Chinese characteristics". For the authors, starting from the 1980s, a large number of associations – ranging from public affairs to technology or business associations – were created "to serve as corporatist intermediaries and agents"[6]. According to Unger and Chan, the fact that the great majority of these organizations were established on the government's initiative and are currently controlled by the central government or by local governments proves that Chinese

[1] HUCHET, Jean-François. The Emergence of Capitalism in China: An Historical Perspective and Its Impact on the Political System. *Social Research*, Spring 2006, vol 73, n°1, p. 19.

[2] HUCHET, Jean-François. *Ibid.*, p. 19. This strategy of "co-opting" entrepreneurs was also mentioned by a number of other scholars, such Bruce Dickson (DICKSON, Bruce J. Integrating Wealth and Power in China: The Communist Party's Embrace of the Private Sector. The China Quarterly, December 2007, n°192, p. 827-854).

[3] The current "Jiang Zemin-Zhu Rongji leadership tandem"'s coalition, still in power today, is for instance formed of bureaucrats, directors of the state-owned enterprises, economic experts, foreign investors and private entrepreneurs.

[4] OI, Jean C. Fiscal Reform and the Economic Foundations of Local State Corporatism in China. *World Politics*, October 1992, vol. 45, n°1, p. 99-126.

[5] OI, Jean C. *Ibid.*, p. 100-101.

[6] UNGER, Jonathan, CHAN, Anita. Corporatism in China: a Developmental State in an East Asian Context In *China after socialism: in the footsteps of Eastern Europe or East Asia?* Armonk, N.Y.: Sharpe, 1996.

corporatist organizations still largely operate within a state-corporatist mold[1], even if recent forces started undermining and weakening the power of governmental authorities and could make the model shift towards a "societal-corporatist" direction.

On the opposite, for Marie-Claire Bergère, the "grip the party maintains" on the economy would have grown stronger over the last few years. The emergence of what she names "new state capitalism" would have resulted from a combination of actors – ranging from public and "hybrid" enterprises to professional associations allied to the regime – and of various tools of proactive economic policies – such as controlled prices for electricity and water or fixed exchange and interest rates[2].

Alongside with the development of explanatory frameworks such as Chinese corporatism and state capitalism, the past and present strong involvement of governmental officials in the economy was also depicted by the developmental school. According to the original concept depicted by Chalmers Johnson, developmental states are contributing to economic growth through the establishment of large national corporations controlled by dedicated ministries. Today, the concept has evolved a lot, and contemporary developmental states rather refer to a broader notion according to which governments "dynamically help to create the political and infrastructural conditions for economic growth by, among other means, carrying out strategic planning, protecting and nurturing key sectors of the economy (and weeding out loosing ones), facilitating accumulation and investment, coping with cyclical movements in the domestic and international economies, regulating markets (including in particular the labor market), coordinating relations among enterprises, and promoting both general education and technical research and development"[3]. The framework

[1] Vivienne Shue reaches similar conclusions in her analysis of Chinese civil associations: "Most of these associations are by no means entirely self-constituted, nor do most of them apparently seek or enjoy much relative autonomy from the state. […] All […] are enveloped in a rhetoric of corporatist interpenetration and encapsulated in a self-conception that stresses corporatist consultation, cooperation, and harmony in action with the party-state and its aim. […] These associations are playing a role in strengthening and empowering the social groups they represent in the Chinese system. But it seems just as clear that the party-state […] may also be strengthened by these new arrangements." (SHUE, Vivienne. State power and social organization in China In KOHLI, Atul, SHUE, Vivienne, MIGDAL, Joel S. *State power and social forces: domination and transformation in the Third World*. Cambridge: Cambridge University Press, 1994, p. 83).

[2] BERGERE, Marie-Claire. *Chine : le nouveau capitalisme d'État*. Paris: Fayard, 2013.

[3] BLECHER, Marc, SHUE, Vivienne. *Tethered Deer: Government and Economy in a Chinese County.* Stanford: Stanford University Press, 1996, p. 109.

has expanded and lost a lot of its explanatory capacity by trying to encompass too many things. However, some notions developed by this framework remain interesting and will be used in this research.

From the advocates of corporatism to the advocates of developmentalism or new state capitalism, political scientists have been particularly active in exploring the mechanisms allowing Chinese officials to keep the development of capitalism under control. For a number of scholars, the strong involvement the Party-state managed to maintain on the economy allowed China for a greater and faster development. Yang Dali, in particular, claims that the "strong state's involvement in China was a crucial ingredient of economic success" [1]. However, too few researchers focused on farmers, who are much more often considered as "social stakeholders" rather than economic players. For Unger and Chan, farmers are even excluded from corporatist arenas[2]. At this point, three questions come to mind. First, how can the hundreds of millions of farmers, whom agricultural production essentially depends on, be excluded from what was described by many as one of the most important control mechanisms of the Chinese government overs its economy (corporatist structures)? If farmers are indeed still excluded from corporatist arenas as Unger and Chan argued, what kind of mechanisms does the government have in its possession to control this sector of the economy? And finally, in a country where agricultural production is mostly taken care of by small farmers, what are the roles played by governmental authorities and by enterprises in the agricultural sector? These are major theoretical caveats this dissertation would like to bring elements to.

4) Towards a weak or strong state? The specificities of rural government in China

The investigation of the evolution of the frames of governments' action is generally associated with questions about "strong" and "weak" states. Most of the scholars who explored the consequences of decentralization, of the rise of social movements and of economic liberalization in China concluded that the regime was still amazingly strong – if not stronger. However, findings drawn from rural case studies do not always agree with the

[1] YANG, Dali L. *Remaking the Chinese leviathan: market transition and the politics of governance in China*. Stanford, Calif.: Stanford University Press, 2004, p. 11.

[2] UNGER, Jonathan, CHAN, Anita. Corporatism in China: A developmental State in an East Asian context In CHAN, Anita, GILL, Graeme, MILLER, Robert F. *China after socialism: in the footsteps of Eastern Europe or East Asia?* Armonk, N.Y.: Sharpe, 1996.

theory of an empowered state. Huaiyin Li, who focused on relationships between villagers and governmental authorities, argues that the abolition of the collective system, the instauration of village elections, as well as other cultural factors, past legacies and institutional reforms, led to "the state's weakened presence in the countryside" and to "the villagers' growing autonomy and equality in local politics, social interactions, and family life"[1]. In the last subsections, when I introduced the state of recent thinking on the evolution of the frames of political authority in China, I used interchangeably the words "state", "Party-state" and "regime", and by that I referred to the whole dual political system composed of the Party structure and of the administrative branches of the government. But can we talk about a complete dual political system when studying village policy? What does Li exactly mean by the weakening of the Chinese state in rural areas? The author argues that the abolition of the collective system, by eliminating brigade teams, weakened the administrative basis of the state's presence. In addition, the implementation of village elections would have eroded the power of Party branches in villages and increased the one of newly elected village councils. Today, as Li argues, village policy is not perpetuated "in the name of the state" anymore and political systems in rural areas would have evolved from government, "or the state's one-way penetration of rural society", to governance, "that entailed the villagers' cooperation and voluntary participation". The main consequence of these developments would be a waning influence of the state. However, Li's argument also mentions that the restructuring of villager-cadre relations led to an increased willingness of local officials to "please the villagers". By a "weakened presence of the state", Huaiyin Lin thus does not mean that the state was administratively hollowed out, but rather that the central Party-state has lost a great deal of its former administrative and ideological influence in rural villages.

In the agricultural sector, the waning of the state's influence goes beyond a simple weakening of the ideological and administrative influence of the central Party-state. Firstly, at the village level, there was a real hollowing out of administrative units in charge of agricultural production, as production teams (administratively organized farming units controlled by the government during the collective era) were eliminated in the late 1970s and replaced by the Household Responsibility System that gave farmers back the freedom to make production choices. In addition, in the 1980s and 1990s, at the county and township levels,

[1] LI, Huaiyin. *Village China under socialism and reform: a micro history, 1948-2008.* Stanford, Calif.: Stanford University Press, 2009.

there was a sharp decrease in the availability of funds dedicated to agricultural development, relatively to the expenditures attributed to other items (see Chapter 1, II). This evolution was strongly linked to the decline of the interest of the central state in rural areas. A massive agricultural reform was carried out in the first years following Deng Xiaoping's accession to power – massive not only by the scale of the institutional changes, but also by the significance of the impacts that it had on the whole sector. However, shortly afterwards, the government turned its focus to industrial and urban development, which resulted in a drop in the share of the expenditures dedicated to agricultural development in the last two decades of the 20th century. Although, at that time, there was not any hollowing out of administrative units in charge of the agricultural sector, there was a sharp decrease in their ability to implement new reforms.

Since 2004 however, the attention of the central government for rural areas rose again. Over the last decade, central authorities indeed issued numerous first-rank documents emphasizing the importance of agricultural and rural development (see Chapter 1, III). This evolution raises several questions: What concerns triggered the state's new willingness to be involved again in agricultural production activities? Did it lead to a strengthening of the state's presence in the agricultural sector? Through which means? Does the state invent new ways of reinstating itself in agricultural production activities or does it capitalize on its existing local institutions and resources?

In spite of the importance rural areas and agriculture had in the historical building of the Chinese state, the fact that rural areas still host nearly half of the population and the rising stakes at hand in the Chinese countryside, rural China has attracted less interest from political scientists, whose research focus shifted to the developments of political processes in urban areas. Although conclusions stemming from urban case studies do contribute a lot to the general understanding of the transformations of the frames of the Chinese political system, research on rural areas, and in particular the analysis of the contemporary agricultural modernization, could bring new and original elements to the analysis of the evolution of the frames of public action in China. It is well established that political power is increasingly shared among government officials and a multiplicity of non-state actors and research in sociology and political science has shed much light on the multiple forms of interactions between public and private stakeholders. However, as a conclusion to the precedent

paragraphs, the analysis of agricultural modernization could bring additional insights to enrich this research.

B - Going further: from state analysis to sociological analysis

Two other major conclusions can be drawn from the analysis of the body of literature above-mentioned. The first is that "the state" is in fact heavily fragmented and made of an array of players. "The state" can be considered neither as a single actor nor as a polymorphous actor[1]. Even though the first question this research would like to address is related to the ways in which "the" Chinese state restores its presence in agricultural production activities, this dissertation would like to question the consideration of the state as a single entity and to consider this latest as a plurality of social actors instead.

The second other conclusion that can be drawn from the analysis of the body of literature on decentralization, civil society and economic liberalization is that the state cannot be considered as an entity that can be looked at in isolation from non-public actors. The evolution of the role played by civil society and economic actors greatly influences the shapes of political action. As a consequence, the aim of this research is to question the theoretical boundaries between "the" state and non-state actors. According to Migdal's state-in-society perspective, "states are no different from any other formal organizations or informal social grouping"[2]. In agreement with Midgal, this dissertation recognizes that the state is not a "coherent, integrated, and goal-oriented body" and that the state and society mutually transform each other and build from one another. As Elizabeth Remick puts it, "the state is purely an organization"[3], and this dissertation intends to analyze it as such. "Images of the state" were put aside as much as possible, in order to focus on concrete practices perpetuated by state actors: government officials of township and county levels, tied to the Party to a greater or lesser extent. This deconstruction of the Chinese state was particularly useful to reach conclusions on practices enabling governmental actors to reinvestigate the agricultural sector, but could not go without asking questions about what, in the end, was holding the

[1] Such as the "polymorphous beast" of Leibfried and Zürn (LEIBFRIED, Stephan, ZÜRN, Michael (eds.). *Transformations of the State?* Cambridge: Cambridge University Press, 2005).

[2] MIGDAL, Joel S. *State in Society: Studying How States and Societies Transform and Constitute One Another*. Cambridge University Press, 2001, p. 12.

[3] REMICK, Elizabeth J. *Building Local States: China during the Republican and Post-Mao Eras*. Cambridge, Mass. ; London : Harvard University Asia Center, 2004, p. 5.

multiple actors of the Chinese state together. Considering the state, at the same time, as a social relation influenced by patterns of relationships and as a working entity shaping its environment, is a dichotomy this dissertation builds on.

The deconstruction of the state as a unique entity separated from other social actors was carried out through an exploration of the various realizations of interactions between stakeholders taking part in the modernization of agricultural production at the local level. Adopting an actor-centered approach brought elements to the analysis of agricultural modernization, as a vast number of actors are involved in the process. Agricultural policies indeed link the highest levels of the government with the "lowest" – meaning "most local" – levels of the society. On one hand, agricultural policies need to answer the national stake of food security – a stake, which ruling regimes could never choose to ignore without risking their collapse[1]. This is particularly true for China, as the country's history, scarred by ancient and recent famines, deeply engraved a fear of food shortage in the minds of central government officials. Although in the current context of globalized markets, famines are not the main fear of most governments anymore, a number of governments are still strongly involved in the agricultural sector today. In fact, the return of Western governments in agricultural affairs can be traced back to the middle of the 20th century. For Pierre Muller, this comeback would be explained by the emergence of a global frame of reference for agricultural modernization in favor of productivism in the 1950s and 1960s[2]. This productivist movement created space for the action of new associative structures and private stakeholders, but also made the involvement of the state in agriculture stronger and more likely to last in the long term. Public subsidies, established to support the trade of agricultural products after the crisis of the 1930s[3], are still substantial today. The massive share of the budget of the European Union dedicated to agriculture is a clear proof that central governments are still

[1] Historians have long associated regime falls with famines. See, among others, the historical corpus on the French revolution, of which a part describes « famine plots ». The term refers to the strategic use of famines in the particular aim of making regimes fall: BORD, Gustave. *Histoire du blé en France. Le Pacte de famine, histoire, légende*. Paris, 1887 ; CAHEN, Leon. Le Pacte de famine et les spéculations sur les blés. *Revue Historique*, Mai-Juin 1926, n°152, p. 32-43.

[2] MULLER, Pierre. *Le technocrate et le paysan : essai sur la politique française de modernisation de l'agriculture : de 1945 à nos jours*. Paris : Ed. ouvrières, 1984.

[3] MOLLARD, Amédée. L'agriculture entre régulation globale et sectorielle In BOYER, Robert et SAILLARD, Yves. *Théorie de la régulation, l'état des savoirs*. La Découverte, 2002, p. 332-340.

strongly involved in agricultural affairs, and that this involvement is necessary to help farmers overcome the structural difficulties of the sector.

On the other hand, farming is always, in the end, performed by local stakeholders – namely, farmers – and regulated by local authorities. This is particularly true for China, where the agricultural structure is still characterized by the very small size of farms and by the demographic weight of small farmers. In addition, although agricultural production is still mostly taken care of by small farmers, agricultural enterprises play an increasing role in the picture. In the past, much research conducted on rural areas drew conclusions on the interactions between a limited number of stakeholders. "State-peasants" relationships were perhaps the most studied[1]. "State-enterprises" relationships were also rather thoroughly analyzed in rural areas[2]. However, farmers as well as industrial players both take part in agricultural production in rural areas. As a consequence, a more comprehensive analysis of the whole concrete system of action (agricultural production), at the local level, appeared necessary to fully understand the picture of agricultural modernization.

Agricultural modernization constitutes a unique framework where numerous stakeholders meet and interact. Agriculture, which is both a stake of national dimension and a local activity, offers a particularly rich area of investigation to assess the involvement of a variety of social actors in the modernization process. From this follows a logical question: how to encompass such a variety of stakeholders in the analysis of agricultural modernization policies? Building on a sociological approach, actors – and not only state officials – were placed at the center of the analysis. The methodology developed by Crozier and Friedberg in

[1] ASH, Robert. Squeezing the Peasants: Grain Extraction, Food Consumption and Rural Living Standards in Mao's China. *The China Quarterly*, Dec. 2006, vol. 188, p. 959-998; CAI, Yongshun. Between State and Peasant: Local Cadres and Statistical Reporting in Rural China. *The China Quarterly*, Sept. 2000, n°163, p. 783-805; BERNSTEIN, Thomas P., LÜ, Xiaobo. Taxation without Representation: Peasants, the Central and the Local States in Reform China. *The China Quarterly*, Sept. 2000, n°163, p. 742-763. See, as well, the corpus of literature depicting the consequences of the abolition of peasants' burden on local governance patterns: TAO, Ran, LIU, Mingxing, SU, Fubing, LU, Xi. Grain Procurement, Tax Instrument and Peasant Burdens during China's Rural Transition. *Journal of contemporary China*, 2011, vol. 20, n°71, p. 659-677; KENNEDY, John James. From the Tax-for-Fee Reform to the Abolition of Agricultural Taxes: The Impact on Township Governments in North-west China. *The China Quarterly*, March 2007, vol. 189, p. 43-59, etc.

[2] UNGER, Jonathan, CHAN, Anita. Inheritors of the Boom: Private Enterprise and the Role of Local Government in a Rural South China Township. *The China Journal*, Jul. 1999, n°42, p. 45-74.

1977[1] rapidly appeared as a suitable frame for analysis. The analysis of organization proposed by Crozier and Friedberg indeed enables to depict with accuracy the sociological structure of a concrete system of action – agricultural production in our case – by proposing a number of tools to characterize the patterns of power between the actors belonging to this organized system of action.

A number of scholars adopted a similar approach based on the description of local patterns of power to investigate rural China. However, most of this previous work embraces several economic sectors at the same time – for instance, in order to depict the consequences of a specific policy implemented in rural areas. In the field of political science, little research has been done on agriculture as a whole sector on its own deserving dedicated research – and even less research has been done relying on Crozier and Friedberg's approach. Among the limited corpus of literature focusing on this issue, much work concentrated on the grain sector, which underwent important reforms in the 1990s and the beginning of the 2000s[2]. However, the current stakes at hand for rural development and food security brings the whole Chinese agricultural sector at a crossroad, and the recent renewal of the state's interest for the agricultural sector can teach us a lot on the reshaping of patterns of power in rural areas. Agriculture deserves a thorough and dedicated investigation and this dissertation would like to fill this gap.

Analyzing patterns of power in rural areas is not only key to the general efforts aimed at characterizing the evolution of the frames of the state in the course of agricultural modernization. It is also fundamental to shed some light on the modalities of the *change* occurring in the course of agricultural modernization.

III - Characterizing change in the agricultural sector

A - How social actors shape the frames of change

As stated above, public policies never apply on a "neutral" substrate. In addition, the new agricultural modernization the government is willing to conduct is most likely to affect a

[1] CROZIER, Michel, FRIEDBERG, Erhard. *L'Acteur et le Système*. Paris: Editions du Seuil, 1977.

[2] See, for instance: CHENG, Enjiang. Market Reforms and Provision of Credit for Grain Purchases in China. *The China Quarterly*, Sep. 1997, n°151, p. 633-653."

wide number of people in rural areas. As a consequence, the change brought by agricultural modernization is definitely linked to stakeholders taking part in direct and indirect ways in agricultural production activities.

Change does not only act *upon* actors. A large body of literature evidences the *active* role social actors play in institutional change. According to Bezès and Le Lidec, the emergence of institutional reforms is facilitated by social actors they call "reform entrepreneurs", who are in a position to transform institutional rules by demonstrating their ability to provide answers to address a given issue and by building support coalitions[1]. Similarly, Paul Sabatier and Hank Jenkins-Smith developed the Advocacy Coalition Framework to analyze the "social" causes of the emergence of policy change on long-term time frames. According to the authors, actors who share basic ontological and normative beliefs are grouped in coalitions, within which they develop strategies to transform their beliefs in concrete public policies[2]. Another major framework used to depict policy change from a sociological point of view was the Epistemic Community Framework. Developed by Peter Haas[3], it depicts how networks of knowledge-based experts – he names epistemic communities – help governments identify their interests and frame the collective debates, considerably influencing policy-making. For Stone Sweet, Fligstein and Sandholtz, "skilled actors", who "find ways to induce cooperation amongst disparate individuals or groups by helping them to form a stable conception of roles and identity" are among the four main causes of institutional change[4].

The importance of the role played by social actors in the course of institutional change goes well beyond the stage of the emergence of a reform. Social actors also play an important

[1] "En première instance, on indexera donc l'émergence de réformes institutionnelles à l'apparition et l'identification d''entrepreneurs de réforme', c'est-à-dire de groupes d'acteurs qui revendiquent l'intention et sont en position de transformer les règles d'une institution en faisant montre de compétences et de ressources pour élaborer des diagnostics, promouvoir des solutions et constituer des coalitions favorables à leur projet." BEZES, Philippe, LE LIDEC, Patrick. Ce que les réformes font aux institutions In LAGROYE, Jacques, OFFERLE, Michel. *Sociologie de l'institution*, Paris : Belin, 2010, p. 58.

[2] SABATIER, Paul A., JENKINS-SMITH, Hank (eds) *Policy Change and Learning: An Advocacy Coalition Approach*. Boulder (Colo.): Westview Press, 1993.

[3] HAAS, Peter. Introduction : Epistemic Communities and International Policy Coordination. *International Organization*, vol. 46 , n°1, 1992, p. 1-35.

[4] STONE SWEET, Alec, FLIGSTEIN, Neil, SANDHOLTZ, Wayne (eds) *The institutionalization of Europe*. Oxford: Oxford University Press, 2001, p.11.

part in the implementation of change. According to Renate Mayntz, three different dimensions determine the effectiveness of policy (or policy reform) implementation[1]. The first dimension relates to the choices made in the program design concerning intervention instruments. The second dimension is linked to the administrative implementation structure, which is made of all the procedural and organizational arrangements which frame the implementation process. The final dimension that determines the effectiveness of policy implementation is the situation and evolution of the social environment: for instance, the economic, political and social weight of the groups targeted by the new policy. In the 1980s, an important body of literature developed on this last dimension. This new approach, Peter Knoepfel, Corrine Larrue and Frédéric Varone call "bottom-up" [2], advocates for a mainstreaming of the analysis of interactions between social actors (target groups, third party groups and other players) as the first step of research on the effectiveness of policy implementation.

The role played by stakeholders in reform process and change is thus supported by a large corpus of literature, reinforcing the legitimacy of the methodology chosen for this research, which places great emphasis on sociological analysis. At this point, the remaining question that seems to be addressed is: what kind of change are we talking about? What kind of objectives does the reinvolvement of the state wish to fulfill? What are the real outcomes of this reshaping of relationships between state and non-state actors?

B - Agricultural modernization pathways

1) Notions of agricultural transitions

Characterizing change has always been a challenging task, as change encompasses a wide variety of political, social and economic dimensions. When it comes to agricultural

[1] MAYNTZ, Renate. Die Implementation politischer Programme In *Implementaion politischer Programme Empirische Forschungsberichte I Empirische Forschungsberichte*. Königstein : Verlagsgruppe Athenäum, Hain, Scriptor, Hanstein, 1980.

[2] This "bottom-up approach" first initiated by Hjern and Hull in 1982 (in HJERN, Benny, HULL, Chris. Implementation Research as Empirical Constitutionalism. *European Journal of Political Research*, vol. 10, n°2, p. 105–115) would be opposed to a "top-down approach" led by Sabatier and Mazmanian (SABATIER, Paul, MAZMANIAN, Daniel A. The conditions of effective implementation: A guide to accomplishing policy objectives. *Policy Analysis*, vol. 5, n°4, p. 481-504). See: KNOEPFEL, Peter, LARRUE, Corinne, VARONE, Frédéric. *Analyse et pilotage des politiques publiques*. Genève: Helbing und Lichtenhahn, 2001, p. 222.

change, or "agricultural transition", a large body of literature exists on the topic and helps to better assess important questions which relate to it.

The different bodies of literature on agricultural transition do not necessarily refer to the same notions of transition. We can distinguish at least four different corpuses, depicting different transition processes, sometimes overlapping. A first corpus depicts agricultural transitions in socialist and communist economies evolving towards market economies[1]. A second one focuses on agricultural transitions in developing countries. Agricultural modernization, in this body of literature, is usually depicted as the first step of an economic development path, called the "Lewis" path – although this has recently been put back into question[2], as we will see later in the dissertation. A third body of literature – sometimes associated with the one on agricultural modernization in developing countries – concentrates on agricultural transitions aiming at integrating domestic agricultural markets (often the ones of developing economies) in international markets – usually for WTO integration purposes. Finally, a last body of literature focuses on agricultural transition towards more productive *and more sustainable* models.

	Definition n°1	Definition n°2	Definition n°3	Definition n°4
Country/ economy	Socialist/ communist economies	Developing countries	Developing countries	Developed and developing economies
Objective	Transition to market economy	Agricultural modernization as a first step of Lewis-type economic development	Integration in international markets	Transition towards more sustainable and more productive models

Table 2 : Different definitions for "agricultural transition"

[1] As described, amon others, in: SWINNEN, Johan F. M., ROZELLE, Scott. *From Marx and Mao to the market : the economics and politics of agricultural transition*. Oxford ; New York : Oxford University Press, 2006.

[2] DORIN, Bruno, HOURCADE, Jean-Charles, BENOIT-CATTIN, Michel. A World Without Farmers? The Lewis Path Revisited. CIRED Working Papers, 2013, n°47. We will come back on this article later in the dissertation.

2) **Recent debates on agricultural transition: food security versus sustainability**

The last model of agricultural transition transitions towards more sustainable and more productive models has developed a lot over the past few years. In 2007-2008, an intense price crisis hit international food markets. The price of cereals, soybeans and cooking oil, in particular, increased dramatically in 2007 and in the first two quarters of 2008. In 2008, the cereal price index reached a peak 2.8 times higher than in 2000[1]. As a consequence of soaring food prices, an estimated 44 million people were driven into poverty[2] and many countries were confronted to major social and political crises.

Four years after the food price crisis of 2007-2008, agricultural issues are still to be addressed, both in developing and in developed countries. The question of how to provide food, at a decent price, to 9 billion people by 2050, is a matter of intense debates and an important number of people and organizations have been urging countries to raise their agricultural productivity levels. However, in a context where arable land and water resources are limited and already eroded by the rising needs of urbanization and industrialization, agricultural intensification has turned into an additional threat to the sustainable use of these resources. As a consequence, a growing number of people and organizations advocate in favor of a transition towards more sustainable agriculture. Since the food price crisis of 2007-2008, it seems that the debate became polarized around two extremes: the advocates of productivism, for whom the main goal of agricultural policies should be to raise production levels in order to feed the ever-increasing world population, and the proponents of environmental protection, for whom the implementation of sustainable farming practices should be considered as a priority to lower the impacts of agricultural production on the environment. As a start, it was important to identify these two poles of the debate on contemporary agricultural transitions – productivity and environmental protection – even if in reality, the array of movements is much larger. Holt-Gimenez and Shattuck, for instance, acknowledge at least four main categories of opposing "global food movements", namely: the

[1] United Nations. *The Global Social Crisis. Report on the World Social Situation 2011*. New Ork: United Nations, 2011, p. 62.

[2] World Bank. *Food price watch*. Washington, D.C.: World Bank. February 2011.

"neoliberal" one, the "reformist" one, the "progressive" one and the "radical" one[1]. While the neoliberal movement is based upon a discourse oriented towards corporate and global markets and giving priority to "food enterprises", the reformist movement, on its side, gives priority to food security, development and aid. The progressive movement, primarily based in northern countries, relies on a "food justice discourse" that promotes the development of local foodsheds, of family farming and of access to fresh and affordable food, with a strong emphasis on direct rural-urban linkages and alternative business models that insist on social rather than individual (consumer) responses to food regime failings. Finally, the radical movement, which endorses some of the elements of the progressive movement, advocates in favor of deep and structural changes of agriculture and food systems towards more sustainability, more fairness, more sovereignty and more security. What kind of agricultural "movement" can we observe in China?

3) Agricultural modernization pathway in China: security… and sustainability?

The two poles in recent international discussions on agricultural transitions are also debated in China. The government, who long had to deal with insufficient resources, clearly keeps on attaching fundamental importance to the capacity of the territory to supply the food demand of the population. On the other side, rural industrialization and intensive agriculture had dramatic consequences on the agricultural land and on the safety of food products. Environmental protection, as a consequence, recently emerged as a strong feature of the debate on the pathway the Chinese agricultural sector is embarking on.

a) Food security: the traditional goal of Chinese agricultural policies

Originally, Chinese agricultural policies mainly aimed at providing enough food to the population. For centuries, drought and flood have hit the country and led to bad harvests and food shortage, triggering social unrest and sometimes regime falls. A complex system aiming at preventing famines – which comprised a network of granaries spread throughout the whole country – was set up as soon as the 17th Century, by the Qing dynasty. Based on precedents

[1] HOLT-GIMÉNEZ, Eric, SHATTUCK, Annie. Food crises, food regimes and food movements: rumblings of reform or tides of transformation? *The Journal of Peasant Studies*, 2011, vol. 38, n°1, p. 109-144.

from the Ming dynasty, which had just fell because of famines, granaries were set up by the Qing in order to "help smooth price shocks and food-supply fluctuations for the civilian population" and to "provide social security in the event of food crises"[1].

Agricultural policies, in dynastic China, were thus a two-fold tool aimed at ensuring food security – as they were set up in order to provide enough food, at a decent price, to the population – as well as social stability, necessary to ensure both the legitimacy of emperors (who would otherwise loose the "Mandate of Heaven") and the one of local elites. As stated by Handlin Smith: "The do-gooders (in particular, for famine relief) […] perceived that an image of kindness would enhance their reputation and stature, and hence their authority in the community"[2].

Famines were though not solely the curse of dynastic China, as no less than three famines hit the country throughout the 20th century (in 1920–21, in 1928–30, and in 1958–61, see Chapter 1, II.B). Today, the ever-heavier agricultural trade deficit and the concerns that it raises are clear signs that the food security goal is still at the forefront of Chinese agricultural policies.

Social stability as well remains, even today, one of the main goals of agricultural policies in China. However, the link between social stability and food shortage has faded. China is indeed well integrated in the globalized economy and as a consequence, famines – although still deeply engraved in the mind of officials – do not jeopardize the legitimacy of the government anymore. Although there are still 160 million of undernourished people in China, the country was presented as a model by international organizations, both in terms of poverty alleviation[3] and in terms reduction of hunger and malnutrition[4]. Since the beginning of the 2000s, agricultural development has become a tool to improve the living conditions of rural residents, and especially the living conditions of farmers. As a consequence, recent

[1] SHIUE, Carol H. Local Granaries and Central Government Disaster Relief: Moral Hazard and Intergovernmental Finance in Eighteenth- and Nineteenth-Century China. *Journal of Economic History*, March 2004, vol. 64, n°1, p. 100.

[2] HANDLIN SMITH, Joanna F. Chinese philanthropy as seen through a case of famine relief in the 1640s In Ilchman, WARREN Frederick, KATZ, Stanley Nider, QUEEN, Edward L. *Philanthropy in the World's Traditions*, Indiana: Indiana University Press, 1998, p. 143.

[3] United Nations Development Program. *Human Development Report, 2010: The Real Wealth of Nations: Pathways to Human Development.* New York: United Nations Development Program.

[4] See FAO's reports on The State of Food Insecurity in the World, 2012 and 2013.

agricultural policies still aim at ensuring social stability, although not by providing enough food to the population, but by raising the revenue and improving the living conditions of farmers. In addition, raising the revenue of farmers would improve the purchasing power of hundreds of millions of rural dwellers, potentially improving national economic growth.

b) Sustainability: a rising stake at hand

Ensuring the adequation between food supply and demand was also the most important goal of post-WWII agricultural policies in France. However, today, debates rather focus on the impacts of agricultural practices on the environment and about their potential consequences for future food supply in this area of the world[1]. Such debates are also emerging in China. The government, which has been actively promoting the use of chemical fertilizers since the 1970s, is now facing the heavy consequences of such policies. Among others, chemical fertilizers leach from the soil and contaminate ground water. In a situation where China already lacks water to answer the rising demand of its population, the pollution of resources – and in particular the one caused by agricultural activities – has become alarming.

The agricultural practices that have prevailed over the past decades do not solely deteriorate resources aimed at feeding people or at supplying non-agricultural sectors. They also have effects on agriculture itself, as they deteriorate soil and water resources, of which the quality is essential to ensure the sustainability of agriculture on the middle- and long-term. Is the awareness of the government of these issues likely to trigger a policy response and to make agricultural practices evolve towards more sustainable farming practices in China – using less water, less pesticides and chemical fertilizers and offering better working conditions to farmers? Is an alternative pathway, environmentally and socially more sustainable, likely to become concrete in the near future? These are some questions this dissertation would like to provide answers to.

Internationally, debates on the new pathways of agricultural development and transition have intensified, especially since the food crisis of 2007-2008. The question of which path should agricultural modernization take is thus not unique to China. Exploring the modalities

[1] At the beginning of the 1990s, France, as well as European Union, started building new agricultural policies, aiming at answering overproduction and at developing environmental protection tools (POUX, Xavier. Biodiversity and agricultural systems in Europe: drivers and issues for the CAP reform, *Iddri's Study*, February 2013, n°3, p. 18).

of agricultural transition pathways in China, by uncovering its political and sociological components, could thus provide substantial elements for the understanding of the building of national agricultural pathways worldwide.

IV - Research question and hypotheses

Summing up the above, the research question of this dissertation could be phrased in three parts: What effect does the restoration of the state's involvement in agricultural production activities have on local patterns of relationships between state and non-state actors in rural areas? These local patterns of relationships, acting as filters of central policy guidelines, led to the creation of the frames of reference of a dominant paradigm of agricultural modernization, influencing both public and private action. Which are these frames of reference? And finally, which lock-ins and path-dependencies do these frames of reference crystallize, engaging China on a specific – and unsustainable – pathway for agricultural modernization?

In order to explore this research question, I will start by analyzing the nature of the current state involvement both at the central and local levels. I will argue that the recent emphasis put on the agricultural sector by central policy guidelines led to a more direct involvement of local officials in agricultural development activities in rural areas. This new involvement strongly shaped the interactions between local officials and non-state actors, forging powerful networks of agri-entrepreneurs and officials and marginalizing small farmers. Policy guidelines and interactions between state and non-state actors mutually influence each-other – in the sense that central policy guidelines shape local patterns of relationships which in turn act as filters of central policies – and elaborated the frames of a dominant agricultural modernization pathway which is capital-intensive, technology-driven, productivity-oriented and gives a leading role to industrial stakeholders. Today, most agro-economists and policy makers, influenced by the ideological legacy of half a century of Green Revolution, believe that agricultural modernization is essentially technological. This dissertation will argue instead that policies promoting productive, technology-driven and capital-intensive agriculture and considering small farmers solely as rational economic actors are likely to lead entire countries engage on unsustainable agricultural modernization

pathways, which withstand late-coming political willingness to shift towards more sustainable trajectories.

A - Characterizing interactions between state and non-state actors

Hypotheses on state intervention in agricultural activities can be divided into five categories, ranging from the most authoritative to the less authoritative forms (*i.e.* the ones enabling more pluralism and a wider participation of other stakeholders), according to the patterns of power and relationship between state and non-state actors:

1) Planned Economy: The use of command and control mechanisms inherited from state socialism (for instance, a monopoly of control over political institutions[1], which, in turn, exercise power over resources; or the control of means of production) enables the Chinese state to redeploy itself in agricultural production activities;

2) Liberal-bureaucratism: Although the country has evolved from a planned economy to a market economy, the state succeeded in implementing administrative reforms, in particular through the establishment and spreading of new public management methods in administrations. Reforms strengthen the top-down capacities of the central state, both to regulate public bodies and to control the activities of stakeholders from economic and social circles;

3) Developmental state: Through the setting-up of a strategy for industrial development by central authorities (for instance, through the establishment of large national corporations controlled by a dedicated ministry, to which extended power is granted), the Chinese state can extend its control over agricultural activities and modernize the targeted sector;

4) Local state corporatism, whether it is closer to a "classical" form of state corporatism, such as described by Schmitter[2] (through professional corporations controlled by the state) or to looser forms of state-business nexus, such as portrayed by Jean Oi[3]. The hypothesis of "local state corporatism" can be seen, to a certain extent, as a variation of the

[1] LANDRY, Pierre F. *Decentralized Authoritarianism in China*, Cambridge University Press, 2008, p. 18.

[2] See, for instance, SCHMITTER, Philippe C. *Corporatism and public policy in authoritarian Portugal.* London; Beverly Hills: Sage Publications, 1975.

[3] OI, Jean C. Fiscal Reform and the Economic Foundations of Local State Corporatism in China. *World Politics*, October 1992, vol. 45, n°1, p. 99-126.

developmental state's hypothesis, but where institutions would have gone through an important process of decentralization;

5) Regulatory state: The liberalization of the economy created a market that is independent from the state and gave greater power to private stakeholders. The state keeps a loose control over agricultural production activities in rural areas through the issuing and implementation of regulations. Although these ones are not as established and as thoroughly implemented as in Western countries because of the level of development of rural China, regulations is progressively giving a coherent frame for agricultural modernization throughout the territory and agricultural sectors.

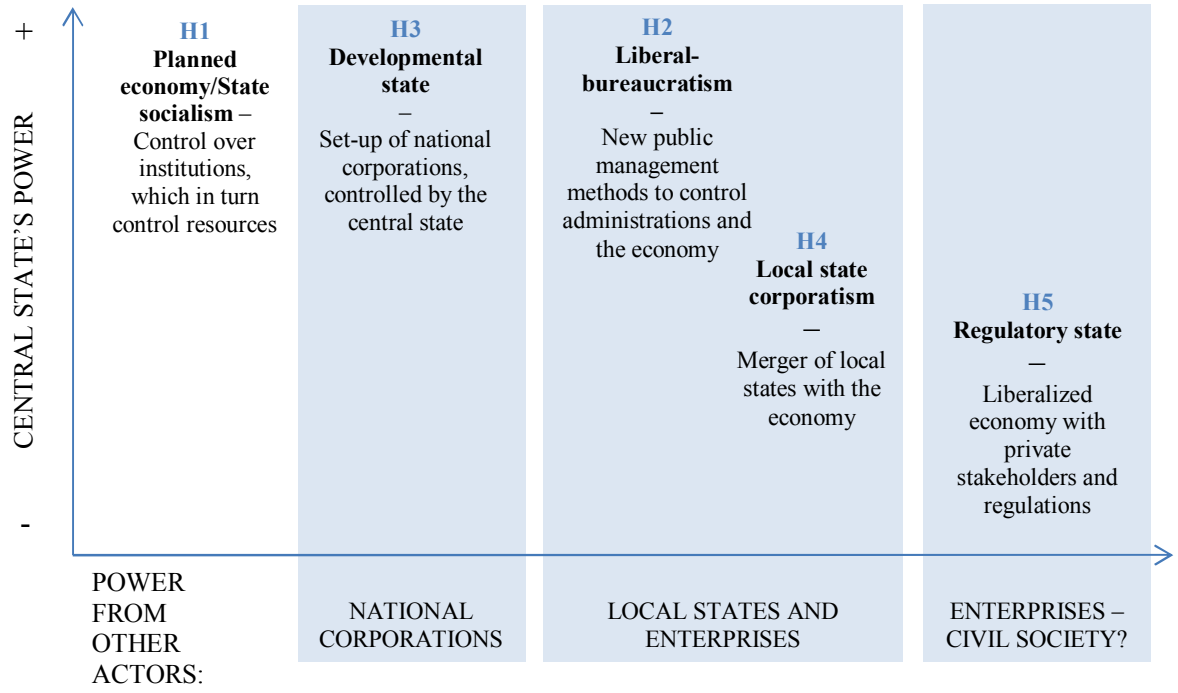


Figure 1: Research hypotheses

The evaluation of hypotheses will lead to a better understanding of the roles played by state and non-state actors in agricultural modernization at the local level and help apprehend the patterns of relationships between these latest. It will shed light on the ways government officials reinvestigate agricultural production activities and allow us to better understand how non-state actors react to these evolutions.

B - Linking social interactions and agricultural transition pathways

Although the importance of the role played by social actors in the various phases of the policy cycle was evidenced and described in detail by a vast body of literature in political science, social stakeholders still seem to be neglected by the policies aimed at trigerring modernization of agricultural sectors – something which is not particular to China. Stakeholders are too often considered by policymakers, by economists and sometimes by political scientists as "rational economic actors" mostly driven by their willingness to increase their profits. As this dissertation will emphasize, the wide array of stakeholders taking part in agricultural modernization are far from seeing the whole picture of policy change, do not react instantly to the implementation of new agricultural modernization policies and are even less stirred by economic profit. Other dimensions are worth considering, such as path dependencies, institutional and cultural factors and the established patterns of power and relationships in local areas. These dimensions greatly contribute to shape the frames of the transition pathway of the Chinese agricultural sector. As a consequence, we can say that agricultural transition pathways are influenced both by the frame of reference promoted by the government through agricultural policies *and* by the action of the established patterns of relationships between stakeholders taking part in agricultural production – something agroeconomists, donors and policymakers could better take into account.

The frame of reference built by the promulgation of agricultural policies, as mentioned above, sways between two poles that are usually considered as opposed to each other:

i) modernization should focus on balancing the demand and the supply of food products. In other terms, it has to answer the stake of national food security. Another goal that goes along with this "productivity objective" of agricultural modernization is the improvement of the living conditions of farmers – productive agriculture is indeed supposed to lead to a rise in farmers' income – ideally leading to more social stability in rural areas, to the maintenance of farming labor (and consequently to the sustainability of agricultural production in the future) and to enhanced economic growth;

ii) modernization should alleviate environmental issues caused by farming practices, in order to protect resources which are also used by other sectors of the economy and to ensure the sustainability of agricultural production in the middle and long-term.

The frames of reference promoted by agricultural modernization policies are always implemented on established social patterns. These local patterns of power and relationships and the capacity local stakeholders have to react to policy implementation greatly influence not only the efficiency of the implementation process itself, but also the frames of policies as well. As a consequence, the sociological analysis of the interests, resources and power of the stakeholders taking part in agricultural modernization in a number of local places is likely to shed light on how social actors, in turn, frame public objectives and political action. Having in hand the interests of stakeholders, a precise picture of local patterns of relationships in the concrete system of action of agricultural production and how they influence agricultural transition pathways, this dissertation will draw conclusions on the modernization pathway China is engaging on, bringing additional elements to the understanding of international debates on how agricultural modernization trajectories are built and evolve through time.

V - Research design

The frames of reference promoted by agricultural modernization policies and the social patterns these frames are plugged into constitute the two main objects of analysis this dissertation focuses on. In order to approach these two objects, it was necessary to conduct two kinds of fieldwork. The first one concentrated on the modalities of implementation of agricultural modernization in rural areas. The second one focused on the definition of the frames of reference of agricultural modernization at the central level of the government.

A - Analyzing the sociological conditions of the implementation of agricultural policies

1) Analytical framework and objective

In order to assess the ways in which state actors restore their presence in agricultural production activities, a crucial step of research is the analysis of the implementation of agricultural modernization policies at the local level.

Building on a sociological approach, stakeholders – and not only state actors – were placed at the center of the analysis. In particular, the methodology uses the organizational

analysis of collective action developed by Crozier and Friedberg[1]. This approach, which was a fundamental contribution to the study of organizations and change, is based on the analysis of a concrete system of action. This latest is made of strategic actors, who interact with each other according to the features of the concrete system of action, to their own interests and to their own resources, which depend on their capacity to control the uncertainties of the system. Concretely, the analysis relies primarily on information obtained through interviews with strategic actors, which aim at understanding "how each actor confronts his situation and its inherent constraints, *what objectives* he sets for himself, and how he perceives his potential for attaining these objectives within a given structure". In other words, interviews look "what *resources* the actor possesses, what his *margin of liberty* is, and *in what way*, *under what conditions*, and *within what limits* he can make use of them"[2].

The analysis of the interests, resources and strategies of stakeholders engaged in the same concrete system of action – agricultural production – as well as the analysis of the uncertainties of the system and of the capacity of each actor to control these uncertainties, were part of a first step of research aimed at gaining an accurate picture of the patterns of power between stakeholders engaged in agricultural production at the local level. The other strength of the organizational analysis of collective action is that this first step of research provides useful tools to depict with accuracy the interactions between strategic actors. Logics of association, partnership, interdependence and latent conflict progressively appeared along fieldwork analysis. The understanding of the patterns of power and of the relationships between the actors of the concrete system of action of agricultural production shed some light on the different ways used by state actors to restore their presence in agricultural production activities, and on how local players were reacting to this "new agricultural modernization".

Even if their rationality is limited, actors are rational, in the sense that they have reasons to behave as they do and deploy strategies according to their interests and to the situation as they perceive it. However, interests and preferences are not set in absolute terms. Rather, they vary according to institutional contexts[3] and interactions between actors, who

[1] CROZIER, Michel, FRIEDBERG, Erhard. *L'Acteur et le Système*. Paris: Editions du Seuil, 1977.

[2] CROZIER, Michel, FRIEDBERG, Erhard. *Ibid*., p. 263.

[3] See historical institutionalism authors such as HALL, Peter. *Governing the Economy: The Politics of State Intervention in Britain and France*. New York: Oxford University Press, 1986.

behave in an opportunistic manner[1] with a bounded rationality. In order to analyze actors in the selected concrete system of action, particular importance was attached to the analysis of the context-related resources, context-related interests, context-related preferences and context-related strategies of stakeholders.

In *Capitalism from Below*, Victor Nee and Sonja Opper perfectly illustrate how the rise of entrepreneurship in the Yangzi delta region "was not fueled by exogenous institutional changes"[2], but rather by entrepreneurs themselves who developed and used "innovative informal arrangements within close-knit groups of like-minded actors that provided the necessary funding and reliable business norms that allowed the first wave of entrepreneurs to survive outside the state-owned manufacturing system"[3]. This dissertation, as well, by relying on an actor-centered approach, will attach importance to the fact that institutional frameworks shaped by the state do not entirely define the behavior of non-state actors, and will analyze the strategies deployed by local stakeholders to use these frameworks or act despite or outside them. In particular, this dissertation will explore whether the expansion of markets and the economic success of firms made them become increasingly independent of the direct involvement of politicians – as argued by Nee and Opper – or not.

2) **Selecting case studies among the diverse agricultural landscape**

The dynamic analysis of the concrete system of action of agricultural production was conducted in several case study areas in the countryside. Counties (*xian* 县) appeared to be suitably sized areas for this research. According to Blecher and Shue, the county, in China, has historically been "the strongest and most coherent subprovincial administrative unit" and "the foundation of China's national government". They add up that: "If a theory of the Chinese state and an understanding of Chinese political economy demands a grasp of the patterns of contestation and cooperation between the center and the provinces, all the more

[1] STEINMO, Sven, THELEN, Kathleen, LONGSTRETH, Frank. *Structuring politics: historical institutionalism in comparative analysis*. Cambridge: Cambridge University Press, 1992.

[2] "The government had neither initiated financial reforms inviting a broader societal participation nor provided property rights protection or transparent rules specifying company registration and liabilities" (NEE, Victor, OPPER, Sonja. *Capitalism from Below: Markets and Institutional Change in China*. Cambridge, Massachusetts, and London, England : Harvard University Press, 2012, p. 69).

[3] NEE, Victor, OPPER, Sonja. *Capitalism from Below: Markets and Institutional Change in China*. Cambridge, Massachusetts, and London, England : Harvard University Press, 2012, p. 69.

then do they require an appreciation of the likewise contention-prone yet often collaborative relationships between China's counties and the enterprises, townships, and villages below them"[1], a remark that this dissertation fully endorses. In addition, counties' prominent role in rural affairs was regularly underlined by a number of scholars[2].

China is one of the largest countries worldwide. With latitudes between 18° and 54° N and an impressive geographic variety, the territory includes an important number of climate types. The diverse range of natural environments and climates enables the country to cultivate a wide array of agricultural products, from pineapples on the tropical island of Hainan to maize, wheat and grass-fed livestock in the provinces of the North.

The diversity of products comes along with a diversity of farming methods. A number of these latest were depicted in the amazing book written by Franklin King, "Farmers of forty centuries". Methods include irrigation systems, selection of crop varieties adapted to local conditions, methods of fertilization and a wide range of other traditional farming practices, in sum, an "unimpaired inheritance moving with the momentum acquired through 4,000 years"[3] that enabled Asian countries to maintain the fertility of its soil. To sum up King's thoughts: "We in North America are wont to think that we may instruct all the world in agriculture, because our agricultural wealth is great […] but this wealth is great because our soil is fertile and new, and in large acreage for every person. […] The first condition of farming is to maintain fertility. This condition these oriental peoples have met, and they have solved it in their way. We may never adopt particular methods, but we can profit vastly by their experience."[4]

Five broad agricultural regions can be depicted. The first one includes the mountainous provinces and autonomous region of Inner Mongolia, Gansu, Xinjiang, Qinghai and Tibet. It is mainly made of grazing areas used by pastoral farmers for meat, milk, wool and cashmere

[1] BLECHER, Marc, SHUE, Vivienne. *Tethered deer : government and economy in a Chinese county. Stanford.* Calif. : Stanford University Press, 1996, p. 204.

[2] See, for instance: LAM, Tao-Chiu. The county system and county governance In CHUNG, Jae Ho, LAM, Tao-Chiu. *China's Local Administration: Traditions and changes in the sub-national hierarchy*. London, New York: Routledge, 2010.

[3] KING, Franklin. *Farmers of forty centuries; or, Permanent agriculture in China, Korea and Japan*. London : J. Cape, 1949, p. 15.

[4] KING, Franklin, *Ibid*., p. 13.

production, with lowland regions famous for their specialized agriculture, mainly producing cotton, sunflower, rapeseeds and tomatoes.

The second agricultural region includes the north-eastern provinces of Heilongjiang, Liaoning and Jilin, which produce mainly grain, such as maize, wheat, sorghum and soybean. In these areas, only one harvest per year is possible because of the cold and harsh climate.

The third zone is located on the borders of the Huang and Huai rivers, in the North of China. The area is highly specialized in wheat production (Henan, for instance, produces one third of the wheat produced in the whole country). The regions located at the south of the area can yield two crops per year (usually rice, maize, sorghum, soybean or fruits and vegetables).

The fourth agricultural region is located on the borders of the Yangzi River, with rice as the main crop, and grain, fruits or cash crops such as tea plantation with secondary crops.

Finally, the fifth area is located at the extreme south of the country. The subtropical climate enables a particularly rich agriculture, with several harvests per year (up to three or even four crops a year). Rice is again the main crop, with fruits, sugar cane, tea, coffee as secondary crops.

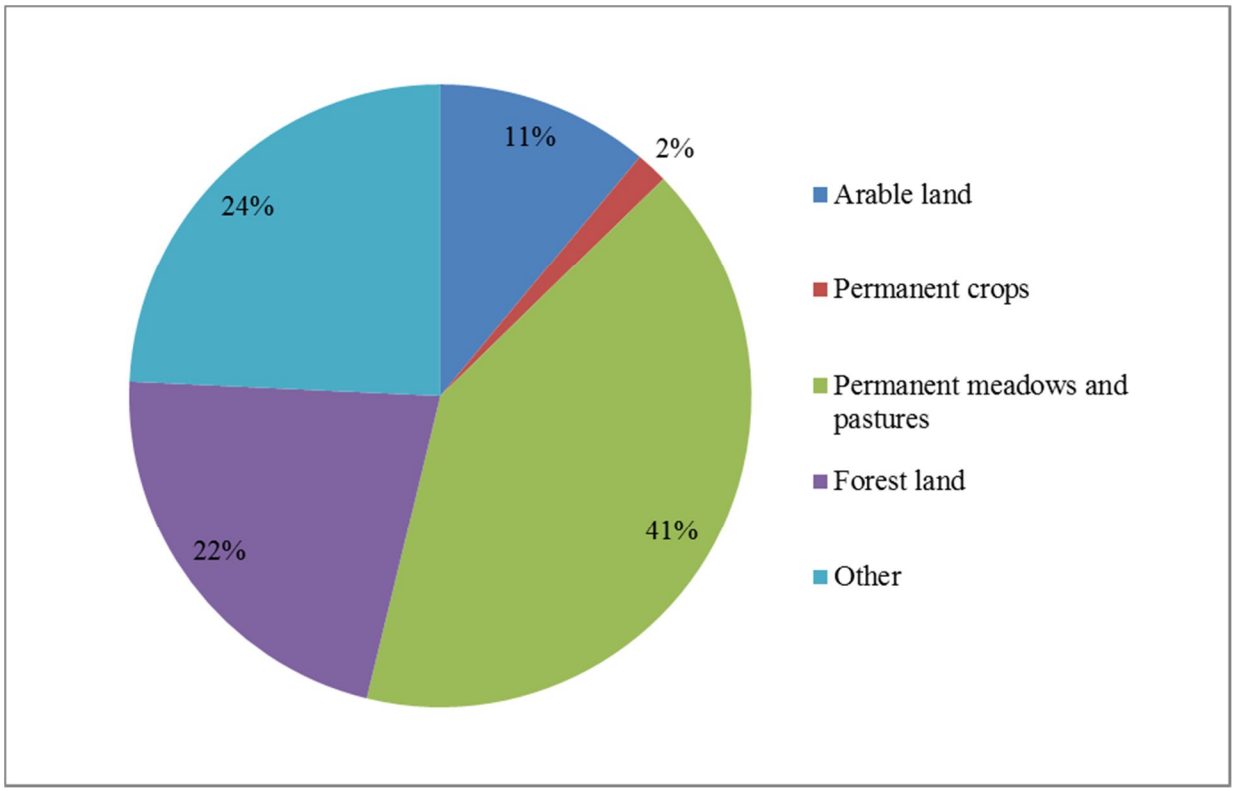
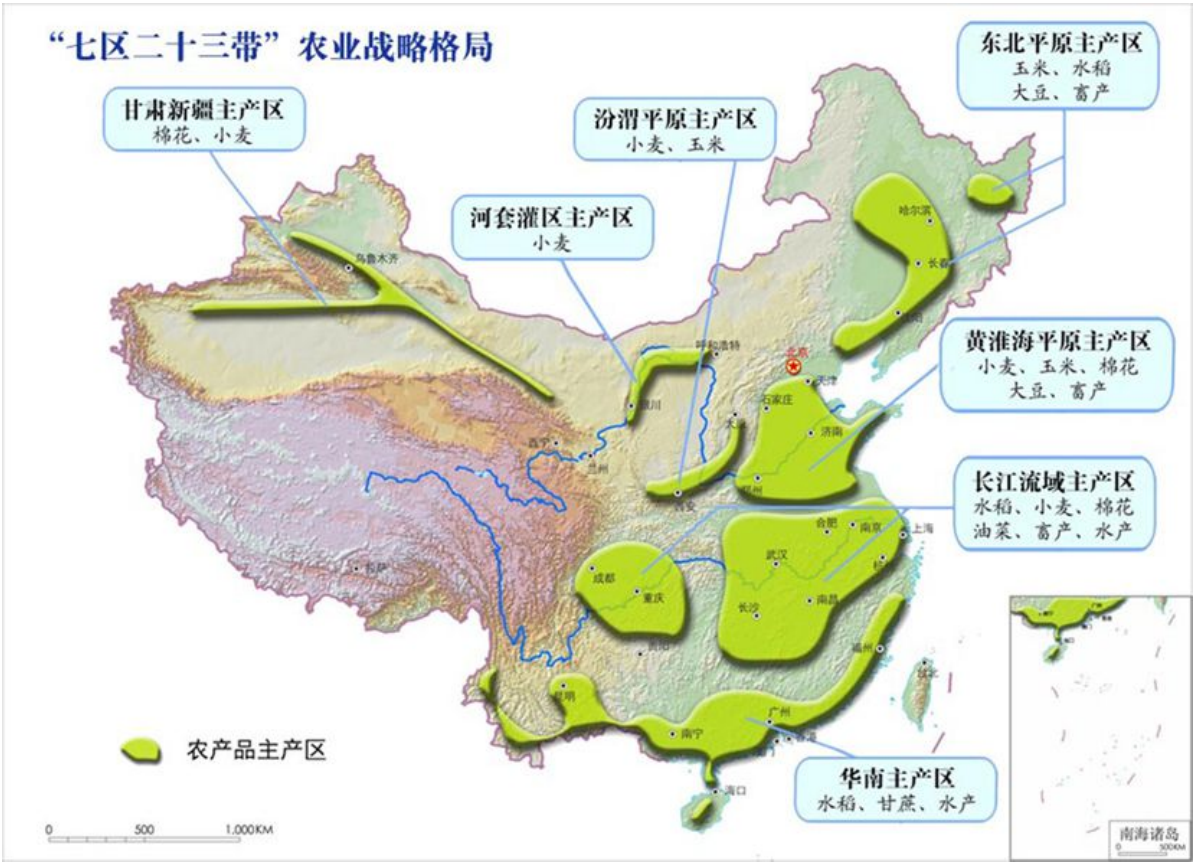


Figure 2 : Land use in China, 2012
Source: FAO database

In spite of such an impressively diverse agricultural production, only about one sixth of the total land area (almost one billion hectares) can in fact be cultivated, of which approximately 15.8 million hectares permanently support crops (Figure 2). This is due to the fact that most of the territory is made of mountainous areas, high plateaus and arid areas, in the west of the country.

The main productive areas across the territory are divided into "seven areas and twenty-three localities" by the government. These "areas and localities" form the geographic backbone of China's agricultural production strategy (Picture 1).



Picture 1: The “seven areas and twenty-third localities” for agricultural strategy
Source: Course material for the training of Chinese mayors (国家发展改革委规划司, 转变经济发展方式，开创科学发展新局面 —“十二五”规划《纲要》解读（课程资料整理）[Planning Bureau of the NDRC, “Change the economic development model, initiate the new dimension of scientific development – Understanding the scheme of the 12th Five-Year Plan (course material)”] http://edu.mayortraining.org/NewsInfo.aspx?NId=1214

Although just about one sixth of its territory can be cultivated, China’s agricultural output is the largest in the world. China ranks first for the production of a number of commodities – among which rice, wheat, fresh vegetables, potatoes, watermelons, tomatoes and pig meat – and its production sometimes far exceeds the one of the country which is ranked second (Figure 3). In other major agricultural commodities, China usually ranks second (maize) or third (sugar cane, fruits).

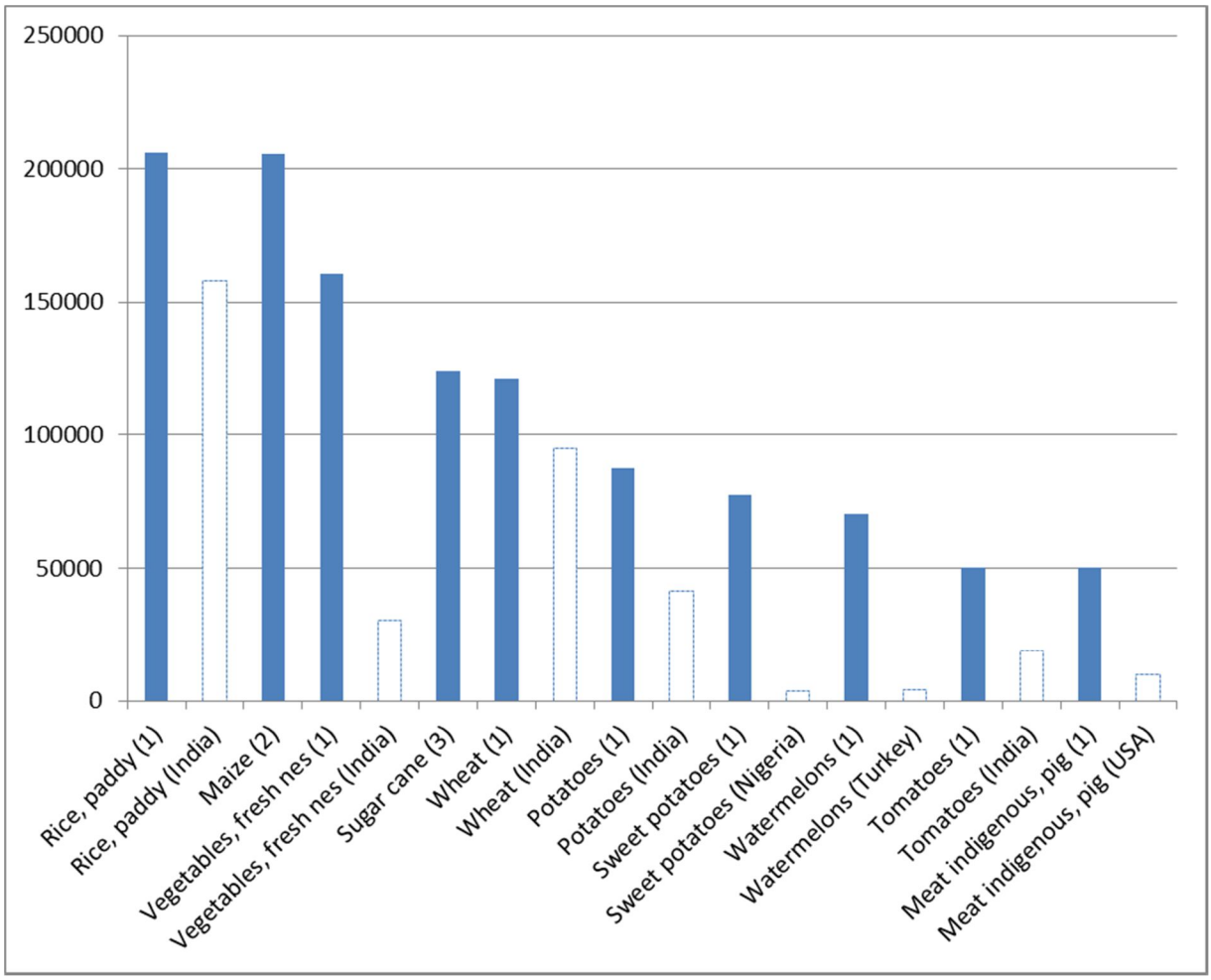


Figure 3: China's top ten commodities production quantity and rank + production quantities of countries ranked 2nd when China is ranked 1st (2012), 1000 ton

The idea of this research was originally to select at least three case study areas, according to the following criteria: i) economic conditions: from the least to the most developed provinces; ii) levels of agricultural development: from the least to the most developed agricultural sectors; iii) historical importance of governmental efforts dedicated to agriculture: from the most ancient efforts to the most recent ones; iv) farming structures: from the least to the most modern farming structures (in terms of hectare per person, of level of integration in food chains, etc.). Accordingly, the following case studies were chosen: i)

Huangmo county, in Ningxia province; ii) Lushan county, in Jiangxi province; iii) Lanshui county, in Shandong province[1].

Huangmo is an administrative area of Ningxia, which ranks among the poorest provinces in terms of net income per capita in rural areas. In addition, the county of Huangmo is located in the arid region of the province and suffers from tough environmental conditions that impede the development of agricultural production activities.

Lushan is better off than Huangmo in terms of net income per capita. However, as the county is a hilly area located in an inland province, conditions remain difficult for agricultural modernization. The fact that Jiangxi, which is usually viewed as the cradle of the Communist Party, is lagging behind in its development, started causing some concern among the authorities. As a consequence, the province recently enjoyed a renewed interest from the highest levels of the government.

Finally, Lanshui county, in Shandong, is located in the inland part of the province and suffers from delays in its development as well. However, the province has a strong agricultural tradition and the financial capacity to further modernize the sector.

The advantage of the above-mentioned case studies is that each one of them corresponds to one different zone in the "Three Rural Chinas" defined by Bernstein and Lü[2]. Particular attention was paid not to select "atypical" areas inside each great belt. For instance, Guangdong, because of the importance of its political reforms, could be seen as an atypical political area inside the Coastal belt. Tibet or Xinjiang, because of the importance of religious and ethnic factors, could also be seen as atypical areas as well, inside the Western belt. Despite the fact that Ningxia is an autonomous region, the agricultural policies implemented in the area are not much impacted by ethnical issues, as we will see later in the dissertation.

I chose to narrow down the focus of most of my fieldwork to a limited number of agricultural activities: the production of fruits and vegetables will be the main focus of this research. In Jiangxi, orange production was investigated, and in Shandong, I focused on apple

[1] All counties were given pseudonyms, in order to protect our sources. Given that interviewees (individuals and companies) were sometimes selected among a small set of people and could be identified by their characteristics, it was indeed not sufficient to remove the names of these latest.

[2] "Industrializing rural China", "Middle-income agricultural China" and "Low-income western China". BERNSTEIN Thomas, LÜ Xiaobo. *Taxation without representation in contemporary rural China.* Cambridge ; New York : Cambridge University Press, 2003, p. 241.

production[1]. Fruits and vegetables are indeed important agricultural sectors, both in volume (712 million tons were produced in 2012[2]) and in the agricultural balance of the country (the trade balance, for fruits and vegetables, exceeded 10 billion USD in 2011[3]). However, these sectors suffer from a lack of interest of political scientists. Most of the scholars who worked on agricultural production in China chose to investigate the grain sector, which is seen as key for the food security of the country and, as such (and as a sector which used to be heavily controlled by the state), was specifically targeted by major policy reforms in the 1990s[4] and in the 2000s[5]. This dissertation wishes to explore the fruits and vegetables sector in order to partly fill this gap in the literature of political science and because this sector constitutes a highly interesting case study for research, for the following reasons. First, the production systems and markets of fruits and vegetables were among the firsts to be liberalized in the 1980s. As a consequence, as the overall trend of the agricultural sector in China is marketization – the grain sector, which was subject to the most stringent state control, was in turn completely liberalized at the beginning of the 2000s –, the current evolution happening in the production systems and food chains of fruits and vegetables is likely to be representative of the future trends of evolution of other agricultural sectors. In addition, as the fruits and vegetables sector was liberalized very early compared to other agricultural sectors, it is most

[1] As we will see, it was not as easy as in Jiangxi and Shandong to find fruits and vegetables production areas in Ningxia that could have been interesting for this research. Therefore, in Ningxia, we had to focus on other types of products (but it did not change the content of our conclusions).

[2] 140 million tons of fruits and 577 million tons of vegetables. As a comparison, 543 million tons of cereals were produced this year. Source: FAO database.

[3] On the opposite, the trade balance for cereals has been becoming heavier and heavier in the past few years.

[4] Researchers were then partly motivated by the widely publicized Lester Brown's question "Who will feed China?" (BROWN, Lester R. *Who will feed China?* New York: W.W. Norton, 1995): See LYONS, Thomas P. Feeding Fujian: Grain Production and Trade, 1986-1996. *The China Quarterly*, September 1998, n°155, p. 512-545; CROOK, Frederick W. China's "governor's grain bag policy": concerns about food security. *China Information*, Winter 1998, vol. 12, n°3, p.87-103. They sought to analyze reforms ongoing in the slowly-evolving grain sector: AUBERT, Claude. The grain trade reforms in China : an unfinished story of State v. peasant interest. *China Information*, Winter 1998, vol. 12, n°3, p.72-85 ; LYONS, Thomas P. Feeding Fujian : grain production and trade, 1986-1996. *China Quarterly*, September 1998, n°155, p.512-545 ; ZHOU, Zhang-Yue. Grain marketing systems in China and India : a comparative perspective. *Modern Asian Studies*, May 1998, vol.32, n°2, p.459-512.

[5] CHEN, Chunlai, FINDLAY, Christopher. *China's domestic grain marketing reform and integration.* Canberra : Asia Pacific Press, 2004 ; ROZELLE, Scott, PARK, Albert, HUANG, Jikun, JIN, Hehui. Bureaucrat to entrepreneur : the changing role of the State in China's grain economy. *Economic Development and Cultural Change*, January 2000, vol.48, n°2, p.227-252.

likely to include a wider diversity of stakeholders interacting with each other, from state officials to public *and private* enterprises as well as farmers of all sizes. In addition, contrary to the grain sector which is land-intensive, the production of fruits and vegetables is labor-intensive and there is a strong seasonality in production tasks with peak periods during treatment and harvest. As a consequence, the sector is more likely to include a large number of diverse people taking part in production tasks at different periods of time, under different contracting models. As we will see, the temporality of labor needs in the sector strongly echoes the mobility schemes of rural dwellers in China – what remains to be discussed is whether the temporality of fruit and vegetable production tasks matches the mobility schemes of rural dwellers who migrate. For all these reasons, the sector offers an abundant and complex research material, particularly valuable to this dissertation, which is willing to give an important space to the sociological analysis of how rural stakeholders take part in and are affected by the new agricultural modernization.

A last case study was added in order to enrich the conclusions of this research on the pathway followed by China's agricultural modernization. A thorough exploration of "green" or "CSA" (Community-Supported Agriculture) horticultural farms in Beijing administrative area was conducted. These farms are indeed part of a relatively new form of agricultural enterprises and seem to belong to another agricultural modernization movement that the one that was observed in the above-mentioned case studies.

	Huangmo county (NINGXIA)	Lushan county (JIANGXI)	Lanshui county (SHANDONG)	Beijing CSA farms
Economic conditions	- -	-	+	++
Agricultural activity	Impeded by tough environmental and economic conditions	Traditional agricultural activity impeded by environmental and economic conditions	Traditional agricultural activity, strongly encouraged by the government	Depends
Governmental efforts towards agriculture	Somewhat weak	Somewhat strong although quite recent (2004)	Strong and ancient	Depends
Farming structures	Traditional	Traditional/Modern	Modern	Innovative

Table 3: Case studies

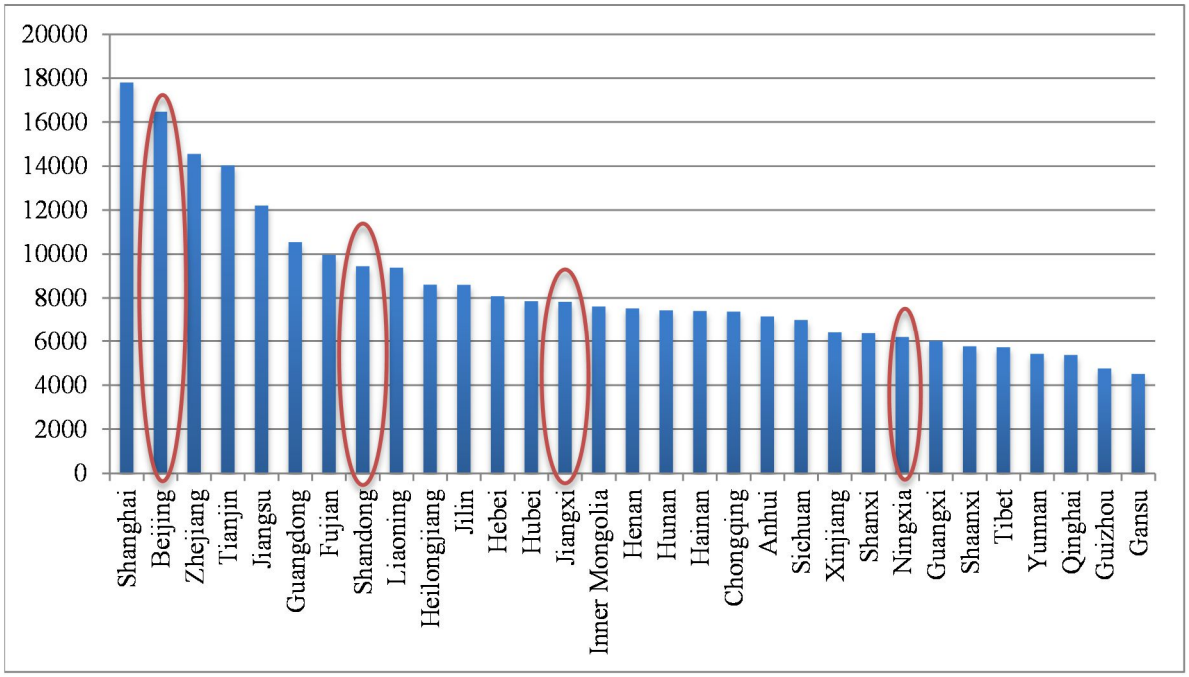


Figure 4: Per capita net income per province (in RMB, 2012)
(Source: data from the National Bureau of Statistics of China)

These four case studies were complemented by a number of fieldworks conducted in other places, villages or investment zones, where I made observation and interviews. The following areas were explored: i) one agricultural investment zone near Changzhou (Jiangsu), where I was accompanied by local officials; ii) one village near Changsha (Hunan), where I lived with a local family of farmers (mainly growing rice and vegetables); iii) three villages near Fengdu (Chongqing), where I investigated the activities conducted by an NGO working in the area on the improvement of maize productivity and on the development of small livestock farming; iv) one village near Chaohu (Anhui), where I lived in a family of farmers (mainly growing rice and vegetables); v) one dairy farm in Anhui province.

Although these areas were not thoroughly enough investigated to constitute "case studies", they contributed a lot to this research by providing additional material that was useful to check the conclusions drawn on the analysis of the main case studies and to fully grasp the features of the implementation of agricultural policies and the strategies and interests of local stakeholders. In addition, they provided elements to understand what was happening in other agricultural sectors, such as livestock farming or rice growing. Drawing on these preliminary elements as well as on secondary sources, it was possible to have a clear

understanding of how other agricultural sectors were evolving in China under the modernization process, a comparative approach that contributed a lot to this research.

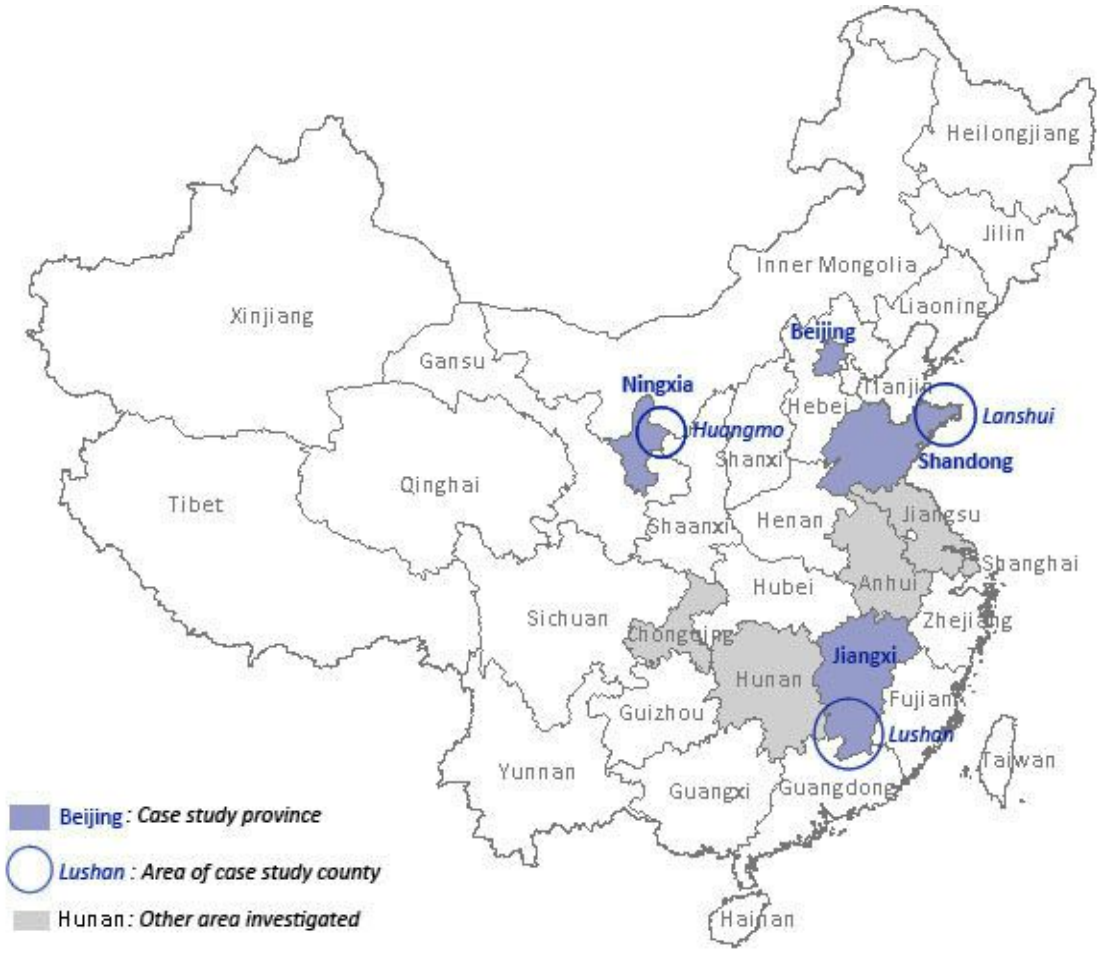


Figure 5: Areas investigated for this research

3) Interview method

Around 20-30 people were interviewed in each area. Food-processing enterprises based in rural areas, because they usually were a "meeting place" for all of the other stakeholders (government officials as well as farmers), were the main source of information. Therefore, I usually spent one day with each one of them, and renewed the experience several months after the first visit whenever it was possible. In addition, attention was paid to select the appropriate time of investigation, during peak activity periods (yield and processing) that usually offered a lot of directly observable information. Such a fieldwork allowed me to gather data inside factories and on production bases, useful to crosscheck information gathered during interviews.

Fieldwork was both empirical and qualitative. Empirically, because the idea of the fieldwork was to "wipe the slate clean" and to build categories according to interests, resources and strategies of actors discovered along fieldwork, in line with Knoefpel's definition of "empirical stakeholders". For him, "stakeholders", in political science, refer "to an individual, to one or several groups of people or to an organization, this latest being characterized by shared ideas and interests that hold its members together"[1].

However, it was necessary to draw pre-categories of stakeholders to create interview outlines before going to the countryside to conduct fieldwork. Usually, policy analysts consider three categories of stakeholders: public stakeholders (state agents and governmental enterprises), para-public stakeholders (such as GONGOs[2]), and private stakeholders (private entreprises, farmers, etc.). These three categories, however, were insufficient to depict what I observed during my fieldwork. Three other categories can be used by policy analysis: public actors; private actors belonging to the "hard core" of political space (such as interest groups or policy communities[3]); private actors of which the activities are more "subtle" in the political process (whether their silence is intentional or due to their lack of organization or resources). Three groups of stakeholders were first identified, which more or less match the above-mentioned categories: government officials, enterprises and farmers. In addition, we discovered that in some areas, the role played by NGOs in agricultural modernization could be quite important. Therefore, this last category of stakeholders was added for the purpose of this research. As we will see later in the dissertation, categories were then refined (Chapter 2, III.C).

These four groups were only broad categories of stakeholders, which were useful at the beginning to create distinct questionnaires and are now helpful in making the methodology of

---

[1] KNOEPFEL, Peter, LARRUE, Corinne, VARONE, Frédéric. *Analyse et pilotage des politiques publiques*. Genève: Helbing und Lichtenhahn, 2001, p. 47.

[2] "Government organized non-governmental organizations"

[3] As defined by Jordan and Richardson in RICHARDSON, Jeremy John, JORDAN, A. G. *Governing under pressure: the policy process in a post-parliamentary democracy*. Oxford: Robertson, 1979. Other useful references: MARSH, David, RHODES, Roderick A. W. *Policy networks in British government*. Oxford : Clarendon Press, 1992 ; KNOKE, David. *Comparing policy networks : labor politics in the US, Germany and Japan*. Cambridge : Cambridge University Press, 1996; MARIN, Bernd, MAYNTZ, Renate. *Policy networks: empirical evidence and theoretical considerations*. Boulder, Colo. : Westview ; Frankfurt am Main : Campus Verlag, 1991; WILSON, Frank Lee. *Interest-group politics in France*. Cambridge: Cambridge University Press, 2012.

this research clearer. Questions were of course adapted to sub-groups that were discovered along fieldwork, and also reworked in order to match each person's situation according to information gathered prior to each interview. In the end, even though some refined categories of actors were overlapping, we did not find major overlaps between these four initial categories. This contradicts what Elizabeth Remick said about the difficulty to locate people or groups in either state or society[1]. However, she was mainly referring to the example of tax farmers (who are "essentially private contractors collecting taxes for the state"), who disappeared with the abolition of agricultural taxes in 2006. The fieldwork of this research did not evidence the existence of other sociological profiles that would be difficult to locate either in state or in society. One explanation could be that this research mainly focused on "modernizing agricultural farming structures", where village leaders (who could match the criteria of both governmental officials and farmers), as we will see, only play a minor part.

For this research, semi-structured interviews were conducted. Questions were designed to elicit information on patterns of relationships between local stakeholders linked to agricultural production and to gather material on their resources, interests and strategies. To this end, interviews included questions on the relationships of interviewees with other stakeholders. For local officials, questions were linked to their views about which stakeholders should take part in agricultural production and modernization and through which policies; for local enterprises and NGOs, questions were related to roles played by state actors in the course of the past, current and future development of their activities; for farmers, interviews aimed at collecting information on their daily life interactions and relationships with the other groups of actors (depending on context, with local officials, enterprises and/or NGOs).

Interviews also involved questions aiming at getting a better understanding of the resources available to stakeholders. For agricultural production, several types of resources were considered: the ones linked to its upstream environment (for instance, financial resources, land, water, technology and human capital, information, etc.) and the ones linked to its downstream environment (*i.e.* potential buyers of agricultural products, such as food processing companies, individual brokers, markets (wholesale markets or chain stores) or

[1] REMICK, Elizabeth J. Building Local States: China during the Republican and Post-Mao Eras. Cambridge, Mass. ; London : Harvard University Asia Center, 2004, p. 10.

consumers). Asking questions linked to the roles played by each stakeholder in the process of the creation and development of enterprises, NGOs or other agricultural activities allowed us to gather significant information on stakeholders' resources.

Questionnaires for local political stakeholders were structured in the following way (see Annexe 1): interviews started by asking the general views of interviewees on national and local stakes at hand in terms of agricultural development, before trying to gather information on their knowledge of policies (issued by the central level and implemented by the local levels) and on their views on these policies (which policies would they issue/implement instead). Questionnaires also put strong emphasis on stakeholders' patterns of relationships in local areas. Finally, interviews included questions on interviewees' backgrounds. Interviews of political stakeholders working in local bureaus were aiming at providing answers to the following questions: Does their view of agricultural modernization match the dominant frame of reference promulgated by the central state? Why/why not? (non-applicable to local conditions, personal point of view, etc.) Which policies (aiming at reorganizing stakeholders taking part in agricultural production) are they implementing? Are local policies influenced by other frames of reference? Which one(s)?

Interviews with other stakeholders were looking at giving answers to the following questions: How do their react to the evolution of stakes at hand and to (newly) implemented policies? Do they associate themselves with other stakeholders in order to defend their interests?

Questions to local entrepreneurs aimed at helping us understand the context in which the enterprise was created and developed itself: Which resources did/do they need to (further) develop their activities? What role did the government/employees play? What are the current difficulties and what are their projects or objectives for the future? (see Annex 1).

For farmers, questions were linked to people's background and history, difficulties and relationship to other stakeholders (government, enterprises, consumers) as well as future projects (see Annexe 1).

NGOs were sometimes active in rural areas, especially in places where agribusiness was not developed. It was useful to interview these players to get a better insight of agricultural development activities from a different perspective. Questions started by asking

their view on national and local stakes at hand, before going into detail on the development of their activities in the area and on roles played by stakeholders in the process.

Although this fieldwork relied on qualitative semi-structured interviews, it is important to note that interviews were far from being the only source of information for this research. Access to fieldwork in Chinese rural areas is very difficult, but an important advantage compensates this difficulty: the fact that it provides an incredible amount of directly observable information. Going to the fields during periods of peak activity enabled me to observe the number of farmers working there and to exchange with them on their working conditions and daily lives, to check the presence of management staff in the fields, to observe their methods and farming techniques, to assess the quality of the products, etc. In addition, fieldwork also included visits of factories, which also offered a lot of directly observable information (such as the basic sociological profile of workers and management staff (whether these latest were farmers or not, came from local areas, etc.), working conditions, industrial processes, traceability systems and other indicators of the investment capacity of entrepreneurs, etc.). Although most of the time, my main interlocutor was one or several managers, I was able to cross-check their answers with information given by employees and workers.

B - Defining frames of reference for agricultural modernization

1) **Analytical framework and objective**

In line with Migdal's state-in-society perspective, fieldwork in rural areas proved that the state was not a coherent, integrated and goal-oriented body, but rather an array of social actors with different sets of interests, interacting with other social stakeholders with whom they define power relationships. However, even if the state is more an "acted" institution than an "acting" body stirred by a common goal, it does not mean that states are completely disorganized and incoherent bodies. What makes the Chinese state hold together in the case of agricultural modernization?

In order to address this question, this research adopted the cognitive approach of public policy defined by Pierre Muller, for whom policies create "frames of reference" which play an important role in the shaping of collective actions. The building of frames of reference in the course of agricultural modernization could be an explanatory factor for the coherence of the

Chinese state. According to the author, each policy has its own objectives and modes of implementation, which vary according to the *approach* adopted for the problem to solve. This approach, defined in political arenas, constitutes the frame of reference that puts order in a complex system of action. As Muller states it: "*L'objet des politiques publiques n'est plus seulement de 'résoudre des problèmes' mais de construire des cadres d'interprétation du monde.*"[1] Muller's frames of reference are close to the "framework of ideas and standards" defined by Peter Hall, which designates "not only the goals of policy and the kind of instruments that can be used to attain them, but also the very nature of the problems they are meant to be addressing"[2]. However, Peter Hall's paradigms, partly defined by exogenous factors (such as experimentation, social learning or scientific circles), influence policymakers, whereas this dissertation wishes to emphasize the normative capacity of public policy and its ability to build frames of reference and to shape collective action. To this end, the objective of this part of research was to acknowledge the existence of one or several framework(s), built by central level authorities to define a coherent frame for action for agricultural modernization in China. Fieldwork in local areas, on its side, provided elements to understand whether this (these) frame(s) of reference of agricultural modernization were effectively influencing the implementation of local policies in the countryside and whether local policies could, in turn, influence the frame of reference defined by central authorities.

The cognitive approach of public policy and the research on frames of reference are part of a relatively recent field of political science. Examples drawn from China were almost non-existent at the time when this research was conducted. However, frames of reference are widespread for agricultural policies worldwide. The International debates arguing about which pathway "agricultural modernization" should follow have been particularly vivid over the past few years. These debates are a clear sign that agricultural policies, today, are not just about implementing technical solutions to answer national demands, but also define frames of reference that shape collective action for agricultural "modernization" (or "transition" in developed countries).

---

[1] [The purpose of public policies is no longer just to solve problems but to construct different frameworks for the interpretation of the world.] MULLER, Pierre. L'analyse cognitive des politiques publiques : vers une sociologie politique de l'action publique. *Revue française de science politique*, 2000, n°2, p. 189.

[2] HALL, Peter. Policy Paradigms Social Learning and the State. *Comparative Politics*, 1993, vol. 25, n°3, p. 275-296.

Since the food price crisis of 2007-2008, debates have been opposing several frames, or "movements". Holt-Gimenez and Shattuck use several criteria to distinguish their four main categories of "global food movements"[1]: i) a key orientation defining a discourse; ii) key actors or institutions; iii) key elements of a model; iv) defined approach to the food crisis; v) key documents. The neoliberal movement, for instance, is based upon a discourse oriented towards corporate and global markets and giving priority to "food enterprises". Its key elements are: overproduction; corporate concentration; unregulated markets and monopolies; monocultures (including organic); GMOs; agrofuels; etc. The reformist movement, on its side, gives priority to food security, development and aid, and its discourse defines the following key elements: mainstreaming/certification of niche markets (e.g. organic, fair, local, sustainable); maintaining northern agricultural subsidies; market-led land reform; microcredit, etc.

The aim of this step of research was to analyze the frames of reference existing in China for agricultural modernization according to a similar methodology: What are the key goals emphasized by agricultural policies? What are the key elements defining their discourse? Which tools, instruments and stakeholders do agricultural policies promote?

In order to provide answers to these questions, this research relied on the analysis of public policies and on qualitative interviews. In addition to the examination of first-hand sources (such as official documents and articles from Chinese media), preliminary interviews with key stakeholders were conducted to get a thorough understanding of the context and stakes at hand. Through this analysis, elements were gathered on stakes at hand, general and specific institutional rules, resources, stakeholders, political programs, action and implementation plans and instruments. These first interviews and documentary analysis helped a lot in structuring the inquiry of this research.

In a second stage of research, more in-depth interviews were conducted with targeted officials and researchers of the central level. Interviews not only aimed at assessing the validity of what was found in official documents[2]. They were also crucial to gather

[1] HOLT-GIMÉNEZ, Eric, SHATTUCK, Annie. Food crises, food regimes and food movements: rumblings of reform or tides of transformation? *The Journal of Peasant Studies*, 2011, vol. 38, n°1, p. 109-144.

[2] The validity of data, and in particular the validity of national statistics, has long been the matter of intense debates in China (HOLZ, Carsten A. Institutional Constraints On the Quality of Statistics in

information that did not exist in documents. For instance, they contributed to a better understanding of the rationale of central policies, of the goals they were aiming to achieve and of the social groups they were targeting. The features of the frames of reference defined by policies do not always appear at first glance. As a consequence, documentary and discourse analysis on naturally occurring data *and* in-depth interviews and fieldwork observations were imperative to get a comprehensive enough picture able to provide answers to questions of the step of research on frames of reference: Which are the discourses, at the central level, defining China's agricultural modernization? Do these discourses define different frames of reference of what should agricultural modernization be or do we acknowledge the rise of one dominant frame of reference? What are the key points, key instruments and key stakeholders promoted by these discourses? Which are the historical past dependencies/current or evolving interests holding up/legitimating this frame of reference? Does this frame of reference itself evolve? Under which constraints does it evolve? Is it influenced by local governments?

2) Targeted interviewees and interview method

Interviews targeted high-level central officials – mostly from the Ministry of Agriculture – and researchers and academicians close to central government authorities, working in natural sciences and social and political science in rural and agricultural institutes at Beijing and Shanghai's main universities and research centers.

UNIVERSITIES AND RESEARCH CENTERS: 50 researchers			
Beijing: 37 researchers			
Institution	Sub-institution	Main field of interest	
Peking University	College of Environmental Sciences	Sciences	3
Tsinghua University	School of Public Policy and Management & Institute for Rural Studies	Agricultural policies	3
Renmin University	School of Agricultural Economics and Rural Development	Agricultural policies	4

China. *China Information*, 2002, p. 16-25; ZHOU, Yixing, MA, Laurence J. C. China's Urban Population Statistics: A Critical Evaluation. *Eurasian Geography and Economics*, 2005, vol. 46, n°4, p. 272-289). In particular, the institutional specificities of data collection in rural areas (CAI, Yongshun. Between State and Peasant: Local Cadres and Statistical Reporting in Rural China. *The China Quarterly*, September 2000, n°163, p. 783-805) as long as a number of other factors (linked, for instance, to the scatterness and mobility of farmers) explain the difficulty to find reliable data for agricultural production in China. As a consequence, interviews with experts are key to supplement documentary analysis.

Chinese Academy of Sciences	Bureau of Sciences & Technology Resources & Environment	Sciences	1
	Center for Chinese Agricultural Policy	Agricultural policies	4
Chinese Academy of Agricultural Sciences	Institute of Agricultural Resources and Regional Planning	Agricultural policies	1
	Institute for Agricultural Economics and Development	Agricultural policies	9
	College of Resources and Environmental Sciences	Land reform	2
Chinese Agricultural University	Soil and water resources department	Sciences	5
	Department of Humanities and Development Studies	Agricultural policies	3
Chinese Academy of Social Sciences	Rural Development Institute	Agricultural policies	2
Other places: 13 researchers			
Institution		Main field of interest	
Northeast Agricultural University		Sciences	1
Jiaotong University		Sciences	2
Tongji University		Sciences	4
Shanghai Institute of Plant Physiology and Ecology		Sciences	2
Nanjing (Chinese Academy of Sciences)		Sciences	4

Table 4: Number of researchers interviewed in Beijing and other places

Most of the people I interviewed in research centers or universities were working in the field of political and social sciences, sharing strong links with the government and taking part in the drafting of agricultural policies. However, I also met natural scientists and visited laboratories, experimentation bases and other research facilities (in Beijing, one state key lab and two demonstrations bases; in Shanghai, two laboratories). Agricultural technology is indeed a key element of the frame of reference defined by central policies, and therefore it was fundamental to have a better understanding of the implementation process of agricultural technology extension programs, supposed to link the central frame with local realities.

Central government: 15 officials		
Institution	Main field of interest	
Ministry of Agriculture	Agricultural and rural policies	7
Ministry of Commerce	Agricultural trade policies	1
Ministry of Finance	Agricultural and rural support policies	1
State Administration of Grain	Agricultural policies	1
NDRC	Rural policies	2
Central Agr.Broadcasting and Television School	Agricultural education	1
China Non-staple Food Circulation Association	Food enterprises	2

Table 5: Number of central-level officials interviewed in Beijing

People from central institutions in charge of agricultural policies were interviewed either during arranged meetings or in the framework of high-level seminars gathering a limited number of people. In order to supplement these interviews –particularly difficult to obtain – additional discussion was conducted with foreign stakeholders having deployed and maintained close links with Chinese central authorities, such as embassies and international organizations.

Foreign international cooperation agencies: 13 officials		
Institution	Main field of interest	
French embassy and consulates	Agr. and environmental policies & Academic cooperation	7
French development agency	Environmental policies	1
EU Delegation to China	Agricultural policies	4
U.S. Department of Agriculture	Agricultural policies	1

Table 6 : Number of officials interviewed in foreign cooperation agencies based in China

International organizations: 9 agents		
Organization	Main field of interest	
United Nations, Food and Agriculture Organization	Agricultural development	3
United Nations, World Food Program	Food	1
United Nations Development Program	Agricultural development	1
IFPRI	Agricultural development	2
World Wide Fund	Environmental protection	2

Table 7: Number of agents interviewed in international organizations based in China

For the selected group of respondents, qualitative semi-directive interviews were conducted, in English and Chinese, as well as participatory observation in exchange workshops. The interview outline was built in a way that could allow researchers and officials to express the "official" point of view (the one found in official documents) as well as their own point of view on current policies and on (alternative) solutions that (according to them) should be implemented to modernize the agricultural sector. The core of the interview guideline was made of questions linked to the role of stakeholders in the process. Interviews usually started by asking interviewees about their interpretation of national stakes at hand in terms of agricultural development, before learning about their knowledge of policies (the ones issued by the central level as well as the ones implemented at the local level) and about their own views on which policies they would issue or implement instead. Questions then aimed at

digging deeper into the subject of social patterns of relationships (what is the situation, what should be the situation, etc.). Interviews also included questions on the general background of interviewees (see Annexe 1). Series of questions were of course reworked and enriched prior to each meeting, in order to be adapted to each interviewee.

VI - Layout of the thesis

In what ways do state actors find news ways to act on agricultural production activities and what are the consequences for the agricultural modernization pathway China is engaging on? In order to address this research question, this dissertation proceeds in several steps.

The first chapter, "Agriculture: an old stake back in central state's concerns", serves as a historical introduction giving elements about the evolution of the interest of the Chinese state towards agriculture since the rise of the CCP. It identifies three main periods. First, it shows how the three aspect of rural life (peasants, agriculture and the countryside) were determinant in the building of the Communist Party during the Maoist era. In spite of the role they played, these areas were progressively relegated to the bottom of governmental priorities during the last two decades of the 20th century, with urban and industrial development monopolizing the attention and consuming the largest of government expenditures. This "industrialization-urbanization" era corresponds to the second period. The third period, which goes from 2004 to present, has witnessed a strong renewal of the state's interest in rural issues, as the analysis of recent policies and of the discourses of central level stakeholders demonstrates it. The chapter provides an idea of the reasons why agricultural and rural development was put back in the agenda of the government.

The second chapter explores the sociological tools developed by local state actors to reinvestigate agricultural production activities, where they had progressively lost their capacity to exercise direct control over the last decades of the 20th century. Drawing mainly on fieldworks conducted in Shandong and Jiangxi, this chapter wishes to demonstrate how state agencies are in fact limited in their ability to address the issues of inflation and food safety directly and preferentially relied on food-processing enterprises based in rural areas to modernize the agricultural production sector over the past decade. The chapter explains why food-processing enterprises based in rural areas are the sole stakeholders considered as capable of rapidly addressing the issues of agricultural modernization, compared to NGOs

(which traditionally play a crucial role in environmental protection) or to farmers (who are impacted by strong control imbalances).

The third chapter explores the recent developments of this new industrial and private-led agricultural sector. While the second chapter depicted the emergence and development of the movement, led by food-processing enterprises in rural areas, the third chapter investigates its recent (while limited) enlargement to other industrial actors, essentially from downstream of the food chain – such as urban retailers – and, to a certain extent, from upstream of the food chain – such as agrochemical companies.

The fourth chapter relies on policy analysis and on interviews conducted both at the central level and in Shandong and Jiangxi to show how, in spite of the rising importance of industrial private players in the field of food production, state actors managed to keep control over this emerging industrial-agrarian entrepreneurship. In particular, the analysis provides details on the formal and informal resources available to local government officials of county and township levels to increase their power over local entrepreneurs. The chapter also explores the complexification of this power game linked to the recent expansion of the movement to other industrial actors of the food chain.

The fifth chapter tries to reunite what was described in the previous parts of the dissertation as a highly fragmented state. Although state actors act as individuals steered by their own interests and preferences, this chapter demonstrates that a common framework of agricultural modernization, shaped by common goals and common tools, exists, is transmitted from the central level to local levels through various formal and informal channels, holds the state together and enables officials to act in a coordinated manner in spite of the fragmentation of the Chinese state.

The sixth chapter builds on the conclusions of the previous chapters – about the central frame of reference and the rural patterns of relationships that developed in the course of the recent agricultural modernization – to characterize the pathway on which agriculture, in China, is embarking. In particular, the chapter aims at answering the question of whether the current institutional and social patterns framed by policies and local players enable the agricultural sector to head towards more social and environmental sustainability.

Most of the conclusions depicted in the above-mentioned chapters were drawn on the case studies of Jiangxi and Shandong and on additional information gathered during stays in

places such as Jiangsu or Chongqing. However, even if common elements appeared along these fieldworks that allowed making assumptions on a dominant frame for agricultural modernization in China, it was important to remain aware of the fact that local elements could shape different frames for agricultural modernization in other areas. Beijing and Ningxia, in particular – considering the particularities of their environments and their likelihood to influence the frame of agricultural modernization – but also the grain sector in general, were interesting case studies to explore. These examples of alternatives to the dominant model for agricultural modernization prove, once again, the important fragmentation of the Chinese state. However, as the last chapter will demonstrate, they also reinforce the main conclusion of this dissertation on the decisive influence of both frames of reference and local patterns of power on agricultural trajectories.

I. Chapter 1: Agriculture: an old issue back on the public agenda

Introduction

This first chapter aims at introducing historical elements about the recent past of China's rural and agricultural policies, essential to understand the current context of this study and research question. The chapter starts by showing how crucial the roles played by peasants, agriculture and rural areas were in state- and Party-building at the dawn of the RPC. However, as this chapter demonstrates, in spite of their importance in the history of China and in the building of the legitimacy of the state, rural areas progressively received less attention from the government in the aftermath of the first economic reforms. The reasons for this progressive decline of support are to be found in the decollectivization of agriculture, in local administrative reforms and in a general willingness to focus on industrial and urban development from the middle of the 1980s on. The final sub-section of the chapter focuses on the recent willingness of the central state to restore its role in agricultural production activities and analyzes the underlying reasons motivating this recent shift in priorities.

I - The role of the three "ruralities" in Party-building – Historical elements, 1949-1978

China's agricultural and rural policies of the 21st century are enclosed in a specific framework, which was defined by the central government at the beginning of the 2000s and was named the *san nong* (三农) framework. In Chinese, *nong* (农) refers to agriculture, but also to "rurality" in the broader sense of the term, as *nongmin* (农民) means "peasants", *nongye* (农业) "agriculture", and *nongcun* (农村) "the countryside". A word-for-word translation of *san nong* could be "the three ruralities", but because of the fact that *san nong* generally refers to the framework set up by the central government for the issues rural policies are expected to address, it is generally translated as "the three rural issues". This introductive part tries to demonstrate how these three aspects of the rural life (peasants, agriculture and countryside) were determinant for the building of the Communist Party, way before the central government promoted them in the framework of "*san nong* policies" at the beginning of the 21st century.

A - "Revolutionary peasants": the myth of origins

"Every nation has its founding myth. For Communist China, it is The Long March."

Sun Shunyun, *The Long March.*

The CCP was officially created as early as July 1921. At the beginning of the 1920s, the communists were collaborating with the Nationalist Party. Integrated in the project of the KMT to unify China, they took part, for instance, in the Kuomintang-led North Expedition in 1926-1927, which was aiming at putting an end to warlord government.

From 1927 on, the Kuomintang, led by Chiang Kai-shek, turned against the CCP and started launching military campaigns to destroy the red bases. At first, the forces of the army of the CCP were underestimated by the nationalist forces, who suffered crushing defeats. The KMT launched several suppression campaigns, and at the end of 1932, the Fourth Encirclement Campaign gave the first concrete results of Chiang Kai-shek's operations. This campaign indeed wiped out two of the three major communist bases, Eyuwan and Xiangexi. The Fifth Encirclement Campaign forced the Jiangxi base – at that time, the most important red base – to engage in turn in a military retreat in October 1934. Historians generally take the end of the Fifth Encirclement Campaign as the beginning of the Long March. The "Long Marches", designating the military retreats of the nascent People's Liberation Army to evade the pursuit of the KMT, lasted until the spring of 1937 and involved tens of thousands of people. What was in fact a military retreat rapidly turned into a founding myth, in which the countryside played a tremendous part.

1) **The Chinese countryside: a political vacuum and a fertile ground for revolution**

At the time of its official establishment, in late July 1921, the Communist Party counted no more than fifty members. After having experienced a steady then rapid growth in the years 1920s – its Fifth Congress, in April 1927, recorded nearly 60,000 participants[1] – the number of members suddenly dropped, just after the KMT launched its first campaign against the communists in 1927. The CCP was forced to move to the countryside to regain political power and military autonomy.

[1] YANG Benjamin. *From Revolution to Politics; Chinese Communists on the Long March*. Boulder, Colo.: Westview, 1990, p. 255.

There, the communists found a fertile ground to expand their movement: exploited peasants. The pre-communist Chinese countryside was indeed under the pressure of the domination of big landowners. 85 percent of farmers were poor or middle peasants, owning only 37 percent of the national arable land. Only one third of farmers had ownership rights over the soil they cultivated[1]. Usury and high rents asked to peasants were impoverishing the countryside, already weakened by overpopulation and land fragmentation from generation to generation. According to Bouvier, the rent of bare land (without buildings, tools or livestock) was reaching half – sometimes three quarters – of the yield's value[2]. As a consequence, peasants were often forced to resort to borrowing. In China at the time, rural interest rates easily went beyond 3 percent per month, and much higher rates were recorded[3]. According to Salisbury, landlords were charging 30 percent on money loans[4]. Conditions in which peasants were maintained were real seedbeds for anger and revolution.

In addition, China already had a long history of rural uprisings, in which peasants were playing a leading role. In fact, peasants were often depicted as the central figures "in the rhythmic pattern of [the country's] millennial history"[5]. For Dick Wilson, the fact that the leaders of the Communist Party were highly influenced by the heroes of peasant wars of the past was determinant in their strategy to look for the support of poor people in rural areas.

Finally, the Communists also jumped on the opportunity to fill a political vacuum. Benjamin Yang provides a particularly enlightening explanation of this "rural political vacuum" and on the strategic move of the CCP to make the best use of it. For him, the factors justifying the formation and expansion of what he calls "the Soviet movement" in China in the 1930s can be assigned to one of two categories: "objective conditions" and "subjective efforts". Among the objective conditions that enabled the expansion of the CCP in the 1930s, Yang includes "the jealousy and rivalry among various military factions in the Nationalist government and the political vacuum and autonomy of the Chinese countryside". For Yang,

[1] BOUVIER, Charles. *La collectivisation de l'agriculture : URSS – Chine – Démocraties populaires.* Paris : Armand Colin, 1958, p. 95.

[2] BOUVIER, Charles. *Ibid.*, p. 95.

[3] BOUVIER, Charles. *Ibid.*, p. 95.

[4] SALISBURY, Harrison E. *The Long March: the untold story*. London ; Sydney : Pan books, 1985, p. 34.

[5] WILSON, Dick. *The Long March 1935: The epic of Chinese Communism's survival*. London: H. Hamilton, 1971, p. 3.

the political vacuum of the countryside, although less apparent, appears "more portentous" to him: "For much of Chinese history, the rural society remained a domain independent of the state government and one offering various possibilities for peasant rebels, secret associates, local despots, bandits and warlords to challenge the government's authority." Yang concludes by saying that "these possibilities were turned – through the sophisticated agitations of the Communists – into the dazzling reality of mass revolutionary movement."[1]

2) Using land reform as a rallying cry

The Red Army, in exile in communist rural bases, needed to recruit people: at first, to regain military autonomy; then, to compensate for ever-increasing losses caused by the successive suppression campaigns launched by the KMT. A lot of testimony exists on how cadres of the CCP army were assigned recruitment targets and sent to rural areas surrounding the communist bases[2]. The essence of their discourse was fully in line with the objects of discontent of poor peasants. Their support was won on the basis of promises to end human exploitation perpetuated by landowners. During recruitment campaigns in "communist areas", promises were often translated into action. Sun Shuyun provides examples of practices perpetuated in the red base of Jiangxi. He depicts how former rich peasants were granted the worst pieces of land, located on the side of hills or in marshy areas, whereas landowners did not have the right to own land anymore and were forced to be hired by others to survive. Land and other goods previously belonging to landowners and rich peasants were redistributed to people supporting the Communists and in particular to the family members of new recruits[3].

Land reform really turned into a rallying cry for the Communist Party in the 1930s. In fact, as Benjamin Yang states it, "the entire decade from 1927 to 1937 was termed by the Communists the period of the Land Revolution, or more bluntly, the Land War."[4] As Kerkvliet, Chan and Unger phrase it: "The war of liberation in China [was], notably, rural-based revolution". Kerkvielt, Chan and Unger outline the difference with Russia, "the fount of Communist revolutions", where the Bolshevik Revolution "resembled more an urban coup

[1] YANG Benjamin. *From Revolution to Politics; Chinese Communists on the Long March*. Boulder, Colo.: Westview, 1990, p. 21.

[2] See, for instance: SUN, Shuyun. The Long March. London: Harper Collins, 2006.

[3] SUN, Shuyun. *La Longue Marche*. Paris : J.-C. Lattès, 2006.

[4] YANG Benjamin. *Op. cit*., p. 23.

than a protracted revolutionary struggle". Quite on the opposite of the CCP in China, the new Bolshevik government was nurturing a suspicion of the rural areas and of the farming population, and "imposed collectivization almost as a war against the countryside". For Kerkvielt, Chan and Unger, this "suspicion of the peasant was entirely lacking in China […], where, if anything, the villages were perceived as bastions of support for the revolution."[1]

3) **Building the myth of the CCP**

Historians generally agree on the fact that the Long March, officially dated from October 1934 to October 1936, was the founding element of the Chinese Communist Party. The building of the myth of the Long March started even though the fleeing communists – among whom a lot were former peasants – were still fighting against elements and enemy troops running after them. Mao, leading the communist troops, started giving public speeches emphasizing the obstacles which the participants of the Long March had to victoriously overcome. The Chairman turned songs into hymns to the glory of the Red Army. He ordered the political department to gather stories of soldiers, among which one hundred were selected and published in a book that was released in 1938. Mao, in the end, managed to transform what had in fact been a military retreat in a glorious epic tale and what would become the spirit of the Long March.

The legacy of the myth of the Long March is still susbstantial today. An important number of high-level officials of the fifth generation of leaders – the current government – are the descendants of communist officials of the first generation, who took part in the early communist guerillas and in the Long March: they are known as "the princelings". Xi Jinping, for instance, is the son of Xi Zhongshun, who played an important role in the later stage of the Long March. In addition, the symbols inherited from the Long March are still used today by the Chinese officials. As Benjamin Yang phrases it: "The importance of the Long March can hardly be overemphasized, either historically or politically. Older Communist leaders have frequently referred to it as a turning point in CCP history; even now, fifty years later, survivors of the long march are still in control of China […]; and new Chinese leaders are calling their drive for economic modernization the 'New Long March'. The Long March has

[1] KERKVLIET, Ben, CHAN, Anita, UNGER, Jonathan. Comparing the Chinese and Vietnamese Reforms: An Introduction. *The China Journal*, July 1998, n°40, p. 4.

become a symbol of CCP history, just as the Great Wall is a hallmark of ancient Chinese civilization."[1]

4) **Peasants at the foundation of the CCP legitimacy**

In spite of the important number of reasons that were given by historians to explain why the CCP "chose" to rely on peasants to start the communist revolution, the peasant base of the revolution was probably not entirely deliberate. According to James Harrison, the first leaders of the CCP in fact wished to rely on the urban proletariat to lead China onto a "correct revolutionary road" and used to consider peasantry as elements of petty-bourgeois origin[2]. In that sense, the original intent of the leaders of the CCP was close to the one of the leaders of the Bolshevik revolution in Russia. However the "white terror" perpetuated by the KMT from 1927 on rapidly damped down the enthusiasm of factory workers for communism. For James Harrison, the willingness of the CCP to rely solely on the urban proletariat to run the Chinese revolution was simply unrealistic[3]. At the end of the year 1928, communist leaders started realizing how few ingenious the choice of neglecting rural areas was. As a consequence, they progressively turned their interest towards the peasant movement. As Charles Bouvier states it: *"Dans [les] pays les plus industrialisés, la révolution ne risquait pas de s'enliser même en laissant les campagnes vivre, un certain temps, en marge de son développement, tandis qu'en Chine une telle formule équivaudrait à se désintéresser des 4/5 de la population. Du reste il n'est pas permis d'espérer que les échos de l'industrialisation puissent y retentir à travers toutes les campagnes ; en admettant que la Chine augmente de moitié la main-d'œuvre industrielle en cinq ans, ceci ne ferait qu'un million et demi d'ouvriers de plus contre des centaines de millions de paysans."*[4]

---

[1] YANG, Benjamin. *From Revolution to Politics; Chinese Communists on the Long March*. Boulder, Colo.: Westview, 1990, p. 1-2.

[2] HARRISON, James P. *The Long march to power: A history of the Chinese Communist Party, 1921-72*. London: Macmillan, 1972, p. 161-165.

[3] HARRISON, James P. *Ibid*.

[4] [In the most industrialized countries, revolution was unlikely to stop even if the countryside was temporarily left out of its development, whereas in China, this would mean ignoring the 4/5 of the population. In addition, it is unlikely that industrialization will spread to the whole countryside; even if China would double its industrial labor force in just five year, there would be only one million and a galf industrial workers, compared to the hundreds of millions of farmers.] BOUVIER, Charles. *La collectivisation de l'agriculture : URSS – Chine – Démocraties populaires*. Paris : Armand Colin, 1958, p. 106.

For Harrison, the shift in the social base of the Party from proletariat to peasantry, "although, throughout its first fifty years, most leaders were in fact 'intellectuals'", was also partly due to the fact that the members of the CCP were pushed back by the KMT in the confined military controlled soviet areas, mostly settled in remote areas, deprived of industrial bases. The main consequence was that "while proletarians held certain leadership positions after 1927, the proportion of Party members who were of worker background fell from more than half in early 1927 to no more than 8 per cent in 1930, of whom less than 2 per cent were factory workers."[1]

The gradual political ascension of the Communist Party was the result of a succession of events. The support of rural dwellers and of new recruits of peasant origins was only one element of the CCP's path to power and needs to be taken with caution. In the countryside, the requests of the CCP military forces – for food, sheltering and recruits – indeed sometimes looked like the ones of warlord armies. New recruits – especially the ones enlisted during times of turmoil – were poorly trained and easily wiped out by enemy forces. Finally, joining the communist cause was not always a voluntary choice (especially at the end of the Fifth Encirclement Campaign[2]) and desertions were another cause of the melting of the army during the Long March.

However, peasants still formed the major part of the CCP's army. In April 1934, just before the March, they would have constituted 68 percent of its ranks. Proletarian workers, on their side, would have accounted for only 30 percent of the communist military forces at that time[3]. Winning the support of peasants was also crucial to start a revolution likely to bring down the existing nationalist government. For Mao, the Chinese revolution was, in essence, a peasants' revolution. Even if this image was partially built by intellectuals whose first meetings were held in Shanghai and who were highly influenced by foreign communists, the idea of a peasants' revolution conducted by a leader coming from a family of farmers from Hunan certainly played a non-negligible role in laying the foundations of the CCP's future legitimacy. One should not forget that at this time, peasants were still forming 80 percent of

[1] HARRISON, James P. *The Long march to power: A history of the Chinese Communist Party, 1921-72*. London : Macmillan, 1972, p. 148.

[2] SUN, Shuyun. *La Longue Marche*. Paris : J.-C. Lattès, 2006.

[3] WILSON, Dick. *The Long March 1935: The epic of Chinese Communism's survival*. London: H. Hamilton, 1971, p. 70.

the population. Having their blessing and support was essential to successfully achieve the reforms that were awaiting China.

B - Agriculture as a state development project

1) **Organizing production at the national level**

In 1949, the Communist Party, who came to power partly because of an increased legitimacy gained from the support of peasants during the period of the Long March, put an end to the domination of big landowners by redistributing land property rights to poor farmers. The scale of redistribution was colossal: 47 million hectares – 46 percent of the cultivated area – were distributed to 70 million peasant households, who received a little over half a hectare per family[1].

However, a national-scale collectivization program for land and agricultural resources quickly grew in the mind of communist leaders. For Thi Minh-Hoang Ngo, the collectivization "represented a critical stage in the Chinese Communist Party's state-building", because cooperatives were a way to link the state to villages. As he states it: "As Mao Zedong envisioned it, the cooperative was to channel village resources toward the state and serve as intermediary between the state and family"[2].

The transition to collectivized agriculture took place gradually. At first, "mutual-aid teams" were created, at the beginning of the year 1952. Membership was mainly on a voluntary basis, but as mutual-aid teams provided their members with significant advantages, they aroused the interest of a certain number of households. The first advantage was that they turned the traditional mutual-aid principle, common at that time in the countryside, into a systematic and legally binding principle. In addition, mutual-aid teams benefited from financial and technical support of the government, wishing to prove their superiority over traditional agricultural production models. Pesticides, fertilizers, improved seeds and technical advices preferentially provided to mutual-aid teams improved crop productivity dramatically compared to the one of traditional farms.

---

[1] BOUVIER Charles. *La collectivisation de l'agriculture : URSS – Chine – Démocraties populaires.* Paris : Armand Colin, 1958, p. 95.

[2] NGO, Thi Minh-Hoang. A Hybrid Revolutionary Process: The Chinese Cooperative Movement in Xiyang County, Shanxi. *Modern China*, May 2009, vol. 35, n°3, p. 285.

In 1953, the first agricultural cooperatives *per se* – the advanced stage of mutual-aid teams – were created. "Elementary cooperatives" firstly appeared in the countryside. They gathered small groups of peasants – usually around twenty households – on small surfaces – about twenty hectares. Elementary cooperatives were running under a "semi-socialist" system. Under this system, the work of each farmer was rewarded according to his amount of effort and participation to agricultural tasks. Farmers were also paid according to the capital they had brought to the cooperative – whether this capital was made of land, tools or machinery. Half of the net proceeds were distributed to households depending on land and tools they had provided, whereas the other half was given to farmers in the form of "work points", proportionally to their contribution to agricultural work. In 1955, thanks to the efforts of local officials, 1.9 million agricultural cooperatives already gathered more than 70 million peasant families, amounting for 60 percent of rural households[1].

Starting from 1956, elementary cooperatives gradually evolved into "advanced cooperatives". The scale of advanced cooperatives was much larger, as these latest usually gathered around 250 households. Land and tools were fully owned by the collectivity and members were entirely paid according to the rules of the "work points" system. In spite of a certain resistance of peasants facing the collectivization of their goods[2], transition from elementary to advanced cooperatives was successfully carried out. At the end of the year 1956, almost 90 percent of rural households were members of advanced cooperatives[3].

In August 1958, at a conference in Beidaihe – the summer residence of leading government dignitaries of the Communist Party – the Central Committee adopted the new designation of "People's Communes", and made them part of the "three great banners", along with the new program for building socialism and the Great Leap Forward. Communes were much larger than advanced cooperatives, as a single commune could count several thousand rural households. They were organized according to a hierarchy of administrative entities.

[1] LI, Huaiyin. *Village China under socialism and reform: a micro history, 1948-2008*. Stanford, Calif. : Stanford University Press, 2009, p. 31.

[2] Resistance started very early in rural areas, see: NGO, Thi Minh-Hoang. A Hybrid Revolutionary Process: The Chinese Cooperative Movement in Xiyang County, Shanxi. *Modern China*, May 2009, vol. 35, n°3, p. 284-312. See also Li's comprehensive description of forms of village resistance in LI Huaiyin. *Village China under socialism and reform: a micro history,* 1948-2008. Stanford, Calif. : Stanford University Press, 2009.

[3] LI, Huaiyin. *Ibid.*, p. 39.

Each commune was organized in brigades, which were in turn divided in production teams. At the end of the year 1958, the Chinese countryside was divided in 26,000 communes.

People's Communes radically changed the agricultural production model. Local officials were put in charge of production and could make decisions in terms of task allocation and working time distribution. In the course of the progressive establishment of cooperatives, this new distribution of power gave rise to debates. Villagers were sometimes reluctant to give back the land they were granted with when the CCP had come to power. However, cooperatives were an essential tool to control agricultural activities and people in rural areas, and for this reason, debates were rapidly cut off. As Robert Bowie and John Fairbank put it: "The cooperative farm system made it easier for the Party to control labor and to collect grain taxes. It was no doubt for this reason that Mao insistently opposed the indiscriminate dissolution of agricultural producers' cooperatives, which in Chekiang had taken place as late as the spring of 1955."[1]

Another tool, crucial to the control of the Party over rural dwellers alongside communes, was communal mess halls. The system of collectivist agriculture came along with a system of work points, which were granted to farmers proportionally to the time spent working in fields. Work points allowed workers to have access to a proportional quantity of food in mess halls. The control of the basic needs of rural residents became a powerful domination mechanism for local leaders, especially when times of food shortage came.

2) **Planning production and distribution**

In the 1950s, the Communist Party not only completely rethought and reorganized agricultural production into collective farms. The leaders of the CCP also gradually established a nationally planned system for the production and distribution of agricultural products.

Agricultural production was essential to sustain urban growth. Urbanization rate had already jumped from 10.64 percent in 1949 to 15.39 percent in 1957[2] and urban population

[1] BOWIE, Robert R., FAIRBANK, John K. Foreword In *Communist China 1955-1959: policy documents with analysis*. Cambridge : Harvard University Press, 1962, p. 4.

[2] CHEN, Zhuoyong. Urbanization and Spatial Structure: Evolution of Urban System in China. Institute of Developing Economies, Japan External Trade Organization. *Visiting Research Fellows Series*, November 2008, n°439, p. 8.

had swollen more than 100 million people. Grain consumption had kept on rising accordingly. In order to answer the rise in urban food demand, productivity targets were assigned to local officials in the countryside. Objectives were decided at the central level and promulgated through Five-Year Plans. As an illustration, the first Five-Year Plan (1853-1957) set up the following national objectives:

"The First Five-Year Plan sets suitable targets for increased agricultural outputs. […] According to the plan, the projected output of staple farm products for 1957 and the expected percentages of increase over 1952 are as follows: Grain: 385,600 million catties[1], an increase of 17.6 per cent. Cotton: 32,700,000 *tan*[2], an increase of 25.4 per cent. Jute and ambary hemp: 7,300,000 *tan*, an increase of 19.7 per cent. Cured tobacco: 7,800,000 *tan*, an increase of 76.6 per cent. Sugar-cane: 26,300 million catties, an increase of 85.1 per cent. Sugar-beet: 4,270 million catties, an increase of 346.4 per cent. Oil-bearing crops: over 118 million mou will be sown, an increase of 37.8 per cent over the acreage of 1952."[3]

The State Planning Commission, established in 1952, played an important role in the implementation of the first Five-Year Plans. The Commission was relying on a network of ministries and local planning bureaus. Whereas the most important targets were settled by the highest levels of the government, ministries were in charge of the setting up of targets for commodities considered as less important for the national economic growth, and local planning bureaus were in charge of the implementation of the plan and of the setting up of targets for less important commodities.

Grain was ranged straightforward among the most important commodities and, as such, was rapidly imposed governmental control. In 1953, a state monopoly on grains was decreed[4]: all surplus grain had to be sold to the state at fixed prices. State granaries mushroomed and quotas per head were established. At that time, grain still constituted the

[1] One catty = 0.5 kilogramme.

[2] One *tan* = 0.05 metric ton.

[3] Report on the First Five-Year Plan for Development of the National Economy of the People's Republic of China in 1953-1957, delivered by Li Fu-ch'un, Vice-Premier of the State Council and Chairman of the State Planning Commission, July 5 and 6, 1955, at the Second Session of the First National People's Congress, In BOWIE, Robert R., FAIRBANK, John King. *Communist China 1955-1959: policy documents with analysis.* Cambridge : Harvard University Press, 1962, p. 54-55.

[4] In China, "grain" (*liangshi*) not only refers to cereals, but also encompasses peas and tubers.

greatest share of the food ration. National planning of food distribution aimed at ending speculation and stabilizing the price of basic staple products.

Planned economy gradually became the rule for other commodities as well. Private markets closed down and state goods, produced by enterprises mandated by the state, started being sold instead at fixed prices.

Cities were granted priority in the distribution of grain. In 1950, the government, faced to the risk of a decrease of the farming workforce consecutive to the rise in urban population, established a national household registration system (户口 *hukou*), which divided the population in two categories: agricultural and non-agricultural population. This system considerably limited rural-urban migration and created the roots of a strong urban-rural divide, which caused important inequalities that remain among the contemporary Chinese society even today. Under this system, under the Maoist era, the non-agricultural population was given food rations. In order to meet the growing urban demand, agricultural products were plucked out of the countryside. In addition, production targets were sometimes established on inflated yield figures, as they were set on the basis of yields that were officially declared by local officials, among whom a number found opportunity to earn merit by inflating the figures[1]. Gaps between urban and rural living conditions started to widen and reached tremendous levels. As Dikötter puts it: "However abysmal their living conditions, workers were better off than the farmers who produced the food they ate."[2]

3) **Agriculture as the first step towards national power**

Food production targets were also established in order to honor export contracts with foreign countries. The refusal of Mao to cut on exports – against the opinion of other CCP leaders – is considered by Frank Dikötter as one of the most important factors that led to the

[1] "Soon all of China was in the grip of target fever, as fantastic figures for agricultural and industrial output competed for attention. […] The actual grain output for 1958 was just over 200 million tonnes, but on the basis of all the claims made about bumper crops the leadership estimated that it was close to 410 million tonnes. […] The stage was set for a war on the people in which requisitions would plunge the country into the worst famine recorded in human history." DIKÖTTER, Frank. *Mao's great famine : the history of China's most devastating catastrophe, 1958-62*. London : Bloomsbury, 2010, p. 37.

[2] DIKÖTTER, Frank. *Ibid.*, p. 151.

Great Famine of 1958-1961[1]. To this day, the pressure of the Soviet Union to pay back debts is still considered by many as the main cause of the Great Famine, along with natural catastrophes.

Assigning production targets to local officials was thus a way to feed a rising urban population and to honor foreign trade contracts that, in turn, enabled China to import industrial products. It was also a way to provide raw material and a suitable ground to industrial revolution, considered at that time as a major pillar of the economic "catching up" of China. In fact, in the 1950s, the whole economy was relying on agriculture. The agricultural sector provided 90 percent of the raw material for consumer goods industries, and industrial imports were paid thanks to exports, of which agricultural products represented 75 percent[2]. In the words of the CCP: "The great tide of agricultural co-operation that has swept China is bringing forth an immense, nation-wide growth of agricultural production, and this in turn is stimulating the development of the whole national economy"[3].

According to Philip Huang, the land reform was a crucial step for industrial development, because it "enabled the state to take the surplus that had been extracted by landlords and expended mostly for consumption, give some of it to the land poor and landless, and channel the rest through taxation and low-priced procurement into investments in urban industry."[4] As we see, agriculture and industry were closely interconnected in the economy and their developments were usually considered as parts of an overall scheme for growth.

Even though leaders of the Communist Party did not always agree on the amount of efforts that ought to be dedicated to agricultural development, for Mao, agriculture had to be

[1] Provincial leaders were confronted with an impossibility to reach their assigned proportion of the national export target because of food shortage. At the end of the year 1960, Zhou Enlai and Chen Yun, close advisors of Mao, finally managed to convince the chairman that grain had to be imported from foreign countries. China considerably reduced its exports and started importing grain, which considerably alleviated famine. (DIKÖTTER, Frank, *op. cit.*).

[2] BOWIE, Robert R., FAIRBANK, John K. Foreword In BOWIE, Robert R., FAIRBANK, John King. *Communist China 1955-1959: policy documents with analysis*. Cambridge : Harvard University Press, 1962, p. 3.

[3] The Draft Program for Agricultural Development in the People's Republic of China, 1956-1967, submitted by the Political Bureau of the Party's Central Committee, January 23, 1956 In BOWIE, Robert R., FAIRBANK, John King, *op. cit.*, p. 120.

[4] HUANG, Philip C. Rural Class Struggle in the Chinese Revolution: Representational and Objective Realities from the Land Reform to the Cultural Revolution. *Modern China*, January 1995, vol. 21, n°1, Symposium: Rethinking the Chinese Revolution. - Paradigmatic Issues in Chinese Studies, IV, p. 113.

closely taken care of, as a necessary step towards industrial development: "*Certains de nos camarades désapprouvent l'orientation du Comité central de notre Parti consistant à faire concorder le développement de la coopération agricole et de l'industrialisation socialiste, orientation juste qui a fait ses preuves en Union Soviétique. Ils considèrent que le rythme de développement fixé pour l'industrialisation convient parfaitement, mais qu'il n'est pas nécessaire que la coopération agricole soit en concordance avec lui, et qu'elle doit en fait se développer à un rythme extrêmement lent. [...] Ces camarades ne comprennent pas que l'industrialisation socialiste ne peut être réalisée isolément et sans lien avec la coopération agricole.*"[1]

Firstly, Mao was aware that the national demand for grain and raw material was rising and that production levels, at that time, were far from being able to answer the future demand: "*Si [nous ne parvenons pas à répondre à la demande de grain marchand et de matières premières industrielles] notre industrialisation socialiste se heurterait à d'énormes difficultés ; nous ne serions pas à même de la réaliser. Ce problème s'est posé également à l'Union Soviétique au cours de son édification socialiste. Elle l'a résolu en dirigeant de façon planifiée et en développant la coopération agricole. Nous aussi, nous ne pouvons trouver une solution à ce problème qu'en appliquant la même méthode.*" [2]

Secondly, for the Chairman, agricultural development and industrialization were strongly linked: whereas heavy industry was able to provide machinery, fuel, fertilizers and transport infrastructures and was thus key for agricultural modernization, light industry could not enlarge its consumer basis as long as peasants (then 80 percent of the population) were not

[1] [Some of our comrades disaprove the direction taken by the Central Comittee of our Party, according to which the development of agricultural cooperation and the one of socialist industrialization should be coordinated, a fair direction that proved its worth in the Soviet Union. They consider that the development rate prescribed for industrialization is ideal, but that agriculural cooperation should not necessarily match this pace, that it should develop at an extremely slow pace. […] These comrades do not understand that socialist industrialization cannot be runned in isolation and without establishing links with agricultural cooperation.] MAO, Zedong. *Sur le problème de la coopération agricole*. Pékin, 1966, p. 21.

[2] [If [we do not manage to answer the demand in grain and industrial raw material] our socialist industrialisation would face enormous difficulties; we would not be able to achive it. The Soviet Union also had to face this problem in the course of its socialist development. The Union solved it by planning and steering the development of agricultural cooperation. We, as well, can figure out a solution to this problem by using the same method.] MAO, Zedong. *Sur le problème de la coopération agricole*. Pékin, 1966, p. 21-23.

reaching a certain level of purchasing power – supposedly provided by agricultural collectivization.

Finally, putting too much emphasis on industrial development in the primary stages of socialization at the expense of postponing agricultural development would mean ignoring the great majority of the population. In the words of Charles Bouvier: "*Il n'est pas permis d'espérer que les échos de l'industrialisation puissent y retentir à travers toutes les campagnes ; en admettant que la Chine augmente de moitié la main-d'œuvre industrielle en cinq ans, ceci ne ferait qu'un million et demi d'ouvriers de plus contre des centaines de millions de paysans*"[1].

As we see, agricultural development was considered as an essential first step towards economic power. Economic power gained from agricultural and industrial development was then supposed to lead China to be one of the world's leading political powers.

C - "Sending people down" to the countryside

1) The purpose of the education and rectification movement

Mao did not only wish to radically change the system through the carrying out of socialization in economic sectors. He also longed for a transformation of people's minds. In this process of ideological and sociological remodeling, the countryside played a major role. In order to lessen the status and influence of intellectuals and to ensure the spreading of the proletarian leadership, intellectuals and young people were sent down to rural areas in order to be "reeducated" by workers, peasants and soldiers. The sending of young and educated people and of more mature intellectuals to the countryside started as soon as the Communist Party came to power. As mentioned by Theodore Chen: "As early as 1945 Mao Tse-tung said that intellectuals 'should gladly go to the countryside, put on coarse clothes, and willingly take up any work, however trivial'. […] At different times in the first decade of the regime, students as well as more mature intellectuals were urged to go to the rural areas to take part in agricultural production."[2]

---

[1] [It is unlikely that industrialization will echoe throughout the whole countryside; even if China doubles its industrial workforce in five years, it would only add one and a half million workers, against hundreds millions peasants.] BOUVIER Charles. *La collectivisation de l'agriculture : URSS – Chine – Démocraties populaires.* Paris : Armand Colin, 1958, p. 106.

[2] CHEN, Theodore Hsi-en. *The Maoist educational revolution*. New York : Praeger, 1974, p. 95.

Sending urban dwellers to the countryside was not only serving ideological purposes. It also aimed at slowing the growth of the urban population – of which food demand kept on rising – and at increasing the number of people working in the agricultural sector. According to the China Development Research Foundation, a great number of people were "sent down" in the aftermath of the Great Leap Forward, as a way to curb the rise in food demand and as a way to ease food shortage: "The failure of the Great Leap Forward, together with natural disasters, forced the country to carry out adjustments to the national economy. The super-fast increase in the urban population had clearly exceeded the capacity of grain supply at the time. Starting in 1961, a large-scale effort began to reduce the urban population in order to mitigate famine. Urban population were 'mobilized' and returned to rural areas. The urban population was reduced by roughly 20 million in the two years of 1961 and 1962. The urbanization rate declined from 19.8 per cent in 1960 to 14.6 per cent in 1964. Only in 1965, by which time the national economy had basically recovered, did it rebound to 16.8 per cent."[1]

The movement of sending people down to the countryside reached its peak at the end of the 1960s, during the first years of the Cultural Revolution. At this time, the process of sending people down had gone back to its original ideological purposes. As Theodore Chen puts it: "The [1968] campaign to send the intelligentsia to the countryside surpasses all previous efforts in proportion and scope. There is now a broader meaning in reeducation: not only do the intellectuals who are the products of bourgeois education need to be reeducated by the laboring class but the young people who attend schools dominated by intellectuals […] must be purged of the ill effects of the wrong kind of education. […] Estimates [of the total number of people sent to the countryside since the stepped-up campaign of 1968] vary from 25 to 30 million to 40 to 60 million."[2]

In the countryside, workers and peasants were supposed to teach young people and intellectuals the "simple virtues" of peasant life, filled with hard work and unburdened of the luxuries characterizing urban lifestyles. During the times of the Cultural Revolution, even though the main purpose of the movement was ideological, the issue of providing human resources to supply the needs of agricultural production in terms of labor was still pending.

[1] China Development Research Foundation. *China's new urbanization strategy*. Abingdon ; New York : Routledge, 2013, 2013, p. 13.

[2] CHEN, Theodore Hsi-en. *The Maoist educational revolution*. New York : Praeger, 1974, p. 95.

Employment and other problems had also started to emerge in cities, and sending people down to the countryside was another way of thinning out urban population and of solving rising urban issues.

A last goal of the program – although it was probably not among the most important ones – was to reduce the bureaucracy of the central government, which had become largely oversized over time. From 1968 to 1971, according to Theodore Chen, the bureaucracy of the central state was reduced from 60,000 to 10,000 people[1].

According to Mao's thinking, ideological remodeling was necessary and hard work was key in the process. The program of sending people down to the countryside did not solely aim at rectifying the mind of "deviant" elements or punishing people resisting revolutionary ideas. Propaganda teams and the Communist Youth League were actively trying to convince people to send their children for "rural service" for their own benefit. Tens of millions of people were sent down to rural areas, either temporarily or permanently. In just four years, between 1968 and 1972, around 42 million "educated youth", cadres and other urban dwellers were "sent down" to the countryside[2].

2) **Giving a role to peasants**

Workers, soldiers and soon, peasants, were considered as *de facto* allies of the Communist Party and viewed as key players in the process of socialization. In the trio worker-peasant-soldier, peasants, because of their demographic weight and because of their opposition to the "traditional bourgeois elite of intellectuals", were considered to be the most dynamic revolutionary force once the CCP had come to power. However, hard work and rural lifestyle were not enough to re-educate urban masses, and a role was also given to lower and lower-middle peasants. As Mao stated it: "It is necessary for educated youth to go to the countryside to be re-educated by lower and lower-middle peasants."[3] Farmers were entrusted to teach values to young people and intellectuals coming to the countryside. In some areas, they were also given control of rural schools. In Mao's words: "In the countryside, schools

[1] CHEN, Theodore Hsi-en. *The Maoist educational revolution*. New York : Praeger, p. 104.

[2] China Development Research Foundation. *China's new urbanization strategy*. Abingdon ; New York : Routledge, 2013, p. 13.

[3] Mao's "latest instruction" on re-education, Jen-min Jih-pao, December 22, 1968 In CHEN Theodore Hsi-en. *The Maoist educational revolution*. New York : Praeger, 1974, p. 273.

and colleges should be managed by the poor and lower-middle peasants – the most reliable ally of the working class"[1].

Giving a role to lower and middle-lower peasants was also a way of controlling local cadres. Agricultural collectivization indeed came along with the creation of millions of grassroots cadres, who were soon given considerable power over peasants (see B.1.). As Huaiyin Li suggests: "to discipline the cadres, the state could only rely on the initiatives of ordinary people through two means: the imposition of various institutions that allowed the 'masses' (*qunzhong*) or ordinary people to supervise the cadres from the bottom up, and the making of a new discourse that empowered the masses by assuming the political correctness of the 'poor and lower-middle peasants' (*pingxiazhongnong*) and their supremacy on the corruptible cadres."[2]

Peasants, first as a revolutionary force and then as the guarantors of the values promoted by the Maoist ideology, played a fundamental role in the building of the CCP, from its earliest times to the end of the Cultural Revolution. Rural areas, by offering the first communist leaders a refuge from the suppression campaigns launched by the KMT, a political vacuum to expand their power and scenery for the founding myth of the Long March, also for a major part of the collective psyche of the Communist Party. Finally, agriculture, as the step of the economic catching up of the great power to come and as a sector where communes were established, through which the new government could reach out to the household level in the countryside, was also among the pillars of the building of the legitimacy of the CCP.

[1] Cited by Jen-min Jih-pao and Hung-ch'i Investigators In CHEN, Theodore Hsi-en. *Ibid*., p. 266.

[2] LI, Huaiyin. *Village China under socialism and reform: a micro history, 1948-2008.* Stanford University Press, 2009, p. 5.

(Permission not granted to display material)

Figure 6: "Our heart beats in in unison with Mao's heart – People's communes are good" (1964)
Source: BAJON, Jean-Yves. Les années Mao : une histoire de la Chine en affiches, 1949-1979. Paris : Les éd. du Pacifique, 2001, p. 71.

(Permission not granted to display material)

Figure 7: "(Let's go) Growing red grains – Let's go planting and making sprout, bloom and bear fruits our motherland's places where it's the most needed" (1964)
Source: BAJON, Jean-Yves. Les années Mao : une histoire de la Chine en affiches, 1949-1979. Paris : Les éd. du Pacifique, 2001, p. 62.

The Chinese countryside, a real political vacuum in the 1930s and 1940s, has offered a fertile ground for the development of the Communist Party, retreated there while being pursued by the troups of the Kuomintang. The peasants, on their side, have first constituted the core of the Red Army, regularly harmed by the conditions of the Long March. During this period (1934-1936) and afterwards, the myth of the "revolutionary peasants" has repeatedly fed the discourse of legitimacy-building of the Party. Finally, agriculture, as a state development project aimed at enabling the economic catching-up of the country and as a way to reach down to rural households, was of fundamental importance as well. However, in spite of the place peasants, rural areas and agriculture had in the Party-building discourse from the 1930s to the 1970s, in the late 20th century, these "three aspects of rurality" had cruelly lost the interest of the government.

II - Agriculture and the state in the late 20th century

The decrease in the interest of the government for rural areas in the 1980s and 1990s was visible on several items: during this period, the share of central expenditures dedicated to rural areas shrunk and the documents produced by the central government barely mentionned rural issues – despite, as we are about to see, strong central administrations in charge of rural policy. The first part of this section will analyze these central institutions and their declining interest in agriculture and rural issues in the last two decades of the 20th century. The second part of the section will focus on local state actors, arguing that at the local level, institutional capacities to implement reforms in the agricultural sector severely weakened after the decollectivization of agriculture and instauration of village elections affected the capacity of local officials to direct the production of the harvest. .

A - Strong central administrations lacking agenda-setting capacity

1) The consequences of post-78 administrative reforms

Overlapping responsibilities, which are regularly depicted by political scientists as a special feature of the Chinese government[1], are usually considered as a legacy of the Maoist

[1] FENG, Yana, HE, Daminga, BETH, Kinne. Water resources administration institution in China. *Water Policy*, 2006, n°8, p. 291-301; VERMEER, Eduard B. Industrial Pollution in China and Remedial Policies. *The China Quarterly*, Dec. 1998, n° 156, Special Issue: China's Environment, p. 952-985; etc.

era. In 1970, China had indeed more than one hundred ministries and commissions [1] competing for economic gain and political power. In the 1980s, after the arrival of Deng Xiaoping to power, the government initiated a fundamental transformation of its administrative system. The main goal of this transformation was to transfer to enterprises a number of productive functions of the economy, which were formerly achieved by governmental institutions. Reforms pushed the state to give up on mechanisms directly controlling the economy, which were supposed to be replaced by less direct macro-level control mechanisms such as subsidies or loans, allowing governmental institutions to keep on steering economic development.

At the beginning of the 1980s, governmental institutions had first benefited from an increase in the number of state employees – particularly in the fields of the economy linked to development, such as infrastructures or education. However, reforms rapidly led to a serious downsizing of public institutions. From 1999 to 2002, in just three years, the number of state employees dropped from 83 million to 69 million people. Personnel reductions started addressing the overlap of responsibilities, which was particularly acute at the end of the Maoist era.

Government bodies abolished, demoted or merged	Government bodies created or elevated	Government bodies maintained
Machinery Industry – Metallurgical Industry – Petroleum and Chemical Industry – Light Industry – Textile Industry – Building Material Industry – Nonferrous Metal Industry – Internal Trade – Railways Etc.	Development & Reform – Asset Management – Commerce – Food & Drug Administration – Industry & Commerce Administration – Customs – Statistics – Environment – Auditing – Information Industry – Human Resources and Social Security – Housing and Rural and Urban Construction – Energy	Health – Information Industry – Railways – Communications – Water Resources – Forestry – Grain – Tobacco Monopoly – Agriculture (incl. Poverty alleviation, land reclamation, TVEs etc.)

Table 8: Reforms of Selected Administrative Departments under the State Council from 1993 to 2003
Source: WALDRON, Scott, BROWN, Colin and LONGWORTH, John. State Sector Reform and Agriculture in China. *The China Quarterly*, June 2006, n°186, p. 284 with author's complements

[1] WALDRON, Scott, BROWN, Colin and LONGWORTH, John. State Sector Reform and Agriculture in China. *The China Quarterly*, June 2006, n°186, p. 282.

The Ministry of Agriculture was put through personnel reductions as well. Between 1990 and 2002, the number of employees in charge of agricultural issues was almost cut by half, dropping from 7.3 million to 4.1 million[1]. A number of functions previously carried out by the ministry were transferred to other central state departments. However, in essence, administrative reforms left the power of the Ministry of Agriculture relatively unimpaired. In the middle of the 2000s, officials working on topics related to agriculture indeed outnumbered by far state employees working in other sectors. The comparison made by Waldron, Brown and Longworth gives a clearer idea of the situation: "The number of state staff in agriculture is comparable to service sectors such as health, sports and social services (combined), and transport, storage, and post and telecommunications (combined) and only overshadowed by the education sector."[2]

At the central level, the Ministry of Agriculture was maintained and kept on working directly under the State Council. As concluded by Waldron, Brown and Longworth[3], administrative reforms of the 1990s and 2000s, far from having weakened governmental institutions in charge of agricultural reforms, seem, on the opposite, to have granted greater power to the ministry, relatively to other central institutions.

The corollary of the minor effect of reforms on the agricultural administration is the resulting persistent issue of overlapping responsibilities. Despite the fact the issue is clearly not unique to China[4], a body of evidence in the literature suggests that overlaps represent a strong feature of the Chinese administrative system[5]. In interviews I conducted, overlaps were

[1] WALDRON, Scott, BROWN, Colin and LONGWORTH, John. *Ibid.*, p. 280.

[2] WALDRON, Scott, BROWN, Colin and LONGWORTH, John. State Sector Reform and Agriculture in China. *The China Quarterly*, June 2006, n°186, p. 280-281.

[3] WALDRON, Scott, BROWN, Colin and LONGWORTH, John. *Ibid.*, p. 277-294.

[4] Similar coordination problems affect a large number of countries in a wide variety of political fields, from Japanese foreign policy (AHN, C. S. Government-Party Coordination in Japan's Foreign Policy-Making: The Issue of Permanent Membership in the UNSC. *Asian Survey*, April 1997, vol. 37, n°4, p. 368-382) to sanitary crisis in Great Britain (GREER, Alan. Policy coordination and the British administrative system: evidence from the BSE enquiry. *Parliamentary Affairs*, October 1999, vol. 52, n°4, p.598-615).

[5] The theory of fragmented authoritarianism, for instance, underlines a number of structural difficulties preventing the government from ensuring efficient coordination between the local administrative entities of the Chinese system. A number of theories focusing on ruling elites also explore the barriers impeding effective coordination between the different ministerial bodies (among others, the strong political emphasis given to the allocation of ministerial portfolios).

regularly mentioned as an important issue impeding the effective implementation of agricultural policies.

Several governmental bodies indeed take part in the decision making of public policies related to the agricultural sector. The Ministry of Agriculture is officially in charge of designing middle and long-term strategies, politics and programs aimed at developing agriculture and rural areas. In addition, it also has to organize and supervise the implementation of these programs and policies. Finally, the ministry can draft legislation related to agriculture, agricultural inputs and rural industry – on which the National People's Congress and its Standing Committee have the final decision.

Performing such tasks can be difficult in an environment where resources essential to agricultural production are managed by other ministries – such as the Ministry of Water Resources or the Ministry of Land and Resources. In addition, the responsibilities of the Ministry of Agriculture are likely to overlap the ones of other institutional bodies. For instance, the Ministry of Agriculture has to "revitalize agriculture through science and education". Such a mission includes the management of scientific and technological research programs, which infringes upon the tasks of the Ministry of Sciences and Technology. It also includes the handling of agricultural education, which might overlap the responsibilities of the Ministry of Education. Many other examples could be given (with the Ministry of Commerce, the Ministry of Foreign Affairs, etc.).

Overlapping responsibilities also exist between the Ministry of Agriculture and other ministerial bodies, which are not granted the name of "ministry" but are nevertheless at ministerial level (such as the Administration for Quality Supervision, Inspection and Quarantine (AQSIQ), of which the responsibility in food safety affairs is regularly pointed out[1]), or between the Ministry of Agriculture and other non-ministerial but powerful bodies under the NDRC (such as the State Grain Administration, which is in charge of controlling

[1] The melamine milk scandal (several hundreds of thousands of babies fell sick and several babies died), in 2008, led to the resignation of the AQSIQ chief, Li Changjiang. The Chinese press, on its side, recently highlighted the responsibility of producers – theoretically regulated by the Ministry of Agriculture – and the necessity for downstream sectors to integrate upstream sectors (See WANG, Xiaodong, WANG, Zhuoqiong, SHAN, Juan. China Dairy measures start at source. *China Daily*, June 21, 2013 (http://www.chinadaily.com.cn/business/2013-06/21/content_16642075.htm accessed on October 8, 2013)).

national grain distribution, of drafting guidelines for grain industry and of managing national grain reserves).

In addition, because of the always-stronger link between urbanization and agricultural and rural development [1], functions previously assumed by the Ministry of Agriculture increasingly need to be coordinated with the action of the Ministry of Housing and Rural and Urban Development. The growing stakes of environmental issues and their obvious connection to agricultural activities – agriculture consumes more than 60 percent of the water resources of the territory[2] and emits large quantities of greenhouse gases – also creates an urgent need, for the Ministry of Agriculture, to establish strong links with the Ministry of Environmental Protection.

In practice, barriers prevent effective communication and coordination between the different administrations of the central state. These barriers are not unique to agricultural issues and can be found in other political fields as well. For a number of issues, transversal commissions have been established in order to coordinate the activities of various governmental bodies on a specific subject. According to Yu Hongyuan, for instance, the setting up of the National Coordination Committee on Climate Change significantly improved the Chinese answer on the issue, both nationally and in international forums[3]. In sectors linked to agriculture however, coordination usually remains weak.

To sum up the above, the administrative reforms of the 1980s let the power of central agricultural administrations relatively unimpaired (in terms of relative status and human resources) – but at the same time did not solve the issue of overlaps in responsibilities for the design of agricultural policies. Although the Ministry of Agriculture was deprived from its capacity to direct the production of the harvest agricultural production through the People's Communes at the beginning of the 1980s, the central structure was then relatively spared from the personnel reductions of the administrative reforms comparatively to other Ministries.

[1] See, for instance, the paragraphs below (III.A. and III.B.) which depict the consequences of rural-urban migrations on agricultural workforce and food demand.

[2] Source: China Water Risk http://chinawaterrisk.org/big-picture/2030-demand-supply/ accessed on July 16th, 2014.

[3] YU, Hongyuan. Global governance against global warming and China's response: an empirical study on climate change policy coordination in China from 1992 to 2002. *Current politics and economics of Asia*, New York, 2008, vol. 17, p. 267-295.

However, the fact that the Ministry of Agriculture was still strong in the 1980s and 1990s did not help it in putting rural and agricultural development in the agenda of the central government overall.

2) Shifting priorities away from rural areas

Starting from the middle of the 1980s, the priorities of the central government indeed shifted to industrialization and urbanization. It is clearly observable in the Five-Year Plans of this period. The main principles of economic development recommended by the Seventh Five-Year Plan (1986-1990), for instance, put strong emphasis on industry and science and technology but do not mention agriculture. Among other things, the plan insists on the necessity to adjust the industrial structure to the changing needs of the population[1], on the need to accelerate the building of the energy sector, the transport and communication sector and the raw and semifinished material production sector[2] and on the need to increase efforts in the development of science and technology. The Eighth Five-Year Plan (1991-1995) and the Ninth Five-Year Plan (1996-2000) are more explicit on the importance to develop agriculture. However, in the 1990s, no significant agricultural reform was conducted apart from the ones affecting the grain sector (see B.1.c.).

In addition, most of the financial effort made by the government during the second half of the 1980s and during the 1990s was dedicated to the development of the industrial sector and urban areas. An unbalance of expenditures progressively appeared in the 1980s and started disfavoring rural development. During this period however, the government in fact

[1] "坚持适应社会需求结构的变化和国民经济现代化的要求，进一步合理调整产业结构" *Jianchi zhiying shehui xuqiu jiegou de bianhua he guomin jingji xiandaihua de yaoqiu, jinyibu heli tiaozheng chanyejiegou* (Source: 中华人民共和国国民经济和社会发展第七个五年计划 *zhonghua renmin gongheguo guomin jingji he shehui fazhan di qi ge wunian jihua* [7th Five-Year Plan for National Economic and Social Development of the Republic of China (1986-1990)], http://www.sdpc.gov.cn/fzgggz/fzgh/ghwb/gjjh/200506/W020050715581805921895.pdf accessed on July 16th, 2014)

[2] "坚持恰当地确定固定资产投资规模，合理调整投资结构，加快能源、交通、通信和原材料工业的建设" *Jianchi qiadang dangdi queding guding zichan touzi guimo, heli tiaozheng touzi jiegou, jiakuai nengyuan, jiaotong, tongxin he yuancailiao gongye de jianshe (*Source: 中华人民共和国国民经济和社会发展第七个五年计划 *zhonghua renmin gongheguo guomin jingji he shehui fazhan di qi ge wunian jihua* [7th Five-Year Plan for National Economic and Social Development of the Republic of China (1986-1990)], http://www.sdpc.gov.cn/fzgggz/fzgh/ghwb/gjjh/200506/W020050715581805921895.pdf accessed on July 16th, 2014)

increased the amount of expenditures dedicated to rural development. For instance, investments for the building of new irrigation systems rose from 10 billion RMB in 1978 to 43 billion RMB at the end of the 1990s[1]. Education also benefitted from an important increase in rural budgets: at the end of the 1990s, public funds aimed at improving education in the countryside reached 48 billion RMB, compared to 10 billion in 1978[2]. Government expenditures on agricultural production and administration rose too, going from 10.1 billion RMB in 1985 up to 22.2 billion in 1990 and 43 billion in 1995[3].

However, despite the rise in absolute government expenditures allocated to rural areas, their share in the national budget decreased, in favor of investments allocated to urban areas and to the industrial sector. From 7.6 percent of the GDP in 1978, public agricultural investments fell to 3.6 percent in 1995[4]. Clemens Østergaard gives another useful data that shows the shrinking of public investment in agriculture in the 1980s: "Government expenditures on agriculture as a percentage of total expenditures decreased from 13.7 in 1979 to 8.1 percent in 1988. Over the same period, State capital construction funds invested in agriculture declined from 11.9 percent of total construction funds to just 2.9 per cent."[5] This unbalance rapidly entrenched economic and infrastructures inequalities between rural and urban areas.

B - The decrease in the ability of local officials to directly act on agricultural production

In addition to the shift in central government priorities, rural areas were also impacted by a number of reforms which further confirmed the waning interest of the Chinese state in these issues, this time visible at the local level.

---

[1] BRUINS, Hendrik J., BU, Fengxian. Food security in China and contingency planning: the significance of grain reserves. *Journal of contingencies and crisis management*, September 2006, vol. 14, n°3, p. 117.

[2] YU, Xiaohua, ZHAO, Guoqing. Chinese Agricultural Development in 30 Years: A Literature Review. *Frontiers of Economics in China*, vol. 4, n°4, p. 11.

[3] YU, Xiaohua, ZHAO, Guoqing. *Ibid*, p. 11.

[4] HUANG, Jikun, ROZELLE, Scott. *Développement agricole et nutrition: Politiques à l'origine du succès chinois*. Document Hors Série n°19, Programme Alimentaire mondial, Novembre 2009, p. 19.

[5] ØSTERGAARD, Clemens Stubbe. Introduction In DELMAN, Jørgen, ØSTERGAARD, Clemens Stubbe, CHRISTIANSEN, Flemming. *Remaking Peasant China: Problems of Rural Development and Institutions at the Start of the 1990s*. Aarhus : Aarhus University Press, 1990, p. 9.

1) Agricultural reforms: towards a greater independence of farmers

a) The failure of Mao's agricultural development program

The weakening of local state authorities in charge of agricultural production first started with the abolition of People's Communes. The planning of production and distribution of agricultural products, set up in the early years of the CCP, had shown important weaknesses. The peasants' loss of control over their working time and cultivation patterns had led to a significant decrease in agricultural output[1]. Collective property of agricultural tools and machinery were giving little incentive to farmers to take good care of them. The remuneration scheme (the work points system) encouraged peasants to focus on the amount of time spent in the fields rather than on work efficiency. Finally, the ever-larger size of collective farms progressively decorrelated the work of individual farmers from its results (the yield of communes), which was not of any help to raise the motivation of farmers.

In addition, rural dwellers were retained in the countryside by the *hukou* system. The agricultural nature of their work and their place of residence were indicated on their *hukou*, which served as an identification document. Internal migrations were considerably slowed down. The fact that farmers faced the practical impossibility of escaping their situation gave considerable power to local officials. These latest, on their side, had to cope with important pressures from above, as they were held accountable for the amount of grain sent to cities. This situation rapidly gave rise to conflicts in rural areas[2].

Finally, the mistakes of agronomic programs implemented at the national level and replicated at the Chinese scale had disastrous consequences on yields. To name just a few: deep seeding depleted soils, close seeding choked out plants, extermination campaigns of birds led to the development of worms population, etc.

The central planning of distribution created considerable difficulties as well for the matching of food demand and supply. During the first years of the agricultural collectivization, it was common for local officials to inflate yields on reports, in order to get higher political credit. However, the same cadres were then assigned higher grain delivery

---

[1] LI, Huaiyin. *Village China under socialism and reform: a micro history, 1948-2008*. Stanford, Calif.: Stanford University Press, 2009, p. 49.

[2] See DIKÖTTER, Frank. *Mao's great famine : the history of China's most devastating catastrophe, 1958-62*. London : Bloomsbury, 2010,.

targets, which greatly contributed to starving rural areas. In addition, the inefficiencies of a planned distribution at the Chinese scale – which required transporting huge volumes across colossal distances – rapidly threatened food security in many areas. In the then-context, state employees were unable to handle the buying, stocking, transport and distribution of grain at the national scale, which led to a serious situation of both food shortage and food waste, even though a number of state granaries were filled with grain[1].

In parallel of the reforms conducted in the agricultural sector, tremendous changes occurred in the industrial sector under the Maoist era. Colossal targets were set. Steel production was supposed to jump from 5.35 million tons in 1957 to 12 million tons in 1960, and to reach 100 million tons in 1962 and 700 million tons in 1975[2]. Small furnaces mushroomed in the countryside and numerous agricultural tools ended up feeding their fire.

The combination of all these elements resulted in the Great Famine of 1958-1961, which was responsible of tens of millions of deaths in just three years[3]. In the years following the Great Leap Forward, the decision to raise food imports eased the situation. However, agricultural production took time to recover and agricultural output started increasing again at a very slow pace only in the middle of the 1960s[4].

b) The tremendous impact of the 1980s' institutional reforms

In 1979, soon after Deng Xiaoping's arrival to power, fundamental reforms were implemented. The new *de facto* leader of the People's Republic of China, in line with the "Four Modernizations" policy enlightened by the failures of past experiences, radically changed the agricultural production system.

---

[1] As stated by Frank Dikötter: "State storage — as opposed to small inventories distributed across a wide range of private and public producers, retailers and consumers — contributed in no small measure to the destruction of grain." For the author, food losses in state granaries were causes by the profileration of rats and insects, by rot and by fire (DIKÖTTER, Frank. *Mao's great famine : the history of China's most devastating catastrophe, 1958-62*. London : Bloomsbury, 2010).

[2] DIKÖTTER, Frank. *Mao's great famine : the history of China's most devastating catastrophe, 1958-62*. London : Bloomsbury, 2010, p. 57-58.

[3] Estimates vary from 20 million (AIRD, John S. Population studies and population policy in China. *Population and Development Review*, June 1982, vol. 8, n°2, p. 85-97) to 45 million deaths (DIKÖTTER Frank. *Ibid.*).

[4] For instance, rice yields grew by only 2 percent annually between 1964 and 1978 (HUANG, Jikun, ROZELLE, Scott. Technological Change: Rediscovery of the Engine of Productivity Growth. *China's Rural Economy Journal of Development Economics*, vol. 49, n°2, p. 339).

Reforms started with the abolition of agricultural collectivization. People's communes were progressively dismantled and land was reattributed to rural families, which were "given" small plots of less than half a hectare. In practice, rural families in fact have to rent land, which is formally owned by village committees. The duration of the leasing contract, in the early years of the dengist reforms, was set at 15 years[1].

In parallel to land redistribution, the "Household Responsibility System" (HRS) was established. Rural households regained the complete control of cultures and farming methods and from then on, agricultural profits entirely went back to farmers. The HRS rapidly proved efficient and an important number of areas quickly adopted the system. From only 5 percent in 1980, the proportion of communes running under the HRS jumped to 67 percent in 1982 and reached 98 percent at the end of 1983. The fact that the income generated by land and farm work would from then on entirely benefit farmers was a strong incentive for these latest to look for productivity gains, to turn to more cost-effective cultures and methods and to maintain land and tools in good conditions. Consequences on production were substantial: grain productivity surged from 2,527 kg per hectare in 1978 to 3,608 kg per hectare in 1984[2].

In parallel to the establishment of the Household Responsibility System, agricultural markets were gradually liberalized. In 1985, the number of products of which markets were directly controlled by the state had been reduced by two thirds. During the second part of the 1980s, liberalization spread to a wider range of products such as pork, fish, chicken, tea or fruits and vegetables. The rapid growth of the urban population – the urbanization rate goes from less than 18 percent in 1978 to more than 23 percent in 1985 and to almost 30 percent in 1997 – along with economic development[3] stimulated the demand for more diversified food products. Market liberalization and the diversification of demand freed farmers from their former obligations to produce more grain. Farmers, who used to work to fulfill grain quotas required by local production teams, were from then on able to turn to other products.

[1] It will be raised at 30 years in the 1990s.

[2] BRUINS, Hendrik J., BU, Fengxian. Food security in China and contingency planning: the significance of grain reserves. *Journal of contingencies and crisis management*, September 2006, vol. 14, n°3.

[3] From an average growth rate of 4.9 percent between 1970 and 1978, the rate of increase jumps to 8.8 percent in average between 1979 and 1984, before reaching a peak of 15 percent on 1984 (TONGEREN, Frank W. van and HUANG, Jikun (eds.) *China's food economy in the early 21st Century; Development of China's food economy and its impact on global trade and on the EU*. The Hague: Agricultural Economics Research Institute (LEI), 2004, p. 27-28).

Consequences on agricultural diversification were tremendous. From 1978 to 1990, surfaces dedicated to commercial crops almost doubled[1]. The average annual rate of increase of areas sown with oil seeds was 1.8 percent between 1971 and 1975 and the total output of oil seeds grew by 15.4 percent between 1981 and 1985[2]. Farmers chose to turn to cash crops, but also gave up on grain farming to concentrate on livestock and aquaculture. The share of livestock farming and aquaculture in the agricultural value added went from 15.5 percent in 1978 to 25.8 percent in 1990. Between 1981 and 1985, pork, beef and mutton production average annual growth rates were close to 10 percent. The development of aquaculture production was even more impressive: 9.4 percent annually[3] between 1981 and 1985, and 13.7 percent annually between 1985 and 1995[4].

According to a number of scholars, most of the rise in agricultural productivity at the beginning of the 1980s can be attributed to the instauration of the Household Responsibility System. At that time, farmers indeed started paying more interest to cropping choices and farmwork, as profits made from productivity rises directly went in their pockets. Whereas the annual rate of increase of agricultural production was about 7.1 percent during the years following the establishment of the HRS, Huang and his team acknowledge a slowdown in the growth of agricultural production once the effects of the institutional reforms had been harvested. As the researchers state it: "As by the mid 1980s the one-off efficiency gains from the shift to the household responsibility system (HRS) essentially had been reaped, the growth rate of the food and agricultural sectors decelerated"[5].

The abolition of the Communes and the establishment of the HRS enabled farmers to

[1] ASH, Robert F. The Agricultural Sector in China: Performance and Policy Dilemmas during the 1990s. *The China Quarterly*, September 1992, n°131, Special Issue: The Chinese Economy in the 1990s, p. 570.

[2] ASH, Robert F. *Ibid.*, p. 548.

[3] ASH, Robert F. *Ibid.*, p. 548.

[4] HUANG, Jikun, ROZELLE, Scott. Technological Change: Rediscovery of the Engine of Productivity Growth. *China's Rural Economy Journal of Development Economics*, vol. 49, n°2.

[5] "Whereas agricultural production knows annual growth rates of 7.1 percent in the years following the establishment of the HRS, Huang and his team acknowledge a slowdown in agricultural production growth However, as by the mid 1980s the one-off efficiency gains from the shift to the household responsibility system (HRS) essentially had been reaped, the growth rate of the food and agricultural sectors decelerated". (TONGEREN, Frank W. van and HUANG, Jikun (eds.) *China's food economy in the early 21st Century; Development of China's food economy and its impact on global trade and on the EU*. The Hague: Agricultural Economics Research Institute (LEI), 2004, p. 35).

turn to economically more attractive agricultural activities, which had considerable effects on their income. Between 1978 and 1985, the revenues of rural families, in average, grew by 15 percent annually, and the net revenue per household more than doubled, going from 134 RMB per year in 1978 to 398 RMB in 1985[1]. In the middle of the 1980s, the annual rate of increase of rural income diminished. Between 1979 and 2002, reforms and investments in rural areas enabled some 400 million people to raise their revenues above the poverty line[2].

c) Sluggishness and setbacks in the grain sector

Whereas reforms rapidly liberalized the markets of most of agricultural commodities, the Chinese government showed much less eagerness and ambition to reform the grain market. Although the establishment of the Household Responsibility System, the liberalization of markets and the growth in urban population had positive consequences on the revenue of rural dwellers, they also had negative impacts on grain production. With the exception of maize – which was feeding the rising needs of mushrooming livestock farms – grain-sown areas rapidly decreased. From 1978 to 1990, surfaces dedicated to grain production were reduced by 6 percent, down to 7 million hectares[3].

In the early stages of the reforms, the shrinking of grain-sown areas had few consequences on the total grain output. The increase in the volume of chemical fertilizers used by farmers enabled these latest to raise productivity per hectare, and production kept on growing[4]. The overall improvement of the situation encouraged the state to liberalize markets. Dual structures for the purchase of grain replaced the former state monopoly, first on oilseeds markets in 1983, then on the cotton market in 1984, and finally on the other grain markets in 1985. Under the new system, local purchasing bureaus negotiated with farmers the amount of

[1] LI, Xiaoyun, WANG, Dongmei, JIN, Leshan, ZUO, Ting. *Impacts of China's agricultural policies on payment for watershed services*. London: College of Humanities and Development; Beijing: China Agricultural University and International Institute for Environment and Development, 2006, p. 15.

[2] OCDE. Réforme de la politique agricole en Chine. *Synthèses*, Novembre 2005, p. 4.

[3] ASH, Robert F. The Agricultural Sector in China: Performance and Policy Dilemmas during the 1990s. *The China Quarterly*, September 1992, n°131, Special Issue: The Chinese Economy in the 1990s, p. 570.

[4] It increased by 34 percent between 1978 and 1984 (LI, Xiaoyun, WANG, Dongmei, JIN, Leshan, ZUO, Ting. *Impacts of China's agricultural policies on payment for watershed services*. London: College of Humanities and Development; Beijing: China Agricultural University and International Institute for Environment and Development, 2006, p. 18).

grain they wished to purchase at prices determined by the government. Production exceeding quotas could be sold on free markets. However, in case prices on free markets would come below the prices fixed by the government, this latest would be able intervene by purchasing grain. Most of the time though (except in the early 1980s), the prices on free markets exceeded the ones determined by the state. This highly encouraged producers to turn to other activities, more profitable than grain production. In 1985, after the establishment of dual grain markets, sown areas decreased by 4 percent and production dropped by 28 million tons – it will reach again its 1984 level only in 1990[1]. Farmers not only turned to more profitable crops or to livestock farming: they also gave up on agriculture. During the 1980s, local officials were indeed actively working on the establishment and development of industrial enterprises in rural areas. The creation of the so-called "Township and Village Enterprises" (TVEs) diversified employment opportunities in the countryside outside traditional agricultural sectors and plucked human resources out of the farming sector to feed the needs of a growing industrial sector.

The decrease in grain production occurred while the population was keeping on growing at a rapid pace, which caused great concerns among public authorities. The government started putting more pressure on producers so that they would fulfill quotas. However, despite measures, the volume of imported grain increased and imports doubled between 1985 and 1987[2]. State grain bureaus were unable to compete with private traders newly empowered on grain markets by the abolition of low-paid procurement quotas in 1993. Competition between grain bureaus and private traders, along with the drop in production, made grain prices rise and led to serious food price inflation in cities. Between December 1992 and December 1993, the price of rice went up by 40 percent[3]. In 1994, inflation worsened (the price of good quality rice went up by 75 percent and the price of wheat flour rose by 45 percent) and extended to other commodities (the price of pork went up by 50

[1] BLECHER, Marc, WANG, Shaoguang. The Political Economy of Cropping in Maoist and Dengist China: Hebei Province and Shulu County, 1949-90. *The China Quarterly*, March 1994, n°137, p. 89.

[2] BRUINS, Hendrik J., BU, Fengxian. Food security in China and contingency planning: the significance of grain reserves. *Journal of contingencies and crisis management*, September 2006, vol. 14, n°3, p. 117.

[3] AUBERT, Claude. The grain trade reforms in China: an unfinished story of State v. peasant interest. *China Information*. Winter 1998, vol. 12, n°3, p.78.

percent between December 1993 and December 1994)[1]. The decision to reestablish mandatory quotas was taken in 1994. Peasants were allowed to sell grain on private markets only once they had fulfilled government-fixed quotas. The state, at that time, regained control of 60 percent of the grain market.

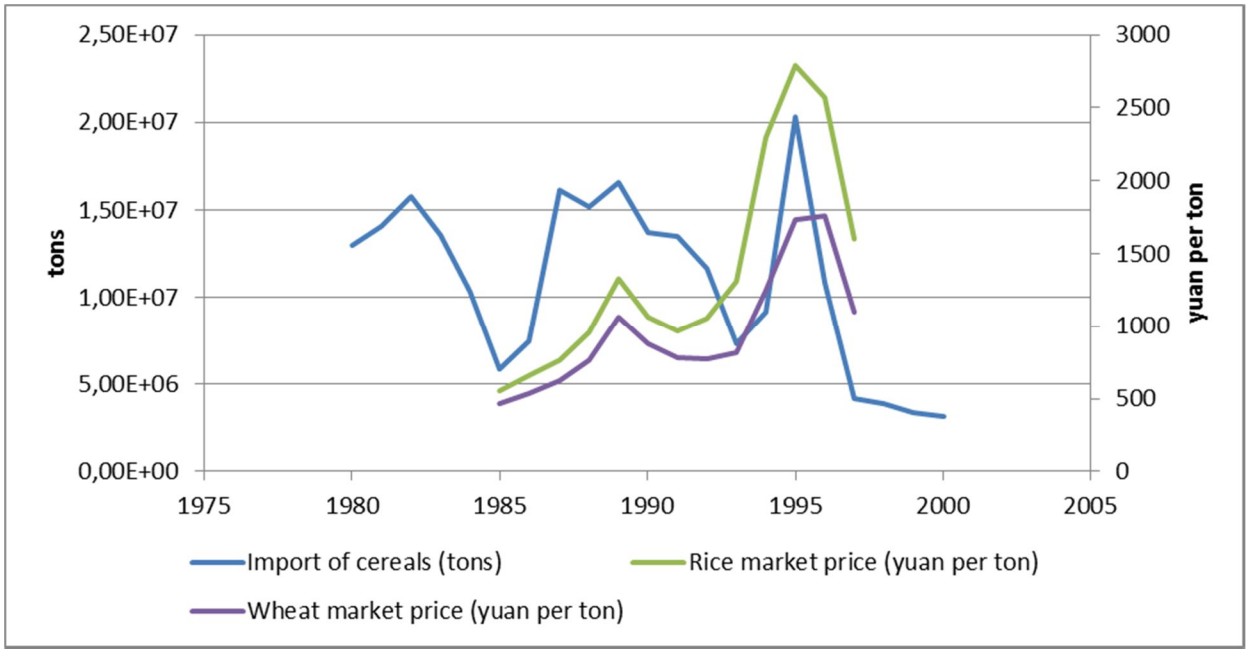


Figure 8 : Cereal imports and market prices in the 1980s and 1990s
Source: FAO database (imports of cereals); AUBERT, Claude. The grain trade reforms in China: an unfinished story of State v. peasant interest. *China Information*. Winter 1998, vol. 12, n°3 (rice and wheat market prices).

The return of the grip of the state on grain markets had a huge cost. State enterprises, less competitive than private traders, were required to buy large volumes of grain at fixed prices. Their debts rapidly worsened. According to Claude Aubert, "for the first half of 1996 alone, the debts of grain state enterprises had increased by 16 million yuan to more than 51 billion yuan."[2] In spite of the huge cost of the program, the complete liberalization of grain markets did not occur before the beginning of the 2000s. Reforms were conducted according to a progressive scheme: new grain market reforms were first implemented in 2001, before the State Council issued new regulations that completely liberalized markets in 2004.

To conclude, whereas collectivization had deprived farmers from their ability to make agricultural production choices, the dismantlement of cooperatives, the instauration of the

[1] AUBERT, Claude. *Ibid.*, p. 78.

[2] AUBERT, Claude. *Ibid.*, p. 82.

Household Responsibility System and the liberalization of markets, at the beginning of the 1980s, restored their responsibilities and their control of agricultural production and considerably reduced their former dependency towards local officials. Collectivization had indeed not only been about state control over rural economic activities such as agricultural production. Agricultural collectivization also had a tremendous effect on the pattern of relationships between rural dwellers. Millions of grassroots cadres were charged with the responsibility of managing rural affairs. They were granted with considerable power over peasants, as they were allocating work time, giving peasants work points according to the amount of time spent in the fields and controlling communal canteens. As Li Huaiyin sums it up, "state penetration of the village [had] reached an unprecedented level during the collective era"[1]. However, the establishment of the Household Responsibility System put an end to these domination mechanisms and considerably changed the pattern of relationships between peasants and local state officials, beyond the sphere of daily agricultural production activities.

2) The consequences of village elections on state-farmers relationships

In addition to the quasi-abolition of the direct state's involvement in agricultural production activities and in the daily life of farmers, rural areas also underwent major political reforms that contributed to the evolution of the pattern of relationships between farmers and local officials. The road to the greater independence of farmers did not end with the dismantlement of the People's Communes and the establishment of the Household Responsibility System. The idea of granting villages with the possibility of governing themselves also progressively emerged. Self-government at the village-level was proposed by the central government as early as in the beginning of the 1980s. The n°111 article of the 1982 Constitution, for instance, defines "village committees" (村民委员会 *cunmin weiyuanhui*) as "self-governing organizations of farmers at the lowest level"[2]. Local governments progressively endorsed the reform and village committees spread across rural

[1] LI, Huaiyin. *Village China under socialism and reform: a micro history, 1948-2008.* Stanford, Calif.: Stanford University Press, 2009, p. 5.

[2] LI, Huaiyin. *Village China under socialism and reform: a micro history, 1948-2008.* Stanford, Calif.: Stanford University Press, 2009, p. 292.

China. In 1984, there were already around one million village committees throughout the whole country[1].

In 1987, the Organic Law of Village Committees was issued in order to establish direct elections in villages for village committee members. At first launched on a trial basis, the law was fully adopted by the National People's Congress in 1998. According to this law, villagers aged eighteen years and above could elect members of village committees (usually three to seven people) every three years. Elected members were made responsible of handling public issues of villages.

The establishment of village committees and of direct elections for committee members was supposed to give self-government rights to villagers. However, during the period following the reform, the most important functions – the ones related to economic development or to the salary of officials – as well as the power to take final decisions usually remained in the hands of the Party secretary, who kept an important role in the management of local affairs. The law was enforced in 1998 and granted village committees with new powers, such as the collection of fees, the raising of funds and the management of land and other resources. Even if the Party secretary, at the village level, sometimes still plays a key role in the handling of the village's affairs[2], village committees and direct elections considerably changed relationships between local cadres and farmers.

In addition, the change in the political leadership significantly lowered the importance of propaganda in rural areas. Mass meetings and group studying, which were common under the Maoist era, disappeared, both because means for exerting pressure over villagers were withdrawn from local cadres and because these latest, from now on evaluated on economic and social stability criteria and on the results of one-child policy they had to enforce, had no interest in keeping on convening ideological meetings anymore. This led to an important depoliticization of the countryside – relatively to what used to be considered as the norm during the Maoist era.

[1] LI, Huaiyin. *Ibid.*, p. 292.

[2] In certain cases, the leader of the village committee and the Party secretary are one and the same person. In villages I visited, villagers explained that because of urban-rural migration, few people capable of taking over political functions remained in the village. It was the reason given for the overlap of responsibilities between the Party secretary and the supposedly independent village committee.

According to Huaiyin Li, the "retreat" of the state enabled traditional ties to revive. Because peasants could not rely on production teams anymore whenever encountering problems related to agriculture, they started turning back mainly to family members for mutual help in the fields or to borrow money[1].

In conclusion, the dismantlement of People's Communes considerably weakened the administrative basis of the government in rural areas, by reducing the number of local cadres and by taking away from them a lot of their capacity to directly control agricultural production and people's daily activities. In addition, grassroots citizens were granted with increased powers through the establishment of village committees, of which members were directly elected by villagers starting from the 1990s. Finally, the dismantlement of production teams encouraged rural dwellers to return to traditional ties instead of relying on government officials whenever encountering financial or other problems. All of these factors noticeably downsized the involvement of state officials in agricultural production activities and weakened their capacity to act in the sector.

3) **Local governments going for industrial and urban development**

During the second half of the 1980s, the gradual decline of the interest of the state for agriculture further confirmed its retreat from this sector of the economy. Local cadres progressively turned their attention towards the development of industrial activities. For instance, the number of *agricultural* TVEs dropped from 495,000 in 1978 to 231,000 in 1991, whereas in the same period of time, the number of *industrial* TVEs increased from 794,000 to 7,426,000[2].

Despite the rise in government expenditures allocated to rural areas, their share in the national budget decreased, in favor of investments allocated to urban areas and the industrial sector (see A.2.). The ratio between urban and rural revenues widened, jumping from 1.71 in 1984 to 2.55 in 1994 and to 3.2 in 2003-2004. Most experts agree on the fact that the economic growth of the 1980s and 1990s mainly benefited urban households (see paragraph B.).

---

[1] LI, Huaiyin. *Village China under socialism and reform: a micro history, 1948-2008.* Stanford, Calif.: Stanford University Press, 2009, p. 305.

[2] Source: Data from the National Bureau of Statistics of China.

In addition, at the exception of the institutional reforms that were conducted on grain markets (see B.1.c.), reforms undertaken in the agricultural sector were little in number and none of them had the magnitude which the instauration of the Household Responsibility System had at the beginning on the 1980s.

At the end of the 1990s, the role of the state had considerably decreased in agricultural activities, which were mostly taken care of by farmers. Local officials had gradually turned to more lucrative activities such as industrial or urban development, and the interest of the central state in agriculture had known a cruel drop. However, the situation considerably changed at the beginning of the 21st century, when agriculture, for a number of reasons we are about to explore in the following section (such as food unbalance and rural underdevelopment), was put back on the agenda of the central government.

III - Agriculture back on the central agenda

A - 21st century food security issues revive China's old fear of famines

"No other civilization has had such a continuous tradition of thinking about famine, and no other nation's modern history has been so influenced by hunger and famine"

Lilian Li, *Fighting Famine in North China*.

1) Urbanization and the evolution of food demand

China is currently experiencing an urbanization process of which the scale and pace are unprecedented. In the course of the four decades that followed the opening up of the Chinese economy, a flow of several hundred million people migrated from the countryside to urban areas. Between 2000 and 2009, urbanization accelerated – with 15 to 20 million people going to cities each year – and the proportion of urban people rose from 36.2 percent to 46.6 percent[1]. In November 2010, the sixth national census revealed that the urbanization rate had already reached the one that was forecasted for 2020. In 2011, for the first time in China's millennium history, the number of urban citizens outreached the number of rural dwellers,

[1] China Development Research Foundation. *China's new urbanization strategy*. Abingdon ; New York : Routledge, 2013, p. 14.

with 680 million people living in cities and 270 million people living in urban agglomerations of more 1 million people[1].

Chinese rural dwellers migrating to cities are largely incited to do so by rural-urban inequalities, both in terms of revenue and in terms of infrastructures. Development policies that were conducted in rural areas in the 1980s and 1990s had a tremendous impact on poverty alleviation (see II.B.1.b.). However, economic growth rapidly started benefitting mostly urban residents, who saw their income increase way more quickly than rural dwellers (Figure 9).

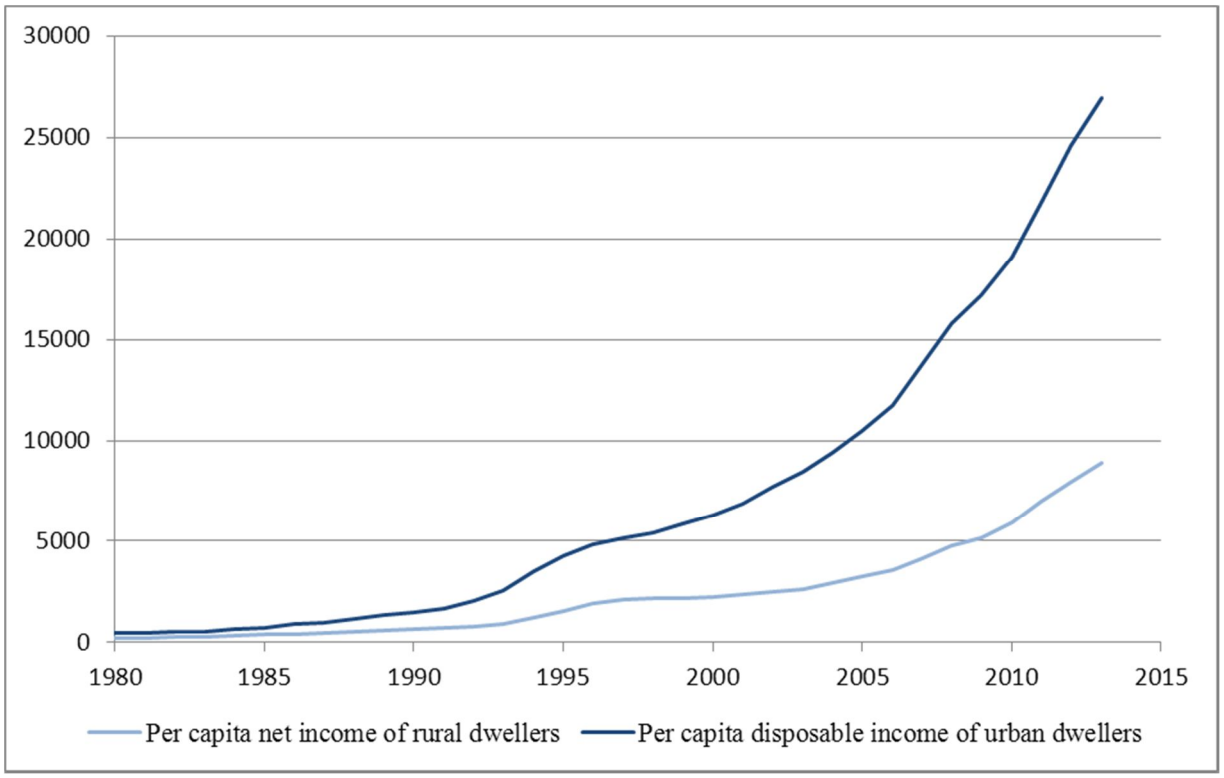


Figure 9: The unequal rise of income of rural and urban dwellers
Source: Data from the National Bureau of Statistics of China

Inequalities also grew in terms of infrastructures. Even though public expenditure allocated to rural development rose during the 1980s and the 1990s, their share in the state budget decreased. While cities actively developed communication and transportation infrastructures and built water and electricity networks, rural areas were lagging behind. The widening gap, both in terms of revenue and equipment, constituted – and still is – one of the main drivers of the rural exodus. The trend of urbanization should keep its pace in the coming

[1] Source: Worldbank database.

years. If the urbanization rate indeed reaches 75 percent in 2050 as forecasted by experts and international organizations, the country will have experimented, in just over fifty years, a transition that countries like France went through in more than one century, and on a very different scale.

The analysis of urbanization in developed and developing countries shows that the process usually comes hand in hand with economic development[1]. The concentration of people in urban areas indeed has positive effects on economies of scale and increases economic activities and consumption by bringing people closer to markets, thus triggering growth. In China, urbanization has become strongly associated with development and economic catching, and, as such, is highly encouraged by the government. As Chen Yuan, Chairman of the Board of Directors of China Development Bank, states it: "'Urbanization' symbolizes how civilizations progress in general, but it also serves as the concentrated expression of a country's overall strength and international competitiveness."[2]

However, rapid urbanization also has drawbacks, especially for the agricultural sector. Urban consumers indeed usually consume more water and more food, putting more pressure on agricultural production and on environmental resources, which agricultural production relies on. In addition, the building of new areas of settlement is likely to have consequences on the total area of arable land and rural-urban migration is likely to take labor away from farming.

The first consequence of China's rapid urbanization was indeed a change in food diet. This evolution is not unique to China and other countries have experienced similar developments as well[3]. Firstly, rising income usually encourage people to diversify their food diet. In addition, in cities, people have physical access to a greater variety of products compared to rural dwellers, for whom it is more difficult to go to stores, have access to

[1] World Bank. *World Development Report 2009*, p. 58-59.

[2] China Development Research Foundation. *China's new urbanization strategy*. Abingdon ; New York : Routledge, 2013, p. xix.

[3] "Urban food consumption patterns and their evolution are not uniform world-wide, but some trends appear to be universal, as they have been similarly observed in vastly different settings. Urban diets are generally more diversified, contain more animal products and vegetables, are less affected by seasonal fluctuations and are on average, more adequate nutritionally than rural diets". (DELISLE Hélène. *Patterns of urban food consumption in developing countries: perspective from the 1980's*. Food Policy and Nutrition Division FAO, Rome 1990, p. 5. ftp://ftp.fao.org/es/esn/nutrition/urban/delisle_paper.pdf accessed December 18th, 2013).

processed food or use refrigeration. Finally, the income of Chinese urban dwellers is three times higher than the one of rural inhabitants. As a consequence, urban residents can afford buying more expensive products such as meat, milk and dairy products, and buy less grain.

In the past decade, the rise in pork meat and milk consumption was the most pronounced rise and the demand for poultry and eggs also increased rapidly. Rural areas, helped by economic and infrastructure development, are following the same trends of evolution of food diets, but are still far from catching up with consumption levels currently observed in urban areas (Figures 10 and 11).

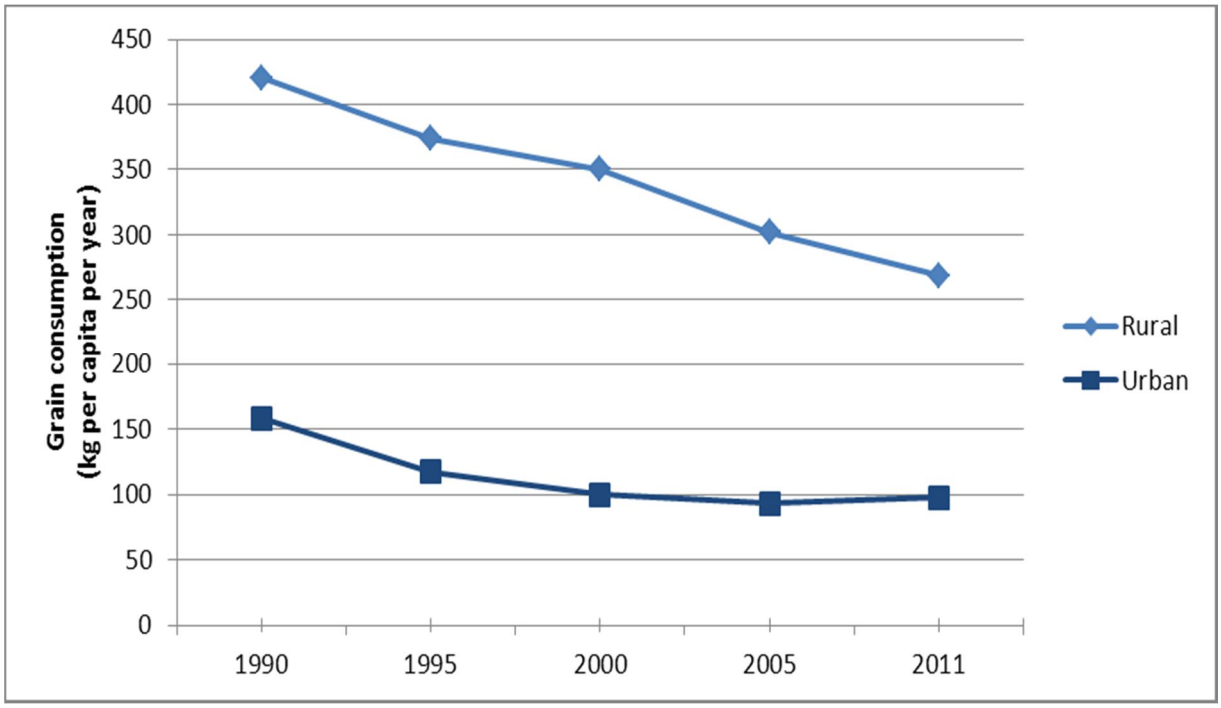


Figure 10: Grain consumption in urban and rural areas (kg/year/person) 1995-2011
Source: OECD-FAO Agricultural Outlook 2013-2022 (based on data from the Chinese National Bureau of Statistics)

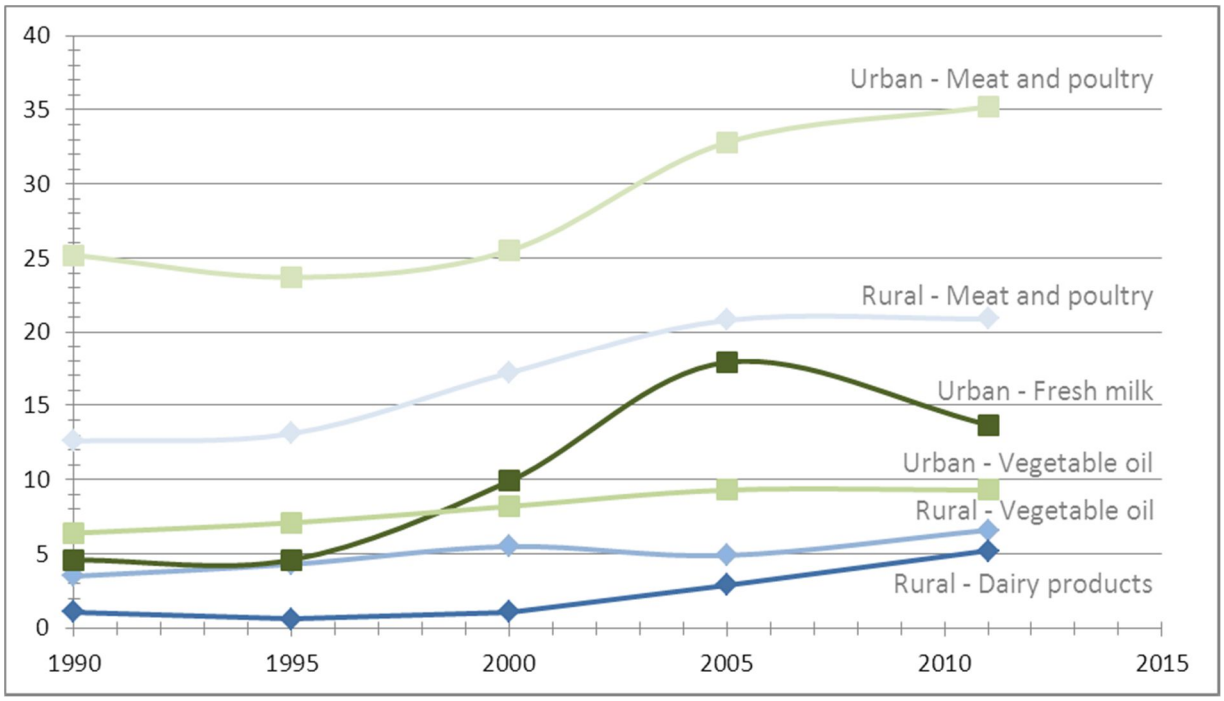


Figure 11: Other food products consumption in urban and rural areas (kg/year/person) 1995-2011
Source: OECD-FAO Agricultural Outlook 2013-2022 (based on data from the Chinese National Bureau of Statistics)

2) Limited resources for agricultural production

In order to answer this rising food demand, the country needs to increase agricultural production. However, natural resources on which agricultural production relies on are highly limited. In spite of the huge size of its territory, China indeed only has 7 percent of the world's arable land. The country mainly consists of high plateaus and arid land unsuitable for farming. In addition, water resources are scarce and unevenly distributed across the territory. Whereas the South is regularly affected by floods, the northern part of the country suffers from serious water shortage. Water is also unequally shared out in time: the southern area of the country, in particular, receives about three quarters of the annual rainfall on a period of only a few months, during the rainy season.

The accelerated development of China led to a radical transformation of its economy and allowed millions of people to improve their living standards. However, this model also had dramatic consequences on the environment – to which rapid urbanization greatly contributed. These consequences and their associated costs were thoroughly investigated in

numerous reports and articles[1] and the following paragraphs do not aim at developing them again. However, it is useful to quickly recall some aspects of the environmental degradation caused by urbanization and accelerated economic growth, as they have a direct impact on agricultural production.

a) Water depletion and degradation

Water depletion and degradation is perhaps the most serious aftereffect of the accelerated industrialization and urbanization in China. National water resources are relatively scarce: renewable internal freshwater per capita was about 2,093 cubic meters in 2011[2], or only one third of the world average[3]. Moreover, water resources are unevenly distributed across the territory (water availability falls to 500 cubic meters per capita in Northern China) and climate change is aggravating inter-regional differences: rainfall has been gradually declining in northern China (- 20 to 40 mm per decade) and rising in the South of the country (+ 20 to 60 mm per decade[4]).

In the northern part of the territory, which is particularly poor in water resources[5], water shortage is raising huge concerns. The situation is alarming in the Huang-Huai-Hai river basins. According to some studies, climate change would be responsible for 35 percent to 40 percent of the reduction in the runoff of the Huang River[6]. In addition, the melting of Himalayan glaciers, which feed the backbone of Chinese water resources (the Huang and

[1] See, in particular, the report of the World Bank published in 2007: "Le coût de la pollution en Chine" http://siteresources.worldbank.org/INTEAPREGTOPENVIRONMENT/Resources/China_Cost_of_Pollution.pdf accessed on December 18th, 2013.

[2] Source: World Bank database.

[3] 6,123 cubic meters per capita in 2011 (World Bank database).

[4] XIE, Jian, LIEBENTHAL, Andres, WARFORD, Jeremy J., DIXON, John A., WANG, Manchuan, GAO, Shiji, WANG, Shuilin, JIANG, Yong, MA, Zhong. *Addressing China's Water Scarcity Recommendations for Selected Water Resource Management Issue.* The International Bank for Reconstruction and Development / The World Bank, 2009, p. 11.

[5] The renewable internal freshwater resources are between 350 and 750 cubic meters per capita in the Huang-Huai-Hai river basins, way below the water scarcity level defined by international organizations (1000 cubic meters) (XIE, Jian, LIEBENTHAL, Andres, WARFORD, Jeremy J., DIXON, John A., WANG, Manchuan, GAO, Shiji, WANG, Shuilin, JIANG, Yong, MA, Zhong. *Addressing China's Water Scarcity Recommendations for Selected Water Resource Management Issue.* The International Bank for Reconstruction and Development / The World Bank, 2009, p. 10.)

[6] ZHANG, Jianyun, WANG, Guoqing, YANG, Yang, HE, Ruimin, LIU, Jiufu. Impact of Climate Change on Water Security in China. *Advances in Climate Change Research*, 2009, vol. 5 (suppl.), p. 38.

Yangzi rivers), causes sudden floods, which are followed by worrisome periods of drought. Today, the annual water deficit would have reached 40 billion cubic meters[1]. The situation should keep on following the same trend and water availability per capita might fall to 1,890 cubic meters per year in 2033[2].

Industrialization and urbanization aggravate water scarcity. Industry is an important consumer of water, whether water is used in manufacturing sectors or for thermal power generation. Urban dwellers, on their side, generally consume more water than rural dwellers, due to changes in their lifestyle. In China, although agriculture used to be the main water consumer at the beginning of the 2000s, industrial and residential demand has been increasing rapidly over the last decade. In 2010, the share of agricultural demand has dropped to 61 percent, while the one of industry had gone from 13 percent up to 24 percent. According to some forecasts, urban water consumption could double by 2025[3]. The share of agriculture should keep on shrinking, while industrial and residential parts should reach 32 percent and 16 percent respectively by 2030[4].

[1] ZHANG, Jianyun, WANG, Guoqing, YANG, Yang, HE, Ruimin, LIU, Jiufu. *Ibid.*, p. 36.

[2] FRENKEN, Karen. *Irrigation in Southern and Eastern Asia in figures*. AQUASTAT Survey, Rome: FAO Land and Water Division, 2011, p. 232.

[3] WOETZEL, Jonathan, MENDONCA, Lenny, DEVAN, Janamitra, NEGRI, Stefano, HU, Yangmel, JORDAN, Luke, LI, Xiujun, MAASRY, Alexander, TSEN, Geoff, YU, Flora, et al. *Preparing for China's urban billion*. McKinsey Global Institute, February 2009.

[4] ADDAMS, Lee, BOCCALETTI, Giulio, KERLIN, Mike, STUCHTEY, Martin et al. *Charting our Water Future*. 2030 Water Resources Group, 2009, p. 9.

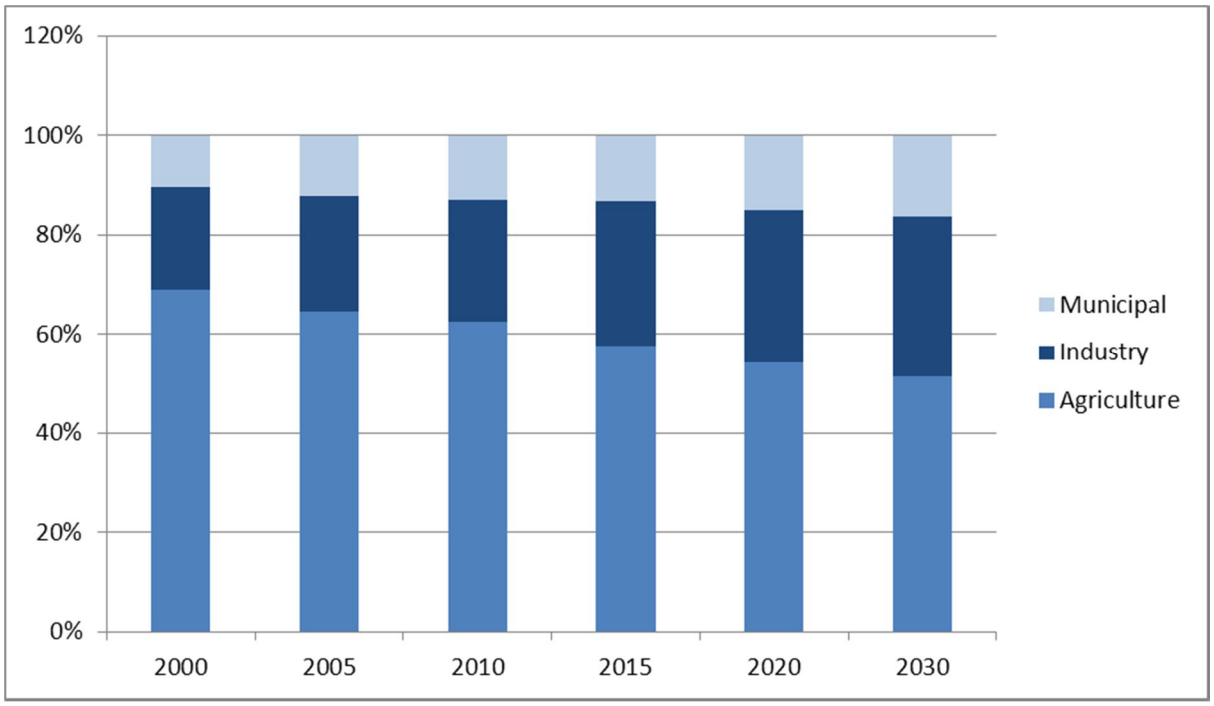


Figure 12: Shares of municipal, industrial and agricultural sectors in total water demand of China, 2000-2030
Source: China Water Risks (2015-2030: forecasts)

In addition, accelerated urbanization and industrialization led to major pollution issues. In 2006, according to a report published by the World Bank, more than two thirds of the seven main Chinese rivers were unfit for human consumption (even after treatment), and almost one third of their resources were completely useless, even for industrial or agricultural activities[1]. In 2009, only 56 percent of urban waste was recycled and domestic wastewater discharges had become the most important source of pollution[2]. At the same time, agriculture, in China, highly relies on irrigation, as in the 2000s, 75 percent of grain was cultivated on irrigated land[3].

[1] XIE, Jian, LIEBENTHAL, Andres, WARFORD, Jeremy J., DIXON, John A., WANG, Manchuan, GAO, Shiji, WANG, Shuilin, JIANG, Yong, MA, Zhong. *Addressing China's Water Scarcity-Recommendations for Selected Water Resource Management Issues*. The International Bank for Reconstruction and Development / The World Bank, 2009, p. 14.

[2] XIE, Jian, LIEBENTHAL, Andres, WARFORD, Jeremy J., DIXON, John A., WANG, Manchuan, GAO, Shiji, WANG, Shuilin, JIANG, Yong, MA. *Ibid.*

[3] BRUINS, Hendrik J., BU Fengxian. Food security in China and contingency planning: the significance of grain reserves. *Journal of contingencies and crisis management*, September 2006, vol. 14, n°3, p. 115.

The agricultural sector is not blameless in the degradation of water resources. The consumption of pesticides and fertilizers, highly encouraged by the government since the beginning of the 1980s, led to important problems of non-point source pollution[1]. Chinese farmers, in average, were using 548 kg of fertilizers per hectare in 2011. By comparison, French farmers were using 150 kg per hectare and Americans 120 kg per hectare[2]. Even if one takes into account the fact that agriculture, in China, relies a lot on multiple cropping, especially in the South of the country, the gap is still huge. In addition, the imperfections of the subsidy system, the lack of training of farmers and the reliance on potash imports led to imbalances in the use of fertilizers. Farmers generally consume too much nitrate fertilizers, at the expense of a balanced use of NPK[3]. The over-consumption and imbalances in the use of agricultural inputs prevent the soil from absorbing nutrients. Nitrate fertilizers, which are particularly subject to leaching, can contaminate groundwater wells that serve the cities. High levels of nitrate in water have adverse effects on human health and can also have disastrous consequences on aquatic ecosystems.

The situation is worsened by rural-urban migrations. Rural dwellers seeking to increase their income by working in cities off agricultural peak seasons have less time to work in fields. It encourages them to spread important volumes of agricultural inputs in fewer times (when they are in the countryside and available for farming activities), which worsens the efficiency of soil absorption and aggravates leaching.

b) A decline in the quality of arable land

The decline in the quality of arable land is another major issue caused by the development of urban areas. The geographical extension of cities, required to answer the housing demand of an ever-rising number of urban dwellers, erodes agricultural land located on urban outskirts. In order to prevent a further diminution of cultivated land and,

[1] Non-point source pollution refers to water and air pollution from diffuse sources. One major source of ater pollution from diffuse sources is due to the runoff of chemical fertilizer into the soil and underground water.

[2] World average consumption of fertilizers per hectare in 2011: 134 kg. Source: Worldbank database.

[3] N: nitrogen; P: phosphate; and K: potassium are the three main macronutrients of chemical fertilizers, that enhance the growth of plants. The equilibrium – the proportion of N, P and K farmers should apply on their soil – depends on several elements such as: the type of crop, the state of growth, the physical properties of the soil, climate conditions, etc.

consequently, of agricultural output[1], at the 11th People's Congress in March 2008, Yun Xiaosu, then vice-minister of Territory and Resources, set a "red line" of 1.8 billion mus of arable land[2]. However, the lucrative profits gained from the sale of urban land – of which the price keeps on rising – highly encourage land conversions. In China, private property does not exist for land. Local governments – through village committees – remain the sole formal owners, which enables them to grab land at cheap prices and sell it back to real estate developers at higher prices. Profits generated by the process sometimes very significantly contribute to the revenue of local governments. Land sales in Chengdu, for instance would have accounted for 39 percent of the total revenue of the local government in 2005[3].

In addition, as agricultural taxes were abolished in 2006, farming does not provide local governments with fiscal revenue as it used to do in the past. The fact that other economic sectors such as industry and trade are still taxed is another incentive that pushes local officials to encourage the development of these sectors on cultivated land, at the expense of farming.

Granting entrepreneurs with land also enables these latest to launch economic activities that generally contribute much more to local economic growth than agriculture – mostly because it generates products with greater added value. In a context where economic growth remains one of the most important evaluation criteria for local officials, it is quite easy to understand the rationale of land sales.

Finally, political choices leading to land grabbing in rural areas are triggered by the magnitude and urgency of the tasks that local cadres have to perform. The rapid pace of urbanization sometimes drives tremendous increases in the demand for housing and infrastructures, locking local officials in short-term stakes. In addition, they are also trapped in the imperfections of the evaluation system and in the legacy of decentralization reforms.

Land grabbing has become a matter of deep concern for the central authorities, as it seriously started threatening social stability in rural areas. The cause recently gained the

[1] Farmland areas dropped from 128 million hectares in 2000 to less than 122 million hectares in 2008. In parallel, space used for urban construction had risen by 36 per cent in the same amount of time. (China Development Research Foundation. *China's new urbanization strategy*. Abingdon ; New York : Routledge, 2013, 2013, p. 82).

[2] 120 million hectares.

[3] WOETZEL, Jonathan, MENDONCA, Lenny, DEVAN, Janamitra, NEGRI, Stefano, HU, Yangmel, JORDAN, Luke, LI, Xiujun, MAASRY, Alexander, TSEN, Geoff, YU, Flora, et al. *Preparing for China's urban billion*. McKinsey Global Institute, February 2009, p. 87.

support of the urban population, particularly active on social networks. The land of peasants has become a "legitimate right" (合法权利, *hefa quanli*), for which they are allowed to submit petitions. The defense of this legitimate right also enjoys the support of the central government – which is actively trying to curb the issue – starting an arm-twisting game with local governments.

According to a number of analyses, land grabbing and land conversions – although a widely spread practice throughout the country[1] – would not have had tremendous effects on the total arable land surface yet[2]. However, experts generally agree that there was a sharp decrease in the quality of arable land over the past few years. Arable land of the best quality is indeed usually located in the outskirts of cities, as historically, cities generally settled on areas providing them with productive arable land to feed the population. In the course of the growth of cities, the land located in the outskirts of settlements is the first to be converted into urban land[3]. In order to keep figures intact, local governments often convert remote areas into arable land, whether they are suitable for agriculture or, on the opposite, located in arid, wet or mountainous areas[4].

Industrialization further aggravates the degradation of land. Rural cadres pushed for the development of industries in the countryside, which was one of the main drivers of the rapid industrialization and economic growth in China. However, the eagerness of local officials to

[1] Between 2008 and 2011, land inspectors found 64,366 cases of land violation, involving more than 240,000 hectares (于猛, 评估报告称地方政府"土地依赖症"成体制性障碍, 人民日报, 2011年11月25日 *Yu Meng, pinggu baogao cheng defang zhengfu 'tudi yilai zheng' cheng tizhi xing zhang'ai, renmin ribao* [YU, Meng. The local governments' sickness of land dependency is turning into an institutional obstacle. *People's Daily*, 25 November 2011] http://politics.people.com.cn/GB/70731/16387913.html accessed on 28 Janurary 2014).

[2] According to official data, China's arable land would have shrunk from 130 million hectares to 122 million hectares from 1996 to 2004 (http://www.gov.cn/english/2005-10/24/content_82778.htm accessed on 28 January 2014), and remained above 120 million hectares since. Data on arable land though differ widely from one source to another. According to FAO's estimates, China's arable land would have dropped from 119,339 million hectares in 1996 to 105,920 million hectares in 2009 (FAO Statistical Database).

[3] "Arable land accounts for 57 per cent of the area used by the recent expansion of cities in China" (China Development Research Foundation. *China's new urbanization strategy*. Abingdon ; New York : Routledge, 2013, 2013, p. 93).

[4] Zhang Xiaoling, director of land planning at the Chinese Land Surveying and Planning Institute under the Ministry of Land and Resources, cited in "Central Government Tells Big Cities to Protect Their Arable Land", Caixin – New Century, November 4th, 2014, http://english.caixin.com/2014-11-04/100746682.html. This was later confirmed by interviews.

develop industrial activities also led to a lack of control of flue gas emissions and wastewater discharge. The accumulation of cadmium in rice crops is perhaps one of the most famous examples of industrial pollution in rural areas, which is regularly denounced by the Chinese media[1].

In the past few years, the government took ever-stricter measures to regulate industrial flue gas emission and wastewater treatment. However, the local bureaus of the Ministry of Environmental Protection, which was granted the ministerial level only in 2008, still lack power as well as financial and human resources to effectively enforce regulations. In addition, local environmental protection bureaus also have to bargain with local cadres, among whom many are constrained by economic growth targets[2].

Agriculture also has a responsibility in arable land degradation. In the framework of temporary migrations, migrant farmers spend an increasing amount of time working in cities, and have to spread higher volumes of agricultural inputs such as pesticides and fertilizers in fewer times, which contributes to the pollution of groundwater, as stipulated in the above, but also contributed to the pollution of soil.

In addition, forest cover's losses, water diversions, over-exploitation of water resources and changes in temperature caused by climate change damaged surfaces and led to serious erosion and desertification issues, even though the government started dedicating important efforts to forest conservation over the past few years (among others, through the National Program for Forest Protection and the "Grain to Green Program", aimed at converting grain-

[1] In the winter of 2011 (宫靖, 镉米杀机. 财新《新世纪》, 2011年第6期 *Gong Jing, ge mi shaji. Caixin 'xin shiji'* [GONG, Jing. The thoughts of killing of cadmium rice. *Caixin New Century*, 2011, n°6] According to this article, 10 percent of the rice sold on Chinese markets would contain excessive rates of cadmium) and again in the spring and summer of 2013 (张 春. 环境公益诉讼 病在哪里？中外对话, 2013年17月15日 *Zhang Chun, huanjing gongyi susong bing zai nail? Zhongwai duihua* [ZHANG, Chun. Where does the illness of legal proceedings for environmental public interests stand? China Dialogue, July 15, 2013] https://www.chinadialogue.net/article/show/single/ch/6206-Cadmium-pollution-in-Yunnan-reopens-debate-over-public-interest-litigation- accessed on January 28, 2014; 郑道. 拯救大米. 财新《新世纪》, 2013年第20期 *Zheng Dao, zhengjiu dami, Caixin "xin shiji"* [ZHENG, Dao. Save rice. *Caixin New Century*, 2013, n°20]; 李雪娜. 湘粤米争溯源 . 财新《新世纪》, 2013年第20期 *Li Xuena, xiang yue mi zheng suyuan, Caixin "xin shiji"* [LI Xuena. Tracing to the source the rice controversy in Hunan and Guangdong. *Caixin New Century*, 2013, n°20]; 郑道, 宫靖. 大米镉超标争议, 财新《新世纪》, 2013年第20期 Zheng Dao, Gong Jing, *Dami ge chaobiao zhengyi, Caixin "xin shiji"* [ZHENG, Dao, GONG, Jing. The cadmium rice controversy. *Caixin New Century*, 2013, n°20].

[2] These issues will be further detailed in Chapter 2, III.B.

sown areas into forests). The decrease and degradation of arable land constitutes another threat to sustainable food production.

3) Food security and the Chinese government

To sum up the above, urbanization and the improvement of living conditions led to an evolution of food diets, which became richer in meat, dairy products and cooking oil, driving a rise in the demand for animal feed (mostly maize and soybeans) and oilseeds. At the same time, resources needed for agricultural production (water and land), which were already scarce, are shrinking and deteriorating. According to some experts, without efficient policies aimed at addressing the rarefaction of resources, grain yields could fall drastically in the coming years[1]. The inability to answer the growing grain demand forced the country to raise imports over the past few years. The agricultural trade balance became negative in 2004 and the deficit kept on growing since then (Figure 13).

The rising cost of the agricultural trade deficit is theoretically easily compensated by China's high trade surplus, which kept on increasing in spite of the world economic crisis. In 2012, the balance of trade was above 181 billion euros, up by almost 60 percent from 2011, as exports to the US and Europe recovered[2]. However, the Chinese government attaches considerable importance to maintaining a high rate of food self-sufficiency. The roots of this policy can be traced back to the country's past. The history of China has indeed been marked by numerous episodes of famine, caused by natural disasters that regularly hit the territory. According to Bu and Bruins, more than 3000 famines struck Imperial China[3]. A survey conducted by John Buck shows that before 1920, peasants had experienced no less than three episodes of famine (about ten month-long) in average in their lives[4].

---

[1] XIONG, Wei, CONWAY, Declan, LIN, Erda, XU, Yinlong, JU, Hui, JIANG, Jinhe, HOLMAN, Ian, LI, Yan. Future cereal production in China: The interaction of climate change, water availability and socio-economic scenarios. *Global Environmental Change*, n°19, 2009.

[2] Directorate-General for Trade of the European Commission. *Trade European Union, Trade in goods with China*. Bruxelles, 16/01/2014, p. 9, http://trade.ec.europa.eu/doclib/docs/2006/september/tradoc_113366.pdf accessed on July 20, 2014.

[3] BRUINS, Hendrik J., BU, Fengxian. Food security in China and contingency planning: the significance of grain reserves. *Journal of contingencies and crisis management*, September 2006, vol. 14, n°3, p. 116.

[4] SMIL, Vaclav. Who Will Feed China? *China Quarterly*, September 1995, n°143, p. 801.

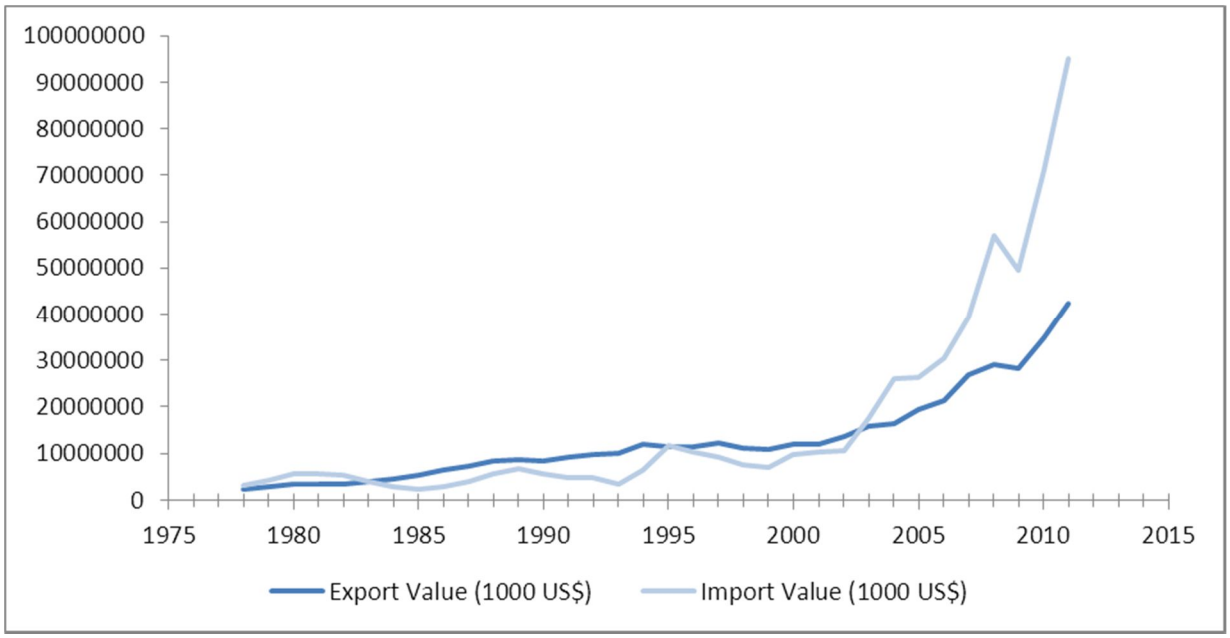


Figure 13: Agricultural trade balance in China 1978-2011
Source: FAO Database

Throughout history, famines often provoked social unrest and falls of regimes worldwide[1]. In China, rises and falls of regimes were particularly closely linked to their ability to provide enough grain to the population. As stated by Zha Daojiong and Zhang Hongzhou: "The traditional Chinese worldview made the ruler responsible for producing enough grains for his people and providing relief aid in the event of famine. These rulers who ignored this responsibility would face losing the 'Mandate of Heaven', or the right to govern."[2] Aware of the importance of these stakes, regimes of Imperial China started developing food shortage alleviation systems as soon as the 17th Century. However, food shortage was not phenomena confined to dynastic China, as the 20th century has in turn been marked by three episodes of famine (1920-1921, 1928-1930 and 1958-1961), the Great Famine of the Great Leap Forward being the last one of the series, and the most dramatic one as well.

[1] The link between famines and falls of regimes is not unique to China. A rich corpus of literature analyses this link in French revolution's examples, and explores « famine conspiracies » (see, among others: BORD, Gustave. *Le Pacte de famine : histoire-légende*. Paris : A. Sauton, 1887 ; CAHEN, Léon. Le Pacte de famine et les spéculations sur les blés. *Revue Historique*, mai-juin 1926, n°152, p. 32-43.)

[2] ZHA, Daojiong, ZHANG, Hongzhou. Food in China's international relations. *The Pacific Review*, 2013, vol. 26, n°5, p. 460.

In the current context of globalization, the fear of famines inherited from the Chinese past can only partially explain the importance attached by present leaders to food security – even if Lillian Li states that "no other civilization has had such a continuous tradition of thinking about famine, and no other nation's modern history has been so influenced by hunger and famine"[1]. During interviews, researchers working closely with the central government and central cadres mentioned two reasons to explain the government's willingness to maintain a high rate of food self-sufficiency. The first reason was "realism". I was explained that it was simply impossible for China to adopt a food strategy relying on imports like Japan[2], given the demographic weight of the country. As was stating an expert from the Development Research Centre of the State Council and official of the Ministry of Agriculture:

> "Food security is our number one goal. We need to support agriculture. […] It is unlikely that China will follow the examples of Japan, which is relying on imports for 80 percent for its food demand, or Korea, which is 27 percent self-sufficient. […] We cannot rely on international trade."[3]

The view of officials matches the view of a number of experts, according to whom, even if China would import just a small amount of its food demand, it would considerable destabilize global markets. Ni Hongxing, for instance, states that "If China imports 10 percent of its current [cereal] consumption, its import volume will represent 20 percent of global imports"[4].

The other reason mentioned by the interviewees was a willingness to guard the country against international price fluctuations. The price of products on international markets is not only about demand and supply, but is also a matter of currency exchange, which raises the possibility of price fluctuations[5]. The food price crises of 2007-2008, which saw the cereal price index reach a peak 2.8 times higher than in 2000, demonstrated the tremendous effects they could have on importing countries – food prices, according to various experts, were

---

[1] LI, Lillian. *Fighting Famine in North China: State, Market and Environmental Decline, 1690s-1990s*. Stanford: Stanford University Press, 2007, p. 2.

[2] Japan today imports about 60 percent of its food demand (Source: USDA ERS).

[3] Closed-door conference, Beijing, October 2012.

[4] NI, Hongxing. *Agricultural Domestic Support and Sustainable Development in China*. ICTSD Programme on Agricultural Trade and Sustainable Development, May 2013, p. 5.

[5] Presentation of the Director of the Department of Rural Economics Research of the Development Research Center of the State Council, closed-door conference, Beijing, October 2012.

crucial in the Arab spring. Concerns also exist, among Chinese leaders, that food could be used as a weapon by foreign powers[1].

Food security, today, remains one of the most important goals of China's current agricultural modernization policies and was mentioned by all the interviewees from the central level. Food security referred in fact as self-sufficiency in basic staple products, grain in particular. As such, food security is usually associated with grain self-sufficiency. The translation for food security, in Chinese, is "粮食安全" (*liangshi anquan*), literally "grain security". Grain is so important that in 1996, the government set up a grain self-sufficiency target of 95 percent. Even if strong debates recently occurred for a revision of this target[2], grain self-sufficiency objectives are still forming one of the most important guidelines of agricultural policies.

B - The other rationale of agricultural policies

Over the past decades, the rising food demand and the depletion of environmental resources revived historical fears in terms of food security, urging the government to put agricultural development back in the national agenda. However, agricultural development does not solely aim at reducing food insecurity. The rationale of agricultural policies is also to reduce the inequalities between rural and urban dwellers and to improve the living standards of a population that still constitutes almost half of the Chinese citizens.

---

[1] 专家八问主粮转基因化:我国究竟为何要盲目引进, 环球时报, 2013年08月21日*Zhuanjia ba wen zhuliang zhuanjiyinhua : wo guo jiujing weihe yao mangmu yinjin, Huanqiu shibao* [8 expert's questions on GM-staple grain : why exactly does our country import unnecessary things ?, Huanqiu Journal, 21/08/2013] http://news.xinhuanet.com/food/2013-08/21/c_125216637.htm, accessed on September 2013.

[2] Debates, in particular, started by questionning the importance of soybean for the country's food security (as in China, grains include cereals, but also peas and tubers). Researchers, at the beginning of the 2000s, started calling for the abandonment of soybean in the self-sufficiency target, to spare the scarce ressources of the country (张晓山, 中国的粮食安全问题及其对策, 爱思想, *Zhang Xiaoshan, Zhongguo de liangshianquan wenti jiqi duice, Aisixiang* [ZHANG, Xiaoshan. Chinese Food Security : problem and measures. *Aisixiang*, September 27th, 2012, http://www.aisixiang.com/data/57747.html]; 陈洁, 粮食进口与我国的粮食安全 , 调研世界 *Chen Jie, Liangshi jinkou yu zhongguo de liangshi anquan, Diaoyan Shijie* [CHEN, Jie. Grain imports and China's food security. *Diaoyan Shijie*, 2011, n°56, August 9th]). Since these articles were published, the self-sufficiency target became more flexible and excluded soybean. The new target fixed by the prime Minister at the 2013 People's Congress is that China has to maintain a self-sufficiency rate of 90% for rice, wheat and maize in the short and middle term (by 2015), and 80% in the long term (by 2025).

Rural-urban inequalities are particularly important in China. The tremendous economic growth China enjoyed during the past decades indeed mostly benefited urban areas, and the unbalance in government expenditures during the 1980s and the 1990s further widened rural-urban gaps. In addition, the fiscal decentralization reforms of the 1980s reduced the possibilities to redistribute growth from the most dynamic industrial export-oriented provinces of Eastern China to the remote agricultural provinces of inland areas. As a consequence, economic gaps widened. Urban revenues are today three times higher than rural revenues. Inequalities in terms of infrastructures are also important. At the beginning of the 2000s, rural areas were still suffering from a lack of running water infrastructures, electricity networks, roads, waste treatment systems, etc.[1]

The persistence of important inequalities between rural and urban areas has major consequences both in the countryside and in cities. In rural areas, it leads to a strong distaste of young and active people for farming. In urban areas, inequalities and the persistence of a dual system institutionalized by the *hukou*, in addition to being likely to provoke social unrest, also make migrants permanently established in cities to give up on their land. Finally, low rural incomes deprive the national economy from important levers of growth – agricultural modernization, by increasing farmers' revenue, could partly answer this issue.

1) The rural-urban divide from the perspective of the countryside

One of the main consequences of the large gaps between rural and urban living conditions is the ever-growing distaste of young and active people towards the idea of living in rural areas. The Chinese government wishes to encourage rural-urban migrations, to a certain extent, in order to increase the size of farming structures – so that they could be modernized, mechanized, create economies of scale and help farmers raise their income. However, the development of "professional and modern farms", highly desired by the government, requires the motivation of an active and educated labor force. The problem is that the poor living conditions in the countryside do not encourage young and educated people to launch business in rural areas, especially in the farming sector, which is particularly

[1] Many places I went to in the countryside did not have flushing toilets, and in a number of areas, households still had to use wells for water supply. The education system was usually considered as poor by rural dwellers in most places. Roads linking small villages to towns were still unpaved just a few months before my coming.

despised both for economic[1] and cultural reasons. Although agricultural universities exist (there are no less than 20,000 students in the Chinese Agricultural University in Beijing), the attractiveness of city life – both in terms of revenue and in terms of living conditions – encourage students majoring in agronomy to look for jobs in research institutes in biotechnology, in political bureaus or in sectors not related to agriculture at all. As was saying a young woman graduated from the Agricultural University of Hebei province, now working in the purchasing department of a retailer in Shanghai:

> "My major was agriculture. Most of my former schoolmates now work in Beijing, but in fields completely other than agriculture."[2]

Another former student in agronomy, graduated from the Chinese Agricultural University, had decided to turn to marketing after unsuccessful experiences in the agricultural sector[3]. According to a Master's director at the Chinese Agricultural University, the situation is indeed like what his students had depicted, but is currently evolving:

> "All of my students have found a job. There are more and more jobs for them, because there are more and more enterprises linked to agriculture."[4]

In order to encourage young people to live in rural areas, the government has been actively trying to improve rural living conditions through the development of infrastructures and the rise in agricultural subsidies. A number of programs aimed at training on-site farmers have also developed over the past few years. In 2004, the government created the "Sunshine project" (阳光工程 *yangguang gongcheng*). At first, this program aimed at providing rural people with trainings linked to catering and hotel services, health care, construction, manufacturing and domestic service, in order to lift them out of poverty by offering them the ability to work in sectors other than farming[5]. In March 2013, the Sunshine project was revised and gave a much larger role to the agricultural sector. The statement published by the Ministry of Agriculture clearly reflects this shift in priorities: "The 'Sunshine Project', a

[1] Although an increasing number of agricultural enterprises offer decent wage to their workers, the average wage does not compensate what is seen as a low quality life in the countryside, especially by young and educated people.

[2] Interview, Shanghai, October 2012.

[3] Interview, Beijing, May 2013.

[4] Interview, Beijing, May 2013.

[5] 'Sunshine' project to offer rural people job training. *People daily*, 18/02/2004 (http://english.people.com.cn/200402/18/eng20040218_135081.shtml accessed on January 31st, 2014).

project designed to train rural labors for increasing their employment opportunities in cities, is to be reoriented to training on agricultural technology and agribusiness."[1]In addition to the Sunshine Project, several programs seek to educate and train on-site and new farmers and at "enhancing the development of rural talents". Among others, programs include business start-up trainings, basic scientific education and field visits[2].

Efforts to raise the attractiveness of the farming sector and to improve the knowledge of on-site farmers are important. However, fixing people in rural areas and ensuring that these latest are both able to take care of land left uncultivated by migrants and active enough to modernize the sector is a very challenging task, considering how deeply engraved the cultural factors stigmatizing rural areas and the farming sector are in the mind of the population (an issue that will be further explored in Chapter 6).

Rural-urban gaps drive an important farming workforce out of rural areas and raise the question of "who will farm in the future". On a more shortcoming perspective, the fact that rural areas are highly unattractive to young and active people raises the question of "who will be able to modernize the agricultural sector".

Finally, the low income of rural dwellers also deprives the national economy of what could be an important lever for growth. Although the relative gap between urban and rural revenue decreased over the past few years[3], in terms of absolute value, the gap kept on growing[4]. In addition, official data released by the National Bureau of Statistics probably under-estimate the real gap. The calculation of revenue, in rural areas, indeed sometimes includes self-consumption, such as grain and vegetables grown by the farmers themselves and consumed by the household members. On the opposite, revenues of urban dwellers do not include subventions they get from unemployment and health insurance. In 2012, the net

[1] Information Office of the Chinese Ministry of Agriculture. Vice Minister Zhang prioritizes three major projects in agricultural sci-tech. *Online newsfeed of the Ministry of Agriculture*, 2013/03/04. (http://english.agri.gov.cn/news/dqnf/201304/t20130409_12148.htm accessed on January 31st, 2014).

[2] Department of Sectoral Policy and Law of the Chinese Ministry of Agriculture. 2011 Policy Measures to Support Increase in Grain Output and Farmers' Income (Part II). *Online newsfeed of the Ministry of Agriculture*, 2013/04/19. (http://english.agri.gov.cn/governmentaffairs/pi/201304/t20130422_19488.htm accessed on January 31st, 2014).

[3] The ratio went from 3.23 in 2010 to 3.1 in 2012.

[4] The gap went from 13,1901 RMB in 2010 to 16,648 RMB in 2012.

income per capita, in rural areas, was of 7,917 RMB per year (by comparison, the disposable income per capita in urban areas was of 24,765 RMB), insufficient to encourage spending in rural areas. Raising the income of rural dwellers and improving rural infrastructures would unlock the consumption capacity of hundreds of millions of people, which would have effects on the whole economy.

2) **The rural-urban divide from the perspective of cities**

In addition to economic and development gaps that exist between urban and rural areas, institutional mechanisms inherited from the past further divides the population in two parts, making it even more difficult to reduce inequalities between rural and urban dwellers. The so-called "urban-rural dual structure" (*chengxiang eryuan jiegou* 城乡二元结构) is closely linked to the *hukou* system. Created in 1950, this system does not prevent rural-urban migrations anymore – although it was created specifically for this purpose. However, the separation of the Chinese population in two categories – rural and urban dwellers – prevents rural migrants who live in urban areas to buy home and to have access to social security and to education.

The urban-rural dual structure has increasingly been denounced by the Chinese media and by a number of scholars[1], as an unfair system likely to trigger social instability and to impede economic growth. Since 2008, the central government, aware of the situation, has been regularly trying to encourage local governments to make their *hukou* scheme more flexible and to integrate more migrants in their urban systems. However, local governments are still reluctant to give up on the *hukou* system, mostly because of the cost associated to such a reform. According to a report issued by the China International Research Committee

[1] To name just a few examples of the papers published on this topic: 蓝方, 城乡鸿沟：农民市民化中那些待拆的壁垒, 财新《新世纪》, 07/01/2013 *Lan Fang, chengxiang honggou: nongmin shimin hua zhong naxie dai chai de bilei, Cai xin "Xin shiji"* [LAN, Fang. The gap between urban and rural areas: the barriers to the dismantlement of transformation of rural migrants into urban residents. *Caixin New Century*, n°1, 7 January 2013]; 范子英, 加速农民工"市民化", 财经, 2012年第19期 *Fan Ziying, jiasu nongmingong 'shiminhua', Caijing* [FAN, Ziying. Accelerate the transformation of rural migrants into urban residents. *Caijing*, n°19, 29 July 2012] ; 陆铭, 自由迁徙的经济价值, 财经, 2012年第18期 *Lu Ming, Ziyou qianxi de jingji jiazhi, Caijing* [LU, Ming, The economic benefits of the freedom of movement. Caijing, n°18, 16 juillet 2012].

for Development and Urbanization Strategy[1], the average cost of integrating one rural migrant into urban systems would be 100,000 RMB. In addition to the expenditures linked to the integration of migrants into education and health systems, costs linked to the building of new infrastructures – such as roads or electricity and water networks – should also be added. Local governments would also be afraid that the integration of rural migrants into urban systems would lower the quality of existing public services and provoke anger among the connected urban middle- and upper-classes, who have the means to protest against the downgrading of public services. Finally, the urban-rural dual structure created by the *hukou* system has also long been granting enterprises established in urban areas with an abundant and cheap labor force coming from rural areas, hard to give up onto.

Debates have been fiercer lately about the relaxation of the *hukou* system and there has also been a growing debate about alternative ways of counting urban population to provide subsidies to localities[2]. Although this is an unquestionable proof of the willingness of the central government to improve the living conditions of the population of migrants, the reluctance of local governments to change the system is still strong, particularly in the over-populated cities of the eastern parts of the country, where the majority of the urban population is concentrated.

The risks of letting migrants live in cities while being locked in the discrepancies of a persistent rural-urban dual structure are not negligible. Among the 700 million people living in urban areas, almost 230 million still hold a rural *hukou*. On the borderland of legality, this population made of former farmers is highly disadvantaged. Rural migrants generally do not enjoy a high level of education and are offered low wages and insecure and temporary jobs. In addition, they often work without employment contracts, which could be a first step towards pension rights, health insurance, and protection for workplace accidents, unemployment insurance and family assistance. Only about half of the rural migrant population would have a fixed term contract agreement, the rest being employed informally[3].

---

[1] 中国国际城市化发展战略研究委员会,《2008年中国城市化率调查报告》, 2008 [China International Research Committee for Development and Urbanization Strategy. *2008 Report on urbanization rate in China*. 2008].

[2] See, for instance, "Cracking the Hukou Code to Hasten Urbanization", Caixin – New Century, August 7th, 2013, http://english.caixin.com/2013-08-07/100566666.html.

[3] Without any contract nor residency permit that could offer them access to social coverage. LAN, Fang in 蓝方, 城乡鸿沟：农民市民化中那些待拆的壁垒, 财新《新世纪》, 07/01/2013 *Lan Fang,*

In the past, the floating population used to enjoy the possibility to go back to the countryside to farm its land and have access to subsistence agriculture, in case of dismissal or disease. However, the new generation of migrants has little experience in farming and has higher expectancies of urban life[1]. In other words, most of them do not intend to return to the countryside, even on a temporary basis.

In cities, migrants live in rented insecure accommodation, sometimes illegal (like 地下室 *dixiashi*, or underground housing), sometimes not connected to basic public infrastructures. Local authorities often see these places as slums (贫民窟 *pinminku*) that need to be turned down for the sake of modernization of urban areas. As stated by Wu, Zhang and Webster: "The habitats of rural migrants are still regarded as backward places to be modernized"[2]. Although programs aimed at compensating and relocating people expelled from their houses do exist, they usually do not include migrants without private property rights and residency permits in their beneficiaries.

The inequalities between these two groups of urban dwellers who live side-by-side (or beneath one another…) are likely to give rise to social unrest. Violent protests already regularly occur on building sites, where workers express their anger for delays in the payment of their salaries. Today, another issue is increasingly worrying local authorities. The average "migrant household" size has increased to 2.5 persons, as less and less migrants leave their children to their parents staying in rural areas. This new generation of young migrants has never farmed, sometimes never lived in the countryside, and compares its living conditions with the ones of the other urban dwellers. This might create a feeling a frustration that can lead to important social unrest. As Pun Ngai and Lu Huilin sum it up: "The second generation of peasant-workers has gradually become aware of its class position and has participated in a series of collective actions. Having a quasi-social status, *nongmingong*, the second generation of migrant workers is now experiencing a deeper sense of anger and dissatisfaction than that

---

chengxiang honggou: nongmin shimin hua zhong naxie dai chai de bilei, Cai xin "Xin shiji" [The gap between urban and rural areas: the barriers to the dismantlement of transformation of rural migrants into urban residents, *Caixin New Century*, n°1, 7 January 2013].

[1] ZHANG, Xiaomin. The New Generation of Migrant Workers in Labour Market in China In PRIES, Ludger (ed.). *Shifting Boundaries of Belonging and New Migration Dynamics in Europe and China*, Palgrave Macmillan, 2013.

[2] WU, Fulong, ZHANG, Fangzhu, WEBSTER, Chris (eds). *Rural migrants in urban China: enclaves and transient urbanism*. London ; New York : Routledge, 2014, p. 13.

of the first generation, and is realizing that they are increasingly cut off from so many erstwhile or nominal sources of support – in fact, there is almost no returning to their hometown."[1]

Integrating migrants in cities would not only alleviate social issues in urban areas. It could also become a significant lever for the national economic growth. The floating population indeed accounts for almost 20 percent of the Chinese population. Migrants do not enjoy high salaries and have to spare money in case of dismissal, disease or retirement. As a consequence, they consume much less than other urban dwellers, although having access to the same markets and commodities[2]. In the current context of contracted international demand, the Chinese government is perfectly aware of the necessity to rely on domestic sources to generate economic growth. Since the middle of the 2000s, several regulations and policies were issued that aimed at improving the living conditions of the 230 million of potential consumers living in cities[3].

Whereas in the past, the conditions of migrant workers contributed to the Chinese economic development by offering cheap labor to industries and urban construction sites (migrants were accounting for 68 percent of the employees of processing and manufacturing industries and 80 percent of the labor of the construction industry[4]), they are now likely to threaten social stability in urban areas and prevent the country from benefiting from a leverage effect for economic growth. Stabilizing the living conditions of the population of migrants is essential, not only to address social issues in urban areas, but also because it would encourage migrants to give up on their land, enabling farmers staying in the countryside to cultivate bigger farms.

---

[1] PUN, Ngai, LUN, Huilin. Unfinished Proletarianization: Self, Anger, and Class Action among the Second Generation of Peasant-Workers in Present-Day China. *Modern China*, September 2010, vol. 36, n°5, p. 512.

[2] Chen, Lu and Zhong estimate that the consumption of migrants is 16–20% lower than that of local urban residents. CHEN, Binkai, LU, Ming, ZHONG, Ninghua. How Urban Segregation Distorts Chinese Migrants' Consumption? *World Development*, 2015, vol. 70, p. 133-146.

[3] See ZHANG, Xiaomin. The New Generation of Migrant Workers in Labour Market in China In PRIES, Ludger (ed.). *Shifting Boundaries of Belonging and New Migration Dynamics in Europe and China*, Palgrave Macmillan, 2013, p. 170.

[4] 国务院研究课题室, 中国农民工调研报告, 北京: 言实出版社, 2006 *Guowuyuan yanjiu keti shi, zhongguo nongmingong diaoyan baogao, beijing : yanshi chubanshe* [Research office of the Chinese State Council, Research Report on Migrant Workers, 2006, p. 172].

C - The 2000s' change of predicament

1) The emergence of *san nong* policies

The above-mentioned evolution of the stakes at hand in terms of food security, social stability and economic development has put pressure on the government over the last decade. Premises of the official re-emergence of agriculture and rural areas in the top-priorities of the government appeared at the end of the 1990s. According to Chelan Li, at the beginning, the willingness of the state to engage in new reforms was not motivated by the rising issues in rural areas, but rather by a willingness to reduce the power of local officials[1]. The reform comprised two phases: during the first phase – from the release of the original reform package in 2000 to its implementation in 2003 – the rural tax regime was rationalized. Many items were abolished, but agricultural taxes were raised in order to compensate townships for the losses generated in their income. This first step proves that, as Chelan Li puts it, "at the beginning, the reform did not intended to benefit peasants, but was rather a way to lower the power gained by local governments in the pace of decentralization"[2].

Farmers started benefitting from the actual subsidies only during its second phase of implementation. In 2004, the Number One Document – the first document issued by the State Council and the Central Committee of the Communist Party at the beginning of each year, which generally sets the tone of the policies that are to be promulgated throughout the year – introduced the concept of the *san nong* (三农): "Under the guidance of the sixteenth Communist Party's National Congress, in 2003, various regions and departments, in accordance with the requirements of the central authorities, strengthened their will to solve the "*san nong*" issue, by withstanding the serious assaults of sudden outbreaks of SRAS, surmounting the high impacts of natural disasters that frequently occur, achieving the adjustment of the agricultural structure, steadily developing rural economy, deepening rural reforms, raising peasants' revenue and preserving and stabilizing rural society."[3]

---

[1] CHELAN LI, Linda. Working for the Peasants? Strategic Interactions and Unintended Consequences in the Chinese Rural Tax Reform. *The China Journal*, January 2007, n°57, p. 89-106.

[2] CHELAN LI, Linda. *Ibid.*, p. 105.

[3] 2004年中央一号文件 - 国务院关于促进农民增加收入若干政策的意见 *2004 nian zhongyang yihao wenjian – guowuyuan guanyu cujin nongmin zengjia shouru ruogan zhengce de yijian* [2004 Number One Document – State Council's opinion about policies to accelerate the rise in farmers' income].

In Chinese, "*san*" (三) means "three" and "*nong*" (农) represents the broader notion of "rurality". As a consequence, "solving the *san nong* issue" implies not only developing rural areas, but also modernizing the agricultural sector and focusing on the improvement of the living conditions of farmers.

The 2004 Number One Document recognizes the issue of farmers' living conditions[1] and stresses that raising farmers' income was a significant step to address economic and political issues: "In the long term, the fact that farmers' income cannot increase will not only affect the living standards of these latest: it will also have an impact on food production and on the supply of agricultural products; it will not only hinder the development of rural economy, but it will also restrict the growth of the national economy; it will not only affect social progress in rural areas, it will also prevent on achieving the goal of building a well-off society; it is not only an major economic problem, it is also an important political issue."[2]

The document encourages ministries and local governments to support agriculture, particularly in major grain producing areas. It recommends promoting the development, modernization and industrialization of the agricultural sector and food chain, in order to improve the quality and safety of food products. The document also stresses the need to diversify the income sources of rural dwellers, by, among others, promoting the development of rural secondary and tertiary industries. Finally, the text emphasizes the need to strengthen infrastructures in the countryside. As we can see, the document includes policies linked to the modernization of the agriculture and food sector ("*nongye* policies"), policies focusing on rural dwellers ("*nongmin* policies") and policies attaching importance to the improvement of rural conditions ("*nongcun* policies"). The three kinds of policies are presented as strongly embedded in each other: for instance, the document underlines that building infrastructures in rural areas will help developing agricultural activities, which will in turn lead to a rise in farmers' income.

---

[1] "Over the past few years, farmers' per capita net income has been increasing slowly; […] the income of many rural households has been decreasing; urban-rural economic gaps have been continuously widening." 2004年中央一号文件 - 国务院关于促进农民增加收入若干政策的意见 *2004 nian zhongyang yihao wenjian – guowuyuan guanyu cujin nongmin zengjia shouru ruogan zhengce de yijian* [2004 Number One Document – State Council's opinion about policies to accelerate the rise in farmers' income].

[2] 2004年中央一号文件 *2004 nian zhongyang yihao wenjian* [2004 Number One Document].

2) The evolution of agriculture in central documents

Almost all of the Number One documents that were published between 2004 and 2015 promulgated agricultural and rural development policy guidelines, except from the 2011 document, which focused on water conservancy. The titles of the documents clearly demonstrate it, as shown in Table 9.

In addition, the willingness of the central government to put greater emphasis on agricultural development was further confirmed by the priorities set by Five-Year plans. The evolution of the role given to the agricultural sector between the first half and the second half of the 2000s appears clearly when comparing the Tenth and the Eleventh Five-Year Plans. In the Tenth Five-Year Plan (2001-2005), agriculture was depicted as one lever of development among others. Agricultural development was mentioned only in the second chapter, among a whole set of tools aimed at "strengthening the economic structure". In comparison, the Eleventh Five-Year plan (2006-2011) introduces agricultural development as a fundamental and fully-fledged objective and dedicates a whole chapter to the "building of the socialist countryside". This chapter appears in second position, just after the chapter introducing general guidelines and objectives. In addition, there are much more occurrences of the word 农 (*nong*) in the Eleventh Five-Year Plan than in the Tenth Five-Year Plan, including in chapters dedicated on issues other than the building of the socialist countryside (Table 10).

Year	Focus/main theme or goal
2004	Raising farmers' income
2005	Improving the overall production capacity of agriculture
2006	Building a "new socialist countryside"
2007	Developing modern agriculture and promoting the construction of a new socialist countryside
2008	Strengthening the foundations of agriculture
2009	Achieving steady agricultural development and rise in farmers' income
2010	Realizing coordinated urban-rural development and further strengthening the foundations of agricultural and rural development
2011	Accelerating the development of water conservancy
2012	Speeding up scientific and technology innovation to ensure adequate supply of agricultural products

2013	Accelerating the modernization of agriculture and further enhancing the vitality of rural development
2014	Deepening rural reform and accelerating agricultural modernization
2015	Enlarging the reform and bringing forth new ideas to speed up agricultural modernization

Table 9: Titles of Number One Documents (2004-2014)

In the 1980s and 1990s, central policies used to consider industrialization as the main vehicle for economic development – including in rural areas. The Tenth Five-Year Plan gave a greater role to agriculture, which became a real tool for rural development. The plan also highlights the importance of increasing rural dwellers' income, as a way to create new domestic levers for the consolidation of the Chinese economic growth. The Eleventh Five-Year plan further stresses the significance of the agricultural sector. Among others, the plan emphasizes that agriculture is not only useful to develop rural areas, but is also a pillar for the other economic sectors and addresses social and political issues. Such a discourse considerably changes the long-established domination of industrialization and urbanization previously promoted by central policies.

TENTH FIVE-YEAR PLAN 2001-2005		ELEVENTH FIVE-YEAR PLAN 2006-2010	
Chapters and occurrences of the word 农		Chapters and occurrences of the word 农	
Chapter 1 Guidelines and objectives	3	**Chapter 1** Guidelines and objectives	16
Chapter 2 Economic structure Main goals: - **strengthening the foundations of agriculture** and promoting the development of rural economy; - optimizing industrial structure and enhancing China's international competitiveness; - developing the service sector; - etc.	95	**Chapter 2** Building the socialist countryside	172
		Chapter 3 Moving forward the optimization of the industrial structure	8
		Chapter 4 Accelerating the development of the services industry	3
		Chapter 5 Promoting a coordinated regional development	17
Chapter 3 Technology, education and talent	5	**Chapter 6** Building an environmentally-friendly society and saving natural resources	7

Chapter 4 Population, resources and environment	11	**Chapter 7** Rejuvenating the country through science and education and empowering the country through people's talents	15
Chapter 5 Reform and opening up	0	**Chapter 8** Deepening institutional reform	0
Chapter 6 People's lives	5	**Chapter 9** Implementing the strategy of mutually beneficial opening up	0
Chapter 7 Intellectual civilization	0	**Chapter 10** Moving forward the building of a harmonious socialist society	4
Chapter 8 Legal system	0	**Chapter 11** Strengthening the building of socialist democratic politics	0
Chapter 9 National defense	0	**Chapter 12** Consolidating the socialist culture	3
Chapter 10 Implementing the plan	0	**Chapter 13** Strengthening the national defense	0
		Chapter 14 Implementing the program	11
TOTAL occurrences of the word 农	119		256

Table 10: Frequency of occurrence of the word 农 in the Tenth and Eleventh Five-Year Plans

The Twelfth Five-Year Plan (2011-2015) goes in the same direction that was established by the Eleventh Five-Year Plan, as the second part of the Plan already focuses on the "acceleration of rural and agricultural development". In this plan, again, the word 农 is mentioned an impressive number of times.

TWELFTH FIVE-YEAR PLAN 2011-2015	
Chapters and occurrences of the word 农	
Part I: Transform growth pattern and create a new scenario for scientific development	
Chapter 1: Develop the environment	3
Chapter 2: Guidelines	2
Chapter 3: Main objectives	4
Chapter 4: Policy guidance	9
Part II: Accelerate the building of a new socialist countryside	
Chapter 5: Accelerate the development of modern agriculture	38

Chapter 6: Expand the channels to increase rural income **Chapter 7: Improve rural production and living conditions** **Chapter 8: Improve institutional mechanisms for rural development**	33 42 23
Part III: Transform and raise the competitiveness of core industry	2
Part IV: Build an environment to extensively develop the service sector	7
Part V: Optimize the structure and promote coordinated regional development and "healthy" urbanization	26
Part VI: Green development: build a resource-saving and environment-friendly society	9
Part VII: Innovation-driven: Implement science and education strategy and the development of new talents to reinvigorate the country	5
Part VIII: Improve people's livelihood: establish and improve basic public service systems	11
Part IX: Strengthen and innovate in social management	1
Part X: Pass on innovation: Extensively promote prosperous cultural development	3
Part XI: Reform and improve the socialist market economic system	1
Part XII: Improve the level of opening-up for mutual benefit	3
Part XIII: Democratic development: Promote the establishment of a socialist political civilization	0
Part XIV: Deepen cooperation: Build a common homeland for the Chinese people	0
Part XV: Civil-military integration: Strengthen the construction of national defense and the modernization of the army	0
Part XVI: Strengthen implementation and coordination of the plan	2
TOTAL occurrences of the word 农	224

Table 11: Frequency of occurence of the word 农 in the Twelfth Five-Year Plan

3) The rise in subsidies directly targeting agriculture

The greater emphasis given to the agricultural sector was not just "virtually" established by central policy guidelines promulgated through Five-Years Plans and Number One Documents. Public expenditures dedicated to *san nong* issues also expanded dramatically in

the years following the promulgation of the first Number One document on rural issues (Figure 14).

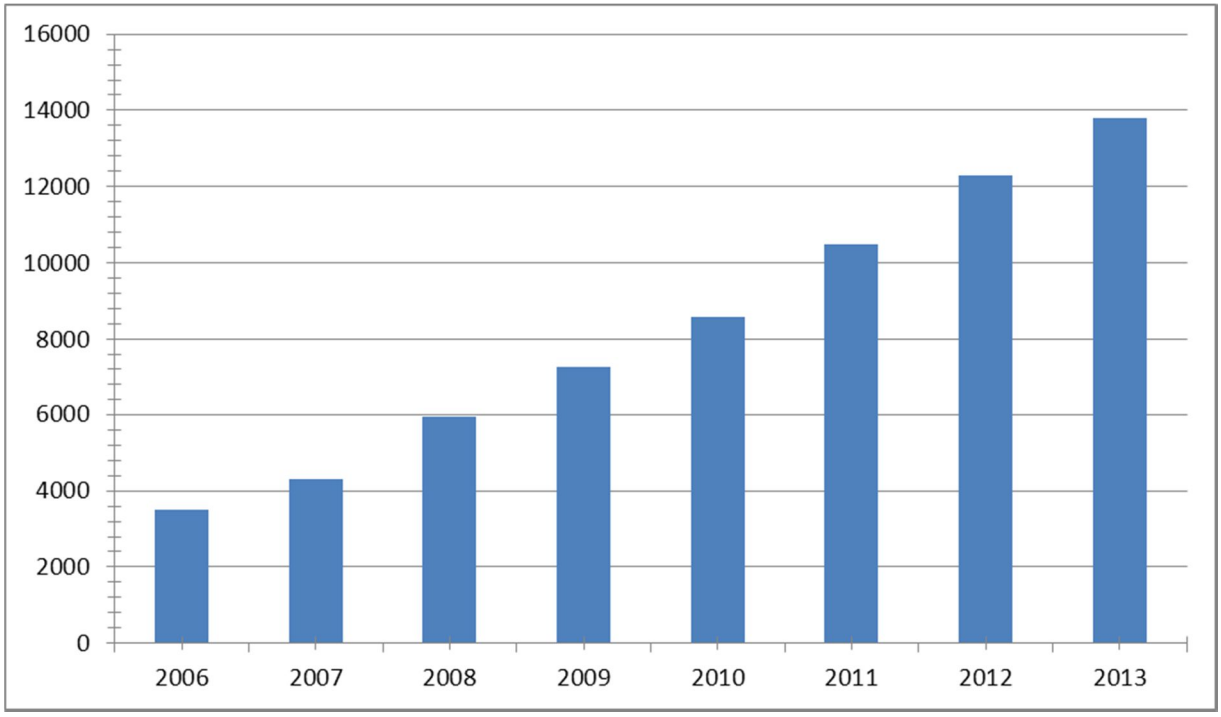


Figure 14: San nong public expenditures (100 million RMB)
Source: 财政部，财政支持“三农”情况 *Caizhengbu, caizheng zhichi “sannong” qingkuang* [Ministry of Finance, Financial support situation for the three rural issues] http://www.mof.gov.cn/zhuantihuigu/czjbqk1/czzc/201405/t20140507_1076149.html

At first, expenditures were mainly allocated to the improvement of rural infrastructures. However, in parallel, the government also progressively built a comprehensive system aimed at directly supporting agricultural production activities (Figure 15).

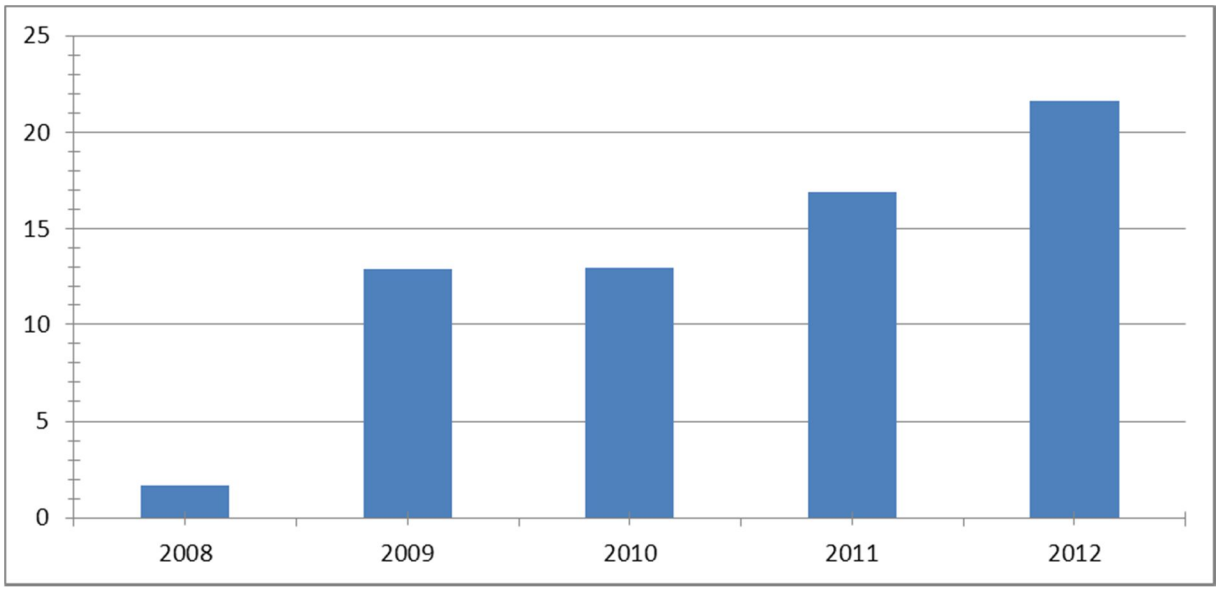


Figure 15: Agricultural subsidies: amounts 2008-2012 (billion euros)

Even if it does not formally constitute a "subsidy", a fundamental step of the establishment of this new system was the abolishment of agricultural taxes in 2006. This reform eliminated relieved farmers from what had long been designated as "the burden of peasants".

The support system itself consists in several kinds of subsidies. The ones dedicated to agricultural inputs, such as pesticides and fertilizers, represent the largest share of expenditures. Subsidies are not always granted to farmers and can instead benefit input producers. Since 2003-2004, fertilizer producers, for instance, enjoy preferential prices for electricity, gas, coal or transport. In addition, they are also granted abatements of VAT and of export taxes for the export of finished products. Finally, producers can have access to preferential loans for the building of production and storage infrastructures. All these mechanisms lower production costs and producers are then supposed to pass on price reductions to the farming sector.

Subsidies for agricultural inputs include seeds. Since 2002, farmers can have access to targeted subsidies designed to help them purchase improved seeds. Financial support was first established for soybeans, before spreading to rice, wheat and maize in 2004 and 2005. Allocation systems are within the jurisdiction of each province and depend of the size of their financial reserves for grain programs. The amounts of the subsidies as well as the allocation methods differ greatly from one region to another.

In 2002, the government also started supporting the purchasing of agricultural machinery, in order to further develop the mechanization of the sector. Financial help targets farmers, cooperatives and/or producers, according to rules set by local governments.

Direct payments have only recently been introduced in the subsidy scheme and they still constitute a small part of it (Figure 16). Their amounts differ greatly from province to province. Originally introduced with the aim of compensating grain growers for the rise in the price of agricultural inputs, they target mostly grain-producing areas.

The subsidy scheme is finally completed by procurement and storage policies, which essentially target grain – even if the state can also intervene in markets through the purchasing or selling of other commodities such as pork. Grain is bought by the three SOEs, Sinograin, COFCO and China Tex, at minimum market prices annually set by the NDRC.

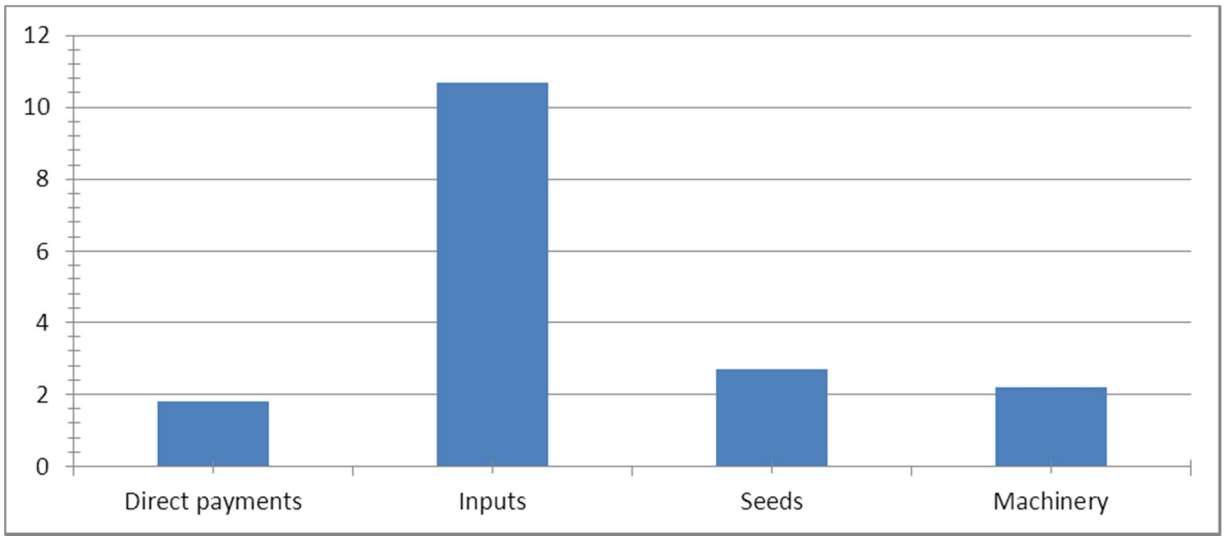


Figure 16: Agricultural subsidies (2011) (billion euros, diplomatic source)

Conclusion

This chapter started by demonstrating how crucial the roles played by peasants, rural areas and agriculture were in state building at the dawn of the PRC. At the beginning of the 20th century, although rural dwellers accounted for 80 percent of the population, the countryside was a political vacuum. The exploitation of peasants by landlords and usurers created a fertile ground for revolution for the nascent Communist Party, who took advantage of the situation by taking land reform as a rallying cry to spread revolution throughout the country. Once their leadership had been established, communist leaders kept on relying on

rural areas for state-building, among other things through the establishment of a nation-wide agricultural development project: the People's Communes.

In the 1980s, after having implemented important reforms in the agricultural sector – of the abolition of the People's Communes and the implementation of the Household Responsibility System – the state progressively lost its interest towards agriculture and started concentrating on urbanization and industrialization. Several institutional reforms further weakened the involvement of governmental actors in agricultural production activities, such as the progressive abolition of procurement schemes, the declining importance of state planning in the agricultural sector and the instauration of village elections.

However, on the eve of the 21st century, issues linked to agriculture and rural areas seriously worsened. Firstly, food security concerns resurfaced, as in 2004, the agricultural trade balance of China became negative due to the evolution of food diets and the degradation and downsizing of production resources. Secondly, rural-urban gaps have been keeping on widening, which started posing social stability threats both in rural areas and in urban areas. Faced to the necessity to address these issues, the government, in the middle of the 2000s, started promulgating policy guidelines focusing on the need to modernize the agricultural sector. The analysis of Number One Documents and Five-Year Plans that have been published since and the rise in expenditures dedicated to rural areas and agriculture demonstrates a rapid renewal of the interest of the central government for agriculture. Are these concerns transmitted down to local areas? Which strategies are implemented by central and local states to encourage agricultural modernization? Which levers are used by state actors to build a new state capacity in an area which had been abandoned by the state during two decades – agricultural production? The next chapters would like to explore a number of elements to address these questions.

II. Chapter 2: Food-processing enterprises: the new leaders of agricultural modernization

Introduction

In order to answer the question whether the central concerns of the past decade were effectively transmitted down to local areas, a crucial step of research was the analysis of the implementation of agricultural modernization policies at the local level. Lushan, in Jiangxi, and Lanshui, in Shandong, were selected as case studies for this research because the two counties are located in areas with different conditions for agricultural development. Jiangxi is indeed an inland and landlocked area characterized by its hilly topography, whereas the flat land of Shandong, along with its coastal situation, has long enabled the region to develop its export-oriented agriculture – whether exports are directed to other provinces or to other countries. As a consequence, before I started conducting fieldwork in these areas, I was expecting to see two different stages of agricultural development. However, agricultural structures I explored in the county of Lushan, in Jiangxi (orange orchards), and in the county of Lanshui, in Shandong (apple orchards), in fact showed strong similarities. Jiangxi, as the cradle of the Communist Party lagging behind in its development, recently enjoyed new support policies following an impetus coming from above. The place I visited in Shandong, on its side, was located in the inland part of the province and, as such, was suffering from delays in its development. As a consequence, the two development stages of the agricultural sectors were approximately similar in the two areas.

Picture 2: Topography of Lushan
(Photography by the author, October 2013)

Picture 3: Topography of Lanshui
(Photography by the author, November 2012)

Apart from these similarities, the two areas were both managed by local governments who were quite eager to develop the agricultural sector. I collected many testimonies and

could see many signs of the efforts recently made for agricultural modernization in the two areas.

The details of local agricultural modernization policies, however, differed widely from one area to the other, whether they concerned the amounts of agricultural subsidies, their allocation methods or the bureaus in charge of the implementation of agricultural modernization. One feature was though common to the two areas (and to several other areas I visited, see Introduction V.A.): the fact that local state actors were strongly relying on food-processing enterprises to steer agricultural modernization.

This chapter wishes to analyze the root causes of the willingness of local state actors to rely on enterprises for agricultural modernization. It starts by describing the past legacies which led to the current patterns of relationships in rural areas and to the eagerness of local governments to rely on enterprises to fulfill economic development goals. The chapter then examines how new stakes at hand for agriculture (and particularly the stakes of food price inflation and consumers' health) became a rationale for giving a greater role to enterprises. Finally, the chapter explores the local patterns of power and the power unbalance between farmers and enterprises – another reason underlying the choice made by local governments to rely on food-processing enterprises.

I - Past legacies: building on the existing ground of rural state-enterprises networks

"As one moves farther down the hierarchy of local government, formal distinctions between property rights and administrative rights tend to become blurred. […] [Documented cases] suggest a growing trend toward the fusion of political and economic power at the basic levels." Richard Baum and Alexei Shevchenko, *The State of the State*.

The choice of relying on enterprises to conduct economic development is not new, especially in China, and especially in rural areas. From the encouragement of the multiplication of Township and Rural Enterprises by local governments in the 1980s to the state-led privatization of collectively-owned enterprises and to the controlled development of private enterprises in the 1990s and 2000s, rural enterprises have always played a major role in rural economic development.

A - TVEs as the drivers of the 1980-1990 rural development

In the 1980s, the decrease in the importance of state economic planning and the reforms of the fiscal system gave new powers to local governments. However, the empowerment of local governments was not without causing problems. Decentralization was not a smooth process and was regularly punctuated by backward moves. In 1994, for instance, an important recentralization of the fiscal system was conducted in order to limit the rise in the power of cadres in townships and villages[1].

In the course of decentralization, local governments, who were granted with greater power, also had to face an increasing pressure to develop the economy in their area of jurisdiction. In the aftermath of fiscal decentralization, local authorities indeed became "fiscally autonomous" for a certain number of items, and as such, were keen on developing local economic activities to increase their revenue.

In addition, township and village governments had been deprived from income sources by the abolition of People's Communes. As a consequence, at the beginning of the 1980s, local cadres had to find a way to develop local activities that could help them keep the political and economic control they had gained in the era of collectivized agriculture.

Finally, the new cadres evaluation system granted an upper position to economic growth achievements. As poor economic performance, from then on, could adversely influence the career of local officials, these latest became particularly eager to promote development.

Local leaders were not only exhorted to achieve economic growth by the new pressures put onto them by fiscal decentralization and by the reform of the cadres evaluation system. They were also given greater incentives to do so. Promoting industrial growth was indeed a way to get wealthier, thanks to the institutional settings of the cadres responsibility system, such as the establishment of direct links between the income of local cadres and the local industrial performance[2].

---

[1] OI, Jean C., SINGER BARBIAZ, Kim, ZHANG, Linxiu, LUO, Renfu, ROZELLE, Scott. Shifting Fiscal Control to Limit Cadre Power in China's Townships and Villages. *The China Quarterly*, Septembre 2012, vol. 211.

[2] WHITING, Susan H. *Power and Wealth in Rural China: The Political Economy of Institutional Change*. Cambridge: Cambridge University Press, 2000, p. 107.

The most important effect of incentives and pressures was perhaps the tremendous development of Township and Village Enterprises (乡镇企业 *xiangzhen qiye*), which created a path dependency for local officials to pursue growth targets by relying on enterprises. Many scholars consider that the development of TVEs was the main driver of economic growth in rural areas and highly contributed to the rise and diversification of revenues[1]. Some even regard TVEs as one of the most important drivers of the economic growth that was achieved in the 1980s and 1990s. As Oi *et al.* state it: "Throughout the reform period, township and village enterprises (TVEs) have constituted one of the most dynamic sectors in the Chinese economy"[2]. TVEs, as engines for growth, effectively answered development goals assigned to local cadres.

Township and Rural Enterprises developed tremendously in the 1980s. From only 1.4 million in 1980, their number rose to almost 19 million in 1988[3]. One of the most important factors that contributed to this rapid development was the considerable agricultural labor surplus generated by decollectivization. Local cadres had to find a way to create new jobs for the rising number of unemployed people in rural areas, as peasants, weakened by the era of collectivization, were economically unable to create enterprises themselves. In the end, from 1978 to 1996, TVEs absorbed 110 million of laborers coming from the agricultural sector[4].

TVEs were collectively-owned, but had few things in common with the Maoist collective systems once the Household Responsibility System was established (Chapter 1, II.B.1.b.). According to Pei Xiaolin, TVEs were then "relatively independent [from the state control] and community oriented"[5]. For the author, this difference played a significant role in the development of TVEs in rural areas. This does not mean that local governments were not involved in the process. They were, on the opposite, quite active players in the development of TVEs. In reality, the ownership structure of TVEs was not very different from the one of

[1] DE JANVRY, Alain, SADOULET, Elisabeth, ZHU, Nong. *The Role of Non-Farm Incomes in Reducing Rural Poverty and Inequality in China*. Working Paper Series, Calif., Berkeley: Department of Agricultural & Resource Economics, UC Berkeley, 2005.

[2] WANG, Juan. Going Beyond Township and Village Enterprises in Rural China. *Journal of Contemporary China*, February 2005, vol. 14, n°42, p. 177.

[3] Source: National Bureau of Statistics of China.

[4] PEI, Xiaolin. The Contribution of Collective Landownership to China's Economic Transition and Rural Industrialization: A Resource Allocation Model. *Modern China*, 2002, vol. 28, n°279, p. 282.

[5] PEI, Xiaolin. *Ibid.*, p. 289.

state-owned enterprises. Residents of villages and townships, supposed to be among the owners, were in fact represented by their village committee members or township government officials. For Jean Oi, the consequence was that "township and village enterprises allowed local officials to keep their control over the economy and to use this control to maintain their patron-client networks and personalized systems of authority."[1]

At this time, suspicion vis-à-vis private enterprises persisted among local cadres, who were taking measures to hinder these latest to take off. TVEs, in this context, constituted a more comfortable solution to promote economic development without relying solely on SOEs. Public ownership of TVEs enabled local cadres to use traditional bureaucratic methods to control their management and operations. In addition, TVEs were usually run under a contracting scheme establishing output, profits and revenue targets, such as in the era of state planning. To sum up, TVEs were answering economic development goals of local cadres without depriving them from their means of control over local economic stakeholders.

B - Economic liberalization and the development of state-enterprises networks

In the course of economic liberalization, private stakeholders progressively acquired the rights and conditions to develop business activities in rural areas. Individuals had had enough time to accumulate capital to create enterprises. In addition, local officials, challenged by falling profits of rural activities and increasing deficits of TVEs, gradually changed their minds about the threat posed by private enterprises and started consenting to their development. The same reasons progressively pushed local cadres to change the ownership structure of TVEs, which experienced reforms similar to the ones state-owned enterprises underwent in parallel[2]. In most cases, local leaders initiated the privatization process[3]. Firms

[1] OI, Jean C. *Rural China takes off: the institutional foundations of economic reform*. Berkeley, Calif. : University of California Press, 1999, p. 66.

[2] On the question of privatization of state-owned enterprises in China, see, among others: HAN, Zhuang. *De l'autonomie des entreprises d'Etat en droit chinois: le « gradualisme » de la réforme chinoise*. Paris ; Budapest ; Torino : L'Harmattan, 2003.

[3] LI, Hongbin, ROZELLE, Scott. Privatizing Rural China: Insider Privatization, Innovative Contracts and the Performance of Township Enterprises. *The China Quarterly*, Dec. 2003, n°176, p. 991.

were sold to "insiders", such as managers or employees[1]. By the mid-1990s, according to Oi's estimates, local leaders had already privatized more than half a million collectively-owned enterprises[2]. The active role local leaders played in the development of the capitalist sector created state-business nexus, through which local leaders could both promote and control the development of the burgeoning private sector.

The social and institutional ties linking local state actors with the managers of newly privatized firms or with the newborn private entrepreneurs were thoroughly investigated by an abundant research, and, in particular, by the proponents of Chinese corporatism. Exploring the theoretical field of corporatism necessitates some preliminary clarifications. In the early stages of the development of this theory, corporatism was used by a limited number of scholars, who were referring either to a particular form of state involvement (through economic corporations) mainly promoted by the fascist ideology, or to the co-optation of trade unions by the state in the framework of labor movements. Later, the 1970s saw a real outburst in the number of studies referring to corporatism. For Leo Panitch, this abundance of work did not positively contribute to the clarification of the concept. As he argues, there is a "profound lack of agreement on what the concept [of modern corporatism] actually refers to", as it is "variously understood to connote a distinct economic system or mode of production (feudalism, capitalism, socialism… corporatism), a state form (parliamentarism, fascism… corporatism), and a system of interest intermediation (pluralism, syndicalism, monism… corporatism)".

Today, in the field of sociology and political science, the most commonly used definition for what has since been re-termed "neo-corporatism" is perhaps the one given by Philippe Schmitter, who describes it "as a system of interest representation in which the constituent units are organized into a limited number of singular, compulsory, noncompetitive, hierarchically ordered and functionally differentiated categories, recognized or licensed (if not created) by the state and granted a deliberate representational monopoly

[1] KUNG, James. The evolution of property rights in village enterprises In OI, Jean C., WALDER, Andrew (eds.). *Property Rights and Economic Reform in China*. Stanford: Stanford University Press, 1999, p. 95-122.

[2] OI, Jean C. The decades of rural reform in China: an overview and assessment. *The China Quarterly*, Sep. 1999, n°159, p. 624.

within their respective categories in exchange for observing certain controls on their selection of leaders and articulation of demands and supports."[1]

After having acknowledged a similar "ideal-type" of corporatism[2], Unger and Chan, in *China after socialism*, recognize that the concept has evolved and been broadened to include various forms of corporatism, including the "societal corporatism" of democratic countries. The authors then explore the characteristics of corporatism in several Asian countries, before taking the example of China, for which they develop a particularly interesting theory of "state-corporatist model". Unger and Chan argue that the state has been able to maintain control over the society and over the (privatizing) economy thanks to corporatist structures serving as bridging agents. These corporatist structures, established prior to the reform era (industrial unions and peasants associations, for instance), would play the role of "transmission belts […] providing a two-way conduit between the Party center and the assigned constituencies"[3]. These "proto-corporatist structures", which did not fulfill their role of percolating demands up to the central government during the Maoist era, began to operate as real corporatist structures in the aftermath of the reform, when the system started loosening up at the beginning of the 1980s. In addition to former structures, the state also started authorizing the registration of new associations, which would act as additional corporatist intermediaries and agents. At the local level, Unger and Chan note the emergence of a "regional corporatism", where local governments try to build their own corporatist structures independent from the grip of the central state, and sometimes against what they name "the peak corporatist structures", controlled by central authorities. The authors finally add that the

[1] SCHMITTER, Philippe C. Still the Century of Corporatism? *The Review of Politics*, January 1974, vol. 36, n°1, The New Corporatism: Social and Political Structures in the Iberian World, p. 93-94.

[2] "In an ideal-type corporatist system, at the national level the state recognizes one and only one organization (say, a national labor union, a business association, a farmers' association) as the sole representative of the sectoral interests of the individuals, enterprises or institutions that comprise that organization's assigned constituency. The state determines which organizations will be recognized as legitimate, and forms and unequal partnership of sorts with such organizations." (UNGER, Jonathan, CHAN, Anita. Corporatism in China: a Developmental State in an East Asian Context In *China after socialism: in the footsteps of Eastern Europe or East Asia?* Armonk, N.Y.: Sharpe, 1996, p. 95).

[3] UNGER, Jonathan, CHAN, Anita. Corporatism in China: a Developmental State in an East Asian Context In *China after socialism: in the footsteps of Eastern Europe or East Asia?* Armonk, N.Y.: Sharpe, 1996, p. 104.

multiplication of "mass organizations" and new associations could lead to a new form of corporatism such as "societal-corporatism"[1].

The model of "local state corporatism" developed by Jean Oi differs from the models of corporatism described above. By local state corporatism, Jean Oi refers to "the workings of a local government that coordinates economic enterprises in its territory as if it were a diversified business corporation"[2]. In this model, local governments keep control over enterprises through several means: firstly, through the contract responsibility system sometimes in operation, and under which the role of dictating the disposition of enterprises' profits remains with local governments; secondly, through the allocation of key resources (whether it be state-supplied goods[3] such as steel and cement – of which the quantities are limited – or goods that are scarce in rural areas, such as fuel, oil, electricity and raw materials); thirdly, through the providing of bureaucratic services, such as help in securing licenses, certification and prizes for products, and tax breaks; finally, through investment and credit (as in rural areas, enterprises need a guarantor to secure a loan, a role which can be taken by the township economic commission).

As we see, privatization, in rural areas, did not put an end to state-enterprises nexus that had mushroomed under the era of TVEs' development. On the opposite, local states managed to establish new ties with private entrepreneurs as well as corporatist structures linking them with new economic circles and granting them with new instruments of promotion and control. As the development of private enterprises in rural areas was seen as a way to fulfill economic

[1] Other scholars, as well, adopted the theoretical framework of corporatism to depict the rise of civil society in China. Vivienne Shue, for instance, argues that the mushrooming civil associations are "neither entirely self-organized nor entirely independent of the state leadership and guidance in their activities", and that social groups act as transmission belts, in the sense that they both "actively reflect the masses' wishes, opinions, and needs to the party and government" and "propagandize and implement party lines and policies" (SHUE, Vivienne. State Power and Social Organization in China In KOHLI, Atul, SHUE, Vivienne, MIGDAL, Joel S. *State power and social forces: domination and transformation in the Third World*. Cambridge: Cambridge University Press, 1994, p. 77). By making the relationships between the Party and the people even closer and by solving social problems, these corporatist structures would give rise to what Vivienne Shue names "state-socialist corporatism".

[2] "I want to make clear that 'corporatism' as used here differs from its use in previous studies. By local state corporatism I refer to the workings of a local government that coordinates economic enterprises in its territory as if it were a diversified business corporation." (OI, Jean C. Fiscal Reform and the Economic Foundations of Local State Corporatism in China. *World Politics*, October 1992, vol. 45, n°1, p. 100-101).

[3] "Those inputs that are supplied to localities under the central allocation system, that is, the plan, which still exists." (OI, Jean C. *Ibid.*, p. 120).

development goals that local cadres had to achieve, these latest have long recognized and valorized the role enterprises could play for a number of development issues. This generated an important path dependency that profoundly influences the current strategy implemented by local governments for agricultural modernization.

For rural economic sectors others than agriculture, it is as if the development of corporatist methods favoring industrial entrepreneurs was a necessary consequence of economic liberalization: local officials, unable to retain the development of private enterprises any longer, had to establish close links with entrepreneurs (in rural areas, with industrial entrepreneurs in particular) in order to keep political and economic control over local players. Enterprises became corporatist structures linking state and non-state actors.

However, local officials could have chosen different strategies to modernize agriculture. For instance, they could have relied on non-corporatist strategies, as they used to do until recently. Following the establishment of the Household Responsibility System in the 1980s, the government indeed let unorganized individual farmers take possession of the sector of agricultural production and farmers have operated relatively independently from the grip of the Party-state since. Agricultural modernization could have meant focusing on these stakeholders, for instance, by providing them with better agricultural extension services. Local officials could also have relied on different corporatist strategies, for instance, by involving corporatist structures other than enterprises such as farmers' unions – as was observed at the beginning of agricultural modernization in France (see chapter 6, II.A.).

In the current context of agricultural modernization, the rationale of the choice of local officials to establish privileged relations with entrepreneurs of rural food-processing industries is more difficult to explain. How can the hundreds of millions of farmers, whom agricultural production depends on, be excluded from corporatist structures closely tied to government officials, described as one of the most important control mechanisms of the Chinese government over its economy? What is exactly the linking role played by enterprises (and which actors in enterprises) in the course of agricultural modernization? The analysis of the rising challenges of food price inflation and food safety and of local patterns of power will provide answers to these questions in the following parts of this chapter.

II - The rising challenge of food price inflation

A - Solving the issue of food prices: choosing between consumers and producers?

1) The worldwide challenge of food prices

In terms of food security, the Chinese government has recently been faced to the need to address several issues. According to the FAO[1], food security has four main dimensions. Physical availability – meaning that food security policies have to address the issue of food supply, by activating the levers of food production, stocks and trade – is just one among these dimensions. Three other dimensions have to be added to fully grasp the notion of food security: the first one relates to economic and physical access to food; the second one is linked to food utilization, or nutrition; the last dimension is related to the stability of the three above-mentioned dimensions over time.

Economic access to food, in particular, has long retained the attention of the Chinese government. In China, food prices have a major impact on national inflation. Food commodities indeed still constitute an important part of the average basket of goods and services. According to the National Bureau of Statistics, food expenditures still accounted for about 35 percent of urban and rural budgets in 2012 and could reach 43 percent for poor rural households. In addition, rises in food prices have indirect effects on inflation in China. The rise in food prices indeed leads to demands for higher wages in the industrial sector and causes an increase of low wages, which in turn leads to a rise in the price of non-food commodities.

However, addressing the issue of economic access to food through a limitation of the rise in the price of food commodities can have adverse effects on the livelihood of food producers. This is not a problem unique to China. While many developing countries struggled with soaring food prices in 2007-2008 and in 2013, the 2014 drop in grain prices negatively affected the income of farmers. According to the FAO, around 75 percent of the world's one billion hungry people are small-scale farmers, fishers and foresters, who "depend entirely on

[1] FAO. *An Introduction to the Basic Concepts of Food Security*. Rome: EC - FAO Food Security Programme, 2008.

agriculture and related enterprises for their food security and livelihoods"[1]. Only about 20-25 percent of the world's hungry people live in urban area, even though the number of hungry rural dwellers is rising rapidly with the rapid urbanization as a worldwide phenomenon. As a consequence, policies aimed at limiting the rise in the price of agricultural commodities are to be thought of and implemented with extreme caution, as they can have a tremendous impact on poverty and hunger.

2) **Establishing minimum prices and storage policies**

In China, there are still about 350 million farmers, who increasingly have to cope with higher production costs linked to the rise in the price of fuel, fertilizers and labor. Curbing price increases, in addition to potentially fuelling protests among farmers – who already suffer from low economic conditions – would only push more labor force out of the farming sector. In order to address these threats, the government established in the 2000s minimum price policies for wheat, rice and corn, along with a national food procurement and storage system. Mostly targeting grain, the system aims at fulfilling three objectives: guaranteeing a minimum price to farmers, as a way to encourage these latest to keep on growing grain; guarding the country against major grain shortage, for instance in the event of a natural disaster; protecting Chinese consumers from price increases of basic staple products.

Minimum prices are set annually in November by a committee gathering officials from the Ministry of Agriculture, from the State Administration of Grain, from the Ministry of Finance and from Sinograin (the most important SOE in charge of grain storage in the country). An average price is determined according to several criteria, such as the minimum price established for the previous year, the evolution of production costs, the stock levels in major producing areas and the expected levels of production. The "average price" is then adjusted according to the variety and the quality of the grain purchased by state granaries, to the period and to the location of the purchase – the program only targets a few producing provinces. Whenever the market price at the farm gate falls below the minimum price established by the central government, Sinograin, along with two other SOEs, Cofco and ChinaTex, are requested to buy grain from farmers at the minimum price or above (purchased volumes being limited by ceilings). These massive purchasing programs are supposed to

[1] FAO. FAO at work 2010-2011: Women key to food security. Rome: FAO, 2011.

trigger a market response that makes the price of grain rise. In order to be able to purchase grain above market prices, Sinograin, Cofco and ChinaTex benefit from loans of the Agricultural Development Bank as well as from governmental subsidies according to the number of silos they are able to fill with grain.

For the past three years, minimum prices established by the government for rice, wheat and maize have grown by 15 to 20 per cent annually, in order to enable farmers to cope with the rise in production costs. In addition, there has been an important appreciation of the Chinese currency against the U.S. dollar. As a result, by 2011, the prices of most major agricultural commodities, in China, were already 20 to 30 per cent higher than US prices[1] and the price of rice, wheat and maize has remained above international market prices since. The main consequence is that it became way more interesting for Chinese mills and other grain transformation companies to buy grain from abroad than to purchase grain on domestic markets – even when these latest produce enough to answer the national demand – only putting Chinese grain growers into more trouble.

In order to solve the issue on the middle and long term, the government wishes to replace minimum prices with target prices. The basic principle of target prices is that whenever market prices fall, producers are compensated directly by the government and receive the difference between the market price and an established "target price". Pilot projects are currently being conducted in Xinjiang, for cotton, and in Heilongjiang, for soybean. The projects, however, have proven quite unsatisfactory so far[2].

Minimum prices and national storage for grain represent an increasingly unbearable burden for the government. In addition, such programs have adverse effects on trade and can put domestic producers into trouble. As a consequence, these policies could never be a satisfactory solution to curb food prices while protecting food consumers at the same time, neither for grain nor for other agricultural commodities.

[1] GALE, Frederic. U.S. *Exports Surge as China Supports Agricultural Prices*. USDA ERS, October 2013 http://www.ers.usda.gov/amber-waves/2013-october/us-exports-surge-as-china-supports-agricultural-prices.aspx#.VIbMpdKG8wc.

[2] Interview with expert, Beijing, November 2014.

B - "Melting" Chinese food chains

In order to address the issue of rising food prices without harming farmers, the Chinese government recently started targeting intermediaries in the food chain. In China, the food chain is characterized by a high number of intermediaries, who link urban markets with small, remote and scattered farmers. According to the National Bureau of Statistics, the average size of farms is less than one hectare[1]. This data should be taken with extreme caution. Firstly, data regarding the average size of farms are extremely complicated to collect in China, due to the remoteness of farmers, to the informality of rental markets and to the (temporary or permanent) mobility of agricultural workforce. In addition, this figure hides considerable discrepancies between farms. For instance, the size of government-owned farms can be more than 1,000 hectares. Having taken into consideration these remarks, it can be asserted that the size of the vast majority of Chinese farms is still extremely small compared to European countries or to the United States.

The small size of farms poses several issues. As many small farmers still do not have vehicles suited for the transport of agricultural products to markets[2], intermediaries able to come to the farm gate to buy products directly from farmers are necessary players to link producers with consumers. In addition, agricultural production is scattered among a wide number of small producers, sometimes located far from consumption centers. The distance between production and consumption sites multiplies the levels of intermediation, from the smallest wholesalers, who simply link farmers with small wholesale markets in township-level cities, to the larger ones who trade on wider and sometimes more diversified wholesale markets, able to answer the needs of modern urban supermarket chains, in terms of volumes and in terms of diversity of products. As was stating a sales manager of a supermarket chain in Shanghai:

[1] In 2012, the average size of land owned by rural households engaged in agriculture (农村居民家庭经营耕地面积) was 2.34 mu (0.15 ha). Other data estimate that the average farm size should be closer to 0.5 ha.

[2] Lack of financial resources is not the only issue farmers have to face to own trucks. In a village where I spent time in Anhui province, the sole farmer of the village who owned a truck – a three-wheeled truck – expressed his desire to buy a larger one, better suited to trade agricultural products. However, once he had spared the money to purchase the truck he wanted, he still had to be licensed to drive it – eventually, he succeeded.

> "On our modern supply chain, we work a lot with brokers. The main interest of brokers is that they sell apples, but also nuts, vacuum cleaners. […] Beside, they are able to trade very big volumes."[1]

In addition, I was told that regulatory constraints sometimes prevented retailers from signing commercial contracts directly with processing plants, as these latest usually did not hold the appropriate business license (partly because the Ministry of Commerce, which is in charge of distributing licenses, sometimes faces protectionist policies implemented by provinces), whereas brokers usually did. The lack of knowledge and professionalism of farmers and processing plants in terms of sales was another important factor mentioned by the interviewees, justifying the existence of a large number of brokers.

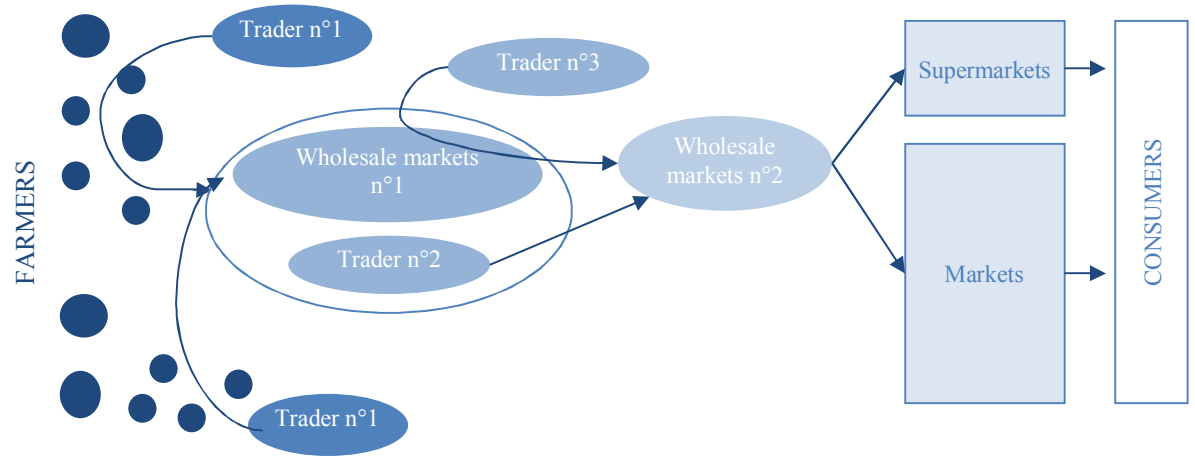


Figure 17: Traditional Chinese food chain

The Chinese government recently started expressing a wish to cut a certain number of intermediaries out of the food chain. "Melting" food chains would reduce the price of food for final consumers by deducting the margins of intermediaries, without negatively impacting farmers. However, the problem that farmers are usually smallholders scattered all over the countryside and producing small volumes in remote areas remains. Implementing a food chain model such as presented in Figure 18 thus does not appear very credible. It would indeed be extremely difficult for retailers based in urban areas to buy sufficient quantities if all the products that they market directly from small and scattered farmers in rural areas. The system including multiple intermediaries, who focus on a limited number of products, considerably decreases transaction costs for each stakeholder.

[1] Interview, Shanghai, June 2012.

As a consequence, the model privileged by local governments is to give a greater role to food processing enterprises based in rural areas. Insights from fieldwork in Jiangxi and Shandong led to several conclusions related to this matter. Firstly, even for simple fruits and vegetables, industrial processing is usually required to transform the initial product into a marketable product able to answer the needs of modern urban markets. For instance, oranges produced in Jiangxi province had to be sorted, cleaned, waxed and packed before being sold to supermarkets. Similarly, apples had to be sorted, cleaned, waxed and packed. Processing also often included the artificial ripening of fruits – especially for oranges, which are more delicate products and have to be sold quickly once ripe[1].

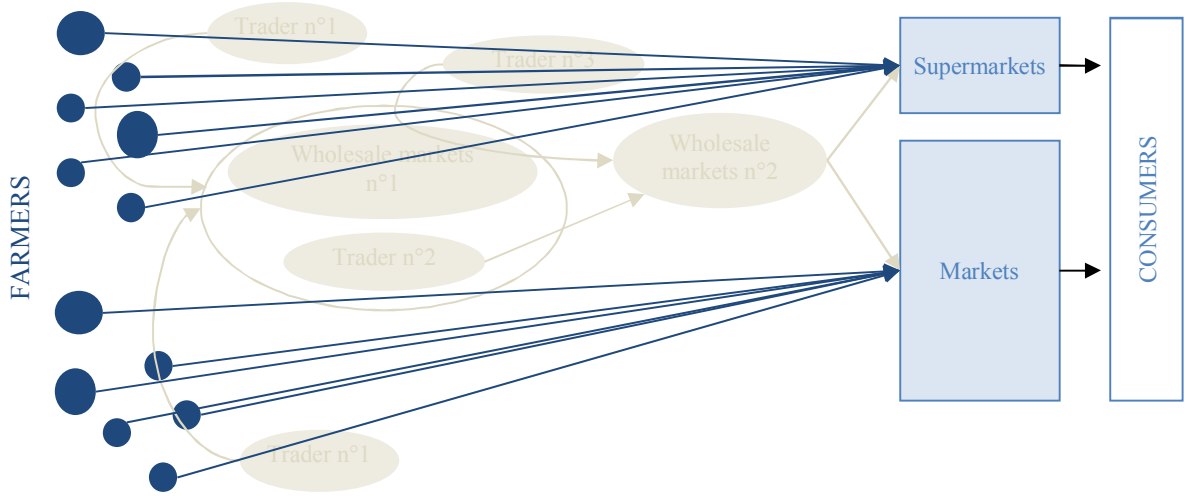


Figure 18: Food chain without intermediaries

[1] Harvesting is made before fruits are ripened, when they are less fragile. Fruits are then stored and artificially ripened depending on demand.

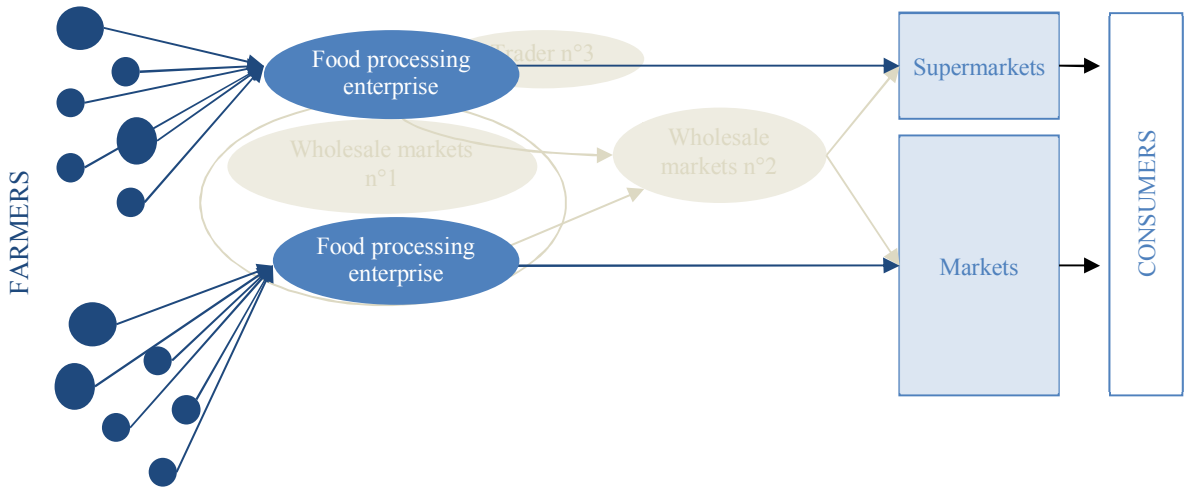


Figure 19 : Expected food chain

In addition, surveys conducted in rural areas demonstrated that food processing enterprises were usually located in rural areas, close to farms or orchards. Comparatively to urban supermarkets, rural food enterprises have much less transaction costs in establishing relationships with small producers located near to them, with whom they already operate on a regular basis for the supply of their processing plants. As a consequence, in the melting of food chains, rural-based food processing enterprises running processing and packaging plants (and sometimes renting a piece of land to grow products "of their own") become key intermediaries between farmers and urban retailers.

Picture 4: Farmers-workers packing apples in Shandong
(Photography by the author, Nov. 2012)

Picture 5: Farmers-workers sorting oranges in Jiangxi
(Photography by the author, Oct. 2013)

Picture 6: Workers unloading a truck coming back from farms located near an orange factory in Jiangxi
(Photography by the author, Oct. 2013)

III - The need to address food safety

In addition to the issue of food prices, the Chinese government is increasingly challenged by rising issues linked to the safety of food products, to which the overuse of pesticides much contributes. During the last decades of the 20th century, the direction taken by the government for agricultural development was the one of an input-intensive large-scale agriculture. The rationale behind this productivist view – which is not unique to China – is mainly based on the scarcity of land resources, as China has to feed almost 20 percent of the global population with only 7 percent of worldwide arable land. Even if this discourse has recently integrated other voices calling for a more rational use of pesticides, the current over-reliance on agricultural inputs persists, partly because of path dependencies caused by past policies that have promoted the extensive use of agricultural inputs at the end of the 20th century.

In fact, the Chinese government was already implementing productivist agricultural policies relying on technological solutions (including pesticides and fertilizers) under the

collectivist era. However, these programs had mixed results at that time, given the dramatic situation in which the Chinese countryside was in the aftermath of the Great Leap Forward and given the tumultuous political, economic and social context of the 1970s.

During the Dengist era, reforms progressively helped farmers increase their consumption of agricultural inputs. The establishment of the Household Responsibility System boosted their income, which enabled them to buy more pesticides, fertilizers and improved seeds. In parallel, reforms were conducted in the industrial sector producing agricultural inputs. During the early stages of the reforms, the sector remained in the hands of the state. However, in the second half of the 1980s, input markets were progressively liberalized, starting with the ones of pesticides and agricultural machinery – the fertilizer market followed at the end of the 1990s. While before reforms, the monopoly of the state enabled farmers to have access to cheap farm inputs, liberalization, on its side, significantly improved the supply of products, as it led to the rapid multiplication of producers in the countryside. Remote areas, in particular, which used to suffer from insufficient supplies of farm inputs, could from then on benefit from the technical advantages of the "Chinese green revolution". The multiplication of producers was highly encouraged by the government, who started developing a comprehensive subsidy scheme targeting these actors. For Kung and Cai, there is no doubt that the increase in the use of chemical fertilizer, in the 1980s and 1990s, was "by and large a rational response induced by a government policy", aiming at increasing agricultural productivity and output through a sharp increase in the supply of soil nutrient[1]. According to Kung and Cai, farmers welcomed this change, as chemical fertilizers rapidly showed more effective than traditional organic fertilizer in boosting crop yields.

Today, the scheme is still operating and keeps on having effects on the development of production capacities. Subsidies include, for instance, preferential prices for electricity, energy, transport and raw material as well as an access to preferential loans for the building of production infrastructures. Between 2002 and 2011, the national production of nitrogen fertilizers surged from 28 to 42 million tons in 2011[2]. The overcapacity of the sector provides farmers with cheap products in abundant quantities, leading to over-consumption. The low

[1] KUNG, James Kai-Sing, CAI, Yong-Shun. Property Rights and Fertilizing Practices in Rural China: Evidence from Northern Jiangsu. *Modern China*, July 2000, vol. 26, n°3, p. 276-308, p. 278.

[2] Source: FAO Statistical Database.

level of education of farmers and the lack of adequate soil diagnosis tools and expert teams on the field prevent Chinese farmers from balancing the volumes of nitrogen fertilizers (which represented more than 60 percent of the total fertilizer consumption in 2008[1]) with other types of fertilizers (phosphor and potash), leading to a low efficiency per kilogram spread.

The over-use of farm inputs poses several problems. Fertilizers spread in excess cannot be absorbed by the soil and leach into ground water, lakes and rivers. The resulting pollution affects a growing urban population, which relies on these reserves for its water consumption[2]. In addition, the over-consumption of fertilizers has effects on agriculture itself, as an over-consumption of nitrogen fertilizers might lead to an acidification of soils likely to lower their fertility without leading to higher yields[3]. Finally, the over-use of pesticides increases the amount of residues found in food. Chinese media regularly drives public attention towards this issue. At the end of the year 2011, Luo Xiwen, an academician from the Chinese Academy of Engineering, stated that "in some vegetables and fruits, up to 13 percent of pesticide residues are found, and heavy metals concentration exceeds quotas by 24 percent, and nitrate by 12 percent"[4].

---

[1] USDA. *Fertilizer – China.* GAIN Report, n°CH9082, 12/14/2009.

[2] A survey conducted in 2005 showed that most of the urban lakes were facing serious eutrophication caused by chemical fertilizers spread in excess (JIN, Xiangcan, XU, Qiujin, HUANG, Changzhu. Current status and future tendency of lake eutrophication in China. *Science in China Series C: Life Sciences*, December 2005, vol. 48, n°2, Supplement, p. 948-954). Another survey shows that the concentration of nitrate found in ground resources used for drinking water greatly exceeds the allowable limit ("At over half of the 69 locations investigated, which were distributed over an area of about 140 000 km^2, nitrate content in ground and drinking water exceeds 50 mg/l, the allowable limit for drinking water. Critical situations were found in vegetable-producing areas, drinking water in the centres of small cities and towns and in farmers' yards, where nitrate contents in ground and drinking water were measured at 300 mg NO3/l", ZHANG Weili, TIAN, Zhexu, ZHANG, Ning, LI, Xiaoqi. Nitrate pollution of groundwater in northern China. *Agriculture, Ecosystems & Environment*, October 1996, vol. 59, n°3, p. 223–231).

[3] A study conducted by several Chinese and foreign institutes estimates that "more efficient use of N fertilizer can allow current N application rates to be reduced by 30 to 60 percent" (JUA, Xiaotang, XING, Guangxi, CHEN, Xinping, ZHANG, Shaolin, ZHANG, Lijuan, LIU, Xuejun, CUI, Zhenling, YIN, Bin, CHRISTIE, Peter, ZHU, Zhaoliang, ZHANG, Fusuo. Reducing environmental risk by improving N management in intensive Chinese agricultural systems. *PNAS*, March 2009, vol. 106, n°9, p. 3045).

[4] Quoted by the Yancheng Evening News' website. 刘玮宁, 张炜哲, 工程院士称全国3亿亩耕地受到重金属污染, 羊城晚报, *Liu Weining, Zhang Weizhi, Gongcheng yuanshi cheng quanguo 3 yi mu gengdi shoudao zhongjinshu wuran, Yangcheng wanbao* [LIU, Weining, ZHANG, Weizhe. Academician of the Chinese Academy of Engineering: 300 million mu of arable land are polluted by

Concerns about environmental and food safety issues caused by unsustainable agricultural practices thus do exist. However, this does neither mean that these issues are brought to the political agenda nor that they are efficiently answered. The following paragraphs draw on literature review and fieldwork to examine the practical ways in which the different groups of actors address these issues. As we are about to see, administrative and scientific circles as well as the civil society and NGOs are constrained by a multiplicity of factors that prevent them from putting environmentally-friendly agriculture at the agenda or from taking effective action to address the environmental degradation caused by or affecting the agricultural sector. As a consequence, only food enterprises and farmers seem to remain on the field to take concrete action. One of the most important conclusions drawn on fieldwork is that local governments usually encouraged food processing enterprises to take action to make farming practices more sustainable and produce safer products (among other things, by encouraging their suppliers to use less pesticides), a lot more than they were pushing farmers to get involved in agricultural modernization. Apart from path dependencies and the issue of food prices, another important explanatory factor could be found in the existing patterns of power in rural areas.

A - On the difficulty of bringing environment on the agricultural agenda

1) Communication constraints of administrative bodies

The capacity of Chinese administrative bodies to bring environmental issues to the agricultural agenda is constrained by two main factors: their fragmentation (which will be further detailed in Chapter 4, I.) and the fact that local governments are usually incited to limit the dissemination of information, and particularly of the information that could spread concern or alarm among the population. These issues led, in the past, to important communication failures for major health scandals. A well-documented case that illustrates this point is the SRAS outbreak in 2003, which infected thousands and killed hundreds of people. According to Patricia Thornton, the Chinese authorities could have anticipated, if not

heavy metals. *Yangcheng Evening News*, 12/10/2011] http://www.chinanews.com/gn/2011/10-12/3383763.shtml accessed on March 4th, 2014.

predicted, the appearance of a SARS-type epidemic[1]. However, the author argues that the administrative fragmentation and the lack of coordination severely impaired an early and effective official response to the outbreak. In addition, Thornton denounces the responsibility of lower level officials, who "intercepted and distorted the flow of information to upper levels, fearful that their perceived mishandling of the situation might result in negative performance evaluations"[2]. Finally, she argues that the emergence of a national crisis, in a way, contributed to the reinforcement of the power of the Chinese state[3], thereby implying that this latest would have a vested interest in crises.

To our knowledge, such in-depth analyses were not conducted for food safety crises. However, similarities exist in the way disease outbreaks and food safety crises are handled, as both are related to health issues. In addition, numerous elements that can easily be found in the daily press suggest that the government might sometimes be reluctant to release information on food safety issues – the same way it was reluctant to release information on the SRAS outbreak – because of the damages that such information can have on the food sector and because of a certain willingness to maintain social stability. An article relating the cadmium rice case illustrates this argument:

> "In May 2013, the authorities in the southern province of Guangdong found that more than 44 percent of rice or rice products tested there contained too-high levels of the poisonous metal. […] But the authorities at the Guangzhou Food and Drug Administration then clammed up, declaring it was 'not convenient to reveal' the affected brands."[4]

Chinese consumers are perfectly aware of the fact that they lack information on the safety of food products. Hidden information, along with the fact that consumers are aware of this issue, led to the emergence of suspicion and sometimes to the rise of fiercer waves of

[1] THORNTON, Patricia M. University Crisis and Governance: SARS and the Resilience of the Chinese Body Politic. *The China Journal*, January 2009, n°61, p. 30.

[2] THORNTON, Patricia M. *Ibid.*, p. 36.

[3] "The labeling of the SARS outbreak as a national crisis shortly after the Hu-Wen team assumed control […] served to consolidate the power of the new team shortly after succession, neutralize real and potential political rivals, and circumvent temporarily the inter-agency bargaining characteristic of 'normal politics' during the post-Mao era." THORNTON, Patricia M. *Ibid.*, p. 26.

[4] 'Cadmium Rice' Is China's Latest Food Scandal. *New York Times*, 20/05/2013 http://rendezvous.blogs.nytimes.com/2013/05/20/cadmium-rice-is-chinas-latest-food-scandal/?_php=true&_type=blogs&_r=0 accessed on March 4th, 2014. The source of the quote of the Guangzhou FDA could though not be verified.

panic[1]. The lobby of industrial players adds up to the holding back of information by the government. Articles in the media sometimes denounce the pressure exerted by industrial players on the government, pushing officials to limit the flow of information spread by the media directly under their control[2]. Such procedures aggravate suspicion and panic reactions among consumers. A series of surveys conducted by the Pew Research Center in 2008, 2012 and 2013[3] clearly illustrates the worsening of this suspicion, by evidencing that the topic of food safety moved to the forefront of people's concerns over the past few years. In particular, the series shows a tremendous increase in the percentage of people thinking that food safety is "a very big problem" in China between 2008 and 2012 – as a consequence of the 2008 melamine scandal. Since then, the issue has remained among the top concerns of the population, just behind the issue of inflation, the corruption of officials, the gap between the rich and the poor and the pollution of air and water.

[1] In 2012, the poultry industry would have suffered from 100 billion yuan losses due to the drop in poultry consumption as a consequence of consumers' panic provoked by bird flu strain (China's poultry industry wants to hush up bird flu news in damage control bid. *South China Morning Post*, 05/02/2014 http://www.scmp.com/news/china-insider/article/1421319/chinas-poultry-industry-wants-hush-bird-flu-news-damage-control accessed on March 4th 2014).

[2] As illustrates an article of the South China Morning Post for the outbreak of bird flue. See: China's poultry industry wants to hush up bird flu news in damage control bid. *South China Morning Post*, 05/02/2014 http://www.scmp.com/news/china-insider/article/1421319/chinas-poultry-industry-wants-hush-bird-flu-news-damage-control accessed on March 4th, 2014.

[3] For the 2013 survey, the size of the sample was of 3,226 people, selected in twelve cities, twelve towns and twelve villages chosen among China's three regional-economic zones http://www.pewglobal.org/files/2013/09/Pew-Global-Attitudes-Project-China-Report-FINAL-9-19-132.pdf accessed on October 27th, 2014.

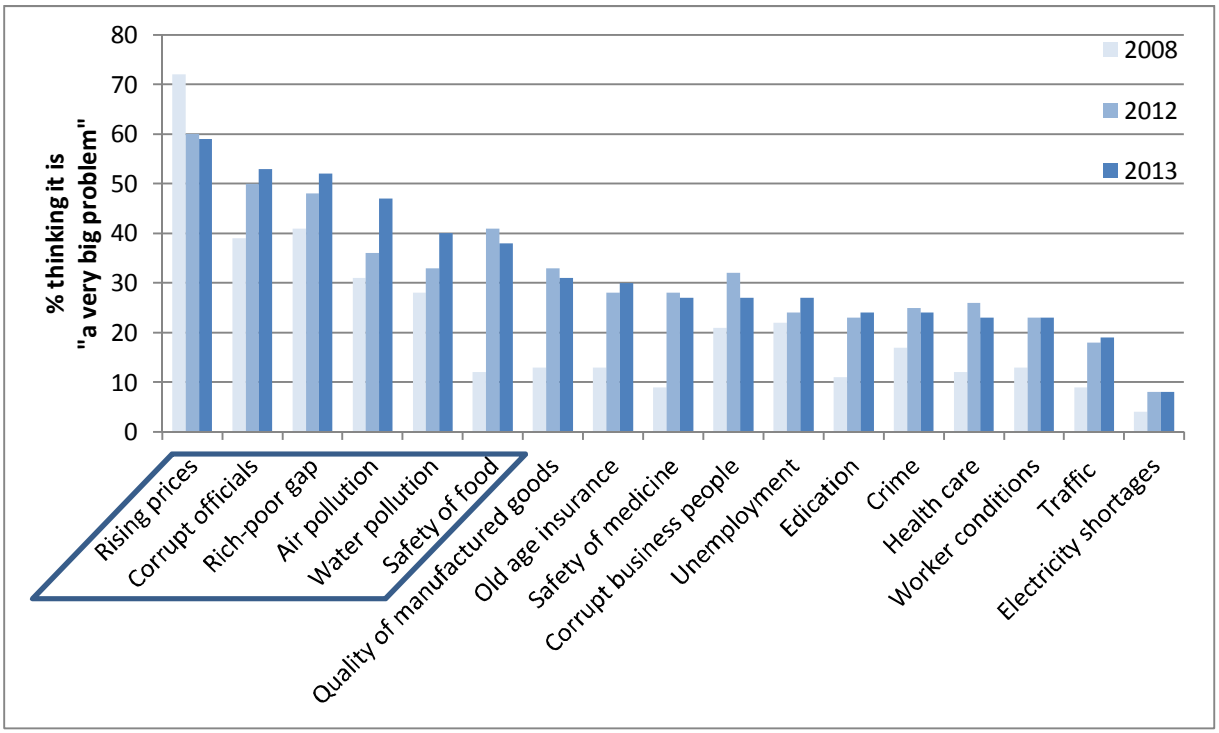


Figure 20 : Issues Chinese people consider as "very big problems"
Source: PEW Research Center Global Attitudes Project

2) NGOs and civil society lack interest in "green agriculture"

Chinese NGOs concerned with environmental issues have flourished over the past decades. In the middle of the 1990s, faced to the inefficiency of environmental protection policies – due to their systematic undermining compared to economic development policies – the government progressively created a space for civil organizations willing to alleviate these issues. "Environment" was categorized as a (relatively) a-politic matter – compared to religious or ethnical questions – or at least non-confrontational vis-à-vis the established power[1], which was careful enough to set up control mechanisms that would enable it to regulate the activities of these new organizations[2]. Tolerated and even encouraged by the government – powerless or lacking interest for environmental issues – environmental NGOs developed rapidly. Non-existent before 1994, there are today thousands of environmental NGOs registered throughout the whole country. Strongly linked to governmental institutions,

[1] Peter Ho – even if he agrees that the political aspect of environmental issues cannot be completely eradicated – argues that Chinese environmental NGOs engage in a "conscious depoliticization of environmental politics and a self-imposed censorship" (HO, Peter. Embedded Activism and Political Change in a Semi authoritarian Context. *China Information*, July 2007, vol. 21, n°2, p. 189).

[2] SCHWOOB Marie-Hélène. L'éveil vert de la société chinoise ? *Ecologie & politique*, February 2013, n° 47, p. 27-37.

environmental NGOs form a consultative and supportive network for the implementation of environmental policies.

However, these NGOs do not form a counter power. In most cases, the turning of non-governmental organizations into a real counter power is predetermined by a strong willingness of organized social actors to bring to the political agenda issues that are firmly anchored in the consciousness of the civil society. To put it simpler, if a significant share of the population is not fully aware of certain issues, organized social groups will experience difficulties in finding opinion leaders and multipliers among the civil society. In China, the lack of environmental awareness, far from finding its rationale in the "classical" explanation linked to the progressive stages of economic development[1], seemed rather linked to a lack of knowledge and insufficient education and to a traditional willingness to rely on solutions proposed by the government[2]. However, over the past few years, the civil society started demonstrating its eagerness to bring environmental issues to the political agenda through protests, outside of the classical channels of regulated environmental organizations[3]. In addition, Chinese citizens also increasingly take up these issues on the web, thanks to the rapid development of online social networks. Even if the state has the means to limit the dissemination of information, it cannot completely prevent the development of online debates. Progressively, the media, a number of active NGOs and the public in general became more sensitive and increasingly urge the government to better address environmental issues[4].

Another important subject that mobilizes the interest of the Chinese civil society (either "physically", through protests, or "virtually", on online forums) is land grabbing and the expropriation of farmers by local governments. Although the requisition of arable land is

[1] See: INGLEHART, Ronald. Globalization and Postmodern Values. *Washington Quarterly*, 2000, vol. 23, n°1.

[2] SCHWOOB, Marie-Hélène. L'éveil vert de la société chinoise ? *Ecologie & politique*, February 2013, n° 47, p. 27-37.

[3] In the summer of 2011, no less than three main demonstration episodes caused by environmental concerns occurred: in Dalian (Liaoning), residents demonstrated against the building of a chemical plant; in Haining (Zhejiang), city dwellers obtained the (temporary) closure of a solar panel factory; in Haimen (Jiangsu), a thermal power plant project had to be stopped because of protests.

[4] BALME, Richard, TANG, Renwu. Environmental governance in the People's Republic of China: the political economy of growth, collective action and policy developments – introductory perspectives. *Asia Pacific Journal of Public Administration*, 2014, vol. 36, n°3, p. 167-172.

theoretically limited by the 1.8 billion mus "red line"[1], instituted in 2008 in order to prevent a further decrease in the total surface of farmland, the financial profits generated by land sales encourage local governments to continue the established practice of land grabbing (Chapter 1, III.A.2.b). Land grabs lead to violent protests of farmers, who do not only loose a major source of income, but are also deprived from an asset used in place of an insufficient – and sometimes nonexistent – social welfare system. The protests of farmers usually meet with the approval of other groups of the Chinese civil society and even with the approval of the central government. Land rights are today considered as *hefa quanli* (合法权利), or "legitimate rights", on a "social sustainability" (as opposed to "environmental sustainability") point of view.

Civil society organizations engaged in the field of environmental protection thus do exist and are supported by a civil society increasingly aware of environmental issues. In addition, social actors know about rural issues (in particular, the issue of land grabbing) and back farmers in their combat (in particular, against abusive land requisitions). However, NGOs bringing environmental issue *on the agricultural agenda* were almost nonexistent at the time this research was conducted. Environmental issues targeted by NGOs are usually the most visible forms of pollution such as air pollution or waste. In the agricultural sector, environmental protection remains a secondary objective and NGOs undertaking actions in the field of agriculture usually do so in order to address low economic development issues. In rural areas near Chongqing, the NGO I met was working on agricultural development essentially in order to address local poverty issues:

> "[For our agricultural development project] we selected the county of […], which was close to Chongqing and to the market, and then we selected the poorest villages with the help of the county bureau of poverty alleviation."[2]

According to a former NGO – now a microcredit enterprise – working on agricultural development in Ningxia, the main part of microgrants is used by farmers to buy water, pesticides and fertilizers – environmental issues alleviation was never mentioned during the interviews.

[1] 120 million hectares.

[2] Interview with the regional director of the NGO in Chongqing, October 2013.

It happens that NGOs focus on environmental issues occurring in the agricultural sector. In 2013 for instance, Greenpeace published a report revealing that herbs used for Chinese traditional medicine contained high concentrations of pesticides, likely to have harmful effects on human health[1]. Although the report was widely cited in the media and profoundly shocked the public opinion, few reports are published on similar topics on a regular basis. And, above all, actions undertaken by NGOs remain limited to research and reports and barely include field action – with the exception of a few NGOs I met, which were undertaking concrete actions in the agricultural sector, but with the main aim of addressing low economic development issues, pushing environmental issues in the background of priorities.

The "connected" urban middle-class, on its side, although backing farmers in theory and convinced that their demands are legitimate, are rather unlikely to take up their cause and to make efforts to bring this topic on the political agenda. For most of the social actors, rural areas and agriculture are rather far from their daily concerns, as illustrates this quote from someone in charge of raising funds for a foreign NGO conducting poverty alleviation projects in rural areas:

> "It is very difficult to raise funds in China. It is very difficult because you don't have a status that authorizes you to raise funds publicly[2] […] so you have to go from place to place to raise funds. And it's very difficult here also because people really don't care about the poor people in [the rural area where we are conducting projects]. They don't even know that there is a poverty line in China and they don't know how much it can be. Usually, in China, people mobilize during catastrophes. For NGOs dealing with seism or things like that, they get money. But not us, not really."[3]

However, concerns about the safety of food products kept on rising among consumers. These latest started developing individual strategies to curb the potential effects of unsafe food on their health. Some simply buy food stamped with organic or green labels. Others launch business in organic agriculture so that their children, family and friends can eat safe food. The development of such strategies is acknowledged in the wealthiest and more environmentally-conscious cities such as Beijing and Shanghai. When I asked a woman why

[1] Greenpeace. *Chinese Herbs: Elixir of Health or Pesticides Cocktail?* 2013 http://www.greenpeace.org/international/Global/eastasia/publications/reports/food-agriculture/2013/chinese-herbs-pesticides-report.pdf accessed on March 4th, 2014.

[2] As it is the case for most of the foreign NGOs operating in China.

[3] Interview conducted in Beijing in November 2013.

she had decided to create an organic market in Beijing, she told me that when she gave birth to a little girl, she started having concerns about the safety of products she was feeding her with[1]. A manager who had just created an organic farm in the suburbs of Beijing told me (these projects will be further detailed in the last chapter):

> "More than ten shareholders invested in this project. They gave a couple thousand yuan each. At the beginning, it was mostly friends, who wanted to grow their own fruits and vegetables, in order to ensure their food safety. Even if products we grew are not 'organic', at least they are better than the ones we find on markets"[2].

Fieldwork showed that on order to cope with the issue of food safety, citizens usually preferred to establish individual strategies rather than taking part in collective action[3]. As a consequence, environmental issues caused by unsustainable farming practices did not lead to the development of NGOs taking effective action, as it was the case for industrial pollution.

B - On the difficulty of implementing solutions for greener and safer food products

1) The lack of coordination and the supremacy of self-sufficiency targets

Food safety, in China, is not just about unsustainable farming practices relying too heavily on pesticides. Since the 2008 melamine milk crisis, Chinese media regularly report food safety scandals linked to the race for increased profits. Examples are numerous, from clenbuterol meat to "recycled" cooking oil and rotten buns. Faced to the worsening of the situation, the government, over the past few years, was particularly active in reforming the system, issued a number of new rules and regulations and set up innovative information mechanisms.

The Food Safety Law, issued in 2009 in the aftermath of the melamine milk crisis, strengthened regulations, controls and punishments, and created internet and hotline early-warning mechanisms, enabling consumers to bring food safety issues to the attention of

[1] Interview, Beijing, April 2013.

[2] Interview, Beijing, April 2013.

[3] This individualism is in fact very similar to what Bryan Tilt observed when he looked at the daily tacticts of Chinese citizens to cope with environmental hazards (TILT, Bryan. Industrial Pollution and Environmental Health in Rural China: Risk, Uncertainty and Individualization. *The China Quarterly*, June 2013, vol. 214, p. 283-301).

authorities. However, the political power and the scope of action of local bodies responsible for the compliance of enterprises remain low, partly because they lack human and financial resources[1] and partly because a portion of the revenue of inspectors comes from fines imposed on food producers[2] – encouraging them to hide the information linked to the violation of regulation, as a way to safeguard their source of income.

In 2010, the Food Safety Commission was created. Among others, the Commission aims at addressing the overlaps in responsibilities of government bodies (see Chapter 1, II.A.1). However, in spite of successive reorganizations, overlaps persist. Several administrative entities are in charge of drafting policies linked to the agricultural sector. Such an institutional fragmentation is also observed at the lower levels of the administration, responsible for implementing policies. Local officials usually work inside competitive environments and power games, which does not encourage them to cooperate with each other. In some areas I went to, local bureaus of agriculture were conducting agricultural development projects, while in others, similar projects were run by poverty alleviation bureaus[3], without effective coordination or even communication between bureaus.

In addition to such institutional constraints, local governmental actors also experience difficulties in implementing solutions for "greener agriculture". Faced to the degradation of its environment and to the consequences it had (and will have) on the national development (in terms of economy, health, food safety, social stability, etc.), the government has been particularly active in developing and promoting environmental protection policies over the past few years. However, in spite of a real willingness to improve the situation, the country still suffers from acute environmental issues. In fact, important obstacles arise when it comes to the implementation phase. These latest were explored by a large number of scholars. Most

[1] There were only 3,900 laboratories to test the safety of food products in 2007, or one laboratory for more than 300,000 residents (Source: *Food Safety and Inspection in China*, The US-China Business Council, 2007). An interview conducted in Beijing in November 2011 with an agent of the FAO working with food safety controllers confirmed that although progress had been made since 2007, local bodies were still lacking financial and human resources to efficiently control food safety.

[2] DUCHATEL, Mathieu. Comment éviter de nouveaux scandales alimentaires ? *China Analysis*, March-April 2011, n°33, p. 26-28.

[3] In rural areas near Chongqing, the poverty alleviation bureau of a county I visited was conducting an agricultural development projects in three villages with an NGO. The project included maize productivity increase, livestock development and fruit tree planting.

of them blame the rapid economic development and urbanization of China[1], the "insufficient authority and the lack of co-ordination between institutional actors"[2] and the administrative fragmentation and the defaults of the cadres evaluation system[3].

For Burns *et al.*, the inefficiency of the National Commission for Food Safety is due to the characteristics of the national cadres evaluation system, which pushed local officials to focus on issues for which they were assigned targets (such as social stability or economic growth), whereas other topics, such as food safety, are considered as less important and let aside[4]. Interviews confirmed that the defaults of the cadres evaluation system were impeding the implementation of environmental protection policies in the agricultural sector. The Chinese government indeed attaches fundamental importance to food self-sufficiency and the fulfilment of agricultural production targets can play a significant role in the promotion of local cadres.

The challenge of maintaining a certain degree of food self-sufficiency is important and environmental protection policies are seen as potential *threats* for the achievement of agricultural production targets: local officials are not particularly eager to encourage farmers to reduce the use of pesticides and fertilizers as they think it might jeopardize the productivity levels. Even among central authorities, environmental protection is still considered as potentially harmful for national food security. As a Chinese research fellow working closely with the Ministry of Agriculture explained to me, when I asked him if current debates on agricultural policies were involving environmental protection:

---

[1] ECONOMY, Elizabeth C. The Great Leap Backward? The Costs of China's Environmental Crisis. *Foreign Affairs*, September-October 2007, vol. 86, n°5, p. 38-59.

[2] JAHIEL, Abigail R. The Organization of Environmental Protection in China. *The China Quarterly*, December 1998, n°156, Special Issue: China's Environment, p. 757-787.

[3] In Zhou, Lian, Ortolano and Ye's "muddling-through" model, the organizational design of performance evaluation make local environmental protection bureaus adopt an approach "based on the logic of meeting pollution reduction targets [and] came at the expense of using measurements based on actual performance" (ZHOU, Xueguang, LIAN, Hong, ORTOLANO, Leonard, YE, Yinyu. A Behavioral Model of "Muddling Through" in the Chinese Bureaucracy: The Case of Environmental Protection. *The China Journal*, July 2013, n°70, p. 145).

[4] BURNS, John P., PETERS, B. Guy, WANG, Xiaoqi, LI, Jing. Food safety policy coordination in three Chinese cities. Paper prepared for the Conference on 'Regulation in the Age of Crisis', Third Biennial Conference of the Standing Group on Regulatory Governance of the European Consortium for Political Research ECPR and the Regulation Network 17-19 June 2010, University College Dublin.

"There are many discussions currently ongoing about agricultural policies. Food security is one of China's main concerns. We also talk about environmental protection, indeed. About environmental protection and food safety. But if we observe what happened in other countries, in Korea, in Europe, everywhere, we see that developed countries first solved their food security problems then designed environmental protection agricultural policies such as payment for environmental services, etc. It is a question of productivity."[1]

2) Scientific circles disconnected from farmers

For most of the Chinese leaders, productivity is still the main objective agricultural policies have to fulfill. In line with this objective, technological innovation is considered as a key lever to raise agricultural production, and important efforts – mainly made by the state[2] – were dedicated to the development of research capacities over the past decade. Public investment devoted to agricultural research and development rose tremendously in the 2000s, and a significant amount of these expenditures was dedicated to research in biotechnology[3].

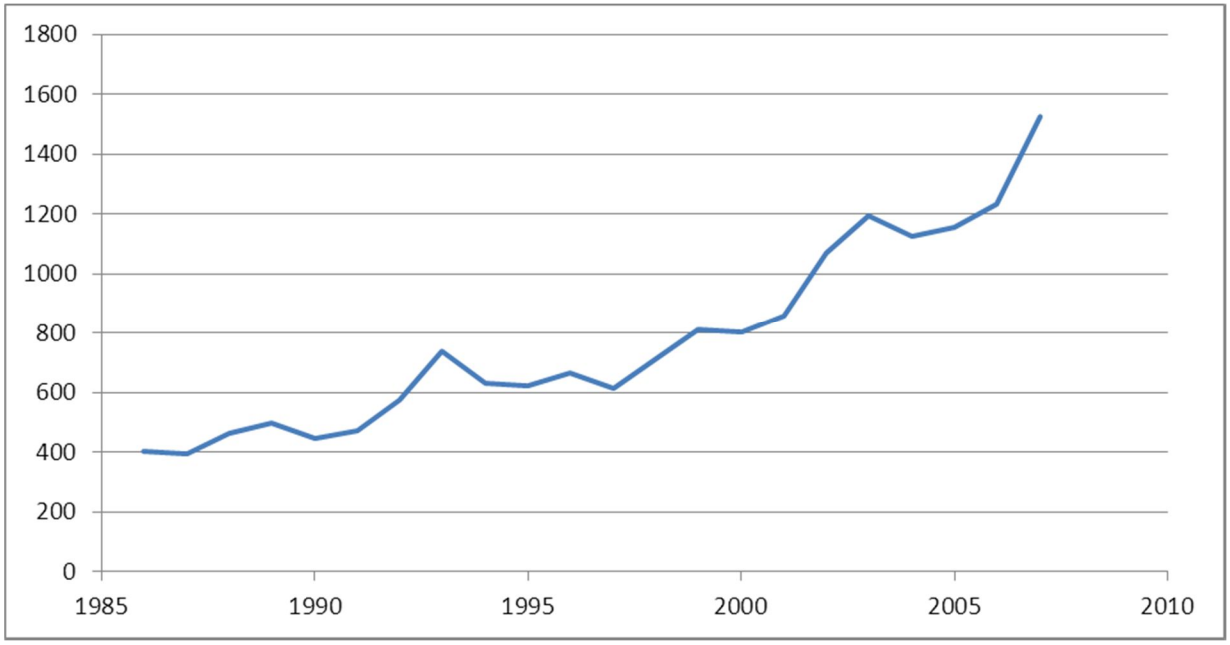


Figure 21 : Total agricultural R&D spending, Public Sector (million 2005 US$)
Source : ASTI database (http://www.asti.cgiar.org/data/)

[1] Interview, Beijing, June 2014.

[2] ZHANG, Fangzhu, COOKE, Philip, WU, Fulong. State-sponsored Research and Development: A Case Study of China's Biotechnology. *Regional Studies*, 2011, vol. 45, n°5, p. 575-595.

[3] For instance, in 2003, China spent 350 million US dollars in plant biotechnology, and 570 million in total agricultural biotechnology (plant, animal and microorganism) (ROZELLE, Scott, HUANG, Jikun, OTSUKA, Keijiro. The Engines of a Viable Agriculture: Advances in Biotechnology, Market Accessibility and Land Rentals in Rural China. *The China Journal*, January 2005, n°53, p. 93).

The research facilities I had the opportunity to visit were impressive. Laboratories were well-equipped and using cutting edge research equipment[1].

Picture 7 : Technicians sorting seeds in a gene bank in Beijing
(Photography by the author, Oct. 2013)

Picture 8 : Researchers at work in a state key laboratory in Beijing
(gene sequencing for wheat, maize, rice and soybean) (Photography by the author, Oct. 2013)

In addition, in the institutes I visited, I met a number of fellows carrying out research aimed at addressing environmental issues in the agricultural sector. A lot of researchers were working on genetics, but not all of them. Solutions also included drip irrigation, solar greenhouses, non-chemical pest control methods and systems, non-chemical fertilizers (biochar in particular), etc. For a number of these solutions, China was considered as quite advanced on the topic on the scale of developed countries[2]. Moreover, a lot of researchers working in the institutes I visited were quite close to administrative bodies in charge of drafting policies. A number of them even told me that they were asked by government officials to submit drafts for agricultural policies on certain topics. As insights from fieldwork seem to demonstrate, scientific circles had the means to bring the topic of environmental protection to the political agenda of agriculture.

[1] An Illumina's HiSeq 2000 (sequencing equipment), worth between 500,000 and 1 million euros, was found in one state key laboratory in Beijing doing research in crop sciences (mainly on wheat, rice, maize and soybeans) – I was told that as a National Key Facility since 2003, the laboratory received 200 million RMB per year to fund the contracted staff and some equipment (the permanent staff were paid as state employees) and could also apply for other fundings for equipment.

[2] Interviews in Beijing (November 2013) and Shanghai (March 2013).

However, as far as implementation is concerned, the task proves to be more difficult. Scientific circles are usually quite disconnected from farmers, with whom they have few opportunities to share their expertise. Exchanges though do exist between researchers and farmers. A wide network of extension services was established throughout China, and trainings provided by scientific staff are regularly proposed to farmers. Several bodies are involved in agricultural trainings. Apart from universities (such as the Chinese Agricultural University in Beijing) and vocational schools (such as the Beijing Vocational College of Agriculture), the China Agricultural Broadcasting and Television School (CABTS) and the National Agricultural Technology Extension and Service Center (NATESC) are the two main national organisms in charge of agricultural training. The CABTS, which is under the direction of the Ministry of Agriculture but is also supported by twenty-one ministries and commissions, offers graduate education for students as well as trainings for active farmers, thanks to a wide network of local schools[1]. Although the CABTS also provides rural areas with technological extension services, agricultural extension is rather the prerogative of the NATESC. The National Agricultural Technology Extension and Service Center, also working under the direction of the MOA, supervises between 200,000 and 300,000 trainers across the country.

In spite of the wide network of local schools and extension service centers and the considerable number of trainers, people interviewed in rural areas expressed vehement criticisms of the system. Interviewees denounced the lack of knowledge of employees in extension service centers, their lack of interest in agricultural development and even their lack of direct contact with farmers. In a remote rural area in the municipality of Chongqing, I was told that the local technical experts preferred to rely on hotlines. The local NGO I was visiting complained about the inefficiency of hotlines. According to the staff, farmers are reluctant to call people they do not know personally, even when they experience an important problem for which they know technical experts can give them advice:

> "[Farmers' instructors of the township government] conduct trainings with the farmers, but the problem is that they usually don't follow up. But you have to follow up. If you simply conduct trainings, then the farmers won't follow the new methods. But the problem is that they don't have enough staff to follow everyone. For example, they set up a hotline for farmers so that they could call in case their

[1] 39 at the provincial level; 372 at the municipal level; 2,071 at the county level; 10,805 at the village level (Source: CABTS presentation held during an EU-China meeting in Tianjin, in November 2012).

> pigs had a disease. But the thing is, they didn't call. But when we [NGO's employees] established our office in [the village], they came to see us for the diseases of their pigs. So we told the government to come sometimes, and now that they have come, farmers call them."[1]

This quote illustrates the importance of personal connections in China (关系 *guanxi*), on which a lot of research has already been conducted[2]. In the vast corpus of literature exploring this matter, scholars emphasize the importance of maintaining social connections, as a way to obtain financial and other resources. In the case of farming however, the significance of personal connections goes beyond a way to have access to resources: even when farmers have the mean to have access to technical advice, they are reluctant to ask for it until they know personally the person providing advice. Several factors explain the situation, apart from the traditional cultural importance of personal connections. The lack of insurance and of personal financial resources increases the risk, for farmers, to bear the costs of a bad advice. As a consequence, it is easy to understand why trust plays a key role in the process. The distance usually put between farmers and advisors of agricultural extension services centers might make the former skeptical about the good intentions of the latter, explaining the lack of efficiency of distant top-down training methods[3].

The distance put between trainers or technical advisors and farmers is also put between scientists and farmers. When I was visiting a "model farm" (or demonstration site) in the suburbs of Beijing, the guide told me:

[1] Interview, Chongqing, October 2013.

[2] For *guanxi* analysis in rural areas, see: YAN, Yunxiang. The Culture of Guanxi in a North China Village. *The China Journal*, January 1996, n°35, p. 1-25; for the importance of guanxi among farmer-migrant communities, see FROISSART, Chloé. Quelle citoyenneté pour les travailleurs migrants en République Populaire de Chine ? : l'expérience de Chengdu. Thèse : Sciences Politiques : Paris : Institut d'Etudes Politiques, 2007, in particular p. 241-249.

[3] On the opposite, I had the opportunity to visit three villages in rural areas near Chongqing, where a foreign NGO was conducting agricultural development projects including trainings for farmers. The proximity between the NGO agents and the farmers – the agents were living very close to the villages and visiting them each week – and the time they dedicated to the development of relationships – they were working with them for more than a year (which enabled them, among other things, to develop trust and to target opinion leaders to conduct pilot field experiment) – were presented as key factors of success for the adoption of alternative farming practices by farmers.

> "We are a window between China and the world. We want to show advanced agriculture science and technology to governments, enterprises. Even farmers come here to learn."[1]

The words "*even* farmers" reflect in fact a widespread situation among agricultural demonstration sites, where most of the displayed techniques are completely unaffordable for the vast majority of Chinese farmers. For instance, the price of a glass greenhouse such as the ones found in most of the demonstration sites I visited[2] was around 2,000 RMB per square meter. To this had to be added the price of technologies such as hydroponics or vertical agricultural technology, also very popular in demonstration sites given the stake of the scarcity of arable land. Finally, the price of water (120,000 RMB per year for a 4 hectares greenhouse) and electricity (1.2 million RMB per year for a 4 hectares greenhouse[3]) had to be added as well. By comparison, in 2012, the average net revenue of rural households was less than 8,000 RMB per year[4]…

Demonstration sites need to employ farmers to cultivate plants. In the science and technology park I visited near Beijing, 80 percent of employees were designated as "*nongmin*" (farmers) and were taking care of plants. I was told that for this job, they were earning 1,060 RMB per month. This, again, is another example of the distance put between agricultural technology developed by scientific circles and the potential users of this technology: farmers.

C - Power unbalance between food enterprises and farmers

In the previous paragraphs, we saw that administrative and scientific circles as well as the civil society and NGOs were constrained by a multiplicity of factors preventing them from

[1] Interview, Beijing, October 2013.

[2] The name "demonstration site" is quite ambiguous. It can indeed be a technological park oriented towards enterprises (either to attract investment or to sell technology: 农业科技园 nongye keji yuan, "science and technology park"), an experimental base attached to a research center (试验站 shiyan zhan, "experimental station"), a site promoting technology among a wider public (enterprises, entrepreneurs, teachers, political leaders, farmers), usually linked to the local agricultural extension service bureau (农业技术推广站 nongye jishu tui guanzhan, "agricultural technology promotion station"), or a combination of the above-mentioned models.

[3] In this particular greenhouse for which my guide gave me the above-mentioned data, some products (such as mushrooms) were also cultivated in dark rooms with artificial light – which could explain the particularly large electricity bill.

[4] Source: National Bureau of Statistics of China.

taking effective action to address environmental issues linked to agricultural production. Among the remaining players – food enterprises and farmers – unbalanced patterns of power explain the supremacy of the role given to food enterprises to address food safety and food security issues.

In order to depict these patterns of power, I proceeded by relying on Crozier and Friedberg's methodology of organizational analysis. According to this methodology, there are four different types of power, gained from the capacity of actors to control different kinds of uncertainties:

- uncertainties linked to expertise;

- uncertainties linked to the environment(s) of the concrete system of action;

- uncertainties linked to communication and information;

- uncertainties linked to the existence of organizational rules.

In the chosen concrete system of action (agricultural production at the county level, for selected agricultural sub-sectors), I distinguished several broad categories of actors interacting with each other, which I call "subsystems" – for instance the subsystem of "local officials" or the subsystem of "food factories based in rural areas". These subsystems sometimes comprise a wide variety of players. For instance, in the subsystem of food factories based in rural areas, I met individuals belonging to management teams (such as founders, CEOs and vice-managers), factory managers (in charge of supervising the arrival of products to the factory and industrial processes) and workers, but also contracted farmers and technicians working in fields "belonging" (in one way or another) to the factory. The additional complexity of the scheme comes from the fact that these groups of players sometimes share actors with other groups: for instance, contracted farmers are sometimes employed by local factories as workers, and, as such, belong to the group of factory workers as well (on figure 22, it is represented with overlapping circles).

In order to simplify this scheme, three groups of players were delimited for the purpose of this analysis: local officials (from county and township levels[1]), "enterprises" (by that, we

[1] Conclusions about the analysis of the capacity to control uncertainties of these latest will be presented in the next chapter, this chapter focusing mainly on power unbalances between farmers and enterprises.

mean mostly the factory management staff), and "farmers" (including farmer-workers). Individuals from each group of actors were interviewed in order to get a precise idea of their capacity to control the uncertainties of the system of action.

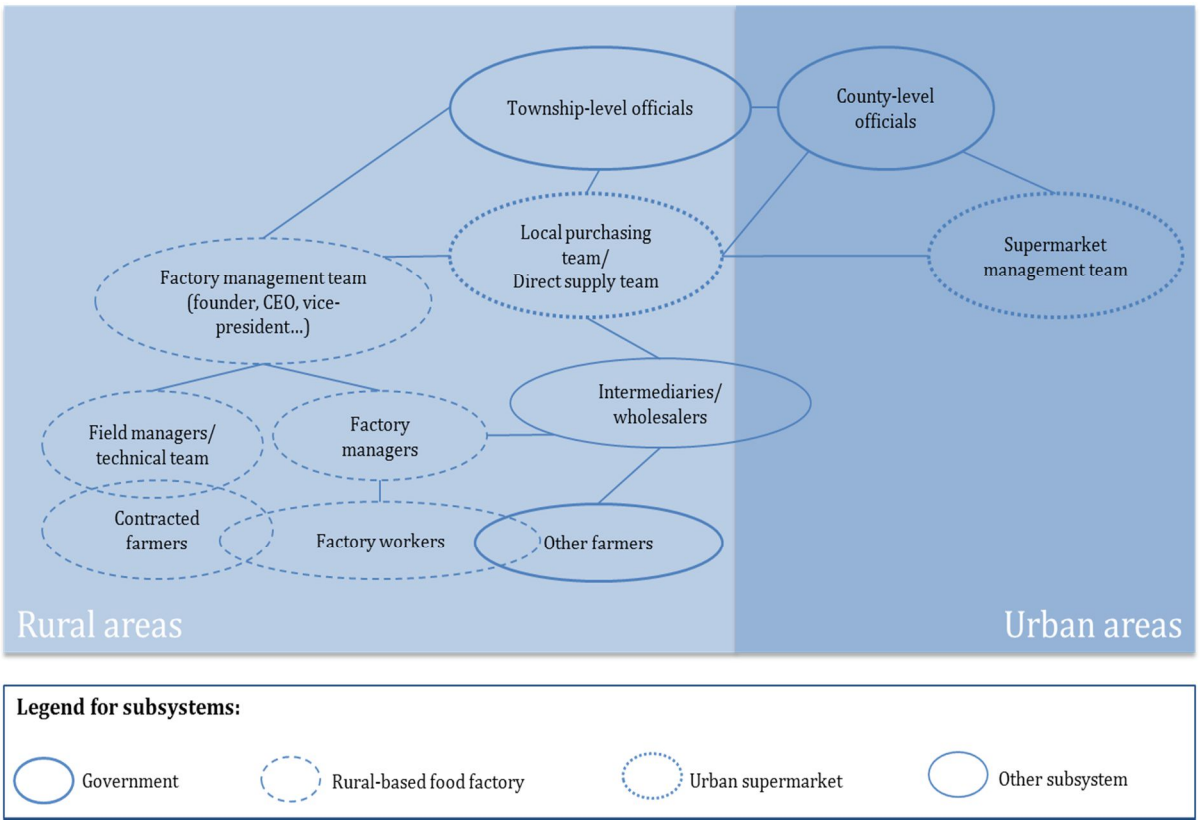


Figure 22: Groups of actors of the concrete system of agricultural production

1) The evolution of farming expertise

Expertise is one of the areas of uncertainty mentioned by Crozier and Friedberg. In the field of agricultural production, "expertise" is a combination of several types of knowledge, linked to agricultural production (the ability to grow crops or to raise livestock), but also to marketing, to finance and to a variety of other areas. This subsection demonstrates that agricultural expertise does not only include the ability to grow crops or to raise livestock, and, as a consequence, the level of expertise of farmers is quite low compared to the one of rural-based enterprises. Drawn on fieldwork, this analysis shows that this unbalance in the control of the uncertainty of expertise is an important explanatory factor for the choice of local governments to rely on rural-based food processing enterprises to lead agricultural modernization.

The vast majority of farmers did not have any vocational training and did not even benefitted from secondary or upper-secondary education. Agriculture, in China, is still widely a profession that does not stem from a choice made by farmers, but is rather an inherited situation from which these latest usually try to escape. As a consequence, trainings of active farmers are essential to address gaps in knowledge. The intent here is not to say that farmers do not know how to grow products. According to most of the agribusinessmen I interviewed (who are usually not farmers but decided, at one point, to invest money in the farming sector), "*nongmin*" have the expertise to farm, while they do not. For instance, the manager of a green farm in the suburbs of Beijing once told me:

> "I majored in rural development in Renmin University. [But] Uncle L. [the farmer] has been working here for twenty years, he knows people, who make him good prices, he knows about manure. […] We have several technical people on the farm. But in fact, Uncle L., as he has been growing vegetables for twenty years, knows better! We don't want to teach them. The only way to learn is through practice. It's the Chinese way: in the Chinese countryside, people are cooperating and learning through practice thanks to the advice of the elderly."[1]

Similarly, agricultural entrepreneurs, in Jiangxi and Shandong, were relying on farmers to grow products, were barely seen in the fields and admitted that they were not capable of growing products themselves.

However, considering the growing importance of environmental issues caused by intensive agricultural practices, making farmers know about environmentally-friendly practices and technology has become essential to achieve the next step of agricultural modernization.

Chinese farmers are generally smallholders, who have little access to the newest technology that would help them modernize their farms. Local governments, on their side, comprise institutions dedicated to agricultural extension services, which are informed by higher levels of the agricultural extension system as well as universities and research centers. Finally, enterprises have the financial capacity to hire technical staff with a certain level of expertise in agricultural technology. As a quote from an organic retailer in Beijing illustrates it:

[1] Interview, Beijing, April 2013.

> "In order to deal with food safety, I only talk with businessmen, and not with peasants, because only businessmen have the money to do that and I wouldn't have time to manage every farmer. The small farmers don't have money, they just look at what is working and what is not working."[1]

From above-mentioned insights, the following table of power patterns can be drawn, that relate to the control of expertise for the growing of agricultural products:

	Expertise linked to agricultural activities	Expertise linked to agricultural new technologies or sustainable practices
Enterprises	-	+
Local governments	-	+
Farmers	+	-

Table 12: Patterns of power related to the control of expertise in agricultural production

2) The ability to market products

Knowledge related to farming techniques is only one aspect of the agricultural expertise. Another aspect is linked to marketing and sales. In Crozier and Friedberg's methodology of organizational analysis, this kind of knowledge would not be labeled "expertise", but would rather refer to the control of "downstream environments" of agricultural production.

Having access to the downstream environment of buyers is essential for producers. The range of buyers of agricultural products goes from food processing companies to individual brokers, wholesale markets, retail markets and individual consumers. However, the remoteness of farmers, their little connection to cities or towns and the fact that they often do not possess any vehicle that could to bring an end to their isolation, make them lack control over the downstream environment of buyers. Most of the peasant-farmers I saw in Lushan had very little capacity to control the downstream environment of agricultural production. Similarly, small farmers cultivating apple orchards, in Lanshui, had little access to markets – even though the area is usually considered as much more developed than Jiangxi – and a lot of them still had to sell apples on the roadside.

Local food processing enterprises, on their side, could recruit specialized marketing teams, who had the resources and the knowledge to contact buyers and sell products. Finally, local officials, because they demonstrated a capacity to act as intermediaries between rural-

[1] Interview, Beijing, November 2012.

based food processing enterprises and urban markets, also had access to markets (even though most of the time, they did not sell products themselves). On fieldwork, it was not rare to see buyers coming from outside and willing to purchase agricultural products in the area asking governmental bureaus for advice to find local producers. From these elements, the Table 13 could be drawn.

	Access to markets
Enterprises	+
Local governments	+
Farmers	-

Table 13: Patterns of power related to the control of downstream environments

Another consequence of the isolation of farmers is that they have little control over information – the third type of power source depicted by Crozier and Friedberg. In spite of the active efforts of the government to develop "agricultural informatization", national and local information systems (giving the market price of agricultural products or inputs or giving information on how to access subsidies) were still poorly developed for agriculture at the time I conducted fieldwork. On the opposite, enterprises and local governments, who are in touch with a wide population of sellers and buyers of agricultural products and inputs and have the technological means to access information, usually had a better knowledge of prices (Table 14) and on the availability of subsidies.

Stakeholder	Information linked to prices of agricultural products	Information linked to prices of inputs
Enterprises	+	+
Local governments	+	+
Farmers	-	-

Table 14: Patterns of power related to the control of information

3) Preferential channels for financial resources

In addition to expertise and to the downstream environment of agricultural production, another fundamental uncertainty of agricultural production, key to depict local patterns of power, is its upstream environment, and, in particular, access to credit. Financial resources are not only necessary for the modernization of the sector (through mechanization, the use of better inputs, etc.), they are also essential to control the daily risks characterizing the

agricultural production sector, as they provide coverage in case of bad harvest due to weather conditions, pests or other events. Because of the growing disinterest of the banking sector for rural areas and agriculture in the 1980s and the 1990s, rural dwellers – and especially small farmers – suffer from important difficulties and from a lack of access to banking services.

Since the middle of the 2000s, the need to reform the rural financial sector was regularly emphasized both by experts and by government officials. In 2008, the central government issued specific demands regarding the reform: among other things, officials pointed at the necessity to modernize rural banking infrastructures, to improve credit availability, to lessen credit conditions and to accelerate the building of mixed systems including commercial finance, cooperative finance and governmental finance[1]. Significant progress was made on the side of financial coverage. ATMs, retail points and mobile phones payment services mushroomed throughout the countryside. However, in spite of these technological advances, credit availability and conditions are still tight for rural dwellers. According to an article from the Caijing magazine, in 2009, only 32 percent of rural families had access to credit[2]. According to interviews conducted between 2011 and 2014 for the purpose of this research, the situation did not evolve much since and access to credit is still limited for rural dwellers. For the building of a house, for the purchasing of a car or a piece of land, the rural residents I had the opportunity to talk to were telling me that they usually relied on their own savings and borrowed from friends and family members.

Farmers, who usually account for the greatest part of low-income rural dwellers, are particularly affected by the lack of access to credit [3]. The main reason behind this situation is the lack of eligible collateral, as farmers do not own their land and cannot use it to insure

[1] SCHWOOB, Marie-Hélène.La réforme de la finance rurale. *China Analysis*, Décembre 2013, n°46, p. 38-42.

[2] 王培成, "农村金融破与立", 《财经》杂志, 11/11/2012. *Wang Peicheng, Nongcun jinrong po yu yi, Caijing Zazhi* [WANG, Peicheng. Breaking and building rural finance. *Caijing Magazine*, November 11th, 2012].

[3] In their article, Li Zhou and Hiroki Takeuchi well analyze how farmers are forced to use other channels, more informal, to get loans. See ZHOU, Li, TAKEUCHI, Hiroki. Informal Lenders and Rural Finance in China: A Report from the field. *Modern China*, 2010, vol. 36, n°3, p. 302-328. The use of informal loans was also something that I regularly encountered among farmers during fieldwork.

banks against liquidity shortfalls. According to Tang Min[1], advisor of the State Council, "micro-credit" for small farmers is usually not considered as a profitable activity for rural banks, in comparison to loans to big agricultural enterprises. In addition, small farmers are scattered in the countryside and usually live in remote areas, which considerably increases the operating costs of rural banks.

On the opposite, enterprises benefit from a much higher degree of trust in the banking sector. In addition, they can be backed by local governments. As a food processing enterprise in Shandong told me:

> "The government can appoint people to provide us various services, including financial services, discounted interest rates and access to preferential loans."[2]

Local governments above the township-level, on their side, also have access to financial resources, especially since agriculture and rural areas were designated by the central government as the new key levers for economic growth[3] – leading to the drawing of the following table.

	Control over production resources: financial resources
Enterprises	+
Local governments	+
Farmers	-

Table 15: Patterns of power related to the control of financial resources

To conclude, what the fieldwork of this research demonstrated is that strong uncertainties exist for agricultural production and that these uncertainties are particularly poorly controlled by small farmers. These uncertainties are linked to the need for expertise, to the scarcity of information or to the uncertainties in upstream and downstream environments. Food processing enterprises based in rural areas control these uncertainties better than

[1] 汤敏, "让农村金融更普惠", 《财经》杂志, 11/11/2012. *Tang Min, Rang nongcun jinrong geng puhui. Caijing Zazhi* [TANG, Min. Allowing rural finance to be more inclusive. *Caijing Magazine*, November 11th, 2012].

[2] Interview, Shandong, November 2012.

[3] The increase in financial resources that I am referring to is not true for all the administrative levels and also greatly varies among regions. In particular, it should be underlined that county- and village-level authorities suffer from a lack of funds, as well as areas with poor environmental and economic conditions. These points will be further detailed in Chapter 3, III.B.

farmers. The amount of time and human resources that a filling of gaps between enterprises and farmers would imply is enormous. In addition, the fact that farmers are scattered among the countryside and their remoteness considerably increases the transaction costs of trainings. The scale of the task is an important factor explaining why local governments usually prefer to rely on rural-based food processing enterprises to drive the modernization of the agricultural sector, which is considered as an urgent task to alleviate food security and social stability issues.

Conclusion

Fieldwork conducted in Lushan and Lanshui, along with additional insight I could collect from interviews conducted in other areas (such as Jiangsu, Chongqing or Beijing) and from actors running projects elsewhere in the Chinese countryside, showed strong evidence that local governments usually preferred to rely on rural-based food processing enterprises to conduct agricultural modernization rather than on farmers (as it was the case for a number of countries such as France) or NGOs (as it was the case for environmental issues alleviation in China). This choice can be explained by several reasons.

The first reason is rooted in the past of China. For the past four decades, local officials have kept on relying on enterprises to achieve local development goals, especially in rural areas. Officials are used to navigate in state-enterprises nexus and much more easily communicate with entrepreneurs than with farmers.

Secondly, rural food enterprises are empowered by the current melting of food chains, which is artificially orchestrated by the state, with the aim of answering the issue of rising food prices without negatively impacting (already low) farmers' income. Considering the fact that most farmers are still smallholders scattered in rural areas and sometimes living in remote places, cutting all intermediaries out of the food chain is hardly conceivable. As a consequence, food-processing enterprises established in rural areas remain non-removable intermediaries between government officials and peasants.

The third reason why local governments are eager to rely on food enterprises is linked to the urgency of the rising stakes at hand in terms of food security and food safety and to the attractiveness of the solution to rely on food enterprises. These latest indeed hold much

greater control over a number of uncertainties characterizing the agricultural sector, such as expertise and upstream and downstream environments. The power and capacity of enterprises to steer agricultural modernization and to drive agricultural production towards more productive and more sustainable practices are fundamental variables that explain the rationale for the choice of local governments to rely on rural food enterprises to conduct agricultural modernization.

III. Chapter 3: Including upstream and downstream actors in the picture

Introduction

In the previous chapter, we saw that the rising stakes at hand, along with the difficulties experienced by small farmers to rapidly address these stakes, were bringing rural-based food processing enterprises at the forefront of agricultural modernization. Another interesting conclusion I could draw from fieldwork observations in Jiangxi and Shandong was that food processing enterprises were not the sole stakeholders taking part in the process. Retailers established in urban areas were also increasingly encouraged to engage in concrete actions to modernize agricultural production in the countryside and were present on the fields. Through the upstream integration of retailers, the government hopes to address inflation and food safety issues without penalizing a number of consumers likely to be supported by the rest of the society such as farmers. Intermediaries of the food chain, on the opposite, make easy scapegoats, as "people know that they are everywhere but nobody really knows them"[1]. In addition to the integration of downstream actors up in the food chain, upstream actors – such as agrochemical companies – sometimes take part in agricultural modernization as well. The inclusion of downstream and upstream enterprises in the fields complicates the scheme of agricultural modernization. It is this complexity and its consequences that this chapter would like to explore.

I - Bringing retailers up in the chain through direct purchase

A - A government-led model or an economic imperative for retailers?

In 2007, the Ministry of Commerce gathered the CEOs of the nine biggest supermarkets in China for a special meeting, which marked the official launch of the model of "farmer-supermarket direct purchase" (DP). In this model, big retailers are encouraged to purchase agricultural products directly from producers in rural areas and are actively supported by the

[1] As formulated by the manager of a food-processing enterprise (Interview, Jiangxi, October 2012).

Ministry of Commerce in their "DP" initiatives through tax abatements and other incentives. In 2011, 2,000 supermarkets had already developed direct purchase projects[1].

The model is expected to help the government reach its objectives in terms of rural development and inflation. DP is indeed supposed both to increase and stabilize farmers' income over time – by linking them directly to final markets and enable them to sell their products at relatively stable prices – and to curb food price inflation – by deducing the margin of intermediaries from final food prices. In addition, DP projects are expected to be attractive to retailers (as DP aims at reducing purchase costs and at improving the safety of products)[2] and to benefit final consumers as well in terms of food safety.

1) An increasingly competitive environment for retailers

Direct purchase projects in fact already existed in China prior to the official launch of 2007. Foreign food distribution enterprises, in particular, were familiar with these methods, as they were already using them in other countries. In order to understand the reasons of the development of direct purchase in China before 2007, it is important to look at the business environment of retail enterprises of the past decade. In the 2000s, the Chinese retail sector underwent a phase of accelerated development. Supermarkets and hypermarkets rapidly burgeoned throughout the country, starting with the developed areas of eastern China. Supermarkets emerged as important players in an environment traditionally dominated by small retailers, grocery stores and marketplaces. Today, the retail sector has become highly competitive. Profit margins are small, which encourages enterprises to engage in mergers and acquisitions. These past few years saw a real concentration of the sector, which consolidated a limited number of players[3]. In the developed provinces located in the East of the country, the multiplication of players and the growth of several big retail companies dramatically raised competition. At the end of 2011, when I began interviewing stakeholders in the retail sector, the saturation of city centers and the rise in real estate prices had already started pushing

[1] HU, Dinghuan. "The opportunity & Challenges of Farmer-Supermarket Direct Purchase in China" Presented on November 13th, 2013, at the FAO's Policy Forum on Rural-Urban Income Gaps and Smallholder Market Integration in Asia in Beijing (November 13th and 14th, 2013).

[2] HU, Dinghuan. *Ibid*.

[3] *China Power of Retailing*. Deloitte, 2011, http://www.deloitte.com.mx/csgmx/docs/China_Power_Retailing_2011.pdf accessed on March 10th, 2014.

supermarkets to suburban areas or to the western parts of the country, where they were much more warmly welcomed by local governments – even though today, competition is already emerging in these areas as well, almost as fiercely as in the city centers of eastern developed China.

In such a competitive environment, the price of products sold by supermarkets comes under strong downward pressure. Retailers face the local competition of a multiplicity of small players who can rapidly take measures to outweigh the hard discount strategies implemented by retailers[1]. In addition, profits can be increased neither by lowering rental costs – as supermarkets have to compete with the other users of urban land, which keeps on pushing land prices up – nor by decreasing salaries – as low wages are already the rule in the sector. In the past, dealing with "brokers" enabled supermarkets to negotiate low prices for food products, as brokers selling a wide variety of products could "invest" in food while making a margin on other products with higher value-added. As was telling me a former sales manager of a supermarket in Shanghai:

> "The main interest of brokers is that they sell apples, but also nuts, vacuum cleaners […] As a consequence, a broker can 'invest' in apples by selling them to us at 1 yuan instead of 2 yuan, and he knows that he will be able to make profits on other products."[2]

Given the large quantities of products they trade, supermarkets and brokers can easily achieve economies of scale. However, faced to the increasing competition in the retail sector, supermarkets had to find another way to maintain their margins, either by trying to reduce costs or by differentiating themselves from their competitors to attract more customers (for instance, through the increase of the value-added of products and/or through brand building). Direct purchase appeared as a way for supermarkets to implement both of these two strategies at the same time. Food processing plants established in rural areas, thanks to the recent support of local governments, are modernizing and are becoming increasingly able to answer the specific demands of supermarkets. In addition, as food safety is rising among the concerns of customers, building a supermarket brand image based on the quality and safety of food products is viewed as an interesting way to improve one's position in the competitive

[1] Interviews with supermarket managers, Shanghai, May 2012.

[2] Interview, Shanghai, June 2012.

environment of retailers. As was saying a manager working at Y., an important international retailer in Shanghai:

> "Among the basic requirements, there is of course the fact that it has to be clean and tidy. But there is also food safety. In fact, we have to define a marketing position: 'Tomorrow, I want to be recognized by my clients for food safety.'"[1]

At another international retailer, X., with Chinese headquarters also established in Shanghai, where I conducted several rounds of interviews[2], I was told that two kinds of direct purchase projects were run prior to 2007: i) DP projects focusing on producers in rural areas as a way to reduce food prices; ii) DP projects selecting producers in rural areas in order to improve the quality of products. However, interviewees taught me that direct purchase projects linked to the quality of products had to be abandoned, due to the increasing difficulties faced by the team in charge of the project in X.'s headquarters, which eventually started lacking motivation. Firstly, it was extremely challenging and time-consuming to force producers to respect the required specifications linked to the quality of products, especially when demand, in supermarkets, was growing and asking for a wider network of suppliers. As one manager who used to be in charge of this project told me:

> "Imposing specifications to one-two-three-four suppliers is doable, but imposing them on whole of the suppliers we today deal with, considering the volumes we deal with, is completely unthinkable."[3]

Or, according to another manager of X.:

> "Sometimes audits showed that less than 60 percent of requirements were met."[4]

In addition, the team in charge of the project had to face the repeated attempts of X.'s local purchasing teams to deal directly with suppliers and to fix prices without requiring the help of the headquarters' team. The high employee turnover and the difficulties to replace human resources was another factor that drove X. to give up on the project. As was saying a former manager of a quality direct purchase project at X.:

> "I face enormous difficulties to find an agronomist for the quality team. They are either too scientific laboratory technicians, either too 'marketing', there is no

[1] Interview, Shanghai, October 2012.

[2] In October 2012, March 2013 and October 2013.

[3] Interview, Shanghai, June 2012.

[4] Interview, Shanghai, August 2013.

profile between the two. They know by heart the test numbers recommended by Deng Xiaoping but they know nothing about other tests, pig breeds, size [of animals], nothing…"[1]

2) The recent government impetus for direct purchase

In 2013, X. decided to restart the DP project aimed at improving the quality of products. According to the people I interviewed, several reasons motivated this choice. The official reason was that X. was willing to meet the ever-increasing expectations of its consumers in terms of food safety and in terms of freshness and taste of agricultural products such as fruits and vegetables. The other reasons were linked to the recent impetus given by the government: namely, all the actions that were conducted by central and local government officials since the official launch of the DP model in 2007. The following quote illustrates this last point:

"The Mofcom recently went with X. to visit quality lines in Brazil. After this journey, the Chinese government asked X. to restart its quality line project, and specifically in Jiangxi province, which is the birthplace of the Chinese Communist Party and for which it is necessary to develop economy and create a good image."[2]

The willingness of a number of government officials to push X. to launch DP projects in fact dates from before this visit. According to a manager of DP projects at X., the initiative was taken by the government in 2007, in order to contain inflation:

"They asked us to make an effort on our profit margin. However, on staple products like spinach, potatoes or tomatoes, our margin is close to zero, and it was impossible to 'make efforts'. But it was true that from the farm to the supermarket, there usually were 5-6-7 brokers, who were taking margins. We thus started implementing direct purchase projects, in order to have a better traceability, a better food safety image for the consumer, and also to have products at better prices."[3]

DP projects involve a complete rethinking of the traditional food supply model and a replacement of brokers with rural suppliers, product by product, which is quite challenging and time-consuming for retailers. In order to encourage them to engage in DP projects, the central government set up tax abatements (there is no VAT for products directly purchased

[1] Interview, Shanghai, November 2012).

[2] Interview with the new manager of quality DP projects, Shanghai, October 2013.

[3] Interview, Shanghai, October 2012.

from farms) as well as special business licenses for a number of rural producers, which facilitates the process.

Government officials are sometimes deeply involved in these projects. For local officials working in rural areas, being involved in direct purchase projects can be a way to promote enterprises with which they have close links – either for personal, political or economic reasons. As was explaining a manager of DP projects at X.:

> "It goes that way: the government tells us: you will work with this supplier, with this one here, with this one there. You will work with this slaughterhouse. It is all informal obligations of course. However, if we do not do it, we face the risk to find something [bad about us] in the media the week after. The slaughterhouses are linked to the government. There is this guy who managed to get the right contacts, or sometimes slaughterhouses belong to officials. It works that way. […] When we started to work with farmers, it was mainly with very integrated farms, which controlled the whole chain from production to transformation, as it was easier for us. They were of course very close to the government."[1]

It is also a way, especially for higher-level officials, to build an image of a politician concerned about his country and going to the fields, both to look good towards the above-level officials in charge of evaluating them and to increase their legitimacy amongst consumers-citizens. As was saying the new manager in charge of quality DP projects at X.:

> "Our first sourcing in Jiangxi for the quality lines was extremely political, as the government [Mofcom] was with us. […] When I was in Fujian, I was escorted by the local contact from the MOA, by the deputy governor of the township and the director of economic development. […] For our second audit, the government again expressed the wish to come with us."[2]

Agricultural development has become a politically-charged matter of interest for a number of officials, given the stakes at hand in terms of food safety and in terms of social stability in rural areas.

B - Competing with rural-based food processing enterprises?

Is the greater involvement of retailers likely to compete with the actions undertaken by food processing enterprises in rural areas? This is what would theoretically happen if retailers

[1] Interview, Shanghai, October 2012.

[2] In this interview, the manager newly in charge of DP projects could badly hide her embarassement vis-à-vis the presence of high-level officials on the field (Interview with the new manager of quality DP projects, Shanghai, October 2013).

were launching DP projects with farmers. However, insights from fieldwork demonstrated that this was usually not the case.

At the beginning, X. wished to work directly with farmers, as this is what the company usually did in other countries. As farmers were too small and could not produce volumes likely to meet demand, X. started looking for farm associations for fruits. However, the company's attempts rapidly proved that the experience was going to be difficult to conduct in China, and X. rapidly turned to food processing enterprises based in rural areas. The main problem of farm associations mentioned by X. was that there were not able to closely control and monitor farming practices:

> "[For the implementation of the new quality line,] we wanted to go back to the previous system of farm associations. The idea of the system was that farmers would join forces and exchange good practices and knowledge, and that we would manage sales activities, it was about to bring huge benefits. However, the thing is that big farmers had put small farmers under their control and that they were sometimes 50-100 farmers belonging to the same farm association. As a consequence, there was no monitoring of agricultural practices."[1]

As X., retailers are usually more eager to turn to food processing enterprises established in rural areas for direct purchase projects. This does not mean that farming practices are systematically controlled by food processing enterprises. In China, traceability usually stops at the factory level:

> "We have been working on traceability with the government for over two years. […] Actually, it is not possible to implement a complete traceability system, not today, not given the current production conditions. Traceability systems can be set up only from slaughterhouses to supermarkets."[2]

When I went to Jiangxi to conduct interviews in orange factories, I could see the challenges factories had to face in terms of traceability from the farmer to the gate of the factory. In fact, food-processing enterprises usually know from which supplier oranges come from when trucks arrive at the factory gates, for the simple reason that they have to know who they have to pay. However, suppliers can be farmers with identified fields and farming practices, but can also be farm associations (gathering a wide number of farmers with different farming practices) or even brokers picking up oranges in several farms or buying

[1] Interview, Jiangxi, October 2013.

[2] Interview with manager of DP projects, Shanghai, October 2012.

them from other brokers before coming to the factory. Requiring factory suppliers to know which farm their oranges come from would take time and jeopardize the ability of the factory to answer the growing demand of its clients and, as a consequence, threaten its development.

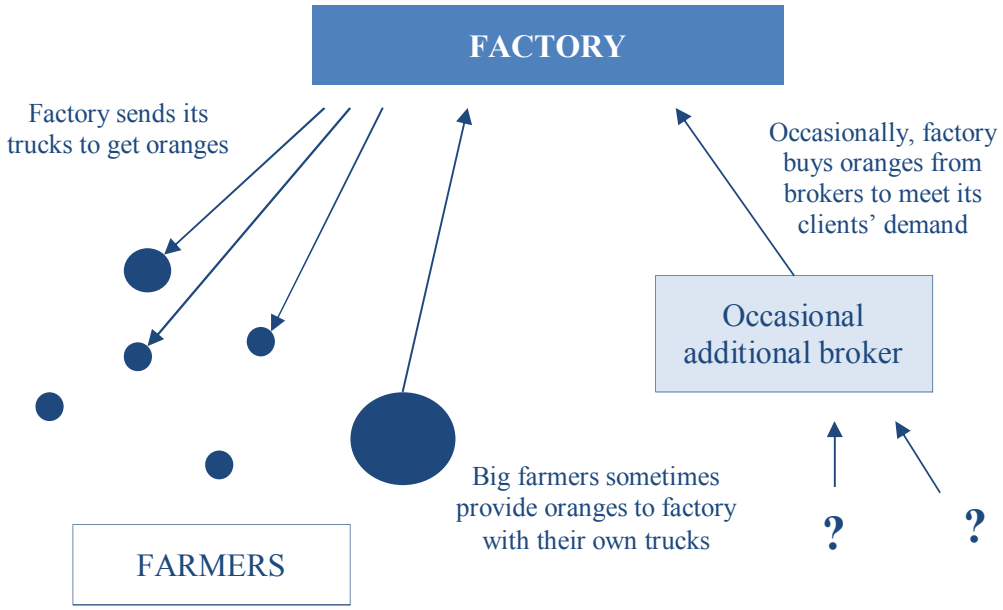


Figure 23: Factory suppliers

In addition, implementing traceability from the field to the factory also implies changing processes inside the factory. Except from a few "high quality" products sold at a very expensive price, oranges coming from different suppliers are processed together. Inside the factory, traceability is not just about putting stickers with barcodes on batches. It implies rethinking the whole processing system, in order to make sure that the right batches go to the right clients, that batches are processed and stocked without being mixed, and other things as well that require superior supply chain management skills and tools. The fact that small volumes are traded by each farmer and arrive to the factory gate further increases the complexity of the task (Pictures 9 and 10).

However, food-processing enterprises, compared to farm associations, usually *had the mean to convince* retailers that it was possible to implement traceability. Most of the enterprises I met indeed had their own plot, and it was easy to say that they would "reserve" a portion of their plot (where they could control farming practices) to supply the retailer's demand in terms of farming practices.

Picture 9 (left): Workers unloading a broker's truck in Jiangxi
(Photography by the author, Oct. 2013)

Picture 10 (below): Size of an orange factory in Jiangxi
(Photography by the author, Oct. 2013)

In reality, in a factory I visited, I saw that oranges packed for another retailer, Z. (which I knew had similar demands in terms of traceability and had agreed on these things with the processing enterprise), were coming from other plots not belonging to the enterprise[1] (and, as a consequence, where farming practices were not closely controlled). However, X. was still willing to take the risk, as managers believed in their capacity to convince producers that is was better for them to implement traceability systems, and willing to help them through trainings.

To sum up, DP projects, far from establishing direct links between retailers and farmers, only give greater power to already empowered rural-based food processing enterprises. Retailers deal preferentially with factory managers, whom they try to train to traceability, while factory managers, on their side, try to implement monitoring systems to improve farming practices – at least in their own plots.

II - Bringing agrochemical companies downstream

A - History of a worldwide move

Apart from retailers, another group of players appeared in the fields over the past few years: agrochemical companies. It is not unusual for contemporary agrochemical companies

[1] The enterprise had told me that they had not yet started to harvest their own plot because it was too soon and the fruits were not ripe. However, oranges were already being packed and sent to Z.

to move downstream in the food chain. The moving of agrochemical companies downstream is not a new development either. At the end of the 1990s, the large transnational agrochemical companies, as a way to overcome the effects of a declining market for pesticides[1], started investing in the development of transgenic crops. Not only did they invest in research and development, but they also purchased existing seed companies, first in industrialized countries and then in the developing world[2], giving birth to "agrobiotechnology" companies, such as BASF, Syngenta, Monsanto, DuPont and Dow.

More recently, agrochemical (or agrobiotechnology) companies have increasingly been seeking to invest further down in the food chain, and particularly in the food processing industry[3]. Already in 1999, William Heffernan had identified several clusters of firms integrated in various levels of the food chain through joint ventures[4]. However, his analysis did not identify, at that time, conglomerates integrated all along the chain. Today, this situation is changing, as an increasing number of biotechnology companies are integrated "from gene to supermarkets shelves". The case of Limagrain well illustrates this process. Limagrain, at first a French agricultural cooperative gathering grain farmers ("Coopérative de Production et Vente de Semences Sélectionnées du Massif Central") and now ranking among the leading multinational seed companies, is indeed running activities all along the food chain through its various subsidiaries. For instance, Jacquet, acquired in 1995, and Brossard, acquired in 2011, are downstream in the food chain and produce processed food and bread[5].

---

[1] CONWAY, Gordon. *Crop biotechnology: benefits, risks and ownership*. Speech delivered by the President of the Rockefeller Foundation delivered at the OECD Edinburgh Conference on the Scientific and Health Aspects of Genetically Modified Foods, March 28th, 2000.

[2] FAO. *The State of Food and Agriculture 2003-2004. Agricultural Biotechnology Meeting the needs of the poor?* Rome: FAO, 2004.

[3] A report of the Directorate General for Agriculture of the European Commission mentioned that it was one way to overcome the reluctance of European food processors to include GM ingredients (EU Directorate General for Agriculture. *Economic Impacts of Genetically Modified Crops on the Agri-Food Sector*, Working Document Rev. 2. Bruxelles: EU Directorate General for Agriculture, 2002).

[4] Heffernan, William. *Consolidation in the food and agriculture system*. Columbia, Missouri : Department of Rural Sociology, University of Missouri, February 1999.

[5] Limagrain's website (http://www.limagrain.com/limagrain/history/the-construction-of-an-international-cooperative-group/article-20/gb.html#.VIrFG9KG8wc).

B - The specificities of the Chinese market

The biotechnology sector, in China, is heavily regulated. Only a few GM varieties of food crops are approved for commercial cultivation, such as a few varieties of tomatoe and pepper (since 1998) and of papaya (since 2006) (even though 80 percent of the cotton cultivated in China is GM). Two matters of concern to the government prevent the development of commercial cultivation of GM food crops. The first matter of concern is linked to the potential social protests that could arise if GMOs were placed on the market. Although a number of studies suggest that the majority of the population is in favor of GMOs[1], debates are fierce on whether or not GMOs should be put on market shelves and in consumers' plates. Debates occur on online social networks among concerned consumers, but also among members of the government themselves. In August 2013, a major-general of the PLA and Deputy Secretary-General of China's National Security Forum, Peng Guangqian, published a tribune denouncing that GMOs were part of a military strategy perpetuated by the United States against China[2]. Following the publication of Peng Guangqian's article, the News Office of the Ministry of Agriculture published an interview of an expert from the GMO security committee, answering the concerns expressed by the major-general and trying to reassure the population[3].

The second matter of concern is linked to the fact that a liberalization of the market of GM varieties would currently only benefit foreign companies such as Monsanto or Syngenta. Indeed, despite the tremendously high levels of public investment in the development of

---

[1] For instance, Xiaoyong Zhang, Jikun Huang, Huanguang Qiu and Zhurong Huang, in a survey conducted in 2002 and 2003, find that between 46 and 67 percent of the urban dwellers reckon that GMOs relatively to completely acceptable (ZHANG, Xiaoyong, HUANG, Jikun, QIU, Huanguang, HUANG, Zhurong. A consumer segmentation study with regards to genetically modified food in urban China. *Food Policy*, vol. 35, 2010, p. 456-462).

[2] "Since the establishment of the PRC, it has already been proved that enemies could not use military force to conquer us. However, with this kind of subtle bacteriological weapon in the cards, we could lose our vigilance." [新中国成立以来，事实已经证明任何敌人都不可能用武力征服我们。然而，那种杀人不见血的生物武器则有可能使我们丧失警惕。] PENG, Guangqian. Expert asks about GM staple grain: why does China want to introduce unecessary things? *Global Times*, August 21st, 2013 [彭光谦，« 专家八问主粮转基因化:我国究竟为何要盲目引进 », 环球时报] http://finance.huanqiu.com/comment/2013-08/4267575.html

[3] "GM and non-GM food are similarly safe", News Office of the Ministry of Agriculture, August 31st, 2013 [« 转基因食品与非转基因食品具有同样的安全性 », 农业部新闻办公室] http://www.moa.gov.cn/zwllm/zwdt/201308/t20130831_3592472.htm.

research in biotechnology over the past few years, foreign companies would currently be more competitive than Chinese companies for GMOs for a number of products such as maize. In order to limit the competitiveness of foreign biotechnology enterprises in GMOs, regulations limit the activities conducted by foreign biotechnology companies. These latest can conduct research activities on the Chinese territory but only through joint ventures with Chinese partners. The State Council indeed stipulates that foreign investment in the conventional seed industry is a "restricted" activity (foreign companies can only own up to 49 percent of a joint venture with a Chinese partner) and foreign company development, production, or marketing of transgenic plants in China is labeled as a "prohibited" activity[1].

The market of pesticides and fertilizers is less regulated than the seed industry. However, it is highly competitive. In other countries around the world, the agrochemical market is usually concentrated among a limited number of multinational companies. For instance, six of the world's largest agrochemical and seed corporations (BASF, Monsanto, Bayer, Syngenta, DuPont and Dow) control 75 percent of the global agrochemical market[2]. In China however, the situation is radically different. The agrochemical market is heavily fragmented, with the "big five" (Nopoison, Syngenta, Bayer, Dow and Dupont) having collectively only 20 to 35 percent market share, the remaining 80 percent being owned by more than 2,000 agrochemical enterprises, mostly local.

C - Exploring the strategy of an agrochemical company operating in China

In such an environment, it is particularly difficult for foreign companies selling agrochemicals and biotechnology to gain new market shares. Among the strategies deployed by international agrochemical companies, the one developed by "A." is particularly interesting, as it relates to our subject: the integration of upstream companies downstream in the food chain. A. is an international company – among the biggest agrochemical companies worldwide – which established a Limited Company in China in 2000. The company now

[1] United States Department of Agriculture (USDA) Foreign Agricultural Service. *Agricultural Biotechnology Annual 2012*. GAIN Report Number CH12046, 13/07/2012, S.I.: USDA Foreign Agricultural Service.

[2] ETC Group. *Who Owns Nature? Corporate Power and the Final Frontier in the Commodification of Life*. S.I.: ETC Group, November 2008, p. 14.

employs around 1,000 employees in its agricultural business unit (the group, in total, employs around 13,000 people in China) and has one production site in Hangzhou.

The company has been particularly active in developing strategies to reach new clients – farmers – through three main channels. The first channel linking the company with farmers in rural areas is made of a network of sales representatives or consultants working for A. in local "agribiosolutions" shops. This network forms the basis of a rather classical marketing strategy.

The second channel is more unusual, as it is made of four research and development centers based in rural areas. The goals of "agrisolution centers" are to train farmers – potential new clients – and to promote A.'s technology through field demonstration. Agrisolution centers are established in partnership with local research centers, which provide resources to the company, such as land (for field demonstrations), facilities and sometimes technicians. The rationale of this strategy is two-fold. The first rationale is market development. Demonstrations and trainings can help the company reach new clients or people able to put them in touch with potential new clients, such as opinion leaders or local officials. In addition, demonstrations and trainings can help the company develop a new business activity: consultancy. Instead of trying to sell more pesticides or fertilizers – hardly feasible considering the current consumption levels in China – developing consultancy represents an interesting and profitable alternative strategy. As was saying a manager in charge of "new business development" at A.:

> "We do not want to sell products only. Our model is that we want to sell integrated solutions."[1]

The second rationale is linked to the attention paid by the company to establish and maintain good relationships with central and local government officials – one reason that was regularly mentioned by foreign retailers as well. Training farmers and contributing to the improvement of their living conditions contributes a lot to the company's recognition by the government. As was explaining the same manager:

> "In order to sell them our products, we have to convince them that it is good both for food security and for food safety and that it will increase the revenue of farmers. This is a slide that we show to the Ministry of Agriculture. It

[1] Interview, Beijing, November 2014.

demonstrates that with our products, we can achieve increase yield by 13 percent, revenue by 14 percent, and decrease the use of pesticides by 62 percent."[1]

Finally, the company is also increasingly developing partnerships with a wide range of "non-traditional" players, even more downstream in the food chain than farmers, such as retailers or food processing enterprises. The aim of this strategy is to convince these enterprises to buy food products that have been grown in the fields using A.'s agrochemical products or to encourage them to convince their suppliers to use A.'s products. A.'s argument is based on better food safety and the capacity to export (as there are strict regulations on residues for exports). For A., the rationale of this third channel is to reach more clients, either directly – for food processing enterprises having their own farm bases – or indirectly. As explained by the manager in charge of new business development at A.:

"We try to link the actors of the food chain with our customers. In some cases these players have direct contracts with farms, and so we try to sell them our products. But it really depends on the kind of product we are talking about. For instance, we work with Mac Kain, which has major potatoe crops in Xinjiang. The size of farms is really huge, so even if a small number of farms buy our products, it can have a huge impact. […] Because food companies and supermarkets have to ensure food safety, and in particular retailers, because retailers are facing the first impacts from the consumer side (in case of a problem of food safety), not the farmers, the farmers are very far. So we are demonstrating things to farmers *and* to food companies (in terms of stewardship, how they can protect their employees). We see ourselves as multipliers."[2]

The partnerships A. is currently developing even involve banks. The purpose of this strategic cooperation is to overcome farmers' obstacles in terms of access to credit. In the framework of this partnership, A. is supposed to offer crop solutions along with figures demonstrating the effects of these solutions on future income. The fact that A. proves the ability of its crop solutions to increase the revenue of farmers raises the worthiness of the credit, unlocking credit access for farmers. The bank in question, which is deeply involved in land consolidation projects with the government, is currently implementing this joint project with A. on several thousand hectares in Anhui and Shandong.

As we can see, agrochemical companies, in China, are likely to address the difficulties they experience in a particularly competitive environment by implementing a variety of

[1] Three concerns that strongly echo the goals promoted by agricultural policies. (Interview, Beijing, November 2014).

[2] Interview, Beijing, November 2014.

innovative strategies, of which some include establishing partnerships with players downstream in the food chain. However, it is worth mentioning at this point that A.'s model is quite advanced compared to the other agrochemical companies on the Chinese market. The model, of which certain aspects are particularly costly and time-consuming, is currently limited to a small number of players on the market.

III - Characterizing the emergence of private food chains

A - The privatization of agricultural policies and the worldwide emergence of "firm agricultures"

The ever-greater involvement, in agricultural production, of private actors traditionally considered as downstream players in the food chain (such as food processing enterprises and retailers) or as upstream private actors (such as agrochemical companies) resembles what was described by some scholars as the "privatization" of agricultural policies. Eve Fouilleux, in her work on voluntary standards, demonstrated that private players, worldwide, increasingly have "the capacity to autonomously enact sets of rules" and that these sets of rules were "intended to apply to an important number of producers – if not all – and sometimes [became] reference points for public action, and [could] thus be considered as forms of *public private* policies"[1]. She argues that people willing to fully understand the current regulations of the food sector have to go beyond the "classical" actors of agricultural policies (the state, the unions and professional organisms), and take into account other players as well, such as MNEs, NGOs, banks, big retailers and certifying bodies. These actors, who used to be out of the fields, now increasingly interfere in the drafting, implementation, evaluation and control of public food and agricultural policies[2].

Although Eve Fouilleux bases her argument on the understanding of the formulation of food standards, other examples illustrate the rising role of food and agricultural firms. In the

[1] "Ces nouveaux acteurs ont la capacité d'édicter de façon autonome des ensembles cohérents de règles, ayant vocation à s'imposer à un maximum de producteurs, sinon à leur totalité, qui deviennent parfois des référents pour l'action publique, et que l'on peut donc considérer comme des formes de politiques *publiques privées*." FOUILLEUX, Eve. Standards volontaires : entre internationalisation et privatisation des politiques agricoles In HERVIEU, Bertrand, MAYER, Nonna, MULLER, Pierre, PURSEIGLE, François, REMY, Jacques. Les mondes agricoles en politique. Paris : Presses de Sciences Po, 2010, p. 371-396, p. 390.

[2] FOUILLEUX, Eve. *Ibid.,* p. 389.

same book, "Les mondes agricoles en Politique", Frédéric Goulet explains for instance how informal networks and professional associations, supported by agrochemical firms, started conducting experimental research on soil at the beginning of the 2000s. Their results invalidated the ones of experiments almost exclusively conducted by national scientific circles until the end of the 1990s, calling into question a whole set of farming practices that had been standardized with agricultural modernization[1].

According to François Purseigle, two fundamental changes marked agricultural modernization: the turning of peasants into farmers (from "paysans" to "agriculteurs") and the more recent emergence of "firm agriculture", or "corporate-style" farming, which includes for instance "corporate" farms, "capitalist-driven" family farms or agricultural service supply agencies[2]. For Purseigle, this last evolution – the emergence of firm agricultures – completely changed the place of farmers both in the Western world and in emerging and developing countries. Farmers associations and agricultural firms started lobbying and their lobbying capacity rapidly expanded well beyond the national scale.

The emergence of firm agriculture, however, should not be considered as the final step of a continuous evolution, from peasants to farmers and then to organized forms of agricultural labor as part of a business activity. For Bertrand Hervieu and François Purseigle, the emergence of agricultural firms does not make the other organizational types of farming labor disappear. For the authors, the social and economic organization of farming labor would now be structured around three opposing divisions: family farming, firm agriculture and subsistence agriculture[3]. By developing new types of organizations, more international and involved in wider areas of activities, firm agriculture becomes more powerful and steps away from the traditional model of family farming, questioning the traditional frames of sociological analysis, but not putting an end neither to family agriculture nor to subsistence agriculture.

---

[1] GOULET, Frédéric. Chapitre 1: Nature et ré-enchantement du monde In HERVIEU, Bertrand, MAYER, Nonna, MULLER, Pierre, PURSEIGLE, François, REMY, Jacques. *Les mondes agricoles en politique*. Paris : Presses de Sciences Po, 2010, p. 51-72.

[2] PURSEIGLE, François. Introduction. *Etudes rurales*, 2012, vol. 2, n°190, p. 19-23.

[3] HERVIEU, Bertrand, PURSEIGLE, François. Des agricultures avec des agriculteurs, une nécessité pour l'Europe. *Revue Projet*, 2011, vol. 2, n° 321, p. 60-69.

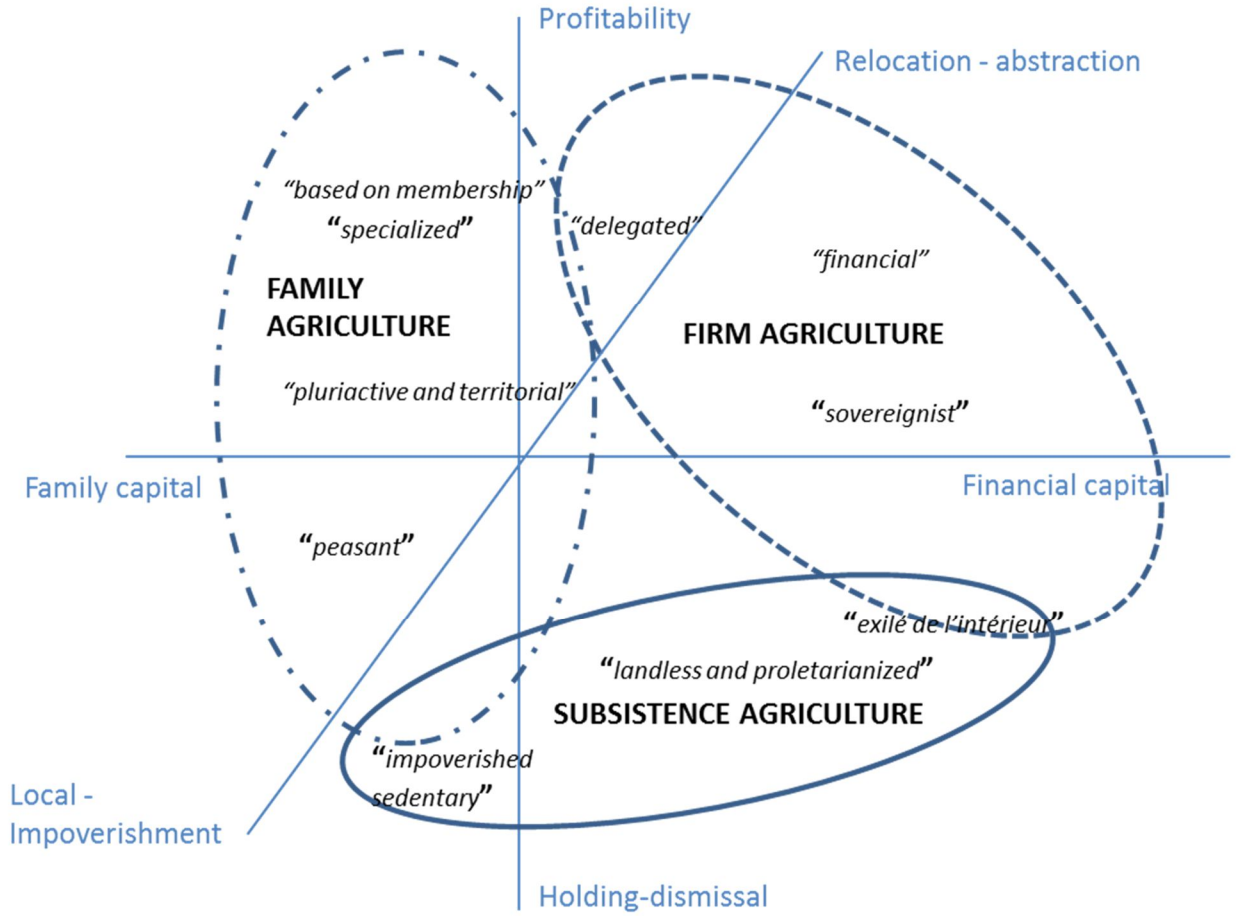


Figure 24: The new social and economic organization of farming labor
Source: HERVIEU, Bertrand, PURSEIGLE, François. *Sociologie des Mondes Agricoles.* Paris: Armand Colin, 2013, p. 246.

B - Privatized agriculture with Chinese characteristics

Did the downstream and upstream integration of retailers, food processing and agrochemical companies lead to the establishment of what Hervieu and Purseigle call "firm agriculture" in China? According to the authors, firm agriculture has two characteristics. Firstly, it is based on a multiplicity of decision-making entities, each with its own interests: the farmer is not the sole decision-making entity anymore, and increasingly shares this task with land owners and investors. The food-processing enterprises based in rural China were indeed characterized by a complex structure of investors and land owners. Secondly, firm

agriculture is widely relying on new, non-agricultural, tangible and intangible resources such as capital and land[1]. As such, we can say that firm agriculture has indeed emerged in China.

If we take a closer look at how retailers integrated upstream, we see that the government played a non-negligible role in the process, through the establishment of subsidies and the personal involvement of a number of officials in DP projects and actions. However, enterprises have an interest in upstream integration outside the frames set by the government. Firstly, direct purchase is likely to lower the cost of agricultural products, through the elimination of a number of intermediaries between farmers and supermarkets. Secondly, direct purchase might help retailers build differentiation strategies focused on traceability, quality and safety. Driven by their interests, which were complemented by governmental support, enterprises emerged all along the food chain, leading to the development of a privatized and market-based industrialized agriculture.

Rooted in rural areas, the earliest forms of this type of industrial market-based agriculture developed at the beginning of the 2000s[2]. The development of private enterprises in the agricultural sector is very different from what was observed in the other sectors of the economy. In these latest, private entrepreneurship developed progressively, from state-owned enterprises to collective and private enterprises[3]. In agriculture (at least in activities such as fruits and vegetables production), the state brutally withdrew with the abolition of People's Communes and the implementation of the Household Responsibility System, letting small farmers develop private entrepreneurship. At the beginning of the 2000s, local officials, already quite used to deal with private enterprises in the industrial sector, decided to encourage the development of "transversal" networks (in the sense of local state-enterprises networks) of food processing enterprises in rural areas, in order to speed up agricultural modernization.

Compared to other countries such as France, where agricultural modernization was mostly carried out by farmers and agricultural cooperatives (and, in this sense, looks like the

[1] NGUYEN, Geneviève, PURSEIGLE, François. The emergence of "firm" agriculture in France: Characteristics and coexistence with family farms. IFSA Symposium 2012, Workshop 1.3.

[2] Most of the food enterprises we investigated in rural areas had been created in the 2000s.

[3] NEE, Victore, OPPER, Sonja. *Capitalism from Below: Markets and Institutional Change in China.* Cambridge, Mass. : Harvard University Press, 2012.

"capitalism from below" described by Nee and Opper[1]), China rather took the path of a form of agribusiness entrepreneurship acting *on* farmers. Agricultural industrial private entrepreneurs progressively became liaison agents, at the same time levers for modernization and non-removable intermediaries between government officials and peasants, who still have little connection with each others (at least, at the county and township levels).

These agribusiness entrepreneurs, more recently, started reinforcing their links with urban areas through DP projects and with agrochemical enterprises, strengthening their position of non-removable intermediaries in the food chain, capable of interacting with a large number of small farmers.

The number of retailers, food processing enterprises and agrochemical companies integrated at the farm level however remains limited at this point – especially for agrochemical companies. In addition, this transversal network of entrepreneurs located all along the food chain lacks a national structure with an established hierarchy, as professional organizations are usually still anchored in local areas and lack independence and/or access to political decision making circles.

Conclusion

The analysis of the strategies perpetuated by local state actors proved that these latest rely preferentially on food-processing enterprises based in rural areas to drive agricultural modernization. The role played by food-processing enterprises is increasingly supplemented by retailers, who were recently invited to take part in the process through the launch of Direct Purchase projects. Networks of enterprises of the food chain consolidated across China, tying together big retailers – of which the headquarters are usually located in cities such as Shanghai – with local food processing industries – usually in areas specialized in the transformation of a particular product. In addition, this role has also recently been supplemented, to a lesser extent, by upstream agrochemical companies.

Both upstream and downstream players have an interest in expanding their area of activities in the food chain. Retailers, by establishing direct links with rural producers, can lower the cost of agricultural products and build differentiation strategies focused on

[1] NEE, Victore, OPPER, Sonja. *Ibid.*

traceability, quality and safety. Agrochemical companies, on their side, can reach new clients by establishing direct contact with farmers, develop consultancy activities or maintain good relationships with central and local government officials. In addition, agrochemical companies can develop partnerships with a wide range of "non-traditional" partners, even more downstream in the food chain than farmers, such as retailers or food processing enterprises. The rationale of this third channel is to reach more clients, either directly – for food processing enterprises having their own farm bases – or indirectly.

The increasing reliance of local governments on food processing enterprises and on other private players downstream or upstream in the food chain opened a new area of opportunities for these actors, leading to the emergence of firm agriculture and industrial and market-based private agriculture. At first rooted in rural areas, this type of agribusiness entrepreneurship progressively became more transversal, although rural-based food processing enterprises are still key intermediaries in the food chain. The inability of farmers to answer modern demand in terms of volumes and information indeed encourages retailers to deal with food-processing factories based in rural areas for direct purchase projects, instead of farmers or cooperatives. As a consequence, even though retailers become increasingly involved in the field of food production, food processing enterprises[1] based in rural areas remain, even today, necessary players, as they are able to cope with the transaction costs of scattered suppliers and answer the specific demand of retailers.

Faced to the emergence of agro-industrial entrepreneurs, do local governments demonstrate an ability to control the actors of this private entrepreneurship movement or is this emergence a sign of a "privatization" of agricultural policies?

[1] From cleaning and packing plants to factories transforming raw agricultural products into more elaborated foodstuff such as dried fruits, pickles, juice, etc.

IV. Chapter 4: The grip of local states

Introduction

The evolution of the concerns of the central state and the rising stakes at hand in terms of inflation, farmers' income and environmental issues led to a reshaping of relationship patterns between stakeholders in rural areas, apparently in favor of food processing enterprises. Is the balance of power really shifting to the advantage of these enterprises or does the state manage to keep control over stakeholders? "Which" state? Through which mechanisms? This chapter tries to provide some answers to these questions. It starts by exploring the institutional reforms and mechanisms that granted local governments with an important capacity to control the development of the above-described forms of agricultural industrial capitalism and to steer agricultural modernization. In the light of this analysis, the chapter then tries to see whether these state-enterprises patterns of relationship fit in previously established theoretical models of state's modes of action and assesses the tensions these patterns are subjected to with the recent involvement of urban retailers in the process.

I - Local control mechanisms

"All in all, whether in making investments themselves or in regulating businesses, the conventional wisdom is that agents of the Chinese state tend to exercise power arbitrarily, often in search of rents individually or institutionally."

Yang Dali, *Remaking the Chinese Leviathan*.

A - Institutional fragmentation and the power of local states

1) **Decentralized institutions as the sole discussion partners**

Post-Maoist decentralization reforms gave considerable power to local governments. The fiscal system, in particular, underwent important changes, which greatly contributed to the fragmentation of political power over the past three decades. Whereas during the Maoist era, local governments were not granted with any decision making power in terms of public expenditures (consolidated budgets were fixed by the central level, which then ratified local budgets according to their estimated needs), the 1980s saw local bureaus becoming the only institutional entities responsible of collecting taxes. This greatly increased the power of local

governments, who took advantage of the situation and started establishing a network of close ties with local enterprises, from which they were collecting taxes.

At the beginning of the 1990s, central revenues started shrinking at a rapid pace. The resulting fiscal stress pushed the central government to take measures to restore its control over the fiscal system. In 1994, national tax bureaus were created and clear shares for national and local revenues were established (central-fixed revenues, local-fixed revenues and shared revenues). In spite of these attempts of recentralization, the share of revenue collected by local governments as well as their share in government spending (two figures that are commonly used to evaluate the degree of decentralization of a given country) kept on rising. The share of expenditures of local governments was almost reaching 75 percent in 2005 (compared to 19.6 percent in developing economies and 32 percent in OCDE countries), whereas their share in the national revenue was 48 percent (compared to 19.6 percent in developing economies and 32 percent in OCDE countries[1]), showing the high level of decentralization of the administration.

In addition to fiscal reforms, the state progressively gave up on planning. It does not constitute the dominant feature of economic policy anymore, even if it is still at the core of Five-Year Plans. The terms in which policies are formulated at the central level in fact give great interpretation power to local governments, which are granted with considerable leeway in *implementation* methods.

According to a number of authors, the central government, in the end, was able to preserve its capacity to control local governments through institutional mechanisms – whether these latest were already established or set up to that end. Maria Edin, for instance, describes how reforms conducted in the old cadres management system enabled higher levels of the Party-state to control the rotation of local cadres between different administrative levels and geographical areas, granting the former with considerable power[2]. Jing Vivian Zhan, on her side, argues that it is the institutional advantageous position of the central state as well as

[1] SHEN, Chunli, JIN, Jing, ZOU, Heng-fu. Fiscal Decentralization in China: History, Impact, Challenges and Next Steps. *Annals of Economics and Finance*, May 2012, vol. 13, n°1, p. 3.

[2] EDIN, Maria. State Capacity and Local Agent Control in China: CCP Cadre Management from a Township Perspective. *The China Quarterly*, March 2003, 173, p. 35-52.

bargaining strategies it established that allowed it to maintain its capacity to control local governments[1].

Still, "the" Chinese state is far from unique. The fragmentation of governmental bodies in charge of drafting policies and programs linked to agriculture depicted in Chapter 1 is not a distinctive feature of central institutions, as it also exists at the local level. Administrative units are organized according to a hierarchy ranging from the most central institutions (like the NDRC, the State Council and the ministries) to the most local bodies (provinces, municipalities and autonomous regions; prefectures; districts and countries; towns; villages). In the course of the policy-making process, highest government institutions take the most general decisions, which are then progressively detailed among their descent in the lowest ranks of administrative bodies. In China, policy implementation is thus sequentially and geographically fragmented[2]. Local governments operate inside "stems" (条 *tiao*), formed by vertical center-periphery hierarchy. Agricultural bureaus, for instance, are working under the supervision of the Ministry of Agriculture. In addition, local governments operate inside horizontal "branches" (块 *kuai*) as well, which are constituted by local bureaus. This aspect greatly complicates the political process at the local level, as Lieberthal explains: "One key rule of the Chinese system is that *units of the same rank cannot issue binding orders to each other*. […] The natural consequence of this operating rule is that there often is a tremendous need to build a consensus in order to operate effectively in China, and negotiations aimed at consensus building are a core feature of this system."[3]

At the local level, the "*tiao tiao kuai kuai*" structure makes bargaining unavoidable. According to Lampton, although bargaining already existed prior to 1978 (administrations were already organized according to territorial levels), post-Maoist reforms further amplified

[1] ZHAN, Jing Vivian. Decentralizing China: analysis of central strategies in China's fiscal reforms. *Journal of Contemporary China*, 2009, vol. 18, n°60, p. 445-462.

[2] LIEBERTHAL, Kenneth G. Introduction: The "Fragmented Authoritarianism" Model and Its Limitations In LIEBERTHAL, Kenneth, LAMPTON, G., David M. (eds.) *Bureaucracy, Politics and Decision-Making in Post-Mao China*. Berkeley, Calif. : University of California Press, 1992.

[3] LEIBERTHAL, Kenneth. China's Governing System and Its Impact on Environmental Policy Implementation In AARON, Frank (ed). *China Environment Series (1st edition)*, Washington D.C. : The Woodrow Wilson Center, 1997, p. 3.

their importance[1]. Decentralization of economic power indeed made the number of local organizational bases proliferate and increased their power. In policy formulation, central bureaucracies have to bargain with empowered territorial administrations. In the course of policy implementation, the highest bodies of the government have to negotiate with stronger subordinated bureaus to gain their support and ensure their cooperation.

Although bargaining prevails in the entire *tiao kuai* structure, bureaus in charge of implementing agricultural and rural policies are particularly affected by this situation. Implementation of agricultural policies indeed requires the cooperation of the "most local" bureaus – as opposed, for instance, to the implementation of transport policies that will only require the cooperation of city-level bureaus. In addition, as mentioned above in the dissertation, an important number of administrative units are in charge of implementing policies related to the agricultural sector (Table 16).

[1] LAMPTON, David M. A Plum for a Peach: Bargaining, Interest, and Bureaucratic Politics in China In LIEBERTHAL, Kenneth, LAMPTON, G., David M. (eds.) *Bureaucracy, Politics and Decision-Making in Post-Mao China*. Berkeley, Calif. : University of California Press, 1992.

Table 16: Hierarchical structure of the planning and executive branches linked to agricultural and rural policies in China

At the central level, legislative processes are "frequently unable or unwilling to arrive at precise settlements of the conflicting interests on many issues. Only by leaving some matters somewhat nebulous and unsettled can agreement on legislation be reached."[1] A fundamental consequence of such a fragmentation of the political process is that local officials have important decision-making power in the carrying out of policies. In particular, county-level officials have important decision-making power in the carrying out of agricultural modernization policies. However, all the county-level bureaus did not have equal power in the process and the power of a given bureau greatly varied from one place to another.

2) Non-standardized procedures of taking contact

Bargaining does not only take place vertically, and also takes the shape of horizontal processes. Within each locality, bureaus have to negotiate with each other. For instance, local agricultural bureaus are responsible of allocating agricultural subsidies, but also depend on local financial bureaus to have access to public funds.

One of the most striking things I could acknowledge when conducting my fieldwork was the wide variety of local bodies in charge of implementing agricultural policies, which varied from one place to another. I was often regarded as a foreign investor – or, at least, as a foreigner able to provide resources (whatever they would be sources of funding, professional or political contacts, expertise, etc.) to contribute to agricultural development in the area I was visiting. As such, I was directed towards local bureaus in charge of cooperation, investment and agricultural development. In the various places I went to, my main interlocutor varied greatly: while in some places, it seemed that the investment promotion bureau was the most important local institution in charge of developing agricultural projects, in others, the role was rather taken by the poverty alleviation bureau, or the sustainable rural development "association" (*xiehui* 协会[2]), the fruit development bureau, the agricultural development bureau, the grain bureau, etc.

What was striking was that local institutions I used to think would naturally cooperate with each other (for instance, the poverty alleviation bureau with the agricultural development

[1] ANDERSON, James E. *Public Policy-making: an Introduction*. Boston: Houghton. Mifflin, 2003.

[2] The last chapter will better illustrate why I consider this "association" as part of the local government.

bureau for agricultural development projects in low-income rural areas) were not necessarily working together and sometimes even barely knew each other. What interviews conducted in a county of Chongqing demonstrated is that the poverty alleviation bureau was willing to take credit for poverty alleviation achievements, without including the agricultural development bureau, as officials of the two bodies were in fact competing against each other in their struggle for higher positions in the local political hierarchy.

This does not mean that cooperation never happens between local bureaus. In Lanshui county in the Shandong province, I saw government officials from the investment promotion bureau working with the fruits development bureau. In fact, local officials can take the decision to cooperate with each other when both parties *wish to achieve the same results* (*i.e.* have the same goals and interests) and think that cooperation *will not jeopardize their careers' progress*. This is a plausible explanation for the cooperation between the investment promotion bureau and the fruits development bureau in Shandong. People of the two institutions indeed have very different profiles and career opportunities. People working at the investment promotion bureau were mostly government officials, whereas researchers formed the majority of the employees of the fruit development bureau.

Just like I did in the course of my fieldwork, entrepreneurs willing to launch business in food-processing or to establish direct links with rural producers interact with different local bureaus, depending on established structures of local patterns of power and on networking opportunities they are able to grasp. The leeway granted to local bureaus for the implementation of agricultural investment promotion policies and the lack of rules clearly establishing the responsibilities of each bureau in the process are important factors that increase the power of local governments over enterprises. This power is exercised through a variety of domination mechanisms.

B - Financial resources: subsidy mechanisms

In my analysis of local patterns of power (Chapter 2, III.C.), I argued that one of the most important upstream environments of agricultural production was finance, and that farmers were strongly suffering from a lack of access to credit. On the opposite, enterprises were benefitting from a much higher degree of trust in the banking sector. In addition, local governments (at least, at the county-level and above) have access to important financial resources, especially since agriculture and rural areas have been prioritized by the central

government. In the second chapter, constraints in terms of *access to credit* were depicted, but the issue of *access to governmental subsidies* was not described in detail. According to interviews conducted during fieldwork, access to governmental subsidies is a strong incentive for entrepreneurs to engage in agricultural business. Agriculture indeed usually generates few profits and has low return on investment compared to other sectors of the economy. As a consequence, entrepreneurs have little control over this uncertainty – access to subsidies – whereas, on the opposite, local governments have important leeway on the decision to attribute subsidy policies, which allows them to gain a significant advantage over rural enterprises.

1) The variability of local subsidy schemes

An interesting observation gained from fieldwork is that agricultural subsidies varied greatly depending on areas. Subsidies could differ in three ways: in the range of products covered by the local scheme, in the amount of subsidies given per unit of product/per hectare/etc. and in the allocation process (who receives the subsidy: the buyer or the producer; is it a subsidy per hectare or per unit of product; is it directly transferred on bank accounts or do people receive the subsidy in another way; what conditions have to be fulfilled by people applying for subsidies, etc.).

To illustrate these differences, the Table 17 provides details on the agricultural machinery subsidy systems of Huangmo (Ningxia), Lushan (Jiangxi) and Lanshui (Shandong). Agricultural machinery subsidies are among the most widespread types of agricultural subsidy throughout China[1]. The following table provides extracts from three documents[2]: i) "Huangmo's 2012 procedure to handle subsidies for agricultural machinery purchase" (published at the end of the year 2012)[3]; ii) "Lushan's reform of the subsidy procedure for the purchase of agricultural machinery" (published at the beginning of the year

[1] Compared, for instance, to grain subsidies which essentially target grain-producing areas.

[2] Extracts were translated and sometimes summarized.

[3] ["Huangmo"] 2012 年农业机械购置补贴办理流程 (*["Huangmo"] 2012 nian nongye jixie gouzhi butie banli liucheng*), published on December 12th, 2012, on the website of Huangmo's government.

2013)[1]; iii) "Lanshui's 2013 first batch of policies linked to subsidies for the purchase of agricultural machinery" (published in June 2013)[2].

As the Table illustrates, procedures vary greatly from one area to another, as well as the list of subsidized products and corresponding amounts, and some areas even have lists of "approved enterprises" for agricultural machinery subsidies[3]. The lack of standardized procedures and the sometimes very complicated steps that need to be taken to have access to subsidies is another factor that empowers local bureaus.

[1] 市农机局改革农机购置补贴程序 (*shi nongjiju gaige nongji gouzhi butie chengxu*), published on April 1st, 2013, by Lushan bureau of agricultural machinery (市农机局 *shi nongjiju*) , on the website of Lushan government.

[2] ["Lanshui"]2013年第一批农业机械购置补贴政策简介 (*["Lanshui"]2013 di yi pi nongye jixie gouzhi butie zhengce jianjie*), published on June 24th, 2013, by Lanshui office of agricultural machinery (农机办 *nongjiban*), on the website of Lanshui government.

[3] 2013年章贡区具备农机购置补贴产品经销资质的农机经销商名单 (2013 *nian zhanggong qu jubei nongji gouzhi butie chanping jingxiao zhidi de nongji jingxiaoshang mingdan*) [Name list of brokers of agricultural machinery for the subsidy system for the purchase of agricultural machinery of Zhanggong qu].

Table 17: Agricultural machinery official procedures in Huangmo, Lushan and Lanshui

County	Huangmo	Lushan	Lanshui
Issuance office	The document was issued by "the township agricultural machinery departments" (乡(镇)农机部门 *xiang (zhen) nongji bumen*), drafted according to the document issued by Ningxia bureau of agricultural machinery (农机局 *nongjiju*) (宁夏农业机械购置补贴办理流程[Ningxia procedure for subsidies for the purchase of agricultural machinery]) and adapted to the "local situation".		The document was issued by the city government, drafted according to the requirements of the document issued by Yantai government (关于印发 2013 年烟台市农业机械购置补贴工作实施方案的通知 [Information on Yantai's implementation program of subsidies for the purchase of agricultural machinery]) and adapted to the "local situation".
Procedure	Farmers' households should apply for agricultural machinery subsidies to the department in charge of agricultural machinery subsidies (乡(镇)农机部门 *xiang (zhen) nongji bumen*) of their township, which will weekly hand over reports to the county agricultural machinery extension services center (县农机推广服务中心 *xian nongji tuiguan fuwu zhongxin*). After examination of all information (name, models of machines and tools, quantity, phone number, ID card, amount of subsidy), a notice will be posted to the village committee, which will make it public. If there is no objection within 7 days, the township cadres (乡(镇)主管领导和农机专干 *xiang (zhen) zhuguan lingdao he nongji zhuangan*) will sign the agreement and the county extension services center will be able to start subsidy procedures. Farmers should go to the county office for agricultural machinery subsidy (县农机购机补贴办公室 *xian nongji gouzhi butie bangongshi*) in order to fill in an application form and be provided with a notice. They then have a certain amount of time to go with the notice and their ID cards to a machinery broker, negotiate the price by themselves and purchase the machinery at a price decreased by the amount of subsidy. The sale is double-checked both by the county office for agricultural machinery subsidy (县农机购机补贴办公室 *xian nongji gouzhi butie bangongshi*) and the county financial bureau, and the machinery broker gets the subsidy.	People willing to buy agricultural machinery should go to the county or township-level departments in charge of agricultural machinery (县或乡镇农机部门 *xian huo xiangzhen nongji bumen*) to apply for machinery and to the county-level departments in charge of agricultural machinery (县农机部门 *xian nongji bumen*) to get the notice to apply for subsidies. Then, this people should select a broker in the province within 10 days, buy agricultural machinery, and apply for subsidies within three months to apply for subsidy. After a multiple-steps checking process (by the county agricultural machinery department (县农机部门 *xian nongji bumen*), the county financial bureau, the township agricultural machinery department (乡镇农机部门 *xiangzhen nongji bumen*) and the township financial bureau), the subsidy is finally granted.	The document states that applicants should be farmers (or agricultural workers: "农民(农场职工)" *nongmin (nongchange zhigong)*) or organizations directly engaged in the production of agricultural machinery. In order to apply for subsidies, farmers should come register themselves with their ID at Lanshui office for the management of agricultural machinery (农业机械管理办公室, *nongye jixie guanli bangongshi*). Subsidies are set according to a list established by the provincial government (山东省 2012 年农机购置补贴机具补贴额一览表 *shandongsheng 2012 nian nongji gouzhi butie jiju butie e yilanbiao*).
Special conditions	Machinery cannot be resold within two years.	Subsidy per machinery cannot exceed 50,000 RMB.	Machinery cannot be resold within two years.

2) Consequences on local patterns of power

Even though procedures differ greatly among provinces, local rules usually have in common that farmers and agricultural machinery manufacturers are their sole beneficiaries. On the opposite, food enterprises I met during my fieldwork complained that they did not have access to subsidies for agricultural inputs or machinery, even when they grew their own crops. However, fieldwork demonstrated that the complexity of procedures was difficult to overreach for farmers. The lack of information, the scarcity of vehicles, local language barriers and their low level of education were named as major roadblocks preventing farmers to have access to subsidies. As a consequence, what I usually saw – in the case of Lushan and Lanshui[1] – was that food enterprises were helping farmers to get subsidies, either by applying for them or by creating farmers' cooperatives, in the name of which the enterprise would then buy agricultural machinery for farmers-employees.

Procedures can reach a degree of complexity so high that trainings to get subsidies are sometimes provided by government officials. What is interesting is that enterprises attend such trainings. On February 17th, 2014, the agricultural machinery bureau of Lushan invited the local financial bureau, local media, rural credit cooperatives as well as agricultural machinery manufacturers to attend trainings on subsidies[2]. Farmers were not mentioned in the list of trainees. The director of the financial bureau said that he was "hoping that agricultural machinery enterprises would disseminate [the information across rural areas]"[3]. Here again, we see another demonstration of how government officials see local enterprises as multipliers for agricultural modernization.

In the above, we chose to depict the case of agricultural machinery subsidies because it is the most widespread agricultural subsidy scheme in the country. As such, official documents were easier to find and to compare. However, the same remarks apply to other types of subsidies as well, such as the ones for other farm equipment (greenhouses, pest traps, etc.) or for seeds, pesticides or fertilizers. The only kind of agricultural subsidy for which

[1] The situation is quite different for Huangmo. It will be more thoroughly described it in the last chapter.

[2] 举办全市农机购置补贴培训班 *juban quanshi nongji gouzhi butie peixun ban* [Lushan government: Organizing trainings for subsidies for the purchase of farm machinery] published on the government's website on 12/02/2014.

[3] In Chinese: 希望各农机企业要宣传好 (*xiwang ge nongji qiye yao xuanchuan hao*)

local officials probably play a less important role is per-hectare subsidies. Although they still constitute a small share of the whole agricultural subsidy scheme, direct subsidies have been developing quickly in the past few years. They usually work with a bank account system, funds being directly transferred on farmers' bank accounts each year according to the size of the cultivated area. However, per-hectare subsidies also vary greatly from province to province, because they depend on the funds granted by central administrations to local grain bureaus.

The haziness and complexity of procedures and the fact that enterprises are better equipped than farmers to overcome these obstacles but are usually not able to get subsidies directly, create considerable advantages for local governments over rural enterprises. County (县 *xian*) and township (乡 *xiang*) governments, in particular, gain significant power in the process – even if they remain highly dependent of decisions made by higher governmental bodies, both for the allocation of funds and for the evolution of their careers. Farmers, on their side, can have access to information regarding the organizational rules of the local subsidy scheme only through village and township-level government institutions. From these elements, the following table can be drawn.

	Information linked to organizational rules (access to subsidies)
Enterprises	-
Local governments	+
Farmers	-

Table 18: Patterns of power related to the control of information linked to organizational rules

The following quote of an interview conducted in Jiangxi with a manager of an orange processing factory well illustrates these conclusions:

> "We need to build a warehouse, and for that we need to apply for subsidies to the fruit industry bureau, which is a department in charge of managing the fruit sector. Some subsidies are granted by the fruit industry bureau, others are granted by other governmental bureaus […] We need the support of the government, we must have it."[1]

[1] "我们是需要政府支持的，这是必须的" *women shi xuyao zhengfu zhichi de, zhe shi bixu de.* Interview, Jiangxi, October 2013.

Subsidies play a fundamental role in the promotion of investment in agricultural industry, because of its high risks and volatile returns on investment. As a consequence, the bureau of finance has important power among county and township bureaus (poverty alleviation, grain bureau, industry bureau, agricultural development bureau, etc.), which have to develop strategies to gain access to more important funding.

The agricultural subsidy scheme of is on its way of getting simpler. In Lushan, for instance, the government recently expressed its wish to establish a shorter four-step procedure for agricultural machinery subsidies: in the future, farmers shall buy machinery and apply for subsidies, before governments check machinery and allocate subsidies[1]. The procedure seems also on its way to becoming more transparent in Lushan, where the government is willing to establish an information disclosure system (农机购置补贴信息公开制度 *nongji gouzhi bujie xinxi gongkai zhidu*), a responsibility system (农机购置补贴工作责任制度 *nongji gouzhi butie gongzuo zeren zhidu*) and a complaint management system (农机购置补贴信访投诉管理制度 *nongji gouzhi butie xinfang tousu guanli zhidu*)[2]. However, at the time fieldwork was conducted, the complexity of procedures still granted local officials with important power over entrepreneurs.

C - Control over non-financial resources

Local subsidy schemes are essential to agricultural investors. However, perhaps more importantly, interviewees underlined the fact that local governments were also able to provide non-financial resources vital for the setting-up and the expansion of activities, such as land, human resources and certificates. The ability to control these upstream environments, again, grants local governments with an important power over rural enterprises.

[1] [Lushan]简化农机购置补贴发放程序 *[Lushan] jianhua nongji gouzhi butie fafang chengxu* [[Lushan] simplifies the procedure for subsidies for farm machinery purchase], published on Lushan government's website on 13/02/2014.

[2] [Lushan]农机局:制定农机购置补贴政策实施三项管理制度 *[Lushan] nongjiju : zhiding nongji gouzhi butie zhengce shishi sanxiang guanli zhidu* [[Lushan] bureau of farm machinery: Establishing a three items-management system for policies regarding subsidies for farm machinery purchase], published on Lushan government's website on 24/02/2014.

1) **Material and human resources: land and labor**

The abolishment of the People's Communes led to a redistribution of land to farmers, in small plots of less than one hectare. China is indeed poor in land resources, as less than 15 percent of the territory is suitable for farming. In addition, at the beginning of the 1980s, there were almost 800 million people living in rural areas, and farmers still constituted the great majority of the population. Redistribution of farmland, as consequence, divided land among an important number of small farmers.

During the years following decollectivization, China started experiencing an unprecedented urbanization process – unprecedented both in terms of scale and pace (Chapter 1, III.A.1). Such rural-urban migrations could have freed the agricultural sector from labor surplus and allowed farmers to cultivate bigger farms, as happened in other countries. However, data show that the fall in the number of farmers employed by the agricultural sector (a consequence of urbanization) did not much influence the size of cultivated land per capita, which remained stable (around 2 mu) after a jump at the beginning of the 1980s caused by agricultural reforms (Figure 25) – indicating that migrants were not eager to give up on their land rights.

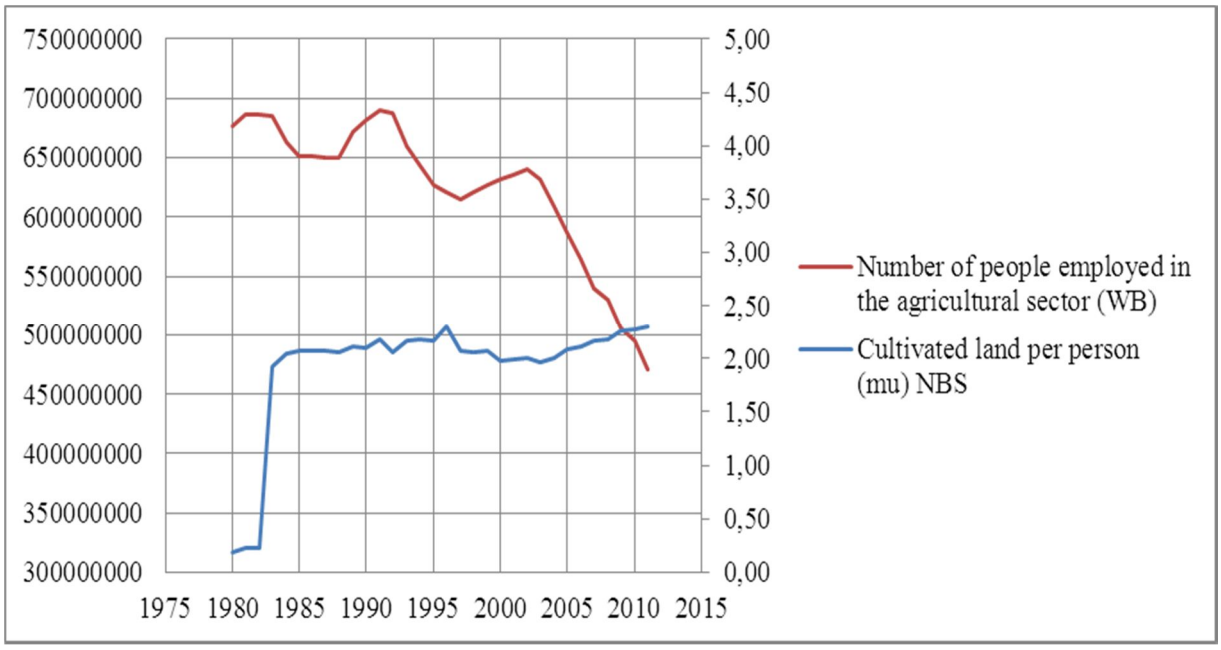


Figure 25: Cultivated land per capita and number of people employed by the agricultural sector
(Calculations with data from the Chinese National Bureau of Statistics (NBS) and from the World Bank (WB))[1]

Enterprises willing to invest in agricultural production have two options regarding arable land: they can either rent plots by themselves or they can contract with farmers and agree that what these latest harvest supplies their factory. In both cases, entrepreneurs need to get the agreement of a significantnumber of small farmers, a part of which does not live in rural areas anymore. In order to make things easier, entrepreneurs usually choose to address county and township governments to "organize farmers", especially when they come from another area of the country. Particularly enlightening was this sentence of an agribusinesswoman established in Beijing:

> "[The project in Beijing] has become a pilot project. […] Now, we are starting to launch projects in other provinces. Local governments come to look for us. […] They organize land and farmers and have them ready for us."[2]

In addition, one should not forget that even if enterprises theoretically need to get the agreement of farmers, who rent arable land but enjoy particular rights on it thanks to the Law

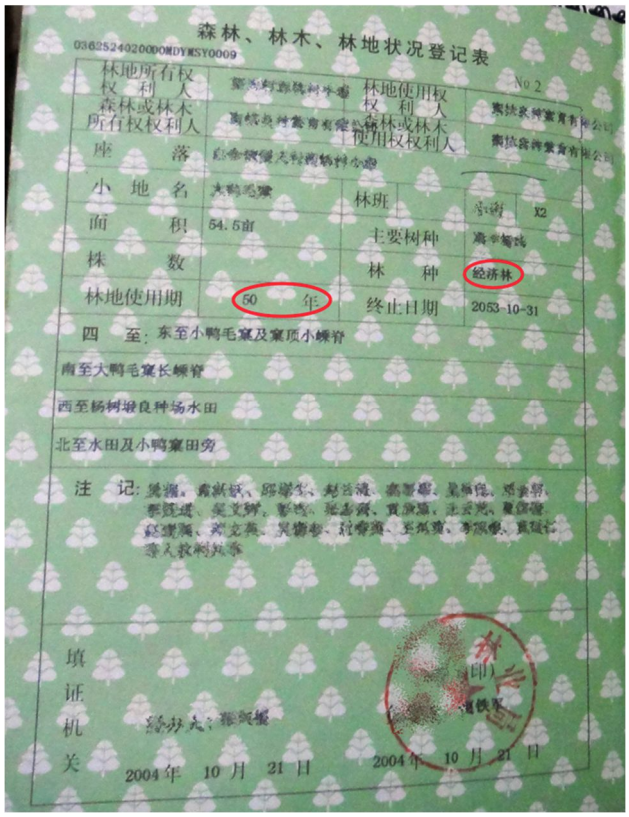
[1] Other sources give data closer to 0.4 hectares (300 million farmers and 120 million hectares or arable land).

[2] Interview, Beijing, June 2013.

on Land Contracts in Rural China, land *property rights* are in the hands of the government (officially in the hands of collectives), which considerably increases the capacity of local governments to "organize land" or to "organize farmers" – usually through the involvement of county, township and village-level government officials. The land use and management rights of farmers, even if they are usually granted for a long period of time, are not strong enough to resist the land property rights of local governments.

"Organizing farmers" is key to launch a business in the food production sector. However, sometimes, land can be allocated to enterprises without getting the agreement of farmers. This happens, for instance, when virgin land (unoccupied and uncultivated land) is converted into land suitable for farming. In Jiangxi, many of the entrepreneurs I met had launched their business at the beginning of the 2000s, when they were offered the opportunity to plant citrus orchards on hills formerly covered with forests. Orchards, in this area, are indeed considered as "forests". Converting hills into orchards is easy, as it does not change the land classification. In addition, orchards are particularly advantageous for enterprises, as forest lease contracts last longer than farmland lease contracts. In places I went to in Jiangxi, this period usually went up to 50 years. In such cases, local governments of the county or township level become particularly poverful negotiating partners.

Picture 11 (above): Certificates for forest rights granted to enterprises at the beginning of the 2000s (林权证 *lin quan zheng*)



Picture 12 (right): Inside page of one certificate
(circled in red: "林种: *经济林*" *linzhong: jingji lin* [type of forest: economic forest] and "林地使用期: 50 年" *lindi shiyong qi: 50 nian* [duration of use: 50 years])

Apart from these exceptional cases where virgin land is converted into land suitable for agricultural production, the degree of difficulty to "organize farmers" usually depends on the degree of industrial development of the area. In industrialized regions – or in rural areas close or well connected to industrial regions – farmers have greater opportunities to find jobs outside the agricultural sector. As a consequence, it is usually easier to get land from farmers in these areas. As was explaining a manager at X. conducting projects in Shandong and Jiangxi:

> "In Shandong, it is easier to gather land to create big farms, because in this area, farmers go to cities. Sometimes, they rent their land to other farmers, sometimes they give [sell] it because they just don't care, they have better lives in cities. Here [in Jiangxi], it is more difficult to gather land, because farmers don't have any other source of income."[1]

The possibility to have other sources of income for farmers does ease a lot the purchase of land by entrepreneurs. However, in Jianxi, rural enterprises had also been able to buy land when the local government decided to convert forest hills in orchards at the beginning of the

[1] Interview, Jiangxi, October 2012.

2000s. The possibility for entrepreneurs to acquire land, as a consequence, depends both on the industrial development level and on the agricultural development strategy of the local government.

In addition, the degree of difficulty of gathering land also depends on the origin of the entrepreneurs. For enterprises founded and managed by local people, it is usually much easier to find farmers without the help of the government. As a manager of a rural food enterprise founded by a farmer in Jiangxi was telling me:

> "Because everyone is local people (本地人 *bendiren*), we have a clear view of the situation of scattered [rural] households. People all know each other, [this is] Chinese kinship relations (中国人的亲戚关系 *zhongguoren de qinqi guanxi*)"[1].

However, even these enterprises need the support of the government. They indeed have to rent non-agricultural land to build plants, warehouses or office buildings. In addition, they also need the support of the local government to create incentives so that farmers keep on farming. As was saying a manager of an orange factory in Jiangxi:

> "We need the government to call on farmers to cultivate oranges. [We have to] support farmers by giving money for every tree they plant: for example, if a tree costs 3 RMB, the government will give 2 RMB, you [as a farmer] will pay only 1 RMB, this will encourage you to plant trees."[2]

Sometimes, local governments decide to create agricultural development zones. The control of the government over land and human resources, in these areas, is particularly strong. In the places I went to in Jiangxi and Shandong, I did not have the chance to visit such areas. However, I had the opportunity to visit one near Changzhou, in Jiangsu province. The area was labeled "modern agriculture demonstration zone" (现代农业示范区 *xiandai nongye shifan qu*) and described by my guide[3] as "an industrial development zone, but for agriculture"[4]. The agricultural development zone was created in 2009 and divided in several sub-areas, in which investors could "make their choice". As was explaining one manager of the area:

[1] Interview, manager, orange factory, Jiangxi, October 2013.

[2] Interview, Jiangxi, October 2013.

[3] An employee of the grain bureau of Changzhou.

[4] Interview, Jiangsu, June 2013.

"Usually, investors take areas of 3,000 mus. They rent land at 8-900 RMB per year. Leasing contracts last from 30 to 50 years. […] The principle of investments is as follows: investors arrive, rent land to peasants who move from the status of peasant (农民 *nongmin*) to the status of workers (工人 *gongren*)."[1]

Picture 13: Map of the "modern agricultural development zone" in Jiangsu
(Photography by the author, June 2013)

To sum up, the fact that land property is in the hands of the state and the capacity of local governments to "organize" scattered human and land resources for enterprises grant these latest – and especially township and country governments - with significant power over rural enterprises. Drawing on these elements, the following table could be established.

	Control over other production resources: land and human resources
Enterprises	-
Local governments	+
Farmers	-

Table 19: Patterns of power related to the control of land and human resources

[1] Interview, Jiangsu, June 2013.

2) **Reputational resources and access to markets**

Another factor that increases the power local officials have on rural enterprises is the fact that the former can act as intermediaries between food-processing factories and potential buyers of agricultural products. Since 2007, an increasing number of retailers based in urban areas have been willing to purchase agricultural products directly from rural areas. Local governments sometimes intervene in the process. In the place I went to in Jiangxi, X., for instance, selected suppliers according to several lists: the one made by X.'s local sales managers, the one made by a Chinese professor hired by the company to assist the team in the development of direct purchase and the one made by the prefectural government. As was saying a manager in charge of looking for direct suppliers in rural areas:

> "Before, X. already had a long list of producers. […] Today, we would like to expand the list. New producers are people who were recommended by the government or by professor [H.]."[1]

According to another (already quoted above):

> "It goes that way: the government tells us: you will work with this supplier, with this one here, with this one there. You will work with this slaughterhouse. It is all informal obligations of course. However, if we do not do it, we face the risk to find something [bad about us] in the media the week after. […] In fact, nothing else is done outside of the government."[2]

In addition to the pressure exerted on the headquarters of retail enterprises, pressure is also put on teams sent to the countryside to look for local suppliers. Government is omnipresent during visits. As was confessing a manager at X. conducting DP projects in Jiangxi:

> "Last time, we had dinner with the government. They didn't talk much about policies, they just said 'It's the best supplier, you should do business with him'."[3]

Township to municipal governments have become intermediaries between producers and consumers and play a role in helping rural food enterprises to find new clients – another lever they can use to exert control on rural-based food-processing enterprises.

---

[1] Interview, Jiangxi, October 2013.

[2] Interview, Shanghai, October 2012.

[3] Interview, Jiangxi, October 2012.

3) Normative resources: licenses and certificates

The last – but not least – kind of resource held by local officials is the ability to deliver licenses and certificates. Local bureaus are usually in charge of delivering licenses and certificates. Several kinds of business license are mandatory for food enterprises. The first license that they need is a food production license (食品生产许可 *shipin shengchan xuke*), granted by above-county-level Administrations of Quality and Technology Supervision (质量技术监督部门 *zhiliang jishu jiandu bumen*)[1]. In addition, food enterprises need a healthy food production license (保健食品生产许可 *baojian shipin shengchan xuke*), delivered by the general Administration of Quality Supervision, Inspection and Quarantine (国家质检总局 *guojia zhijian zongju*)[2]. Producers willing to sell products in other provinces also need a food circulation permit (食品流通许可证 *shipin liutong xukezheng*), granted by the local bureaus of commerce. This latest license can be complicated to get because of the protectionism that is sometimes exerted between provinces. A manager from X., for instance, was complaining about the fact that slaughterhouses from Anhui could not supply Shanghai, whereas the city was far from being self-sufficient in meat.

In addition to the above-mentioned mandatory licenses, enterprises might need quality documents such as the Global Gap certificate – this latest being quite popular in the areas where I conducted fieldwork. Quality certificates are granted by local certification bodies theoretically independent from the state but which still have to be approved by the PRC's Certification and Accreditation Administration (中国国家认证认可监督管理委员会 *zhongguo guojia renzheng renke jiandu guanli weiyuanhui*), a body of the AQSIQ. A survey investigating certification agencies in Guangzhou, Shenzhen, Hangzhou and Qingdao

[1]国家质量监督检验检疫总局《食品生产许可管理办法》(总局令第129号) *guojia zhiliang jiandu jianyan jianyi zongju « shipin shengchan xuke guanli banfa » (zongju ling di 129 hao)* [General Administration of Quality Supervision, Inspection and Quarantine "Of the ways of managing food production licenses" (General Order n°129)] http://www.aqsiq.gov.cn/xxgk_13386/jlgg_12538/zjl/20092010/201210/t20121016_239328.htm

[2]国家质量监督检验检疫总局《食品生产许可管理办法》(总局令第129号) *guojia zhiliang jiandu jianyan jianyi zongju « shipin shengchan xuke guanli banfa » (zongju ling di 129 hao)* [General Administration of Quality Supervision, Inspection and Quarantine "Of the ways of managing food production licenses" (General Order n°129)] http://www.aqsiq.gov.cn/xxgk_13386/jlgg_12538/zjl/20092010/201210/t20121016_239328.htm

demonstrates that, in fact, "most [of them were] run by or affiliated with the government rather than being market-driven"[1].

The fact that local governments are the sole players able to deliver mandatory licenses and licenses that are not mandatory but are necessary to develop business grants them with an important power over enterprises. In addition, enterprises are regularly checked and can see their license suspended or revoked. As a consequence, the granting of a given license does not put an end to the pressure exerted on entrepreneurs, who keep on making efforts to preserve it.

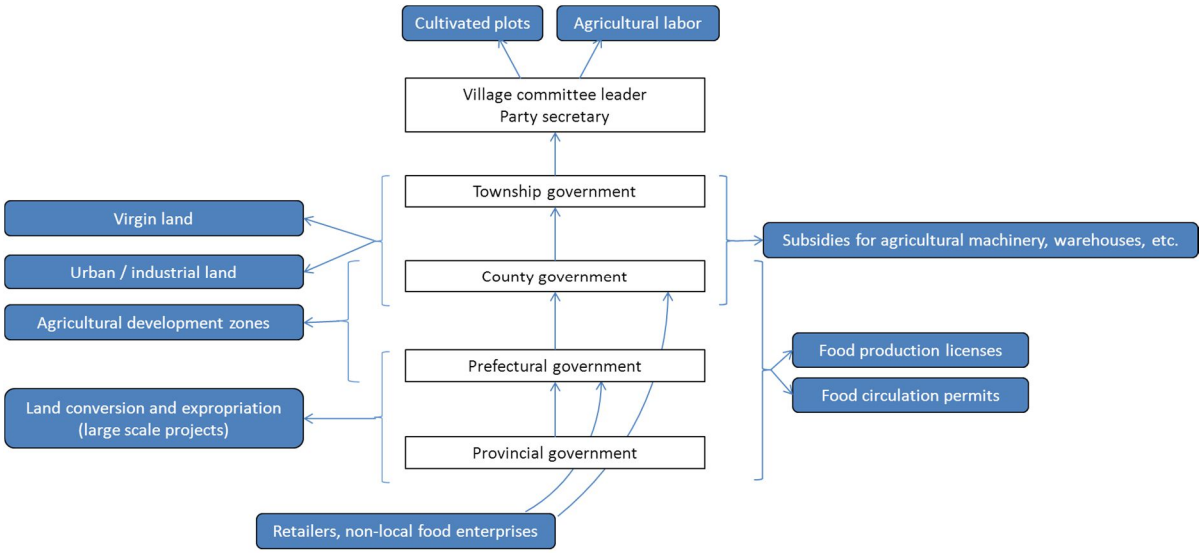


Figure 26: Control of the different levels of local governments on financial and non-financial resources

D - Entrepreneurs' strategies

All the resources depicted above – financial, material, reputational and normative resources – grant local governments with an important capacity to control entrepreneurs. Maintaining good relationships with the government is not just useful because it enables agrifood-entrepreneurs to have access to land and contacts, crucial to start or expand business. I was also explained that the government "could easily make things more difficult" to entrepreneurs through their capacity to grant, suspend and revoke licenses and certificates, fundamental to trade food products in the current context of food safety issues. As we see,

[1] FAN, Hongping, YE, Zhihua, ZHAO, Weijun, TIAN, Heshan, QI, Yamei, BUSCH, Lawrence. Agriculture and food quality and safety certification agencies in four Chinese cities, *Food Control*, vol. 20, 2009, p. 628.

regulations do exist, but are used by local governments both in formal ways (through standard and institutionalized procedures) and in informal ways, which have to deal with the establishment of personal relationships and social networks, in which applicants are subjectively selected by local officials.

Interviews conducted in Jiangxi and Shandong showed that entrepreneurs were constantly worrying about maintaining good relationships with the government and continuously developing strategies aimed at fulfilling this goal. A variety of opinions were voiced by food enterprises concerning the action of local governments in rural areas. Some remarks expressed vehement criticism:

> "[*Is it not the role of the government to spread agricultural techniques?*] The government doesn't care, just drinks wine!"[1]

An equivalent number of remarks, on the opposite, expressed approbation:

> "The government has policies to sustain the peasants, we need to build a warehouse and for that we apply for subsidies to the fruit industrial bureau. It will not grant them to you because you drank wine with them. China is a society ruled by law."[2]

Nevertheless, all the enterprises I met were highly valuing relationships with government officials – because of the resources they could provide and take away from them – and were developing strategies to establish and consolidate *guanxi*.

Strategies could be rather simple and formal ones, as the following quote illustrates:

> "[We establish relationships with the government] because we have many things to deal with them, for example they pass by because they need to manage us. For example we have a meeting together, they also may come to our factory, they often come to check on our work. The government comes to see you in order to see if everything complies (有没有符合条件 *you mei you fuhe jiaotian*). If I need to get money from the government, and if the government does not give me [money], they can come and check if you meet the standards of examination and approval."[3]

Strategies also include the displaying of posters in offices and factories, presenting how enterprises are managed, how food safety is taken care of, etc. What was striking in messages

[1] Interview, Jiangxi, October 2012.

[2] Interview, Jiangxi, October 2013.

[3] Interview with manager of rural food processing enterprise, Jiangxi, October 2013.

displayed by posters was that they seemed to essentially address governmental officials rather than potential customers, as the following extract illustrates:

> "Each household or plot has a *danwei*[1] number, is drawn on a map and reported to the town and county-level fruit industry bureaus."[2]

Strategies could also be way more elaborate and include social meetings such as dinners. In Jiangxi, an employee of a rural-based food enterprise told me, for instance:

> "The manager has to leave us now because he has to have dinner with the financial department and the mayor. They have to pay some taxes and maybe after some drinks they will lower down the price."[3]

In another orange processing enterprise:

> "This is the factory's canteen. A lot of "*lingdao*" (领导 "leader") come to have dinner here. She says that it is good and comfortable, but also *guanxi* are essential most importantly."[4]

It often happened that managers could not receive me or had to leave at some point or the meeting for a while because they had to go to business meetings with the government. "He is seeing leaders" (他现在看领导 *ta xianzai kan lingdao*) was the most widespread explanation that was given to me. The most "achieved" form of *guanxi* I saw was an entrepreneur who was friend with the mayor. During a visit of a rural-based orange factory in Jiangxi, the manager invited me to have lunch in a fancy restaurant in the township. We ran into the mayor, who invited us at his table. He was in fact friend with the manager, with whom he was "often playing majong or poker", and we spent the lunch all together along with other local officials.

To sum up the above paragraphs, the growing importance of food enterprises in the farming sector does not grant them with complete autonomy. Their new involvement in agricultural modernization over the last decade was indeed largely state-induced. By converting forest land into farmland, by establishing agricultural investment zones or by implementing other incentive mechanisms, county and township-level governments managed

[1] Work Unit.

[2] Translation from a poster displayed in a food processing enterprise, Jiangxi.

[3] Interview, Jiangxi, October 2012.

[4] Interview, Jiangxi, October 2012.

to attract investors at the beginning of the 2000s. In addition, in spite of the economic liberalization and the hollowing out of the state capacity to directly control agricultural production activities, local states managed to use their direct or indirect control of resources – such as land and human resources – and to develop regulatory and pseudo-regulatory control mechanisms – through their capacity to grant and withdraw subsidies and licenses – of which the existence is permitted by the fact that regulations *vary at the discretion of local governments*, granted with significant leeway in the implementation of policies since decentralization.

II - Recent evolutions of local states' capacity

"The question surrounding the governance of China's markets, then, is not whether the government will remain involved but, rather, what form the new 'regulatory state' will take."

Margaret Pearson, *The Business of Governing Business in China*.

A - Local developmental states relying on a network of private actors

The capacity of local officials to engage in economic networks and activities was described by a wide corpus of literature. Researchers depicted "developmental" [1] or "entrepreneurial"[2] states or portrayed forms of "local state corporatism"[3]. However, none of these theoretical frameworks really provided frames matching what I observed in Shandong and Jiangxi. The mechanisms described in Oi's model of local state corporatism are very similar to some of the mechanisms depicted above. In Oi's model indeed, local governments keep control over enterprises through the contract responsibility system, through the allocation of key resources and through the providing of bureaucratic services, tax breaks, investment and credit. However, as this present analysis remains limited to the agricultural sector, it seems rather difficult to argue that local states "act as business corporations" by taking profits from local factories "to pay for expenditures and for reinvestment", as it is the

[1] BLECHER, Marc, SHUE, Vivienne. *Tethered Deer: Government and Economy in a Chinese County.* Stanford: Stanford University Press, 1996.

[2] DUCKETT, Jane. *The Entrepreneurial State in China: Real Estate and Commerce Departments in Reform Era Tianjin*. London: Routledge, 1996.

[3] OI, Jean C. Fiscal Reform and the Economic Foundations of Local State Corporatism in China. *World Politics*, October 1992, vol. 45, n°1, p. 99-126.

case in Oi's model. From what I could observe during my fieldwork, local states indeed highly depend on above-level governments for agricultural subsidies, as agriculture itself does not generate profits for local states, since agricultural taxes were abolished in 2006. In addition, Oi's framework of local state corporatism does not provide answers to the following question: why did local governments decide to reinvest agricultural production activities, whereas these latest do not generate revenue and especially tax revenue that can be redistributed to other sectors?

In the areas where I conducted fieldwork, local officials were not taking over the role of entrepreneurs in food factories or retail enterprises. On the opposite, a clear distinction was always made between entrepreneurs and "*lingdao*", as this latest term always referred to government officials. As a consequence, the cases of agricultural production observed in Jiangxi and Shandong do not fit in the framework of entrepreneurial state either.

The theory of the developmental state is perhaps the most likely to suit the findings of this research. In this framework, enterprises (either state-, collective or private) undertake entrepreneurship under suitable conditions shaped by the government – among others, through the establishment of close relationships with selected business groups. The original concept framed by Chalmers Johnson depicted developmental states as governments contributing to economic growth through the establishment of large national corporations controlled by dedicated ministries. Today, the concept has evolved a lot and refers to a broader notion according to which governments "dynamically help to create the political and infrastructural conditions for economic growth"[1]. However, even if the evolution of the concept enables the case studies of this research to fit in, the framework of developmental states sadly has lost a lot of its explanatory capacity. In addition, the framework was widely used to explain the role that East Asian states played in economic development, an approach that is too growth-centered. On the opposite, it is necessary for this research to "move beyond the growth perspective"[2], because agriculture plays a rather limited role in the national economic growth. For all these reasons, it is necessary to go further in the analysis.

[1] BLECHER, Marc, SHUE, Vivienne. *Tethered Deer: Government and Economy in a Chinese County.* Stanford: Stanford University Press, 1996, p. 109.

[2] BOYD, Richard, NGO, Tak-Wing. *Asian states : beyond the developmental perspective.* New York, N.Y. : RoutledgeCurzon, 2005, p. 9.

Insights from fieldwork showed that more tribute had to be given to inherent social logics – more than is currently given by most agroeconomists. To sum up, stakeholders need to be brought back in, in the whole complexity of their interactions, by adopting a relational approach to state capacity and power. The model that could capture the results of this research would be a merger between developmental and pseudo-regulatory states. In the course of economic liberalization, the planning functions of Chinese local states shrunk. In addition, their involvement in agricultural activities progressively hollowed out, as their interest shifted to industrial and urban development. Building on the impetus given by policy guidelines promulgated by the central state since the beginning of the 2000s, local state officials managed to reintegrate agricultural production activities through the development of ties and networks with private entrepreneurs (usually excluding farmers) and the reinvestigation of existing entrepreneurial networks. These latest were progressively used as tools for the coming back of developmental local states, which started to rely on resources at their disposal and on pseudo-regulations to control these networks – in the sense that they adapt loose regulations to the structure of social ties they build and maintain with entrepreneurs. To sum up, a transformation of existing regulations and of key resources into control tools helped local officials better control the developing network of food processing enterprises in rural areas. These latest serve as transmission belts for agricultural modernization, allowing local governments to reinvestigate agricultural production activities.

B - "Beyond local": towards wider and more complex forms of state capacity

Local state-enterprises networks recently evolved towards wider and more complex forms of social ties. Over the past few years, the multiplication of Direct Purchase projects changed the modalities of the agricultural development capacity of local government officials. Whereas networks and power relations linking county and township governments with rural food processing enterprises seemed to constitute the main source of state capacity for agricultural development in the 2000s, the pull for upstream integration and direct purchase led to the building of more intricate transversal rural *and* urban state-enterprises nexus. Today, the scheme includes not only county and township governments, but higher levels as well, such as prefectural, provincial and central officials. High-level officials sometimes express the wish to escort retailers on the field – for instance when these latest are looking for

suppliers, doing audits or conducting trainings in rural areas – and through such visits are likely to gain political credit.

The sometimes strong involvement of central, provincial and prefectural officials can be, as stated by an interviewee working in a retail company, "at the same time, a chance and a break". For instance, the fact that governments grant retailers with a list of suppliers in rural areas can become complicated when problems linked to food safety are encountered – whether problems are revealed by audits or discovered by a consumer, once products are on shelves. As was saying a manager of DP projects in a retail company:

> "We audit suppliers [which are recommended to us by the government]. For fruits and vegetables, it is OK. For beef, it is OK. But if we find a problem for pork, it is better that we do not say we found a problem. We will sort this out by telling to the supplier that its products are too expensive, or something else."[1]

Food safety, in China, is a very politically-charged issue. The degree of political sensitivity varies depending on products. Pork, for instance, is one of the most "affected" products, given its importance in Chinese food diets – both in price and volume – and given the high risk of pork safety issues for human health.

Another issue resulting from the presence of high-level officials in the countryside is that it can complicate the mission of DP projects managers looking for suppliers. As was stating one of them:

> "On this project, I have the support of the government, which is, at the same time, a chance and a break: a chance because suppliers, knowing that the government is behind the project, will be more frightened and might better fulfill their commitments […]; a break because I am not free of doing what I want to do. […] We had five days to visit five suppliers. Suffice to say they could tell us whatever they wanted, we had two and a half hour per supplier and they weren't going to show things that weren't working out in their companies, in front of the government."[2]

Still, it is essential for urban retailers to develop *guanxi* with government officials of national, prefectural and provincial levels. *Guanxi* – especially for foreign retailers – are indeed a barrier against media attacks, which have become widespread since the 2008 melamine milk scandal. The risk that media cover food safety problems discovered in

[1] Interview, Shanghai, Octobre 2012.

[2] Interview, Jiangxi, October 2013.

supermarkets (even if these latest are just errors in labeling or products that passed their "best-by" dates but are still on the shelves) is a particularly worrying threat for them, as they face important competition and have to answer the rapidly changing demands of consumers highly concerned about food safety. The fact that food safety has become a politically-charged issue and the state capacity to influence media and consumers' associations[1] grant the government with powerful control tools over retailers. A final control mechanism highlighted by fieldwork was commercial land leases, of which the price is regularly re-evaluated – every 15 years in cities I investigated. This can be problematic in over-populated cities, where space is increasingly scarce and where renting prices can escalate dramatically.

In addition, retailers willing to integrate upstream may sometimes need the help of local governments, if not in finding local enterprises (which they sometimes prefer to look for by themselves to avoid above-mentioned issues), at least in finding local technical experts. As was saying a manager in charge of implementing DP projects in Jiangxi:

> "It is important to be connected to the government. For example, we ask to the government to provide us with local technical experts. We want people who know well the area, because I will not say [to my suppliers] 'do not spread this type of pesticide' and I am incapable of telling them which pesticides they have to apply, in which amounts, so we are looking for local technical experts, which are provided by the government because each local government has its own program to improve practices."[2]

To sum up, the eagerness of urban retailers to please the government and to get a number of resources likely to facilitate their upstream integration pushes them to establish and maintain *guanxi*. For urban governments, getting in touch with retailers is a way to have access to political credit through their involvement in direct-purchase projects.

Over the past decade, urban retailers came into the picture, as well as municipal governments having them within their area of jurisdiction. Because of the political nature of food safety issues, officials from a number of ministries (and especially from the Ministry of Commerce) also integrated the scheme. Even though the different levels of the state have the capacity to keep control on the wide variety of stakeholders of the whole food processing and retail chain, government bodies act independently from each other and defend a number of

[1] According to an interviewee conducted with a retailer in Shanghai in October 2012, the members of consumers associations were mostly "the wives of Party officials".

[2] Interview, Jiangxi, October 2013.

interests that they do not necessarily share with other officials. In addition, although control mechanisms exist in the hierarchy of public authorities[1], higher levels of government officials do not necessarily exert control over lower stakeholder in the food chain. As we see, each stakeholder is part of a global scheme, where interests are the main push and pull factors for action – for instance, retailers are motivated by governmental incentives, but had already started looking for direct suppliers in rural areas before the central government gave them impetus to do so, as was depicted in Chapter 3.

Conclusion

The new role granted to private enterprises in the course of agricultural modernization does neither mean that the state capacity was not able to recover in agricultural production activities, nor mean that government officials were not able to establish control mechanism on the emerging forms of agricultural-industrial capitalism. In Jiangxi and Shandong, where most fieldwork was conducted, local government officials were not directly involved in the process, but still played a role through their integration into state-enterprises networks, over which they established control by using existing resources and regulations. The fact that decentralization granted local authorities with considerable leeway in their use of resources and regulations led to the birth of "fragmented pseudo-regulatory local states", where officials apply rules according to their own and specific terms, in order to push and pull entrepeneurs to take part in the modernization of the agricultural production sector. The always-stronger involvement of private players in the area of food production, as a consequence, cannot be considered as a sign of a privatization of agricultural policies, as defined by Eve Fouilleux.

In *Capitalism from Below*, Victor Nee and Sonja Opper argue that "with the continuing expansion of markets, the economic success of firms became increasingly independent of the direct involvement of politicians". For the authors indeed, "vertical ties linking economic actors in firms with the state decline in significance as horizontal ties – interfirm networks and network ties between buyers and sellers based on repeat exchange – gain in importance."[2]

[1] CHUNG, Jae Ho. Prefectures and prefecture-level cities: political economy of administrative restructuring In CHUNG, Jae Ho, LAM, Tao-chiu. *China's Local Administration: Traditions and changes in the sub-national hierarchy*, London ; New York : Routledge, 2010, p. 137.

[2] NEE, Victor, OPPER, Sonja. *Capitalism from Below* : *Markets and Institutional Change in China*, Harvard University Press: Cambridge, Massachusetts, and London, England, p. 150.

However, insights from fieldwork showed that the links with the government had neither faded nor decreased in importance. On the opposite, most of the interviewees said that even after the crucial step of land attribution, entrepreneurs remained eager to maintain strong links with government officials, in case they would be willing to expand their activity and even for the smoothness of day-to-day business. Urban retailers, as well, had to face the continuous pressure of "local governments" – as termed by them. As a consequence, the emergence of transversal networks of agrarian capitalism, involving both downstream and upstream private entrepreneurs, does not put back into question the strong capacity of the state, of which officials remain strongly integrated in the scheme of agricultural modernization.

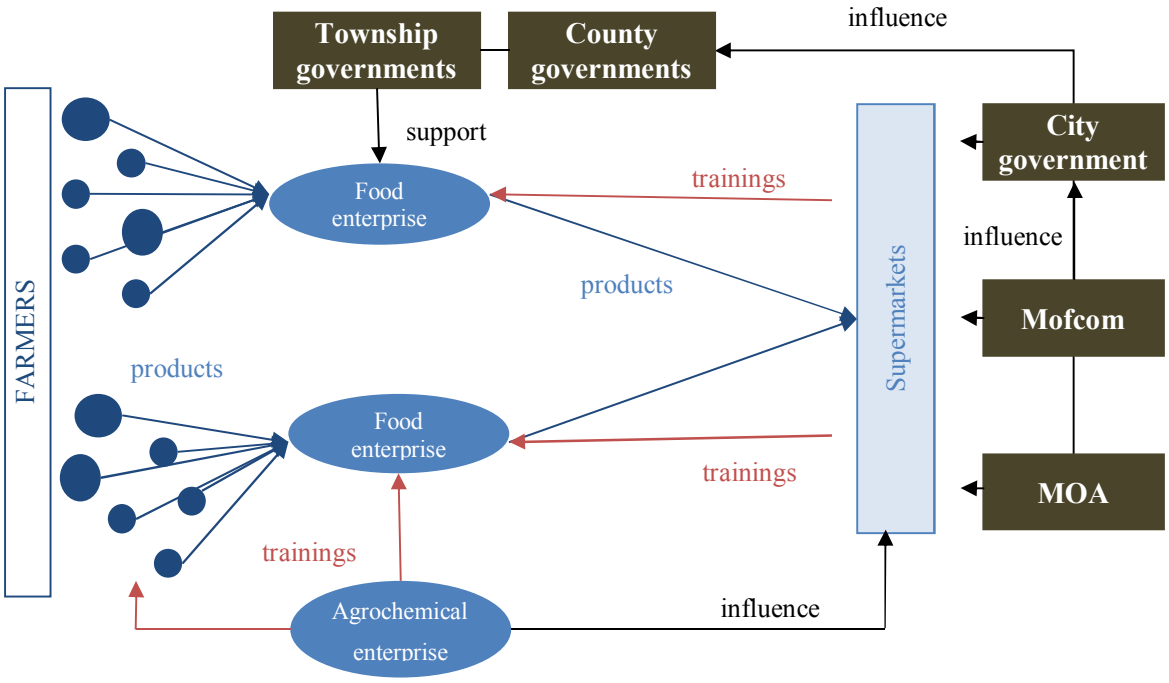


Figure 27: Interventions of governments and retailers in the food chain

Two words were continuously coming back during interviews conducted with food and retail enterprises in Jiangxi, Shandong and Shanghai: "*lingdao*" ("officials") and "*guanxi*" ("relationships"). Contrary to a few scholars who noticed in the 1990s that the importance of *guanxi* was declining in the economy[1], the fieldwork of this research shows that *guanxi* with the government (or "political capital" in the broader sense of the term) are still fundamental to

[1] GUTHRIE, Douglas. The Declining Significance of Guanxi in China's Economic Transition. The *China Quarterly*, June 1998, n°154, p. 254-282.

food processing enterprises for their launch, survival and economic success. Maintaining good relationships with local officials is essential because this latest grant food enterprises with resources – otherwise scarce, scattered or non-existent – during the implementation stage (for resources such as land, human resources and licenses) and thereafter (subsidies, renewal of licenses, granting of certificates, etc.). The power of local governments is increased by the fact that they can take some of these resources away from enterprises (licenses) even once they are granted. Even for uncertainties they control (Chapter 2, III.C.), enterprises need local governments, which can either strengthen or threaten their control over uncertainties. As was summing up a manager of a rural food enterprise:

> "*Guangxi*, in China are very important. Without relationships with the government you cannot do anything."[1]

As clearly appears in Figure 27 and as the sociological analysis of agricultural modernization demonstrated, "the state" is made of a variety of officials. From this follows the logical question, that remains to understand the process of agricultural modernization in China: How is the fragmented state holding together? This is a question the following chapter would like to address.

[1] Interview, Jiangxi, October 2012.

V. Chapter 5: Uniting the fragmented state around a common modernization framework

Introduction

Over the past few years, state-enterprises networks grew into wider and more complicated forms of communities of stakeholders, who do not necessarily share the same interests nor have the capacity to influence the actors in other areas of the system. This remark leads to the following question: what holds the different actors of the Chinese state together? Why local officials, in rural areas, actually comply with the agricultural development guidelines promoted by the central state?

As we saw in the above, the decentralization of the state granted local officials with important flexibility in policy implementation. As a consequence, the details of agricultural modernization policies vary greatly from one region to another, both in institutions and in formal and informal rules governing agricultural modernization (see the example of agricultural machinery subsidies in Chapter 4, I.B.1). However, interviews and policy analyses conducted in the framework of this research showed that common elements were repeatedly found in the modalities of implementation of agricultural modernization. Similarities exist both between local political discourses and between central and local discourses. These common elements progressively built a Chinese "agricultural modernization frame of reference" holding together the fragmented actors of the Chinese state. Drawing on the analysis of Number One Documents[1] (from 2004 to 2014, ten out of eleven Number One Documents focus on agricultural and rural development) and on fieldwork interviews (both central and local), this chapter identifies the main similarities between central and local discourses. The elements of what became a common framework for agricultural modernization are of two main kinds: objectives and levers.

I - A twofold objective

> "The purpose of public policies [is] no longer just to solve problems but to construct frameworks for the interpretation of the world." Pierre Muller, *L'analyse cognitive des politiques publiques: vers une sociologie politique de l'action publique*.

[1] The tables drawn in the following subsections were built considering only the titles of the paragraphs and sub-paragraphs.

The most obvious "common elements" of political discourses related to the Chinese agricultural modernization are linked to its goals. Agricultural modernization, as presented by central documents and local governments, indeed aims at fulfilling two main goals.

The first is to increase the income of farmers and to improve the living standards of rural dwellers, partly to ensure social stability and partly to find out new levers for national economic growth. "Increasing farmers' income" was the title of the 2004 Number One Document, as well as the title of one chapter of the 2006 Number One Document. In addition, it also appears in the titles of the 2008 and 2009 Number One Documents and on various forms in the other documents. It will be explored in the first part of this section.

The second objective is to raise agricultural production levels – especially grain production. It is put out clearly in all the Number One Documents related to agriculture and rural areas since 2004. The second part of this section will focus on this latest.

A - Ensuring rural economic development

When concerns about agriculture and rural development started re-emerging in the middle of the 2000s among officials of the central government, an important focus was put on the necessity to improve the living conditions of rural dwellers. In fact, this was the most emphasized objective in the first Number One Document linked to agriculture and rural areas.

At the beginning, Number One Documents mostly insisted on the necessity to diversify income sources and to protect the legitimate rights of rural migrants (farmers working in cities or in the industrial sector). Policy guidelines then progressively started putting stronger emphasis on the necessity to protect the land rights of farmers, to improve social services and establish social security in rural areas, with the apparent intent to ensure social stability in the countryside. This goal grew stronger over the years and became a central point of Number One Documents at the beginning of the 2010s. Poverty alleviation guidelines are also included in more than half of the documents, as one of the tasks that need to be achieved to improve the living conditions of rural dwellers. As we can see, Number One Documents clearly show that the issues linked to the under-development of rural areas became an important cause of concern to the government from the middle of the 2000s.

The necessity to improve the living conditions of rural dwellers and to raise farmers' income, regularly emphasized by central documents, was clearly mentioned as an important

objective by local officials as well on fieldwork. Local officials of county and township-levels extensively talked about the benefits for rural dwellers of "*san nong*" policies they were implementing in their area of jurisdiction.

As an employee of the Investment Bureau of Lanshui told me:

> "Farmers enjoy benefits from local policies. Wheat and corn production are subsidized by the government. Apples are not subsidized, but farmers do not pay taxes. Finally, farmers enjoy the benefits of a lot of policies that contribute to raise the interest of people into their products: with festivals for instance, more clients get interested into Qixia's apples and want to buy these products, thus prices rise and farmers' income rise too."[1]

The director of the Investment Bureau of Lanshui added:

> "Today, our country does not have any agricultural taxes. People sell their products by themselves and every income they get from it is theirs, the government does not earn a *fen*[2]. […] The government heavily sustains agricultural development. Each year, Number One Documents talk about agricultural issues, *sannong*. The government attaches great importance to it, and invests a lot in it every year."[3]

For local officials, raising farmers' income is essential to promote economic development and to maintain social stability. As was saying the director of the Investment Bureau of Lanshui:

> "Agriculture is the foundation [of China], there are many people living out of agriculture ("中国的农业人口最多 *zhongguo de nongye renkuo henduo*"), [agriculture is linked to] rural stability, national stability. If rural areas are not stable, the country will not be stable, this is why all governments have always been actively supporting agricultural work. […] The gap between the rich and the poor is too wide, there are outstanding social problems. China is now faced to such a situation."

He added later:

> "The problem of China is development. […] For economic development, we need to improve rural areas. […] Because raising living standards, ensuring medical

[1] Interview, Shandong, November 2012.

[2] *Fen* = cent.

[3] Interview, Shandong, November 2012.

> treatment, giving employment opportunities and improving the education of children is a necessity for the development of society."[1]

On the opposite, the willingness to increase the revenue of farmers as a way to find new levers for national economic growth was barely mentioned by local officials (and was much more a concern from the central level), who were usually much more concerned with local social stability threats. However, according to central level officials and researchers I interviewed, rural development policies clearly aim at freeing the consumption capacity of the hundreds of millions of rural dwellers, especially given the current context of a decrease in the national economic growth rate.

B - Increasing agricultural production

Another important goal that clearly appears in all the Number One Documents linked to agriculture since 2004 is the necessity to increase agricultural production. In particular, documents emphasis the need to maintain efforts in grain production. Grain is indeed considered as a basic staple product – in Chinese, "粮食安全" (*liangshi anquan*), literally "grain security", means "food security". In addition, grain production is not economically attractive for farmers. Finally, grain imports have grown stronger over the recent years. For all these reasons, grain production is given much attention in central documents. The necessity to develop a modern and productive agriculture gradually grew stronger in the documents, before reaching a peak in 2014, when the Number One Document devoted an entire chapter on the "necessity to improve national grain security protection system", given the "new circumstances" – basically, the rapid increase in grain imports since 2004 and the growing deficit of the agricultural trade balance.

Over the years, emphasis was also gradually put on the necessity to increase the production of other agricultural commodities. The 2005 Number One Document, for instance, wishes to develop animal husbandry. In 2007, the focus is then put onto aquaculture, before political guidelines, starting from 2008, start including recommendations to increase production levels of commodities of a diversified food basket, including vegetables, meat and fish.

[1] Interview, Shandong, November 2012.

	Support and increase grain production levels	Support and increase other agricultural commodities production levels
2004	1. "Support main grain producing areas and grain industries' development and increase grain-growing farmers' income" 7.b) "Deepen the reform of the grain distribution system"	*Not mentioned neither titles nor in subtitles*
2005	1.b) "Reinforce support for the major grain producing areas" 6.a) "Go a step further in improving grain production" 6.d) "Sustain the development of processing capacities in major grain producing areas"	6.c) "Accelerate the development of **animal husbandry**"
2006	2.c) "Stabilize grain production"	*Not mentioned neither titles nor in subtitles*
2007	4.a) "Promote the stable development of grain production capacities"	4.b) "Develop healthy **aquaculture**"
2008	2.a) "Attach importance to the development of grain production"	2.b) "Improve the production of the **whole food basket** (including vegetables, meat and fish)"
2009	2.a) "Vigorously support grain production"	2. b) "Sustain **oil and cash crop** production" 2.c) "Accelerate the development and standardization of **animal husbandry and fishery**"
2010	2.a) "Steadily develop the production of grain and other staple products"	2.b) "Push forward the standardization of production of **vegetables** and other products"
2012	1.a) "Keep up efforts for grain production"	1.b) "Pay close attention to production of **vegetables** and other products"
2013	1.a) "Steadily develop agricultural production"	
2014	1. "Improve national grain security protection system"	*Not mentioned neither titles nor in subtitles*

Table 20: Emphasis put by 2004-2014 Number One Documents on grain and other agricultural commodities production (occurences in paragraph titles and subtitles)

The necessity to develop a modern and productive agriculture was a wish expressed by local officials as well. In Lanshui, a lot of policies and programs were implemented to develop local food production. Subsidies for grain production were mentioned by the interviewees, as well as other policies targeting apples – the main agricultural output of the area – and other products. In Lanshui, the county government had decided to establish a fruit development bureau, as a way to provide technical answers addressing the issues encountered by local farmers. In Lushan, the local government was pushing enterprises to train farmers so

that they could increase their yield. I could see many pest traps in the orchards and was told that they were heavily subsidized by the government. The active promotion of local fruits throughout county governmental bureaus, both in Lushan and in Lanshui, was also part of the strategy of local governments aimed at helping the development and modernization of the agricultural sector – even though fruits are far from being the first priority set by central documents.

C - What about food safety and environmental issues?

Environmental protection and the safety of food products are closely linked. A great number of food safety issues are indeed caused by unsuitable farming practices. Among these practices, the spreading of important quantities of pesticides and herbicides, for instance, damages ecosystems and at the same time leads to high residues on food products, highly detrimental to human health.

Food safety has been a recurrent theme of Number One Documents since 2004. It can be found in seven out of the ten documents as the subject of a whole subparagraph. Most of the political guidelines linked to this topic promote better control and regulation of markets. In the years following the 2008 melamine milk scandal however, which caused the sickness of hundreds of thousands of babies and killed several, policy guidelines became more precise and more pressing.

Environmental concerns, on their side, were already part of Number One Documents starting from the middle of the 2000s. However, policy guidelines were rather vague at this time. The concept of ecology was progressively refined along the years. In 2005, environmental concerns were linked to the necessity to protect water resources and to improve the resilience of agriculture to natural disasters. Then, new terms gradually emerged, such as “circular agriculture”, clean energy, biomass, etc. (Table 21)

	Soil quantity/quality	Promote ecology	Improve the quality and safety of food products
2004	*Not mentioned neither titles nor in subtitles*	*Not mentioned neither titles nor in subtitles*	2.a) "Raise quality and safety levels of food products"
2005	2. "Build a rigorous system protecting cultivated areas and improve the quality of cultivated areas"	3. "Reinforce irrigation and water conservancy and ecology and raise agriculture's capacity to cope with natural disasters"	*Not mentioned neither titles nor in subtitles*
2006	4.a) "Improve irrigation and water conservancy, farmland quality and ecology"	2.f) "Accelerate the development of circular agriculture"	*Not mentioned neither titles nor in subtitles*
2007	2.b) "Improve soil quality"	2.a) "Improve irrigation and water conservancy" 2.c) "Accelerate the development of clean energy in rural areas" 2.e) "Raise rural areas' sustainable development capacity"	5.b) "Improve market services and management of quality and safety of products capacity"
2008	3.d) "Strengthen the protection of soil and improve soil quality"	3.f) "Continuously promote ecology"	2.c) "Strengthen the standardization of food products and improve the quality and safety of products"
2009	4.c) "Strictly enforce cultivated land protection and land saving mechanisms"	3.e) "Promote ecology as a priority"	2.d) "Strictly regulate and control the quality and safety of food products"
2010	*Not mentioned neither titles nor in subtitles*	2.f) "Build a strong ecological security barrier"	*Not mentioned neither titles nor in subtitles*
2012	*Not mentioned neither titles nor in subtitles*	5.d) "Strengthen ecological construction"	6.c) "Improve agricultural products regulation and control"
2013	*Not mentioned neither titles nor in subtitles*	6.d) "Encourage the construction of rural ecological civilization"	1.d) "Enhance agricultural markets' regulation and control" 1.e) "Promote food safety"
2014	*Not mentioned neither titles nor in subtitles*	3. "Establish sustainable agricultural development long-term mechanisms"	1.c) "Strengthen agricultural markets' control systems" 1.e) "Closely watch over the quality and safety of food products"

Table 21: Emphasis put by 2004-2014 Number One Documents on land protection, ecology and food safety (occurrences in paragraph titles and subtitles)

Environmental protection and food safety concerns, although stated in central documents soon in the 2000s, did not have the importance of the guidelines urging for the

improvement of food security or rural living standards. In areas investigated in Jiangxi and Shandong, environmental issues were clearly second-rank objectives for local officials. In fact, most of the environmentally-friendly farming practices were put aside as potential threats to production levels or as additional work generating costs but not profits. The only exception was a few environmentally-friendly farming practices generating profits, which developed rapidly over the past few years. In Jiangxi for instance, I could acknowledge a prompt development of the use of organic fertilizers, as it was giving birth to a new sector creating employment, generating economic growth and attracting investors. In Jiangxi again, pest traps equipped with solar panels and manufactured by local companies or subsidiaries were often observable in orange fields – although I was told that their location was not always suitable.

Picture 14: Pest trap in orange field in Jiangxi
(Photography by the author, October 2012)

Other practices such as water treatment, soil testing and trainings for a rational use of fertilizers were usually too complicated and too costly to implement. In addition, whenever environmentally-friendly farming practices required the cooperation of farmers,

implementation could become even more complicated. In the field of rice production for instance, I was told in Anhui and Chongqing that local officials were dedicating important efforts to prevent farmers from burning straw to limit greenhouse gases emissions. However, in a village near Hefei (in Anhui province), the methods used by the government – a car passing in villages or parked in front of farmers' markets with a loudspeaker repeating to "friend-peasants" not to burn straw – let me rather puzzled… The distance put between officials – who rather talk to entrepreneurs – and farmers constituted a considerable obstacle impeding the cooperation of farmers and the evolution of farming practices.

II - Favored levers: technology, industrial actors and rural exodus

Frames of reference for modernization are not only defined by the goals that modernization policies put emphasis on. Frames of reference promote levers as well, as tools to reach the objectives that they support. In the case of agricultural modernization, three main levers were regularly promoted as dominant levers to modernize the sector.

A - The importance attached to scientific research and development

The first lever that defines China's agricultural modernization frame of reference is the importance given to science and technology. Science and technology are really at the core of Chinese central discourses on "modern agriculture" and clearly appear at local levels of the government as well. It is interesting to notice that this faith in science and technology, which is regularly expressed by officials in documents and in interviews, strongly echoes the faith that the society has in science and technology. The results of the World Value Survey 2014, for instance, show that to the question "Science and technology are making our lives healthier, easier, and more comfortable", 73 per cent of Chinese respondents said that they strongly agreed[1].

[1] On a scale going from 1 to 10, 1 meaning that people "completely disagree" and 10 meaning that people "completely agree", 73 per cent of respondents answered 7 or above (World Value Survey, 2010-2014). As a comparison, only 65.9 per cent American respondents answered 7 and above. 23.6 per cent Chinese respondents answered that they "completely agreed", compared to 12.6 per cent American respondents.

In the agricultural sector, scientific and technological modernization includes a wide range of techniques, from the most basic ones (such as agricultural machinery, pesticides and fertilizers) to the most elaborated ones (such as improved seeds). The fundamental role of science and technology for agricultural development is mentioned in all Number One Documents since 2004. Among other things, strong emphasis is put on the development of research capacities. Researchers met during fieldwork confirmed that considerable financial efforts had been put in the development of research centers, which are today equipped with cutting-edge technology (Chapter 2, III.B.2).

As far as rural areas are concerned, mechanization and informatization are regularly mentioned in central documents as well as in local governments' discourses. As was stating the director of the Investment Bureau of Lanshui:

> "The government is attaching strong importance to agricultural mechanization. […] If you want to purchase modern agricultural machinery, the government will give you subsidies, in order to encourage you to use advanced technology and equipment. In the past, Chairman Mao used to say that the basic foundation of agriculture was mechanization. He was already aware of this issue at that time."[1]

While wandering in the countryside, it happened a lot that people who knew that I was working on agricultural modernization showed me tractors and said "See! Agricultural modernization!"

However, technological progress has today proven to be useless without technological extension services. The inefficiency of the overuse of chemical fertilizers and the damages it has on the environment clearly illustrates the issue. Technological extension is mentioned in Number One Documents, but with less emphasis compared to the one which is put on the necessity to develop research capacities and technology industries. During the first half of the 2000s, considerable efforts were dedicated to the development of upstream research facilities and industrial capacities, while few concentrated on how to link the final users of technology – farmers – with technological progress, leading to a number of issues mentioned in Chapter 2, III.B.2.

[1] Interview, Shandong, November 2012.

In the second half of the 2000s however, the need to "foster rural talents" and to "breed a new variety of farmers" gradually emerged. According to an employee of the government of Lanshui:

> "The government developed training programs for farmers. There is a fruit development bureau in the government. They have more than ten senior agricultural experts who teach at a fruit tree station. They also put a lot of efforts into the upgrade of technology in industry."

However, the incapacity of local government extension services to answer the specific needs of farmers was regularly denounced by farmers and by industrial players and NGOs closely working with them. It appears that a lot of progress can still be achieved to improve how technology manages to reach farmers.

B - The role of industrial actors

If the role that "talented farmers" can play in agricultural modernization is recognized by some of the 2004-2014 Number One Documents, the role industrial stakeholders are encouraged to take on is much more strongly and more frequently emphasized by the same documents. The 2004 Number One Document, for instance, pushes "dragonhead enterprises"[1] to "provide trainings and marketing services to farmers, to feed agriculture with new technology" and to take on a number of similar "leading" roles. In the 2007 Number One Document, "dragonhead enterprises" are mentioned as key players "leading farmers' development and agricultural modernization".

The importance granted to enterprises was found at the local level as well. According to an employee of the Investment Bureau of Lanshui, the living conditions of farmers had "improved a lot here, thanks to the food enterprises who invest and buy their products."[2] Fieldwork conducted in Jiangxi, as well, demonstrated that the willingness of local officials to grant industrial players – and not only dragonhead enterprises – with a leading role in agricultural modernization was extremely strong – for a number of reasons depicted in Chapter 2.

[1] Dragonhead enterprises are companies recognized by the Chinese government for their leading role in their industry sectors. The status grants them with certain tax exemptions and other financial support.

[2] Interview, Shandong, November 2012.

On the opposite, grassroots organizations play a relatively small role in agricultural modernization. Even though the 2006 Number One Document talks about the necessity to breed "new types of service organizations" – other than the collective ones – at that time, only professional associations were mentioned, of which the members are usually food industries and traders. In 2007, the necessity to promote the development of agricultural cooperatives emerged as a new lever to provide services to farmers. In 2012, the role of rural associations expanded to cover a wider variety of services, from financial services to marketing or technology extension. All forms of rural organizations, from then on, were encouraged: agricultural cooperatives, supply and marketing cooperatives, technology associations, water associations, enterprises, etc. In 2013 and 2014, the necessity to develop all forms of rural organizations is again emphasized in central documents.

As we see, from 2004 to 2014, the exclusive leadership of enterprises in agricultural modernization gradually evolved and started integrating other stakeholders as well as "grassroots" forms of organizations. However, as documents underline it, rural cooperatives only complement – and never replace – dragonhead enterprises as service providers to farmers. In the areas where I conducted fieldwork, enterprises have remained the most important players, in spite of the recent change in central policy guidelines. This topic, which deserves to be discussed more thoroughly, will be further investigated in the following chapter.

C - The lever of the rural exodus

The last element defining the Chinese frame of reference for agricultural modernization is the idea that labor migration out of the farming sector and rural exodus are important *levers* for the increase in agricultural productivity and for the improvement of the living conditions of rural dwellers. For instance, the 2004 Number One Document argues that pushing more farmers to live in small towns will have positive effects on industrial development, population gathering and market enlargement. The 2006 Number One Document expresses the willingness of the central government to establish rural-urban networks of public services able to provide free information, guidance and assistance to former farmers willing to work in the industrial sector. Before 2008, central documents used to put strong emphasis on the necessity to protect the legitimate rights of migrant farmers (*i.e.* the ones taking jobs *outside* the farming sector). All these guidelines clearly intended to facilitate rural exodus.

In 2008, along with the goal of protecting migrant workers, another goal emerged: the one according to which the rights of farmers staying in rural areas should be protected as well. In 2008, only farmers' land rights are clearly mentioned in the titles of subparagraphs. In the following years, additional features such as forest collective rights or land contract reform were added to policy guidelines. However, the rising necessity to protect farmers' rights did not lower the eagerness of the state to encourage rural exodus and migration of labor out of the farming sector. The 2013 Number One Document clearly stipulates that the "urbanization of farmers" should be encouraged (in particular, through the relaxation of the *hukou* systems of small and medium towns, the establishment of social security and assistance for migrants, etc.). Similarly, the 2014 Number One Document states that the urbanization of farmers should be accelerated. Five-Year Plans, on their side, keep on promulgating urbanization rate targets.

Such a discourse was clearly found at local levels as well. When I was noticing the old age of the agricultural labor force (especially in Ningxia and, to a lesser extent, in Jiangxi and Shandong), I systematically asked questions about local rural-urban migration policies. Answers were invariably defending the same logic: rural exodus is a positive process, because farmers staying in rural areas will be able to have bigger farms and earn more money. According to the director of the Investment Bureau of Lanshui:

> "The land per capita is very small, three mus or two mus, four-five mus is already a lot. As a consequence, it is very difficult to manage the shape of farm. If we want to change the mode of agricultural production in the future, we have to concentrate the landholdings, in order to have owners of big farms. When leasing markets will be established, landless peasants will take temporary jobs, it will be modern farmers, it will more convenient to manage and there will be technological upgrading. This is the path for the future."[1]

As the above paragraph demonstrated, strong similarities, both in terms of goals and levers, exist between central level documents and the discourses and policies of officials of county and township levels. How come the elements of the central frame of reference of agricultural modernization are transmitted down to local levels of public authorities? The following subsection will try to provide some answers to this question.

[1] Interview, Shandong, November 2012.

III - Spreading the framework

A large body of literature focused on the question of transmission mechanisms in the fragmented Chinese state. According to Shiuh Shen Chien, several mechanisms are used by the Chinese central government to control the lower levels of public authorities: i) administrative orders; ii) mandatory plans (plans for social and economic development, measured by indexes such as GDP and FDI); iii) allocation of financial and other resources; and iv) personnel appointments and removals[1]. Graeme Smith, on his side, argues that county governments have important leeway in policy implementation and "only take up initiatives wholeheartedly when three conditions are met": i) the initiative is important to the annual assessment system; ii) the initiative raises revenue, either through levying fines, taxes or service fees, or by opening up revenue sources from higher levels; iii) the initiative benefits individual cadres and the 'shadow state' financially"[2].

These valuable explanatory frameworks, however, did not completely correspond to what was observed in the fieldworks that were conducted in Jiangxi and Shandong. In these areas, strong similarities were indeed found between central and local frames of reference for agricultural modernization, even though the implementation of central policy guidelines was neither generating additional revenue nor enabling local cadres to be better ranked in the cadre evaluation system. This does not mean that the cadre evaluation system does not play any role in the transmission of central agricultural modernization guidelines. However, the fieldwork of this research proved that other mechanisms, both direct and indirect, were important as well in the whole system allowing the transmission of the frame of reference down to local levels.

[1] CHIEN, Shiuh Shen. Prefectures and prefecture-level cities: the political economy of administrative restructuring In CHUNG, Jae Ho, LAM, Tao-Chiu. *China's Local Administration: Traditions and changes in the sub-national hierarchy*. London ; New York : Routledge, 2010, p. 137.

[2] SMITH, Graeme. Political Machinations in a Rural County. *The China Journal*, July 2009, n°62, p. 30

A - Direct transmission mechanisms

1) Cadre evaluation systems and competitive political environments

In the literature, the Chinese cadre evaluation system was depicted as an important steering mechanism for upper-level public authorities [1]. Under the system, which is implemented at each level of the government, officials are evaluated by the Organization Department and the Party Committee of the level just above their own. Targets, which set by evaluating offices[2], are ranged on a grading scale according to their relative importance: soft targets (软指标 *ruan zhibiao*), for low-priority tasks; hard targets (硬指标 *ying zhibiao*), more important to achieve; and "one vote down" targets (一票否决 *yipiao foujue*), of which the failure automatically results in punishment and cannot be remedied by good achievements in other areas. Some targets are quantifiable and evaluated through measurable figures (such as GDP, birth rate, etc.), whereas others cannot be assessed through specific indicators ("integrity", "incorruptness", etc.).

Family planning, social stability and economic development are traditionally considered as critical tasks that have the larger impact on the career of officials[3]. The strong

[1] "Performance evaluation system and its targets have become an important point of orientation for local cadres" (HEBERER, Thomas, TRAPPEL, René. Evaluation Processes, Local Cadres' Behaviour and Local Development Processes. *Journal of Contemporary China*, 2013, vol. 22, n°84, p. 1048). See also: LI, Hongbin, ZHOU, Li-An. Political turnover and economic performance: the incentive role of personnel control in China. *Journal of Public Economics*, 2005, n°89, p. 1743-1762; EDIN, Maria. State capacity and local agent control in China: CCP cadre management from a township perspective". The China Quarterly, 2003, vol. 173, p. 35-52; GAO, Jie. Governing by goals and numbers: a case study in the use of performance measurement to build state capacity in China. Public Administration and Development, 2009, vol. 29, p. 21-31.

[2] The central government only gives guidelines. For example of guidelines, see: 关于改进地方党政领导班子和领导干部政绩考核工作的通知, 人民日报, 2013年12月10日 *guanyu gaijin defang dangzheng lingdao banzi he lingdao ganbu zhengji kaohe gongzuo de tongzhi, renmin ribao* [Notice about the improvement of the evaluation of leading cadres and leadership ranks of local party and government administration, People's Journal] http://renshi.people.com.cn/n/2013/1210/c139617-23793409.html , accessed on April 23rd, 2014.

[3] BURNS, John P., ZHOU, Zhiren. Performance Management in the Government of the People's Republic of China: Accountability and Control in the Implementation of Public Policy. *OECD Journal on budgeting*, 2010, vol. 2, p. 10. For work on the importance of economic growth targets, see, for example: LI, Hongbin, ZHOU, Li-An. Political turnover and economic performance: the incentive role of personnel control in China. *Journal of Public Economics*, 2005, n°89, p. 1743-1762. In the past few years, economic development targets were the subject of intense debates (partly because of environmental concerns), and the central government has been trying to encourage local governments to diversify their economic targets beyond GDP. See: 关于改进地方党政领导班子和领导干部政绩

emphasis that has always been put on social stability and economic growth in the cadres evaluation system facilitates the transmission of the objective of "improving living conditions in rural areas". Almost all Number One Documents, since 2004, stressed the fact that improving rural infrastructures was necessary to create good conditions for economic development. In addition, Number One Documents from 2004 to 2007 emphasize the need to promote small towns economic growth and to diversify the income sources of rural dwellers, mostly with the aim of encouraging economic growth in rural areas. From 2008 on, as concerns about rural social stability issues linked to farmers' expropriation grew stronger, Number One Documents started focusing on the necessity to protect farmers' rights, to reform land property system and to fill the gap between the living conditions in rural and urban areas. As we can see, economic growth targets – and, later on, social stability targets, because they are critical for the evaluation of cadres – encouraged local officials to carry out policies complying with the guidelines promoted by the central government.

However, the traditional cadre evaluation system is far from being sufficient to explain the eagerness of local officials to implement agricultural modernization policies. Activities other than agricultural production can indeed contribute to social stability and economic growth in rural areas way more than agricultural development does – industrialization, for instance, has long been the preferred way of developing the economy of rural areas. The traditional evaluation system is in fact completed by other evaluation mechanisms, which are managed by local agricultural bureaus and local grain bureaus. These latest are responsible for checking the enforcement of grain production targets. As underlined in Chapter 1, III.3., the Chinese government attaches fundamental importance to the national grain self-sufficiency and, as a consequence, established responsibility systems to check on the compliance of local officials. The "governor's grain bag responsibility system" was implemented in 1995 for provincial governors, who are in charge of balancing grain supply and demand within their province – in particular, by supporting grain production in rural areas within their area of jurisdiction. In addition to the governor's grain bag responsibility system, grain production targets are set every five years by the central government in Five-Year Plans. These targets

考核工作的通知, 人民日报, 2013年12月10日 *guanyu gaijin defang dangzheng lingdao banzi he lingdao ganbu zhengji kaohe gongzuo de tongzhi, renmin ribao* [Notice about the improvement of the evaluation of leading cadres and leadership ranks of local party and government administration, People's Journal] http://renshi.people.com.cn/n/2013/1210/c139617-23793409.html , accessed on April 23rd, 2014.

are then progressively detailed by each level of the government, down to local grain bureaus which set local grain production targets on a yearly basis.

Five-Year Plans also include production targets for other agricultural products, such as oilseeds, sugar, meat and dairy products (see Table 22). Although the enforcement of these targets is less important than the reaching of grain targets at the national level, it can matter in some provinces that specialize in these kinds of products. In addition, another system encourages government officials to take vegetable production into account: the mayors' vegetable basket, which was implemented by the Ministry of Agriculture in 1988. Under this program, local agricultural bureaus built thousands of wholesale agricultural markets in order to improve the production and marketing of vegetables and other food products[1]. It is still and important system today that encourages areas to consume local vegetables.

To sum up, the combination of responsibility and evaluation systems complements the traditional cadres evaluation system. The whole scheme establishes formal mechanisms that are supposed to push local officials to keep food production at the core of the rural policies they implement in their area of jurisdiction.

Target	2010	2015	Annual rate of increase （%）
Grain overall production capacity (100 million tons)	>5.0	>5.4	
Grain sown area (100 million mus)	16.48	>16.0	
Cotton total output (10,000 tons)	596	>700	>3.27
Oil seeds total output (10,000 tons)	3230	3500	1.62
Sugar products total output (10,000 tons)	12008	>14000	>3.12
Meat total output (10,000 tons)	7926	8500	1.41
Egg total output (10,000 tons)	2763	2900	0.97
Dairy products total output (10,000 tons)	3748	5000	5.93
Fishery total output (10,000 tons)	5373	>6000	>2.23

Table 22: 12th Five-Year Plan agricultural production targets

[1] China moves to improve vegetable supply. *Xinhua*. 18/08/2010 http://www.chinadaily.com.cn/china/2010-08/18/content_11172694.htm, accessed on May 1st, 2014.

Objective set by the central government	1) Improving rural living conditions	2) Increasing agricultural production levels		
Transmission mechanisms	Traditional cadres' evaluation system: high score attributed to the maintenance of social stability and achievement of economic growth	Grain bag	Vegetables basket	Grain and other major agricultural commodities' production targets
Targeted local government	Leaders at each level of the government	Provincial leaders	Mayors	Grain and agricultural bureaus' officials

Table 23: Central governments' agricultural and rural targets and transmission mechanisms

The existence of this set of agricultural production targets, however, is not sufficient to explain why local governments pursue agricultural development goals. Agricultural targets are indeed not among the "one vote down" targets and can be compensated by other achievements, which can at the same time grant local officials with greater financial and political power. As were noticing Zha Daojiong and Zhang Hongzhou: "Although the central government is committed to ensuring grain security for the nation and promoting farmers' incomes, the local governments show little interest in the agricultural sector […] Agriculture does not help the local government's promotion system. Promotion of local government officials is strongly based on merit, especially their contribution to economic growth. However, agriculture, particularly the grain sector, generates little employment for the local economy and its contribution to GDP growth is negligible."[1]

Göbel, on his side, observed that the hardness of targets could not entirely explain the efficiency of policy transmission, because despite the fact that "local leaders everywhere face the same targets", "one of the same policy often produces eager supporters (known as 'pioneers') in one locality and resisters in another"[2]. Göbel illustrates his analysis by

[1] ZHAO, Daojiong, ZHANG, Hongzhou. Food in China's international relations. *The Pacific Review*, 2013, vol. 26, n°5, p. 462.

[2] GOBEL, Christian. Uneven policy implementation in rural China. *The China Journal*, January 2011, n°65, p. 54.

depicting the example of the uneven implementation of the Rural Tax and Fee Reform, but his remark about the unevenness of policy implementation also applies to the rest of the rural policies designed by the central state and that have to be implemented by local governments.

Finally, agricultural targets already existed before the 2000s, whereas conclusions drawn from fieldwork show that local governments only started renewing their interest in agriculture and rural areas about a decade ago. Therefore, other explanations need to be found.

The competitive environment within which local officials evolve partly explains this puzzling issue. In a competitive political environment, agricultural development indeed becomes a strategy for "marketing differentiation" for local officials. Landry states that "local competition [breeds] political competition by creating local power bases that undermine political cohesion"[1]. It is true that on my fieldwork, I could see that political cohesion was not the best strength of local governments (Chapter 4, I.A.2.). However, this lack of cohesion between the bureaus of a same administrative level was not impeding the implementation of agricultural development policies. On the opposite, the results of this research demonstrate that the competitive environment between local officials encourage these latest to adhere to central policies, because their results are likely to allow them to have access to political credit in front of higher level officials, potentially leading them to higher positions in the hierarchy of the Chinese administration. The willingness of municipal officials to be involved in DP projects and to go to rural areas illustrates this point. The agricultural development project conducted by the poverty alleviation bureau (without involving the agricultural bureau) in the county I explored near Chongqing is another example of the efficiency of the competitive environment to steer agricultural development policies inside local administrations. To sum up, even if a lack of political cohesion was indeed observed in local areas – bureaus were hiding things from each others (Chapter 4, I.A.2) – cohesion with the guidelines promoted by the central level was in fact reinforced by the competitive environment of local officials.

The explanation given by Göbel shares similarities with the conclusions I drew from my fieldwork. According to Göbel, the uneven implementation of rural policies is due to what

[1] LANDRY, Pierre F. *Decentralized Authoritarianism in China: The Communist Party's Control of Local Elites in the Post-Mao Era*. Cambridge, N.Y. ; New York : Cambridge University press, 2008 p. 21.

he calls "competition under hierarchy", a system under which "pioneers are motivated to go along, not only by fear of punishment, but also by the promise of material and immaterial rewards" and where "resistance is the result of a locality's inability or unwillingness to engage in competition". However, fieldwork also demonstrated that this mechanism of evaluation and competition was completed by other types of control mechanisms for the implementation of agricultural development policies, among which the allocation of financial resources.

2) **The allocation of financial resources**

In addition to the cadres evaluations systems and to the competitive environment in which local officials evolve, another mechanism explains why agricultural development targets are transmitted to local level officials: the allocation of financial resources.

The efficiency of the financial allocation system for the transmission of policy guidelines cannot be taken for granted. The Chinese fiscal system is indeed considered as one of the most decentralized systems worldwide. In the middle of the 2000s, around 70 percent of public expenditures were spent by subnational governments (provincial, prefectural, county- and township-levels)[1]. As a comparison, subnational governments of developing countries and transition economies spend about 20 percent of the entire public budget[2]. The particularly strong decentralization of the Chinese fiscal system thus goes against the theory of a fiscal steering mechanism that could be used by central administrations to control local officials.

However, a number of studies showed that in spite of such a sharing of public expenditures, the Chinese central government remained able to control the allocation of financial resources to lower levels. A significant fiscal re-centralization was conducted in 1994. Taxes were simplified, VAT was introduced and the national government established its own revenue-collection bureaus. In 1994, the ratio of the revenue of the central government jumped to 56 percent (compared to 22 percent in 1993), and has remained around 50 percent since. As a consequence, local governments are highly dependent on the

[1] SHEN, Chunli, JIN, Jing, ZOU, Heng-fu. Fiscal Decentralization in China: History, Impact, Challenges and Next Steps. *Annals of Economics and Finance*, May 2012, vol. 13, n°1, p. 2; LANDRY, Pierre F., *ibid.*, p. 3.

[2] SHEN, Chunli, JIN, Jing, ZOU, Heng-fu, *ibid*., p. 2.

redistribution of the revenue collected by the central state. According to Shen, Jin and Zou, transfers from the central government to provinces account for 67 percent of provincial fiscal resources and transfers from provinces to sub-provincial governments account for more than half of these latest' fiscal resources[1]. As a consequence, in spite of a highly decentralized fiscal system, the central government is able to steer local governments through the allocation system of fiscal resources. This remark is particularly true for agricultural production, as farming does not generate fiscal revenue.

At the national level, agriculture is budgeted in two main items: "Agriculture, forestry and water conservancy" and "Grain and edible oil reserves and other related measures". The amount of expenditures (in nominal values) dedicated to both items kept on increasing over the past few years. "Agriculture, forestry and water conservancy" jumped from 182,174 million RMB in 2008 to 600,540 million RMB in 2013, whereas resources allocated to "Grain and edible oil reserves" went from 46,169 to 126,638 million RMB over the same period of time[2] (Table 24).

2008 National revenue		6,131,690
Among which expenditures	Agriculture, forestry, and water conservancy *- Agricultural infrastructures* *- Subsidies for improved seeds and agricultural implements*	182,174 *113,760* *16,340*
	Grain and edible oil reserves and other related measures	46,169
2009 National revenue		6,847,688
Among which expenditures	Agriculture, forestry, and water conservancy *- Rural and agricultural infrastructures* *- Subsidies for improved seeds and agricultural implements*	350,124 *116,870* *112,350*
	Grain and edible oil reserves and other related measures	174,662
2010 National revenue		8,308,032
Among which expenditures	Agriculture, forestry and water conservancy: *- Agricultural and rural infrastructures* *- Subsidies for improved seeds and agricultural implements* *- Agricultural science and technology, agricultural cooperatives and highly-efficient agriculture*	387,966 *135,200* *107,490* *11,400*
	Grain and edible oil reserves and other related measures	79,324

[1] SHEN, Chunli, JIN, Jing, ZOU, Heng-fu. *Ibid*., p. 17.

[2] Expenditures allocated to Grain and edible oil reserves are not steadily increasing. Increase rates vary according to China's international supply strategy. We can indeed see, for instance, that the budget underwent a tremendous rise in 2009, just after the 2007-2008 international food price crisis (probably to replenish depleted stocks).

2011 National revenue		10,374,001
Among which expenditures	Agriculture, forestry and water conservancy *- Agricultural and rural infrastructures* *- Subsidies for improved seeds and agricultural implements* *- Agricultural science and technology, modern agriculture and agricultural cooperatives* Grain and edible oil reserves and other related measures	478,526 *139,878* *135,130* *16,300* 89,062
2012 National revenue		11,720,975
Among which expenditures	Agriculture, forestry and water conservancy	599,598
2013 National revenue		12,914,290
Among which expenditures	Agriculture, forestry and water conservancy Grain and edible oil reserves and other related measures	600,540 126,638

Table 24: Selected items from China Central and Local revenue and expenditures from 2008 to 2013 (unit: million RMB)

Source: 关于 2008-2013 年中央和地方预算执行情况与 2009-2014 年中央和地方预算草案的报告 guanyu 2008-2013 nian zhongyang he difang yusuan zhixing hang qingkuang yu 2009-2014 nian zhongyang he difang yusuan cao'an de baogao [Report on 2008-2013 central and local budget situation and 2009-2014 draft for central and local budget]

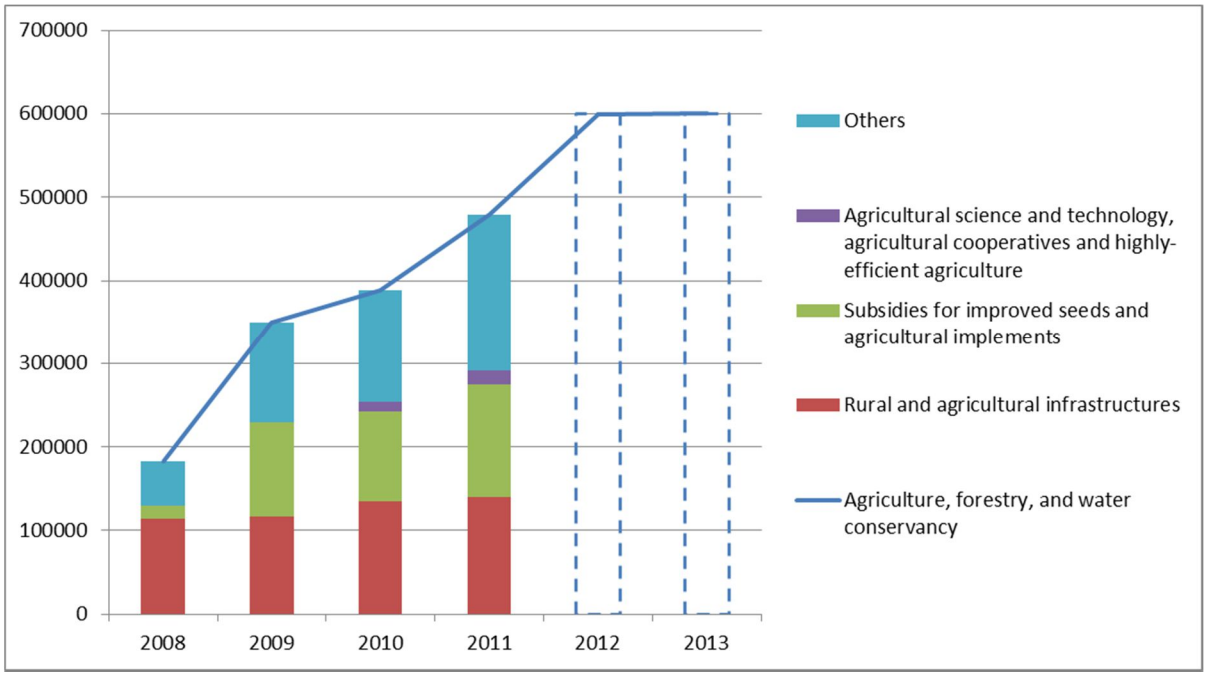


Figure 28 : China's agriculture, forestry and water conservancy expenditures from 2008 to 2013 (unit: million RMB)

Source: 关于 2008-2013 年中央和地方预算执行情况与 2009-2014 年中央和地方预算草案的报告 guanyu 2008-2013 nian zhongyang he difang yusuan zhixing hang qingkuang yu 2009-2014 nian zhongyang he difang yusuan cao'an de baogao [Report on 2008-2013 central and local budget situation and 2009-2014 draft for central and local budget]

From the Figure 28, it appears that the two most important items of expenditures allocated to agriculture are "Rural and agricultural infrastructures" and "Improved seeds and other agricultural implements". According to an interview conducted with an official working on rural expenditures at the Ministry of Finance, most of the resources allocated to the improvement of infrastructures come from local governments. On the opposite, almost all of the subsidies directly allocated to agriculture come from the central level, because agriculture does not generate local revenue since agricultural taxes were abolished in 2006[1]. The development of infrastructures, on its side, aims at generating economic growth likely to lead to increases in the fiscal revenue of local governments. Such a scheme of expenditure allocation grants higher levels of the government with an important steering mechanism to push local officials to make efforts to develop agriculture. The figures 29 and 30 illustrate the importance of transfers from the central government to local governments in general and for agriculture and rural areas in particular.

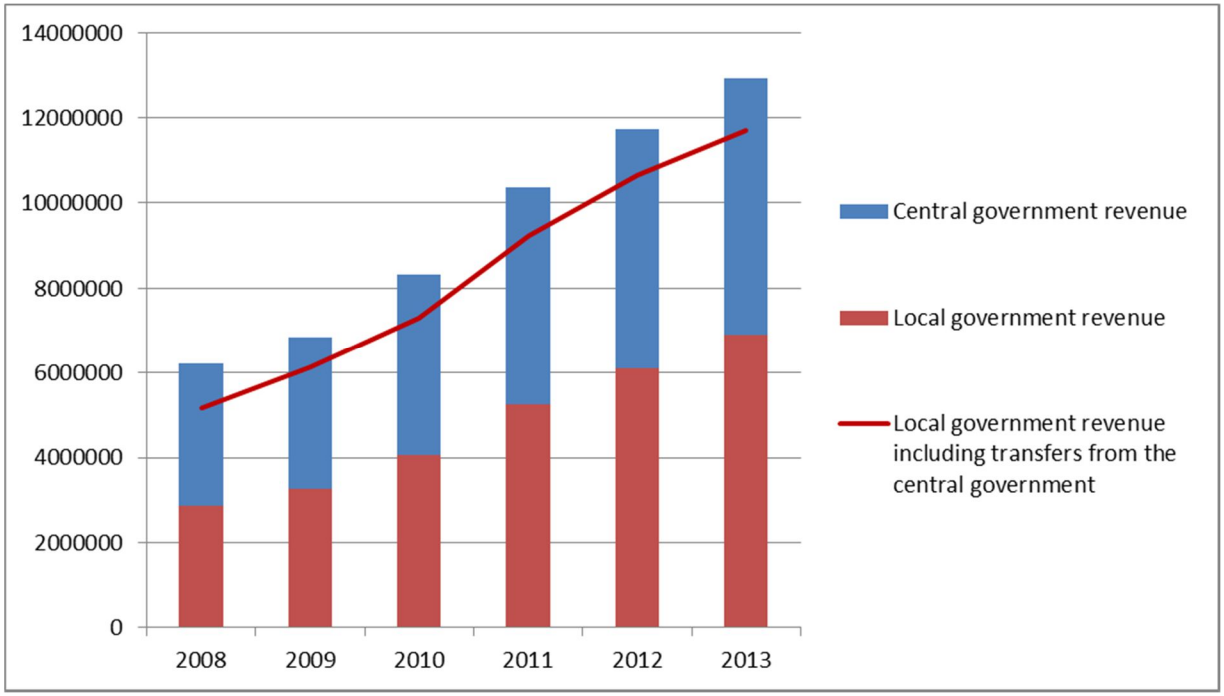


Figure 29: The importance of transfers from the central government for local government revenue (unit: million RMB)
Source: 关于 2008-2013 年中央和地方预算执行情况与 2009-2014 年中央和地方预算草案的报告 guanyu 2008-2013 nian zhongyang he difang yusuan zhixing hang qingkuang yu 2009-2014 nian zhongyang he difang yusuan cao'an de baogao [Report on 2008-2013 central and local budget situation and 2009-2014 draft for central and local budget]

[1] Interview with an official from the Ministry of Finance, June 2014.

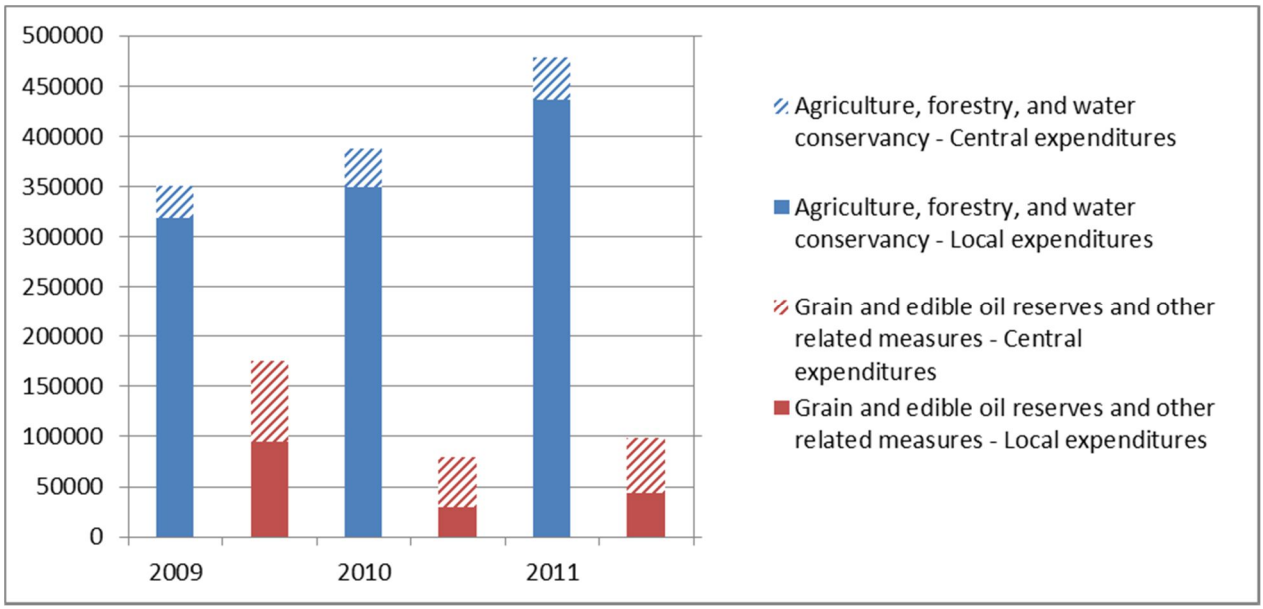


Figure 30 : The importance of central expenditures for rural and agricultural development (unit: million RMB)
Source: 关于 2008-2013 年中央和地方预算执行情况与 2009-2014 年中央和地方预算草案的报告 guanyu 2008-2013 nian zhongyang he difang yusuan zhixing hang qingkuang yu 2009-2014 nian zhongyang he difang yusuan cao'an de baogao [Report on 2008-2013 central and local budget situation and 2009-2014 draft for central and local budget]

The steering mechanism becomes particularly powerful in townships and villages, as these latest have scarce resources and highly depend on higher levels for revenue[1]. This lack of financial capacity at the township and village levels was widely denounced by research as a negative consequence of fiscal reforms. Shen, Jin and Zou, for instance, denounced the incoherencies to which the reforms of the fiscal system led. For the authors, "the higher tiers of government devolve fiscal responsibilities down to the lowest levels of government and meanwhile the most productive sources of revenue are captured by the top tiers of government"[2]. Graeme Smith, on his side, noted that township governments found themselves squeezed both from above and from below[3].

[1] OI, Jean C., BARBIAZ, Kim Singer, ZHANG, Linxiu, LUO, Renfu, ROZELLE, Scott. Shifting Fiscal Control to Limit Cadre Power in China's Townships and Villages. *The China Quarterly*, September 2012, vol. 211, p. 649-675.

[2] SHEN, Chunli, JIN, Jing, ZOU, Heng-fu. Fiscal Decentralization in China: History, Impact, Challenges and Next Steps. *Annals of Economics and Finance*, May 2012, vol. 13, n°1, p. 36-37.

[3] "While the aim of local government reform was to transform extractive township governments into 'service-oriented' agencies, this article finds that the current logic of rural governance has produced township governments which are squeezed from above and below. […] Unprecedented numbers are working as 'sent-down cadres' in villages where their capacity to deliver services has been weakened

In areas I investigated, issues linked to the lack of financial capacity, especially at the township level, were raised as well by a number of interviewees. For instance, I was explained by a manager of a foundation conducting land planning projects in rural areas in Jiangxi that local officials were paid only 2,000 RMB per month and were much eager to dedicate time to activities generating money (either to the production of oranges when they farmed themselves or to other activities such as trade) than to public management.

However, the fact that local officials from township and county levels are not fiscally autonomous is in fact part of the steering system allowing for a transmission of the goals of the central government down to local officials. Local officials who wish to keep the same budget from one year to another indeed need to report their expense to higher-level officials. In particular, during fieldwork, I could acknowledge the eagerness of a number of local bureaus in charge of developing the agricultural sector to spend the funding that had been allocated to them the previous year, in order to maintain their level of public funding for the following year. This was an additional incentive to encourage them to implement agricultural development programs.

B - The fundamental importance of existing patterns of power and relationships

Even if steering mechanisms such as the evaluation systems and the allocation of financial resources remain important, fieldwork provided elements to reach the conclusion that these traditional direct transmission mechanisms were far from sufficient to explain why some elements of the central frame of reference for agricultural modernization were found at the local levels, whereas others were not. In fact, we saw that the dominant elements of the frame of reference were well transmitted down in the Chinese administration (the importance of science and technology, the role of industrial players and the lever of rural exodus), while other policy guidelines were not – such as the ones linked to environmental protection. Insights from fieldwork demonstrated that less direct mechanisms, linked to the existing structures of power, to previously experimented modalities of development and to the frame

by village amalgamations and the lifting of agricultural taxes and fees." (SMITH, Graeme. The Hollow State: Rural Governance in China. *The China Quarterly*, September 2010, Volume 203, p. 601).

of politic and economic interests of local stakeholders, played a major role in the transmission process.

As Table 25 shows, the Twelfth Five-Year Plan includes targets linked to technological progress, mechanization, industrialization, the necessity to find employment for agricultural labor out of the farming sector, as well as targets linked to the improvement of food quality and safety and ecology.

Target	2010	2015	Rate of increase (%)
Targets for agricultural production capacities	(See Table 22)		
Quality and safety tests pass rate of food products (%)	94.8	>96	>[1.2]
Meat production's share in total agricultural output value (%)	30	36	[6]
Fisheries' share in total agricultural output value (%)			
Food products' processing industry's share in total agricultural output value (%)	9.3	10	[0.7]
	1.7	2.2	[0.5]
Agricultural machinery power (100 million KW)	9.2	10	1.68
Agricultural mechanization level (%)	52	60	[8]
Science and technology rate of contribution to progress (%)	52	>55	>[3]
Rural talents (10 000)	820	1300	6.8
Number of households taking part in agricultural industrialization (100 million)	1.07	1.3	3.97
Biogas penetration rate (%)	33	>50	>[17]
Crop straw comprehensive utilization (%)	70.2	>80	>[9.8]
Transfer of agricultural labor (10,000 people)			[4000]
Increase in rural dwellers' income			>7

Table 25: 12th Five-Year Plan selected agricultural and rural targets

These items also appear in yearly budgets. For instance, a forest ecological benefit compensation fund (森林生态效益补偿基金 *senlin shengtai xiaoyi buchang jijin*) was budgeted in 2010 (although the program is more ancient). On Table 26, we can see that in 2011, subsidies for grassland protection appear in budgets as well. To sum up, environmental concerns gradually grew both in political guidelines and in the national budget.

2008	**Agriculture, forestry, and water conservancy**	**182,174**
Among which	- Agricultural infrastructures	113,760
	- Subsidies for improved seeds and agricultural implements	16,340
2009	**Agriculture, forestry, and water conservancy**	**350,124**
Among which	- Rural and agricultural infrastructures	116,870
	- Subsidies for improved seeds and agricultural implements	112,350
2010	**Agriculture, forestry and water conservancy**	**387,966**
Among which	- Agricultural and rural infrastructures	135,200
	- Subsidies for improved seeds and agricultural implements	107,490
	- Agricultural S&T, agricultural coop. and highly-efficient agriculture	11,400
	- Forest ecological compensation fund	**1049**
2011	**Agriculture, forestry and water conservancy**	**478,526**
Among which	- Agricultural and rural infrastructures	139,878
	- Subsidies for improved seeds and agricultural implements	135,130
	- Agricultural S&T, modern agriculture and agricultural cooperatives	16,300
	- Subsidies for grassland ecological protection	**13,600**

Table 26: Selected items from China Central and Local budgets from 2008 to 2013

However, in the areas that I investigated for this research, only three basic levers of agricultural modernization were effectively transmitted from the center to the localities: i) the importance of science and technology; ii) the crucial role played by industrial stakeholders; iii) the lever of rural exodus. Two explanations can be given for this phenomenon.

The first explanation lies in path dependencies. As we saw in the first part of the second chapter, local officials are used to rely on enterprises for development goals and barely talk to small farmers, with whom they are simply not used to exchange. As a consequence, local officials find it natural to promote entrepreneurs as leaders of agricultural modernization.

The second explanation lies in the frame of interests of local officials. Basically, local officials, at the county and township levels, are stirred by economic and political interests. In the framework of my fieldwork, I could distinguish three kinds of political interests. The first one is political power in the administrative hierarchy of the government. To put it simply, local officials seek recognition from their supervisors for career advancement, and for this reason try to reach a number of targets given by higher level officials. As this partly overlaps

what was said about cadre evaluation systems in paragraph A.1., this chapter will not elaborate further on it.

Another political interest of local officials is their will to exercise power on social players within their area of jurisdiction. Fieldwork demonstrated that local officials had very few contact with farmers and were not eager to establish dialogue with them, as they usually considered them as poorly educated and refractory to modernization. As was saying the director of the microcredit enterprise in Ningxia:

> "The Chinese government wishes to build the new socialist countryside, to increase rural investment and income and to enlarge the support of the industry for agriculture. But the problem is they don't know how to do that, because they face scattered groups of 'low quality' farmers (素质低的农民 *suzhi di de nongmin*)."[1]

Instead of trying to exercise control over a multiplicity of small-scale farmers and to encourage them to modernize agricultural production, local governments are keen on adopting a cost-efficient corporatist strategy relying on several selected (relatively) large-scale enterprises, over which they exercise control. Enterprises, in turn, are supposed to manage small farmers-workers, arrange trainings and take them on the board of agricultural modernization.

However, one cannot say that the political interests of local officials relate solely to political power. A fundamental interest of local officials, which has an increasingly important part to play, is linked to their political legitimacy amongst citizens, beyond the scope of farmers. Political legitimacy can be enhanced by using traditional "legitimacy tools", such as the promotion of economic growth, but also through agricultural modernization, which can provide farmers with better living conditions. As social issues and protests developed tremendously in rural areas over the past few years and seriously started threatening the legitimacy of the whole government, central level officials increased their attention to social stability issues in rural areas and tend to make local authorities responsible way more easily than in the past. As a consequence, showing to central level officials that local citizens are satisfied with implemented policies is also part of the strategy of local officials regarding their career advancement. As was saying a central level official from the Ministry of Finance in charge of agricultural support policies, regarding the strategy of local officials:

[1] Interview, Ningxia, April 2013.

> "[Each level of the government] is in charge of evaluating lower levels. [But] my job […] gives me opportunities to go to many places in China [to check on the work of local officials.] It is not easy to control local officials. Usually they gather farmers to welcome us and everyone tells us that very good policies have been implemented, maybe it is not the truth."[1]

Implementing agricultural development policies, in addition, is likely to grant local officials with political credit in front of a wider portion of the population. As we saw in Chapter 2, food safety has become a matter of deep concern to urban citizens. The desire of local officials to accompany retailers in their direct purchase and training programs in the countryside proves that food safety is politically charged and illustrates the new trend of local officials willing to take credit for agricultural modernization programs.

Finally, in addition to political interests, local officials are also stirred by economic interests: namely, the search for increased financial resources and for lower expenses. Financial resources can come from upper levels, from local tax collection bodies or even from personal activities. In the first case, complying with directives given by upper governmental levels (such as urbanization targets, agricultural production targets or economic growth targets) can help local officials increase the amount of financial resources granted by the financial bureau. Funds are indeed allocated according to the budget granted by the higher level of the administration, to what local bureaus ask for, to what has been spent on the previous year and to the estimated efficiency of policies implemented. As for financial resources coming from local tax collection bodies, agricultural modernization seems unlikely to increase their amount, as agricultural taxes were abolished. As a consequence, the only way agricultural activities can generate revenue for local governments is through industrial taxes. This is another fundamental reason that explains why local officials rely preferentially on food processing enterprises for agricultural modernization than on farmers. The process also lowers down agricultural modernization costs (now at the expense of enterprises), without depriving local officials from the political credit they can gain for the progress achieved in terms of agricultural modernization in their area of jurisdiction.

To sum up, although the nature and scope of agricultural policy guidelines have recently expanded to food safety and environmental protection, agricultural policies implemented at the local level still mainly focus on food security, economic development and

[1] Interview with an official from the Ministry of Finance, June 2014.

social stability. In addition, in spite of the recent promotion of democratic management, local officials, because of path dependency and local frames of interests and power, keep on relying mostly on industrial players.

Conclusion

The aim of this dissertation is not to argue that "the Chinese state" is now fully involved in agricultural production activities. As the above paragraphs demonstrated, "the" Chinese state is highly fragmented, as well as the other actors taking part in the modernization of agriculture. State-enterprises networks of the agricultural and food sector involve a wide variety of players, among whom government officials act independently from each other and defend interests they do not necessarily share with others.

This does not mean, however, that the Chinese government is a completely incoherent body. Two main goals (agricultural productivity and rural development) and three main levers to achieve these goals (science and technology, industrial players and rural exodus) are regularly promoted by central level documents. They constitute a dominant frame of reference of agricultural modernization as promoted by the central state. This frame of reference is found at the local level as well and emphasized in the discourse of local officials.

The transmission of the elements of the dominant frame of reference for agricultural modernization is permitted through direct mechanisms such as cadres evaluation systems and budget allocation, but mostly, as fieldwork demonstrated, because these elements fit in path dependencies as well as in the current pattern of interests of local economically and politically powerful stakeholders.

As the following chapter will demonstrate, the most recent guidelines on democratic management and grassroots organizations, which fit less in local patterns of power, are way more difficult to implement at the local level. As we will see, this has tremendous consequences for the trajectory of agricultural modernization in China.

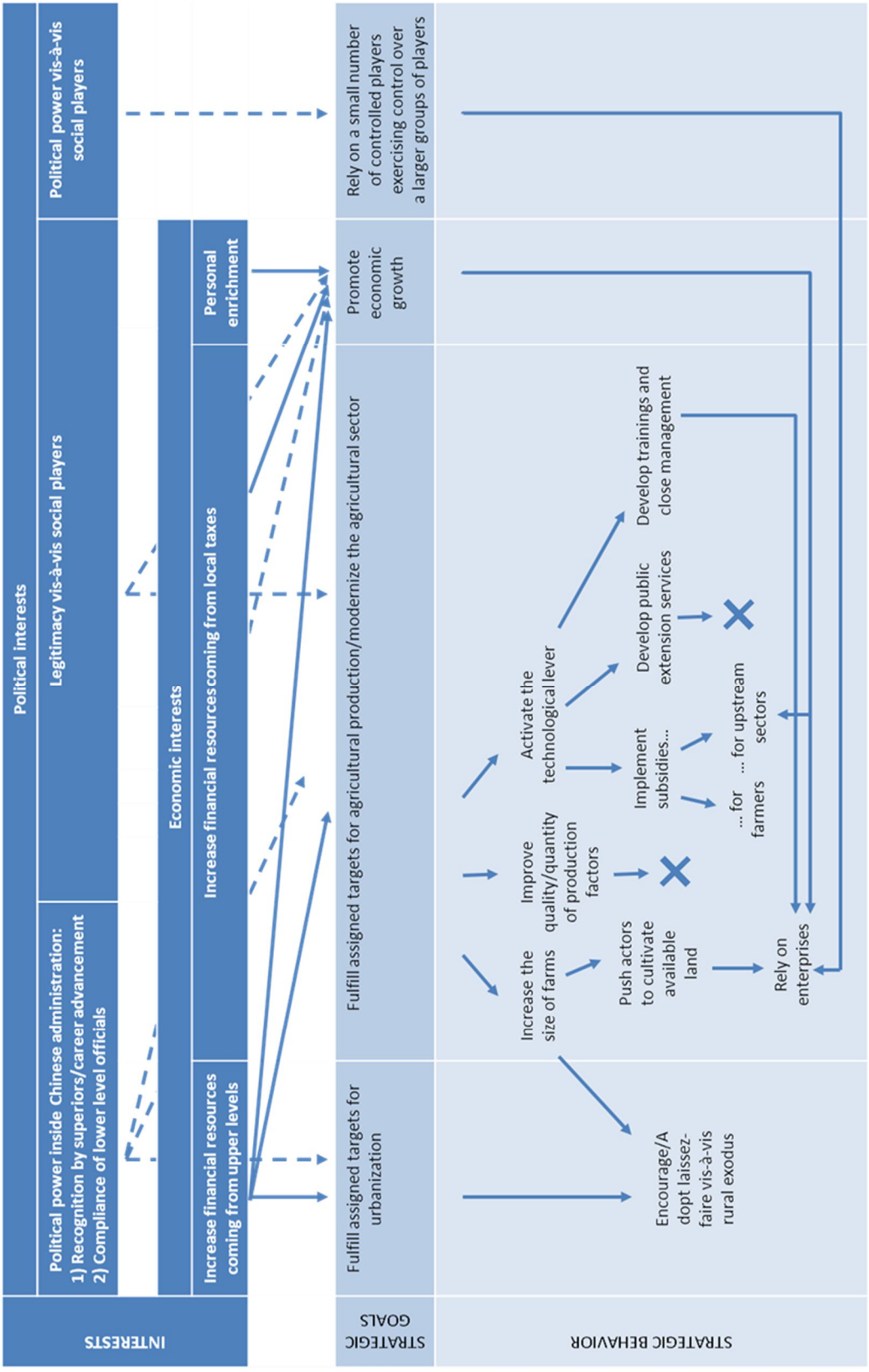


Figure 31: Set of interests, strategic goals and strategic behaviors of local governments

VI. Chapter 6: Agricultural modernization pathway: towards environmental and social sustainability?

Introduction

In the previous chapters, I analyzed "transversal state-enterprises networks" that were taking part in agricultural modernization, but I barely mentioned farmers. However, farming, in the end, is still mostly taken care of by *nongmin*, even though agri-food entrepreneurs, encouraged by local officials, took the leadership in agricultural modernization over the past few years.

Focusing on the forms of agrarian industrial entrepreneurship as was done in the previous chapters might lead the reader to reach the conclusion that the development of entrepreneurship, in the agricultural sector, is essentially taken care of by entrepreneurs not belonging to the social layer of farmers. On the opposite, I would like to underline that forms of agrarian capitalism have long existed among *nongmin* as well. The abolition of People's Communes and the implementation of the Household Responsibility System indeed enabled farmers to become independent in the decision-making linked to agricultural production at the beginning of the 1980s, pushing them to make farming choices according to market signals and to look for better profits. As such, small farmers can be considered as the first agricultural entrepreneurs.

What have these agricultural entrepreneurs become? What is the place of the private entrepreneurship of small farmers in the contemporary process of agricultural modernization? Will the 300 million farmers be called upon to play a role such as happened in other countries[1]? How do they react to current strategies implemented by local political and economic stakeholders? And, more importantly, what are the consequences of the current institutional and social patterns framed by policies and local players for the agricultural modernization pathway China is engaging on? These are some questions this chapter would like to address.

[1] Such as the class of "entrepreneurs-paysans" depicted by Pierre Muller (MULLER, Pierre. *Le technocrate et le paysan : essai sur la politique française de modernisation de l'agriculture : de 1945 à nos jours*. Paris : Ed. ouvrières, 1984).

I - "Endure or escape" strategies among marginalized small farmers

"Reference to *suzhi* justifies social and political hierarchies of all sorts, with those of 'high' quality gaining more income, power and status than the 'low.' In rural contexts, cadres justify their right to rule in terms of having a higher quality than the 'peasants' around them."

Andrew Kipnis, *Suzhi: A Keyword Approach*.

A - Institutional and cultural boundaries of the "nongmin" status

1) *Hukou* and land tenure: two institutions limiting small farmers' ability to become farmers-entrepreneurs

At the end of the 1980s, fundamental reforms were implemented in the agricultural sector. People's communes were dismantled and land was reattributed to rural families. As China is poor in land resources[1], land was redistributed in small plots of less than half a hectare, fragmenting the agricultural landscape.

In the three decades following the abolition of collectivization, China underwent rapid urbanization. However, data show that in spite of the migration of a considerable population of rural dwellers to cities, the size of arable land per farmer remained small (Figure 25). The explanation of this situation can be found in the constraints that prevent migrants to transfer their land to farmers staying in the countryside. These constraints are rooted in two major institutional systems governing rural areas: the land tenure system and the *hukou* system.

The property of rural land is in the hands of local collectives. It does not belong to farmers, who rent it to village committees. Since 2008, the Law on Land Contracts in Rural China grants farmers with rights over their land as if they owned it: they can rent, exchange and inherit leases. However, in spite of this reform, permanent transfers of arable land are far from being common in rural areas.

The fact that land does not belong to farmers grant local governments with significant power over land transfer. Local officials have long preferred to favor entrepreneurs or real estate developers, as providing land to such players is likely to generate economic growth and

[1] Less than 15 percent of the territory is made of arable land, as an important part of the country, in the West, are made of mountains, high plateaus or arid areas.

to increase fiscal revenue. According to Takeuchi, selling village land to developers at huge prices while, at the same time, compensating farmers with very small amounts of money, is also a strategy to cope with the funding shortage caused by the abolition of agricultural taxes[1] - and worsened by the abolition of the "Five Tongchou" and the "Three Tiliu" by the tax-for-free reform in 2002[2]. However, land requisition turned into a major source of conflict in rural areas[3], pushing the central government to promulgate regulations to hinder arable land conversions. In 2008, the Ministry of Land and Resources set a red line of 1.8 billion mu, under which the total amount of arable land should not fall. Punishments of local cadres taking advantage of their rights over land at the expense of social stability became increasingly severe in the past few years[4] and arable land conversion to non-agricultural purposes slowed down[5].

---

[1] TAKEUCHI, Hiroki. Survival Strategies of Township Governments in Rural China: from predatory taxation to land trade. *Journal of Contemporary China*, vol. 22, n°83, p. 764.

[2] The "Five Tongchou" were the fees paid by farmers to township governments for education, social help, family planning, collective transportation and militia exercises; the "Three Tiliu" were the fees paid to village administrations for public accumulation fund, public welfare fund and administrative fees (OECD. *Agricultural Policies in China after WTO Accession*. OECD, 2002).

[3] YEP, Ray. Containing Land Grabs: a misguided response to rural conflicts over land. *Journal of Contemporary China*, vol. 22, n°80, p. 273-291; TAKEUCHI, Hiroki. Survival Strategies of Township Governments in Rural China: from predatory taxation to land trade. *Journal of Contemporary China*, vol. 22, n°83, p. 755-772.

[4] The Ministry of Land and Resources recently started warning local governments about the severity of the law regarding land use violations (see, for instance : 张德霖,进一步严格公正廉洁效能执法, 中国国土资源部网, 21/05/2014 *Zhang Delin, jinyibu yange gongzheng lianjie xiaoneng zhifa, zhongguo guotu ziyuan bao* [ZHANG, Delin. Going a step further in impartial fair honest and efficient enforcement of the law. Published on the website of the Ministry of Land and Resources of China, 21/05/2014] http://www.mlr.gov.cn/xwdt/jrxw/201405/t20140521_1317621.htm accessed on July 11th, 2014) and putting violations on the public place (国土部限期六地方政府整改土地违规, 中国国土资源部网, 10/04/2014 *Guotubu xianqi liu defang zhengfu zhenggai tudi weigui* [Ministry of Land and Resources rectifies and reforms land rights violations in six local governments, Published on the website of the Ministry of Land and Resources of China, 10/04/2014] http://www.mlr.gov.cn/xwdt/mtsy/qtmt/201404/t20140410_1311884.htm accessed on July 11th, 2014 ; 国土部挂牌督办河北省永年县违法征占土地案, 中国国土资源部网, 16/05/2014 *Guotubu guapai duban hebeisheng yongnianxian weifa zhengzhan tudi an* [Ministry of Land and Resources hangs out the shingle of land right violation of the county of Yongnian in Hebei, Published on the website of the Ministry of Land and Resources of China, 16/05/2014 http://www.mlr.gov.cn/xwdt/mtsy/people/201405/t20140516_1317279.htm accessed on July 11th, 2014 ; etc.).

[5] LIN, George C.S., HO, Samuel P.S. The State, Land System, and Land Development Processes in Contemporary China. *Annals of the Association of American Geographers*, 2005, vol. 95, n°2, p. 411-436.

The transfer of arable land, provided that it does not lead to the conversion of land to non-agricultural purposes, is strongly encouraged by the government as a way to increase the size of farms. However, the "farmland market" is far from efficient, as the current land leasing system and the *hukou* system create strong institutional obstacles hindering permanent land consolidation. Since the beginning of the reform era, the *hukou* system underwent important reforms. Restrictions on internal migrations disappeared, giving birth to a wide population of "migrant peasants-workers" (农民工 *nongmingong*) – former or part-time farmers working part time or permanently in other sectors. Whereas the *hukou* system does not prevent rural-urban migrations anymore, it still keeps on separating the population into two categories: rural and urban dwellers. On *hukou* documents, two pieces of information (agricultural/non agricultural work and place of residence) contribute to prevent rural migrants who live in urban areas to buy home, to have access to social security and retirement pension and to register their children in the public school system. In such a scheme, arable land replaces social security and retirement pension for migrant farmers who cannot have access to such services in urban areas. In order to be able to go back to farming in case of sickness, work injury, dismissal or retirement, migrant workers usually leave their land to family members (parents, for instance) for free[1] or informally rent it to members of the extended family or to neighbors, sometimes for free (as can happen for low quality land), sometimes in exchange of a percentage of the harvest or in exchange of money. Informal land transfers are very common in rural areas. In the places where fieldwork was conducted, most of the land available for farming was cultivated, even though more than one third of the villagers were working in the industrial sector, far away from the countryside. However, the number of permanent and official land transfers was limited in these areas. Land transfers did not appear on any official document and that migrants could come back to farming whenever they wished or needed to.

In spite of repeated attempts to encourage cities to relax their *hukou* scheme, rigidities are still strong. The wish of the central government to reform the system bumps against the reluctance of provincial and municipal governments – especially in overpopulated cities of

[1] As a manager of a farm was telling me in Jiangxi: "[People who went to look out for jobs in cities] do not rent their land to other farmers, because their parents are here. In Jiangxi, people have children very early, many people get married around 18 years old. It means that their parents are about 40 years old, and still young." (Interview, Jiangxi, October 2013)

Eastern China – who claim that integrating migrant workers in urban social security, health and education systems would have costs they would not be able to bear[1]. As a consequence, countless small plots of land are still informally rented out by a large population of former farmers not living in villages anymore – whether on a temporary or a permanent basis. This both distorts the picture given by national statistics – where the figures of informally rented farmland, sometimes on a long term basis, do not appear – and impedes the expected birth of a new category of modern farmers cultivating land as a full time business in conditions of land rights secured for long periods of time.

The land tenure system is currently undergoing major reforms as well. At the third plenum of the 18th Congress in November 2013, the land reform was a much-debated topic. According to the communiqué that was released after the plenum, the government wishes to "endow farmers with more property rights" (赋予农民更多财产权利, *fuyu nongmin gengduo caichan quanli*)[2]. Among other things, farmers, in a number of areas, are now able to transform their land into wealth in currency or other capital forms, such as using it as loan collaterals[3]. However, guaranteeing farmers' rights in land transfers cannot be achieved without making clearer rights over land. A tremendous amount of work is necessary to establish clear land rights, as in many areas, farmers do not possess any certificate for their right to use land. Establishing a cadaster in rural areas requires collecting data on land use rights at the national scale, a task that promises to be arduous. The scale of the task is enormous, as it has to be conducted on about dozens of millions of hectares of farmland. In addition, establishing an official cadaster is likely to give rise to disagreements and conflicts, as local people will have to agree on land use rights on a permanent basis.

A number of local officials also expressed concerns about the land reform. According to them, giving land titles to farmers is likely to encourage them to take loans. Unable to

[1] The "cost of integration" was recently estimated at 100,000 RMB per capita, investments needed to develop infrastructures (waste, electricity, water, gas, etc.) included (SCHWOOB Marie-Hélène. L'intégration des immigrés de l'intérieur. *China analysis n°42*, avril 2013).

[2] 中国共产党十八届三中全会公报 *Zhongguo gongchandang shibajie sanzhong quanhui baogao* [Communiqué of the Third Plenary Session of the 18th Central Committee of the CPC] http://www.china.org.cn/chinese/2014-01/16/content_31213800_3.htm Accessed on March 10th, 2014.

[3] The absence of collaterals in rural areas was one of the main causes rooting farmers' difficulties to access credit (SCHWOOB, Marie-Hélène. La réforme de la finance rurale. *China Analysis*, Décembre 2013, n°46, p. 38-42), which is a major obstacle to the modernization of small farmers.

reimburse loans, farmers would then lose their land and join the ranks of landless peasants, rooting more social instability in rural areas, as was expressed by some of the interviewees. Tenuous progress has been made to reform the *hukou* and land tenure systems, but these reforms still face a strong reluctance of local governments to give up on economic and political power sources.

Local officials are not the sole opponents to land reform. The attempts of the establishment of a cadaster provoke vivid debates among farmers as well. In some villages I visited, I was told that farmers were not satisfied with the current land allocation. According to an agent of IFPRI coming back from fieldwork in Guangdong, farmers are afraid of a clarification of land use rights because of the imperfections of the current allocation system:

> "Now the land reform is everywhere in China. But it is very complicated, because the farmers don't want to write down their plot. Actually, what happened is that in the 1980s, they were given 1 mu per person, but maybe this farmer got a less productive land, so on the paper, it is written that he only got 0.6 mus, and so it is unfair."[1]

In a village where I spent time in Anhui, farmers argued that households had evolved since the beginning of the 1980s, putting back into question the fairness of land distribution, even though reallocations were common when birth or death occurred in families. Conflicts would be likely to arise if official land titles would be distributed again.

In some places, farmers cultivate wider farms, thanks to informal land rental systems, which rapidly developed. In other places, arable land is sub-rented by farmers to entrepreneurs, who manage to gather large pieces of land and to develop "modern" farming on their own plots. Finally, in other regions, wide areas of land are left unfarmed. Because of the variety of situations and the informality of sub-renting markets, the development of farming structures is difficult to follow and it is almost impossible to assess the actual farm size with accuracy. However, drawing on fieldwork, the conclusion can be reached that accessing permanent and secure rights over a wide area of arable land is a challenge that is difficult to overcome, especially for small farmers.

[1] Interview, Beijing, December 2014.

2) The importance of cultural schemes: the rising paradigm of *suzhi*

In addition to the institutional obstacles preventing farmers from escaping their social and economic condition – for instance, by acquiring land and become farmers-entrepreneurs – one of the most striking things the fieldwork of this research revealed is that the status of *nongmin* was associated with a strong negative connotation and deeply engraved in cultural schemes of *both* non-farmers and farmers. "*Nongmin*" occupy the bottom rung of the socio-economic ladder, which partly explains why entrepreneurs (even when these latest used to be farmers in the past, see 2.) hire farmers but never join their ranks – in the sense that they do not dare to grow products themselves. As was saying a manager in charge of direct purchase projects in Jiangxi, who graduated from a Chinese Agricultural University:

> "Even if I had the opportunity to work in a farm and to live in the countryside, even if this is good for me, my parents will never accept that – and my grandparents will even less accept it. How to say… They think that people don't respect people working in the countryside. It's not the same as in France, where people think that they can live a better life in the countryside sometimes. Here, you live better lives in cities."[1]

Although the interviewee was then talking about rural dwellers in general, her statement is even truer for farmers. The term *nongmin*, in any case, usually encompasses both rural dwellers and farmers.

The low social status of *nongmin* is deeply engraved in cultural schemes. A wide corpus of literature developed on this topic and evidences that the status of farmers and rural dwellers is significantly lower than the one of the rest of the Chinese population. The research dealing with the notion of "*suzhi*", or "population quality", is particularly enlightening on this topic[2].

The term *suzhi* started being used again in the 1980s, when the country embarked on modernization and opening up and when the government began developing discourses on development. Particularly instructive is this quote from Rachel Murphy: "Suzhi derives part

[1] Interview, Jiangxi, October 2012.

[2] ANAGNOST, Ann, The corporeal politics of quality (suzhi). *Public Culture*, 2004, vol. 16, n°2, p.189-208; THOGERSEN, Stig. Parasites or civilizers: the legitimacy of the Chinese Communist Party in rural areas. *China: An International Journal*, 2003, vol. 1, n°2; MURPHY, Rachel. Turning peasants into modern Chinese citizens: 'population quality' discourse, demographic transition and primary education. *The China Quarterly*, 2004, n°177; KIPNIS, Andrew. Suzhi: A Keyword Approach. *The China Quarterly*, June 2006, n°186, p. 295-313.

of its ideological potency through its reinforcement of related systems of valuation already embedded within Chinese development discourse, such as town versus country, developed versus backward, prosperous versus poor, civilized versus barbarian, and to have culture (you wenhua) versus to be without culture (mei wenhua)."

According to Murphy, the categorization of groups within the population is in fact part of a political modernization program. As she says: "[…] although concerns about suzhi pertain to the entire population, groups in lower valued situations are seen to need special remedial attention. […] in a variety of social and historical contexts, nation-states perceive a problem in the 'backwardness' of certain groups, in this case rural people, and designate a pivotal role for schools in 'civilizing' them."[1] In fact, the concept of *suzhi* has only been widening the divide between rural and urban dwellers, in the sense that rural dwellers and *nongmin* are seen as "low *suzhi*" or "low quality" population. In rural areas, the program aiming at "Building a New Socialist Countryside", which has been promoted by central officials and implemented by local officials since 2004 – emphasizes the need to promote "urban and rural integration" (城乡一体化 *cheng-xiang yitihua*) and to "transform farmers into urbanites" (农民市民化 *nongmin shiminhua*)[2], emphasizing again the superiority of the social status of urban dwellers compared to people from the countryside. In addition, the status is institutionalized by the *hukou* system, as "agriculture" still appears on identification documents and raises barriers blocking access to education, health coverage and social security. As a consequence, both institutional and cultural factors thus maintain farmers at the bottom rung of the socio-economic ladder.

According to Andrew Kipnis, the word "*suzhi*" has now become central to the contemporary governance and society in China, in the way that reference to suzhi "justifies social and political hierarchies of all sorts, with those of 'high' suzhi being seen as deserving more income, power and status than those of 'low' suzhi."[3] Suzhi has turned into a real paradigm almost legitimizing the social status of certain groups within the Chinese society.

[1] MURPHY, Rachel. Turning peasants into modern Chinese citizens: 'population quality' discourse, demographic transition and primary education. *The China Quarterly*, 2004, n°177.

[2] BRAY, David. Urban Planning Goes Rural, *China Perspectives*, 2013/3.

[3] KIPNIS, Andrew. Suzhi: A Keyword Approach. *The China Quarterly*, June 2006, n°186, p. 295-313.

B - Rural migration: escaping the status of farmer

1) **Leaving the farming sector**

Fieldwork demonstrated that farmers were not trying to put back into question their social status, deeply engraved in the cultural scheme of the non-rural society and also engraved in their own cultural scheme. *Nongmin* are aware of their low social condition, of their "low suzhi", which they do not put back into question but which they rather try to escape from (even if some come back to the countryside later on, "freed" from their *nongmin* status). Young rural dwellers, in particular, wish to migrate to cities and/or to work in sectors other than the farming sector. In most of the rural areas I went to, people between the age of twenty and forty were missing. As was noting a farm manager in Jiangxi:

> "There aren't young people anymore here. They all left to look for jobs (出去打工了 *chuqu dagong le*) in Guangzhou, Meizhou, everywhere [even if] conditions are very bad over there."[1]

Parents, on their side, also encourage children to "look for better lives" in cities. Andrew Kipnis and a number of studies reach similar conclusions. As Kipnis puts it:"The most obvious cause for rural educational discipline is a desire for social mobility. Throughout the reform era, Zoupingers have expressed this desire with the adage 'hoping one's child becomes a dragon' (wang zi cheng long)."[2]

Farmers going out to look for jobs in cities or in the industrial sector are attracted by the higher income that such lives promise them. Since the middle of the 1980s, China's economic growth mostly benefited urban households, who saw their revenue grow much more rapidly than rural households. Pushed away of the countryside by the difficulties they encounter as small farmers (both to increase the size of their land and to have access to credit), by the low status they will be stuck to if they remain *nongmin* and by the development gaps between rural and urban areas, farmers usually adopt a going-out strategy. In addition, they are encouraged to do so by local governments – who have to be in line with urbanization targets set by higher levels of the government – and by enterprises – who see them as a convenient source of cheap labor.

---

[1] Interview, Jiangxi, October 2013.

[2] KIPNIS, Andrew. The Disturbing Educational Discipline of "Peasants". *The China Journal*, July 2001, n°46, p. 16-17.

Going-out is not just a way to access better economic conditions. It is also a way to escape the social condition of farmer, or the "low *suzhi*" – even if sometimes, even when they migrate to cities, farmers still consider themselves as "temporary and undesirable guests"[1]. Particularly enlightening is this quote from Andrew Kipnis: "The commitment to leave the countryside reflects not only the hope of relatively lucrative urban occupations but also, for many students, a desire to shed the stigma of the 'peasant' label."[2] In fact, migrant farmers do not necessarily have better living conditions in cities, compared to farmers who stay in rural areas. Difficulties experienced by migrants living in urban areas with rural *hukous* are tremendous. Migrants cannot have access to services such as health coverage or social security and have little hope of fulfilling locally-set requirements to be granted urban *hukou*. As Huang states it: "Those people generally take the heaviest and dirtiest jobs, are the most poorly paid, do not enjoy legal protections, and work without benefits or with reduced benefits."[3] However, rural dwellers, especially the young ones, are still willing to accept the tough conditions non-farming work offer them in order to seize their chance to escape their status of *nongmin* and to have access to a better life and higher income. Migration still remains their best option to get rid of the "peasant" stigma or the "low *suzhi*".

2) **Going out to come back as an entrepreneur**

Going-out can be a way for farmers to be freed from their social status and to come back as an entrepreneur. Whereas local farmers who had become entrepreneurs without ever leaving the countryside were rare and seen as people having achieved real miracles, former farmers having worked a certain amount of time in cities and having come back to launch a business were more numerous. In Capitalism from Below, Victor Nee and Sonja Opper show that rural dwellers with modest origins, and especially farmers, significantly contributed to the rise of private entrepreneurship in China: "Our Yangzi delta survey confirms that those who

[1] "La manière dont les migrants se représentent la migration, leur place dans la société et leur rapport à l'Etat est informée par le dualisme de la société et par l'intériorisation de leur condition" [The way migrants view migration, their place in society and their relations with the state is influenced by the dualism of the society and by the internalization of their condition.] FROISSART, Chloé. Quelle citoyenneté pour les travailleurs migrants en République Populaire de Chine ? : l'expérience de Chengdu. Thèse : Sciences Politiques : Paris : Institut d'Etudes Politiques, 2007, p. 217.

[2] KIPNIS, Andrew. The Disturbing Educational Discipline of "Peasants". *The China Journal*, July 2001, n°46, p. 16-17.

[3] HUANG, Philip C., YUAN, Yuan, PENG, Yusheng. Capitalization without Proletarianization in China's Agricultural Development. *Modern China*, April 2012, vol. 38, n°2, p. 142.

ventured into the private enterprise sector of the manufacturing economy came from modest to marginalized social backgrounds. The entrepreneurial movement was fueled neither by the technocratic elite of skilled engineers from state-owned companies nor by the country's political and administrative elite. […] Although entrepreneurship is no longer exclusively a rural affair, rural founders are still prominent in the overall picture, with 53 percent of our respondents stemming from rural, and often farming, backgrounds."[1]

Nee's and Opper's survey is mostly about private entrepreneurs having launched a business in the manufacturing sector. A similar process of emerging capitalism started happening in the agricultural sector at the beginning of the 2000s, as a consequence of the new incentives given by local governments to entrepreneurs willing to engage in agriculture and food business. In the areas that I investigated for this research, there were two main kinds of entrepreneurs investing in agriculture: local and non-local entrepreneurs. In "inland" areas such as Jiangxi, most of the agricultural entrepreneurs I met were local people. On the opposite, in Shandong, the origins of entrepreneurs were much more diverse, for several reasons, among which the local tradition of an export-oriented agriculture and a good business environment for both Chinese and foreign entrepreneurs.

The former occupational activity of entrepreneurs, on its side, varied a lot. Many "agricultural businessmen" I met used to work in completely other sectors and had no experience of farming whatsoever before they engaged in agribusiness. As they were not former farmers, businessmen did not have any land rights and needed either to rent or to buy land use rights (使用 *shiyong*) from farmers, or to rent land directly from the government. In Jiangxi, many businessmen were renting land directly from the government, as in the beginning of the 2000s, local officials had decided to turn forests located on hilly areas into orchards suitable for citrus production. However, in reality, models of land usage are usually mixed. Businessmen who manage to rent a certain area of land directly from the government usually keep on relying on other land and on other suppliers to fulfill the order of products. These suppliers are usually local farmers having their own land use rights, who sell their products to the businessmen on an *ad-hoc* basis, contract with them to deliver products on a more regular basis or rent out their piece of land (sometimes with their workforce)

[1] NEE, Victor, OPPER, Sonja. *Capitalism from Below : Markets and Institutional Change in China.* Cambridge, Mass : Harvard University Press, 2012, p. 54.

Among the local entrepreneurs I met, some used to be farmers in the past. A number of entrepreneurs, in Lushan, for instance, were former farmer-migrants[1] who had spent a certain amount of time working in cities. However, a clear line was always drawn between "peasants" (农民 *nongmin*) and agricultural "businessmen" (生意人 *shangyiren* or sometimes 农场主 *nongchangzhu*). The Figure 29 is a drawing that was made by the manager of a small grocery store who was getting its products directly from farmers. The drawing clearly illustrates the difference between farmers (in red, owning use rights over small plots of land) and businessmen (in blue, getting their supplies both from their own plots and from the plots of small farmers).

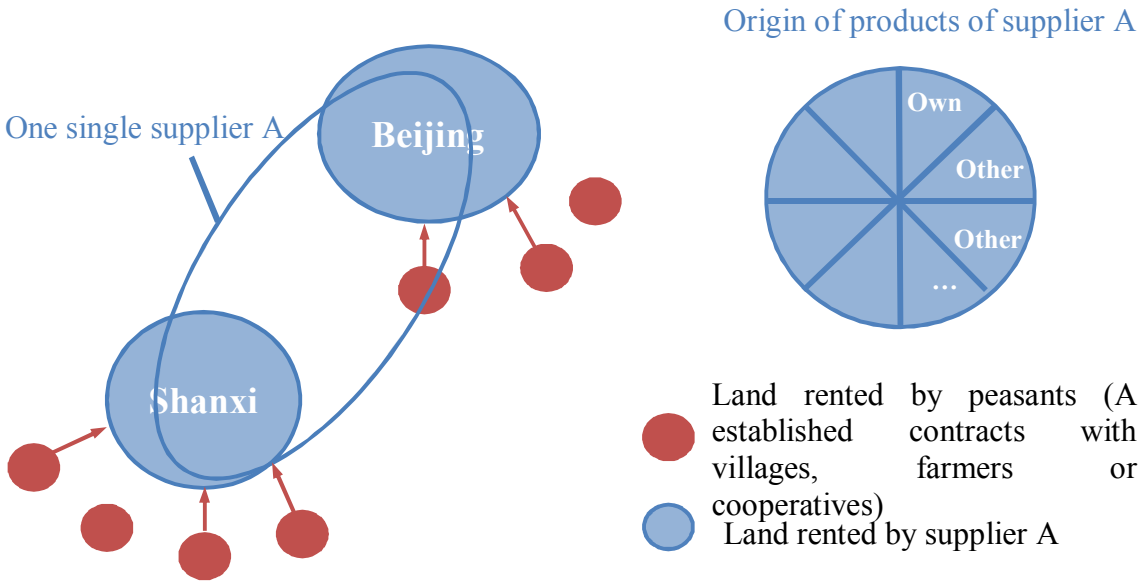


Figure 32: "The Origin of products of one supplier" (drawing made by the manager of a grocery store)

Farmers who became businessmen usually spent time working in cities or in sectors other than the farming sector. The time spent in cities granted them with several kinds of capital: financial capital (as rural-urban gaps are still wide and, as a consequence, salaries are usually higher outside the farming sector) but also business-related knowledge as well as

[1] In Lanshui, the origins of entrepreneurs were much more diverse.

access to a network of contacts, likely to serve a variety of purposes[1]. When they come back to their hometown, former farmers benefit from this acquired capital, knowledge and contacts as well as from their knowledge of the place and of local networks, usually made of family ties. Being a "*bendiren*" (本地人 "native") can also, in some cases, facilitate the establishment of relationships with local officials and be useful to have access to land more easily.

Escaping rural life and "going to the city" is a way to be freed from the status of farmer and to be able to access another social status, which can possibly lead to the status of "businessman" – even if these businessmen actually engage in agricultural production. As was summing up the above-mentioned manager of the grocery store:

> "Some of the businessmen were farmers. This is one of the good things of the rapid development in China I think: people in their twenties can be farmers and then they go to live in the cities and they can become businessmen."[2]

Locked in an institutionally and culturally-bounded social status they can only escape by going out of the farming sector – even on a temporary basis – small farmers seem to have been unable so far to take on a role in agricultural modernization (the few ones who manage to launch agribusiness leaving their status of *nongmin* behind…). However, the recent push for the development of agricultural cooperatives once held out hope that the situation evolves.

II - The recent development of farmers' cooperatives: modalities and perspectives

"Step by step, the small and middle land ownership of the farmers, the basis of the whole political constitution, is succumbing to the competition of giant farms. […] This school of Socialism dissected with great acuteness the contradictions in the conditions of modern production. […] It proved, incontrovertibly, the disastrous effects of machinery and division of labor; the concentration of capital and land in a few hands; overproduction and crises; it

[1] Weihong Ma and Joseph Cheng notice that "In sum, several functions of social networks [in China's economic exchanges] have often been identified: obtaining capital; securing information, raw materials and technology; finding sales channels; and recruiting workers." (MA, Weihong Ma, CHENG, Joseph Y.S. The Evolution of Entrepreneurs' Social Networks in China: patterns and significance. *Journal of Contemporary China*, 2010, vol. 19, n°67, p.906).

[2] Interview, Beijing, November 2012.

pointed out the inevitable ruin of the petty bourgeois and peasant" Karl Marx, Frederick Engels, *Manifesto of the Communist Party*.

A - Farmers' cooperatives worldwide

1) A brief history of cooperatives

In a number of developed countries, farmers' cooperatives were a useful sociological tool to modernize the agricultural sector by mobilizing farmers. The first agricultural cooperatives were founded in Europe at the end of the 19th century, as a response to low agricultural prices that severely impacted farmers in the 1880s and 1900s. The rationale of these new producer groups was twofold. First, through joint purchasing, the members of cooperatives could have access to cheaper products (such as fertilizers or pesticides) and form a common pool of technological resources, recently made available by the Industrial Revolution. At the same time, members of cooperatives, as a group, could improve their capacity to defend themselves against the abusive practices of suppliers of agricultural inputs. However, the proportion of farmers belonging to agricultural cooperatives remained low at that time.

In the aftermath of the 1929 financial crisis, faced to the adverse consequences of an excessive laissez-faire capitalism, industrialized states started re-asserting their role in the control of markets, and particularly in the control of agricultural markets. New support policies were created in order to supplement market mechanisms, which had proven insufficient to balance supply and demand. Agricultural cooperatives started being seen as good transmission belts for the new state-led agricultural development incentives, which included credit, insurance or subsidies for basic agricultural inputs. For this reason, industrialized states started implementing legal and political environments suitable for the development of cooperatives as new corporatist groups. In the aftermath of the Second World War, their number rapidly increased. In France, cooperatives now represent 40 percent of the French agri-food sector, and three out of four farmers belong to at least one cooperative[1].

[1] Source: Coop de France, http://www.coopdefrance.coop/fr/16/une-reussite-economique-et-sociale/ accessed on August 5th, 2014.

2) **Basic principles**

Agricultural cooperatives are traditionally classified according to the three major functions they are meant to perform: supply, marketing and services. In reality, most of agricultural cooperatives fulfill more than one of these functions.

Supply (or purchasing) cooperatives provide their members with affordable agricultural inputs, such as seeds, fertilizers, pesticides, fuel or farm machinery. The basic principle of supply cooperatives is that joint purchasing enables members to negotiate bulk prices.

Marketing cooperatives help their members sell their products. The idea of marketing cooperatives is that farmers, as a group, have more bargaining power vis-à-vis their clients. In addition, by being members of cooperatives, they can sell bigger volumes, which usually better meets the requirements of modern markets. Moreover, marketing cooperatives can raise the value-added of products through vertical integration. Group investment makes it possible indeed for a given cooperative to purchase its own storage, processing and distribution infrastructures and equipment – some cooperatives even have their own grocery stores – in order to add value to raw agricultural products. In the end, this extends the control of farmers over markets. Finally, agricultural cooperatives, as they usually gather producers of a designated product working within a designated area, can help them develop regional brands, much appreciated by modern consumers.

The last type of cooperatives – services cooperatives – provides its members with a wide variety of services, which would not be affordable to individual farmers. Services may include, for instance, information (trainings or consultancy), technical services (such as artificial insemination, herd management, etc.) or financial services (such as credit or insurance). Some cooperatives of services also provide their members with access to electricity, communications and even health care, schooling and housing.

Usually, forms of cooperation in the agricultural sector are named “agricultural cooperatives” or “farmers’ cooperatives” if they fulfill two criteria. Firstly, cooperatives have to be member-owned enterprises, in the sense that each member is supposed to be an investor and to have stakes in the enterprise. The other criteria is that cooperatives have to be run on democratic principles, meaning that decisions regarding the strategy of the cooperative are

taken through democratic vote or by representatives elected by its members through democratic vote[1].

3) The example of French cooperatives

Agricultural cooperatives appeared in France at the end of the 19th century. Laws issued in 1884 and 1920 first recognized the rights of trade unions to defend agricultural interests and to buy, for their members, farming technology such as equipment, fertilizers, pesticides or seeds. At the beginning of the 20th century, the state created mutual agricultural credit unions to support farmers. However, the legal status of agricultural cooperatives as we know them today was not formerly established before 1947.

On September 10th, 1947, the French government promulgated the law on cooperatives (including non-agricultural cooperatives), which defined their legal status, modes and terms of functioning. In particular, the law established the principle according to which cooperatives should be run by democratic management and members should be set on an equal footing (each member has one voice): "*Les coopératives sont administrées par des mandataires nommés pour six ans au plus par l'assemblée générale des membres et révocables par elle*"[2], and later on: "*Chaque associé dispose d'une voix à l'assemblée générale*"[3].

The legal status of agricultural cooperatives was further defined by the Code Rural, which establishes that agricultural cooperatives should not seek economic profit but rather look for the development of the economic activities of their members: "*Les sociétés coopératives agricoles ont pour objet l'utilisation en commun par des agriculteurs de tous moyens propres à faciliter ou à développer leur activité économique, à améliorer ou à*

[1] According to the international principles set by the International Co-operative Alliance, this also applies to non-agricultural cooperatives (International Co-operative Alliance By-laws, Article 7 http://ica.coop/sites/default/files/attachments/ICA%20Bylaws%20-%20updated%202013%20-%20English_0.pdf accessed on August 4th, 2014).

[2] [Cooperatives are managed by representatives, who are elected for a maximum period of six years by the general assembly of members and who can be revoked by the same assembly] Loi n° 47/1775 du 10 septembre 1947 modifiée par la loi n° 92 643 du 13 juillet 1992, Article 6, http://legifrance.gouv.fr/affichTexte.do?cidTexte=JORFTEXT000000684004, accessed on May 22nd, 2014.

[3] [Each associate shall have one vote at the general assembly] Loi n° 47/1775 du 10 septembre 1947 modifiée par la loi n° 92 643 du 13 juillet 1992, Article 9, http://legifrance.gouv.fr/affichTexte.do?cidTexte=JORFTEXT000000684004, accessed on May 22nd, 2014.

accroître les résultats de cette activité"[1]. The code also further emphasizes the equal vote right of the members of cooperatives[2].

In addition, the Code Rural states that members are "associés coopérateurs", meaning that they are, at the same time, users of the services provided by the cooperative and associates (investors) of the cooperative (Art. L521-3). As a consequence, only farmers can be "associés coopérateurs". Charters of cooperatives can stipulate that they may admit "associés non coopérateurs" (who can be non-farmers), but the status and advantages of "associés non coopérateurs" is strictly delineated by the law, for their share in the cooperative's capital (which cannot exceed 20 per cent)[3], their return in capital[4] as well as their representativeness in the general assembly (they cannot hold more than one fifth of the votes)[5].

The principles of agricultural cooperatives promoted by Coop de France, the professional organization of French agricultural cooperatives, are quite similar to the ones established by the Code Rural: agricultural cooperatives shall have members qualified by their "dual status" (members are shareholders and suppliers as well as users of the cooperative's

[1] [The purpose of agricultural cooperatives is to enable farmers to have access to the common use of every mean that would facilitate or develop their economic activity or improve or raise the results of this activity] Art. L521-1, Code Rural et de la Pêche Maritime, Livre 5, Titre II, http://www.legifrance.gouv.fr/affichCode.do?cidTexte=LEGITEXT000006071367 Accessed on May 22nd, 2014.

[2] "Ne peuvent prétendre à la qualité et à la dénomination de coopérative ou d'union que les sociétés dont les statuts prévoient : […] f) Un droit égal de vote pour chaque coopérateur aux assemblées générales" [Are eligible for the status of cooperative or union only the societies of which statutes provide: […] f) an equal vote right for each member at the general assembly] Art. L521-3, Code Rural et de la Pêche Maritime, Livre 5, Titre II, *ibid*.

[3] "Le capital détenu par les établissements de crédit, les sociétés de financement et leurs filiales spécialisées de participation ne peut excéder 20 pour cent du capital social." [The capital held by credit and financial institutions and their branches cannot exceed 20 percent of the capital stock.] Article L522-3, Code Rural et de la Pêche Maritime, Livre 5, Titre II, *ibid*.

[4] "Les parts des associés non coopérateurs n'ouvrent pas droit aux ristournes annuelles sur les éléments d'activité. Elles donnent droit à un intérêt dont les statuts peuvent fixer le taux à deux points au-dessus de celui des parts des associés coopérateurs." [The shares held by non-farmers associates do not give them access to annual dividends determined on the results of the activity. They provide them with a financial interest, of which the rate is set two points above the one of the shares of farmers associates.] Article L522-4, Code Rural et de la Pêche Maritime, Livre 5, Titre II, *ibid*.

[5] "Ils ne peuvent détenir ensemble plus d'un cinquième des voix en assemblée générale, ces voix pouvant être pondérées dans les conditions fixées statutairement. En outre, aucun associé non coopérateur ne peut disposer de plus de 10 p. 100 des voix." [They cannot hold together more than one fifth of the votes at the general assembly. A weighted voting system can be established by statutes. In addition, no non-farmer associate can hold more than 10 per cent of the votes.] Article L522-4, Code Rural et de la Pêche Maritime, Livre 5, Titre II, *ibid*.

services); agricultural cooperatives are "a-capitalistic" enterprises seeking to improve the development of their members instead of their own economic profit; agricultural cooperatives are run by democratic management. In addition, Coop de France states that agricultural cooperatives shall be registered in a designated territory and, as a consequence, be anchored in the local economic network. Such agricultural cooperatives play an important role both in preserving rural employment and in adding value to rural areas.

Starting from the second part of the 20th century, the French government actively supported the development of agricultural cooperatives through the establishment of preferential policies such as tax abatements. Today, the 2,800 agricultural cooperatives and 11,500 CUMA (*Coopérative d'Utilisation du Matériel Agricole* [Farm machinery cooperative]) gather three farmers out of four and provide employment to 160,000 people. They represent a significant share of agri-food companies and their consolidated turnover is above 80 billion euros[1].

At the beginning of the 21st century, the movement of agricultural cooperatives has spread worldwide. However, their forms and the objectives they aim at fulfilling can differ widely according to countries. The objective of the following subsection will be to depict the peculiarities of the Chinese model of cooperatives, keeping in mind the characteristics of French agricultural cooperatives that were just depicted.

B - The central push for the development of Chinese cooperatives

1) The emergence of cooperatives in central documents

In China, agricultural cooperatives (合作社 *hezuoshe*) appear in the 2005 Number One Document, in the subparagraph "Accelerate the building of circulation and examination infrastructures for agricultural products" of the paragraph "Strengthen the building of rural basic infrastructures and improve agricultural development environment", in the following sentence: "Seriously bring into play the action of supply and marketing cooperatives for (the improvement of) the circulation agricultural products, means of production, etc."

[1] Coop de France. *Observations de Coop de France sur le projet de lignes directrices de l'Autorité de la concurrence sur le contrôle des concentrations – Annexe relative aux coopératives agricoles*. S.I. : Coop de France, 19 Avril 2013, http://www.autoritedelaconcurrence.fr/doc/coop_france_obs_ld_concentrations_2013.pdf, accessed on May 22nd, 2014.

In 2006, the law on cooperatives established a legal status for *nongmin hezuoshe* (农民合作社, farmers' cooperatives)[1]. According to the law, farmers' cooperatives shall be founded in rural areas by farmers: "Farmers' cooperatives are established on the basis of rural households' contracted management, gathering service users and suppliers engaged in the production of a same kind of agricultural product, in a voluntarily contracted mutually beneficial economic association. The objective of farmers' cooperatives is to provide to its members: agricultural means of production, marketing, processing, storage and transport services, technology and information services, etc. Farmers' cooperatives should follow the below-listed principles:

1) Member-farmers shall be the main body;

2) Services provided to members shall serve the interest of all members;

3) Members shall join the organization on a voluntary basis and be free to leave;

4) Members shall be on an equal footing and democratic management shall be put into practice;

5) Profits shall be redistributed to members according to their share in the cooperative."

According to the definition given by the law, the principles of Chinese farmers' cooperatives do not seem to differ much from the ones of French cooperatives, in the sense that the cooperatives are supposed to be created by member-farmers, who are supposed to be on an equal footing and to benefit from the services provided by the cooperative.

However, insights from fieldwork showed that strong differences existed in the modalities of the establishment of cooperatives as well as in the way they were run.

2) The promotion of agricultural cooperatives

From 2005 to 2013, central documents progressively granted an increasingly important role to farmers' cooperatives, calling local officials to encourage their development in order to speed up agricultural modernization. The number of occurrences of the word "cooperative" increased tremendously in Number One Documents, from 2005 to 2013. While cooperatives

[1] 中华人民共和国农民专业合作社法 *Zhonghua Renmin Gongheguo Nongmin Zhuanye Hezuoshe Fa* [People's Republic of China Law on Farmers' Specialized Cooperatives] http://www.gov.cn/jrzg/2006-10/31/content_429182.htm accessed on May 21st, 2014.

were mentioned just once in 2005 and 2006 Number One Documents, there were no less than 28 references to them in the 2013 Number One Document.

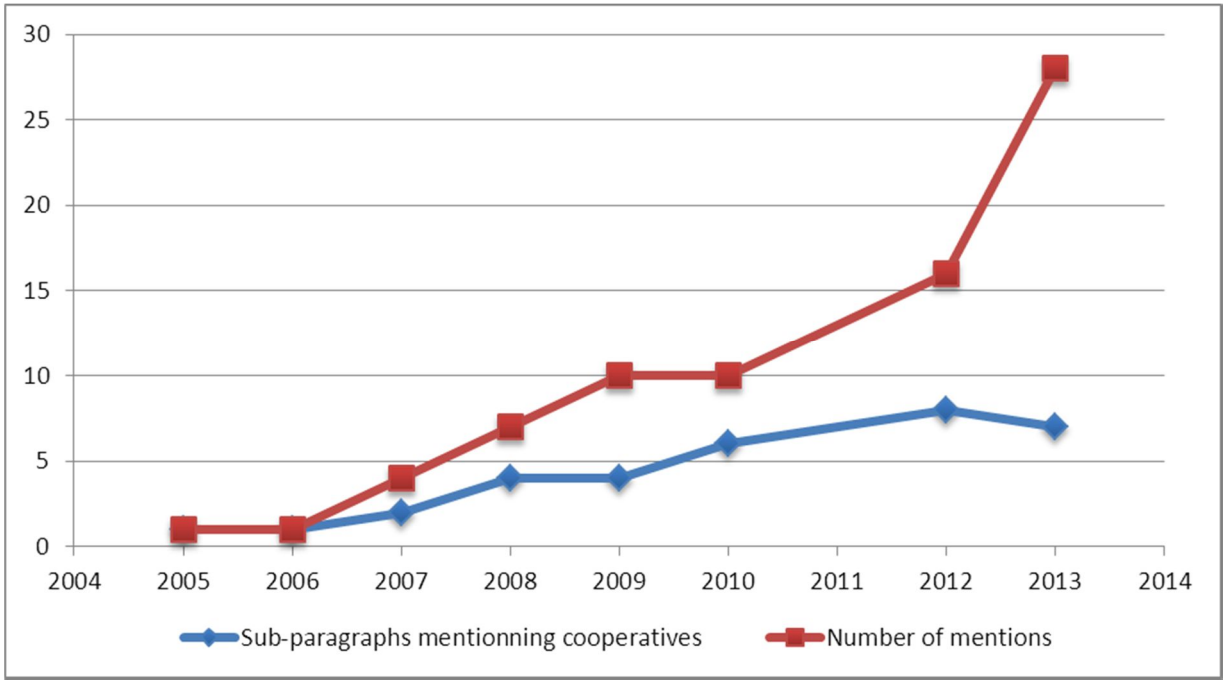


Figure 33: The rise in the importance of farmers' cooperatives in Number One Documents

In addition, the role granted to cooperatives evolved and became much more diverse. In 2005 and 2006, only "supply and marketing cooperatives" (供销合作社 *gongxiao hezuoshe*) were mentioned in Number One Documents and their role appears somehow limited to the improvement of the circulation of food products. In 2007, the role that supply and marketing cooperatives shall have in the development of "modern rural circulation systems" (流通体系 *liutong tixi*) is again mentioned. In addition, "farmers' professional cooperatives" (农民专合作社 *nongmin zhuan hezuoshe*) appear, as an "innovative" way to promote systems and mechanisms enabling the development of modern agriculture. The 2007 Number One Document encourages local governments to "do everything in their power" to promote the development of farmers' cooperatives and to support their efforts in the purchasing of means of production, in marketing, in information services, in technological training, in storage and in the processing of agricultural products. In the 2008 Number One Document, alongside with supply and marketing cooperatives and farmers' specialized cooperatives are also mentioned agricultural machinery cooperatives (农机合作社 *nongji hezuoshe*). Farmers' specialized

cooperatives, on their side, are from then on seen as important tools for the development of agroindustrial capacities in rural areas (alongside with dragonhead enterprises) as well as new service providers to farmers (alongside with "rural service organizations" 农村服务组织 *nongcun fuwu zuzhi*). In 2009, 2010, 2012 and 2013, the role of farmers' cooperatives is further refined, and extended to other services (such as financial services, purchase of improved seeds, etc.).

What is interesting to notice is that from 2010 on, a subparagraph is added to Number One Documents, that underlines the necessity to improve Party building inside farmers' cooperatives. Could this be a sign of the success of agricultural cooperatives development policies?

3) The development of cooperatives in rural China

Data accurately quantifying the development of Chinese farmers' cooperatives are difficult to find. According to a survey made by Deng, Huang, Xu and Rozelle[1], the effect of central policies promoting cooperatives was tremendous. On Figure 31, drawn on data gathered by the authors, we can indeed see that after 2006, the percentage of villages with professional farmers' cooperatives increased exponentially.

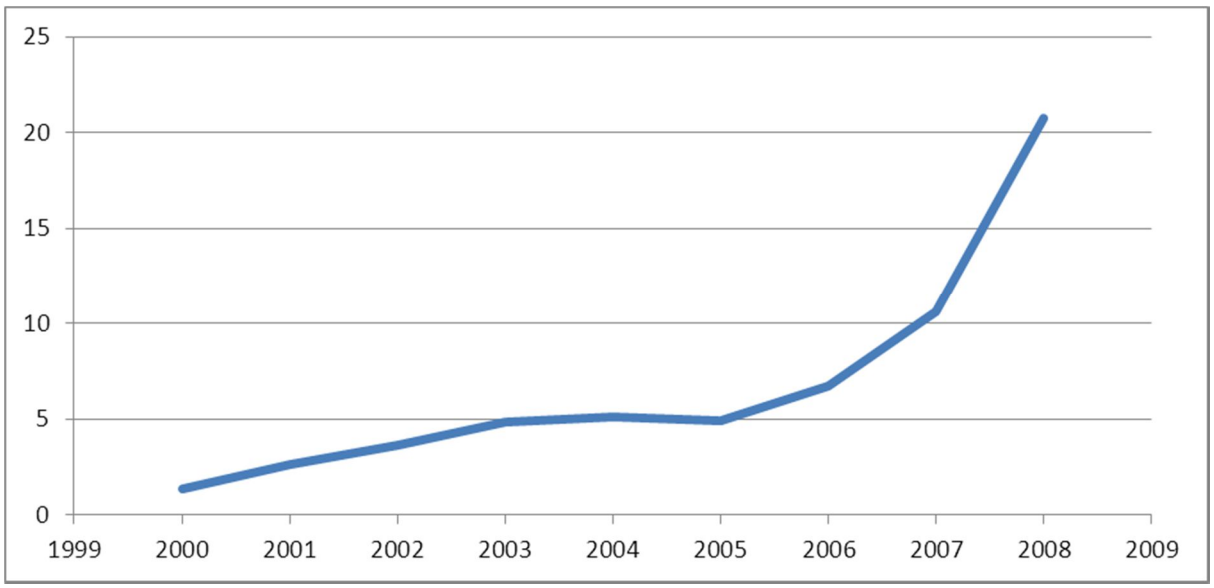


Figure 34: Percentage of Chinese villages with professional farmers' cooperative
Source: Deng, Huang, Xu, Rozelle, 2010

[1] DENG, Hengshan, HUANG, Jikun, XU, Zhigang, ROZELLE, Scott. Policy support and emerging farmer professional cooperatives in rural China. *China Economic Review*, 2010, n°21, p. 496.

According to official statistics as well, the development of farmers' cooperatives was remarkable and the number of farmers' cooperatives would have reached 600,000 in 2012, gathering approximately 46 million farmers[1]. Beyond the quantitative analysis, what were the concrete qualitative modalities of this development?

C - Modalities of development: insights from fieldwork

1) Pre-cooperatives exchanges of services and equipment

When I conducted fieldwork in rural areas, I discovered that a number of farmers were already providing services which cooperatives were expected to provide, such as marketing, bulk purchasing of agricultural inputs or lending of agricultural machinery.

Farmers providing others with marketing services usually cultivate relatively wide areas of a designated product and own small trucks to reach other villages and township markets. They usually buy the yield of farmers living in their village and in surrounding areas and sell it to local wholesalers – either public or private.

[1] MTCP Second Sub-regional Farmers' Forum in Southeast Asia and China was Launched in Nanning of China. *China Farmers' Cooperatives*, http://www.cfc.agri.gov.cn/cfc/html/205/2012/20121108145225497501848/20121108145225497501848_.html, accessed on June 23rd, 2014.

Picture 15: Weighting the yield of small farmers in surrounding areas in Anhui
(Photography by the author, Nov. 2014)

Picture 16: Selling bulk product in the township's purchasing bureau in Anhui
(Photography by the author, Nov. 2014)

On my fieldwork, it also happened that farmers had bought agricultural equipment and were renting it to other farmers. Again, it was usually the farmer of the village who had managed to cultivate a bigger area of land who also had the financial resources necessary for the purchase of the equipment.

Informal and marketed forms of services such as marketing of agricultural products or renting of farm equipment were already common between farmers, outside the legal framework of farmers' cooperatives that was set by the central government in 2007. However, even if I met farmers who could manage to gather relatively large amounts of agricultural products before selling them to wholesalers, these kinds of "farmers-merchants" were not always present in the areas that I explored, neither were they sufficient to cover the needs, in rural areas, in terms of marketing and sharing of agricultural equipment. The existence of these proto-forms of exchange of services between farmers – completed by the existence of local government-led seed and input selling cooperatives – thus does not put back into question the rationale of the recent governmental push for the development of farmers' cooperatives.

2) Mixed models including industrial actors

Farmers' cooperatives I investigated in Jiangxi usually gathered a variety of stakeholders much wider than the above-depicted earliest forms of agricultural cooperation –

in which only small and middle-farmers were taking part. In fact, I could acknowledge the existence of two types of farmers' cooperatives. The first type brings together only farmers – for instance, farmers who took the decision to market their products together. The second model involves the participation of industrial stakeholders based in rural areas as well.

During my fieldwork, as the first thing I usually did was to explain that I was conducting research on agricultural modernization – and probably also because local players were eager to showcase their accomplishments – I was often directed towards "the most modern" local agricultural structures. In Jiangxi, the "most modern" farmers' cooperatives I investigated systematically included industrial stakeholders among their members. According to the Chinese law, industrial players can be shareholders of a farmers' cooperative. In Lushan, I discovered that local governments, who lack confidence in farmers' knowledge for the establishment of professional cooperatives, preferred to promote the "industry plus farmers" model of cooperatives. Concretely, most of the industrial players who were shareholders in farmers' cooperatives at the time I conducted fieldwork – usually food processing enterprises based in rural areas – in fact already existed before the official status of agricultural cooperatives was enacted by the Chinese law in 2006. Created at the beginning of the 2000s, they existed prior to the promotion of cooperatives by the central government. I discovered that in the aftermath of the promulgation of farmers' cooperatives by central documents, food-processing enterprises that already existed in rural areas were encouraged to set up farmers' cooperatives. In Lushan, I was told that enterprises, for their own benefit, could easily take the identification documents of farmers working for them and register cooperatives in their name, as only farmers could register cooperatives – the only criteria being that at least five farmers shall take part in the project.

Insights from fieldwork in Jiangxi showed that rural-based food processing enterprises registered farmers' cooperatives for several reasons. The first reason is linked to fiscal and financial support policies. Farmers' cooperatives indeed benefit from targeted subsidies (for the purchase of agricultural equipment for instance) as well as from tax abatements. If the terms and conditions of subsidies vary from one area to another, subsidies always exist for cooperatives and constitute an important motivating factor for enterprises. Another reason mentioned by a number of interviewees was the maintenance of good relationships with local governments, who were particularly eager to promote the "mixed" model of farmers' cooperatives, as the following quote illustrates:

> "The government thinks that maybe farmers are not well enough educated (they don't know how to use a computer, they cannot make invoice), and so they encourage local enterprises to set up cooperatives."[1]

Local governments did not force entrepreneurs to create cooperatives, but rather opened new areas of opportunities (subsidies, easier procedures for license, etc.), which entrepreneurs were eager to grasp.

Finally, I met factory managers who told me that they had set up farmers' cooperatives to please their clients. Retailers can indeed be pushed by the government or by their own ideals to look preferentially for farmers' cooperatives to implement direct purchase projects.

The legal status of farmers' cooperatives, which enables the formation of mixed models of shareholding, as well as the preference of local governments for the involvement of industrial players in the process, create unequal conditions for the development of the two types of farmers' cooperatives – the ones gathering only farmers and the ones gathering farmers as well as industrial players. However, this does neither mean that cooperatives gathering only farmers do not exist, nor that their emergence is not encouraged by local officials. However, when they reach a certain size, farmers' cooperatives usually evolve towards the model of "industry plus farmers" cooperatives. The manager of a cooperative I met in Jiangxi used to be a farmer (the ones of the very few I met who became managers without ever leaving the countryside) and was encouraged to create a cooperative by the local government in 2009. The cooperative is now associated with a factory processing oranges that was established in 2006. Despite the fact that the cooperative was not created by the factory but by a former local farmer and although elections of the manager of the cooperative and of the staff of the factory are held every three years, the division of responsibilities of the factory-cooperative does not differ much from the one of other industrial-farmers cooperatives that I investigated in Jiangxi. In these latest as well as in the cooperative created by a farmer, there is indeed a strong divide between the managers and the small farmers-workers. The following quote, in which a manager of the factory explains the reasons why the former farmer does not farm anymore – illustrates how deep the divide is between the people responsible for management and the people responsible for growing agricultural products (as

[1] Manager of a DP project in Jiangxi, November 2012.

opposed to farmers in a number of developed countries such as France who are performing management, administrative as well as farming tasks):

> "The manager used to be a farmer, but he does not have time anymore to cultivate his orchard because of administrative work. So he lends his land to other farmers of the cooperative."[1]

To sum up, the fact that numerous farmers' cooperatives were created by agri-food industrial players is a particularity of the Chinese model that does not follow the principle of the dual status of shareholders that is promoted by legal documents for French cooperatives – according to which shareholders shall be, at the same time, providers and beneficiaries of the services offered by the cooperative and should be put on an equal footing with the other members. Even when the principles of democratic management promoted by Chinese central documents are effectively enforced, members of farmers' cooperatives do not appear to be on an equal footing, as people granted with the status of manager put an end to their farming activities and leave their status of farmer. Although the area investigated was rather small, these conclusions on the poor part small farmers take in the creation and development of cooperatives are strengthened by the fact that other researchers reached quite similar results. For instance, Yan Hairong and Chen Yiyuan state that "the contemporary support for the cooperative movement is confronted with the predominance of 'fake cooperatives', in which small producers barely participate"[2] – meaning that small farmers simply keep on performing their former tasks without being involved further in the management of cooperatives. Further in the article, the authors quote a study conducted by Liu Laoshi, according to which "among the 272,000 cooperatives formally registered by 2010 in China, it is estimated by many observers that 80–95 percent of them are fake". Other research states that cooperatives can be headed not only by enterprises, but by village committees or government departments as well[3]. As a consequence, in spite of the recent efforts of the government to promote

[1] Interview, vice-manager of an orange factory/farmers' cooperative, Jiangxi, October 2013.

[2] YAN, Hairong, CHEN, Yiyuan. Debating the rural cooperative movement in China, the past and the present. *Journal of Peasant Studies*, 2013, vol. 40, n°6, p. 969.

[3] ZHANG, K., ZHANG, Q. Puzzles and thoughts about the growth of farmers' professional cooperatives. *Agricultural Economic Issues*, 2007, vol. 5, p. 62-70 (*Nongmin zhuanye hezuoshe chengzhang de kunhuo he sikao*, *Nongye jingji wenti*) and ZHANG, X. To what direction should peasant specialized cooperatives develop. *China's Construction of Old Revolutionary Base Area*, 2009, vol. 2, p.13-14 (*Nongmin zhuanye hezuoshe yin chao shenme fangxiang fazhan*, *Zhongguo laoqu jianshe*), cited in YAN, Hairong, CHEN, Yiyuan, *Ibid.*

agricultural cooperatives, the role of farmers remains small in agricultural modernization. The marginalization of small farmers in the modernization process is not only detrimental to this category of the population considered to have a "low *suzhi*". It also has an adverse impact on the degree of environmental and social sustainability of the pathway China's agriculture is embarking on. The next section will give details on this path dependency, which plays a fundamental role in the shaping of the frames of China's current agricultural modernization.

III - Local patterns of power and agricultural modernization pathway: sustainability lagging behind?

"Development policy is due for its own redesign based on careful consideration of human factors." *World Development Report 2015*.

A - The development of trainings and the evolution of farming practices: towards more environmental protection?

Food-processing enterprises, retailers and, to a lesser extent, agrochemical companies, are increasingly encouraged to conduct trainings in rural areas, in order to improve farming practices and the safety of food products. It is indeed in their interest to produce and advertise safer products in a context where the concerns of consumers on this issue keep on rising. Interviews and observations on the field showed that an increasing number of trainings were indeed provided in rural areas. Numerous food-processing enterprises I met were giving trainings to farmers and actively trying to implement management methods including technical advice given by recruited technical staff. Retailers conducting direct purchase projects in rural areas were also quite active. As the following paragraphs will demonstrate, the stronger involvement of these actors in farming did not alleviate environmental issues in the agricultural sector so far, as the process keeps on marginalizing small farmers, who are growing crops in the end and for whom changing practices is not interesting.

1) Trainings provided by retailers to industrial actors

Direct purchase programs are usually not just about buying products directly from rural producers at better prices. It is also about improving the quality of products through a closer management of rural suppliers. Retailers involved in direct purchase increasingly carry out

trainings for farmers and factory managers. This is particularly true for foreign retailers, which are more exposed to bad publicity in the Chinese media compared to local supermarkets[1]. As a consequence, foreign retailers are particularly eager to make efforts to improve their image and relationship with officials, for whom taking an active part in agricultural modernization can be really helpful.

Trainings targeting food-processing aim at helping factory managers improve their methods, in order to answer the demand of retailers in terms of volumes, traceability and safety. Trainings linked to farming practices are supposed to push farmers to adopt more sustainable practices and to implement traceability methods. From 2007 to 2013, more than 50 trainings were conducted by supermarkets, mostly in the framework of direct purchase projects[2]. The ones I could attend to, even though I was told that participants were farmers, were in reality mostly gathering factory managers and managers of farm associations. In the case of trainings linked to DP projects, managers of factories and farm associations in fact often act as transmission belts between experts mobilized by retailers and farmers working in the field for the enterprise.

Trainings linked to direct purchase are sometimes deeply intertwined with contracts established between retailers and rural factories[3]. The trainers that are mobilized by retailers include members of retailers' quality teams as well as Chinese scientists (regional experts and renowned researchers from Chinese universities) and focus on environmental as well as social aspects, as this quote of a trainer illustrates:

> "The first day of the training, I explained the requirements in terms of production practice: herbicides are forbidden […], they should not use hormones either, more

[1] Some foreign supermarkets are really seen as the flagships of their country of origin, such as demonstrated the 2008's boycott of Carrefour's products and protests in front of its supermarkets, in response to French pro-Tibet demonstrations during the summer Olympic torch relay.

[2] HU, Dinghuan, "The opportunity & Challenges of Farmer-Supermarket Direct Purchase in China" Presented on November 13th, 2013, at the FAO's Policy Forum on Rural-Urban Income Gaps and Smallholder Market Integration in Asia in Beijing (November 13th and 14th, 2013). Other data were collected during fieldwork showed that X. conducted 12 trainings in 2011 and 14 trainings in 2012 and that another foreign supermarket was conducting approximately the same number of trainings (the two supermarkets were though probably the most active ones in the field of farmers' trainings).

[3] "Contracts [signed with suppliers] cover a period of several years. They include development plans, technical trainings…" Interview with manager at X., Shanghai, October 2012.

than 60 percent of fertilizers have to be organic… We also have social requirements."[1]

Trainings are not always enthusiastically welcome by industrial managers. These latest fear to invest in the modernization of their practices and processes without being adequately compensated. They perceive trainings as additional time- and money-consuming requirements made by clients who then refuse to pay more for upgraded products. Retailers, on their side, provide trainings for free to industrial players, with the idea that they are helping them modernize their process and manufacture standard goods for the mass-market retailing, not with the aim of creating a niche market of expensive safe products for wealthy consumers. The fact that long-term contracts are often associated with trainings does not reassure industrial players, who remain suspicious about the long-term engagement of retailers. A quote from a manager of X. in charge of conducting trainings in rural food processing enterprises sums up these differences in points of view:

"For the first training, I just talked about production processes. If we start talking about traceability, they have dollars in their eyes because for them, traceability equals high-end products [more expensive]. […] [During the first training, I told them that] more than 60 percent of fertilizers had to be organic. They listened to us, and after that they all said that they were using exactly 60 percent of organic fertilizer in their fields! […] We spend time explaining the whole philosophy of the project to them. We try to make them understand what will be the benefits for them: that they will have an edge over other suppliers, that they will be able to export, etc."[2]

Although industrial players and retailers share different views, their involvement in agricultural modernization could still have positive effects on farming practices through the multiplication of trainings. As it is in the interest of industrial players and retailers to sell safer products and as these latest have the financial capacity to recruit skilled trainers to disseminate knowledge, farming practices should theoretically evolve towards more social and environmental sustainability.

[1] Interview with trainer belonging to X. retailer's quality team, Shanghai, October 2013.

[2] Interview, Shanghai, October 2013.

2) **The missing link originating from the marginalization of small farmers**

However, the fact that farmers remain marginalized in the process of agricultural modernization considerably lowers the possibility of a real evolution of farming practices towards more sustainability, for three main reasons.

The first reason is that the increased involvement of food-processing enterprises in agricultural modernization – through the subrenting of farmland, the contractualization with small farmers or the increased trainings on farming practices – does not change the set of interests of farmers, and, as a consequence, does not encourage them to change their practices. In Lushan and Lanshui, farmers are usually still paid according to the weight and to the quality – mostly referring to the appearance of fruits – of products they are able to yield for the factory, even when they are shareholders in a farmers' cooperative that is associated with the factory. As a consequence, farmers are reluctant to decrease the amount of pesticides and fertilizers they use, as they face the risk to decrease their yield or to affect the appearance of their fruits and, as a consequence, to be paid less. It is not a risk they are willing to take, considering the already low level of their revenue and the absence of insurance coverage.

The second reason is linked to the fact that, in the areas where I conducted fieldwork, trainers were keeping on relying on traditional top-down approaches of teaching. Such practices are already widely used by local officials. In Chongqing for instance, the setting up of hotlines by agricultural extension services bureaus was supposed to link farmers with technical experts, but in reality only reinforced the distance existing between experts and farmers (Chapter 2, II.B.3.b.). In a village where I spent time in Anhui province, the local government was trying to prevent farmers from burning rice straw after harvest by sending a car to villages and to farmers' markets, on the top of which a loudspeaker was repeating its message all day long. The effectiveness of such top-down methods for transition is highly questionable. In Chongqing, farmers were not calling hotlines. In Anhui, during the evening meals, gathered villagers were devising ways to burn straw that would prevent officials from noticing and wondering about how to disturb the car during its next visit.

International organizations, development agencies and an increasing number of countries have adopted the rhetoric of participatory development as a way to achieve greater sustainability of projects and to efficiently steer transition. The 1992 Rio Declaration on

Environment and Development, for instance, states that "environmental issues are best handled with the participation of all concerned citizens, at the relevant level. At the national level, each individual shall have […] the opportunity to participate in decision-making processes."[1] Participatory processes have multiplied worldwide, particularly in the field of environment and sustainable development[2]. While a large corpus of literature questions the effectiveness of participatory approach for transition, there seem to be at least a consensus about the low efficiency of top down approach in the field of transition towards more sustainability. For Jan Van Tatenhove and Pieter Leroy, participation is inextricably linked to environmental issues[3].

However, in China, rural enterprises that were investigated were keeping on using traditional top-down methods for the spreading of agricultural knowledge and insights from fieldwork showed that such an approach was quite inefficient at changing practices, because these methods increases the rigidity of the barriers that exist between the different social categories of the population. Factories are increasingly trying to implement close-management methods. A number hire technicians in charge of managing small groups of farmers in fields. Others purchase pesticides and fertilizers directly for farmers. Sometimes, the "best" farmer is awarded a position of technical management. However, in most of the situations I encountered, exchanges between circles of stakeholders – the one of *nongmin* growing products in the field and the one of managers or entrepreneurs from "upper-levels" – remained poor: in one way, as it was very difficult for a *nongmin* to become a manager or an agricultural businessman (see I.B); *and* in the other way, as instructions coming from upper

[1] United Nations. *Rio Declaration on Environment and Development*. Rio de Janeiro, 1992.

[2] "[Les] problématiques liées au développement durable […] suscitent […] l'émergence et la mise en œuvre de nouvelles dynamiques socio-institutionnelles […] extrêmement diversifiées, [qui] impliquent une grande variété d'acteurs (gouvernements, pouvoirs publics locaux, entreprises, investisseurs, associations et mouvements 'écocitoyens', etc.)." [Issues linked to sustainable development […] lead to […] the emergence and the implementation of new socio-institutional dynamics […] extremely diversified, [which] involve a wide variety of actors (governments, local public power, enterprises, investors, associations and grassroots 'eco-citizen' movements, etc.] HAMDOUCH, Abdelillah, ZUINDEAU, Bertrand. Introduction. Diversité territoriale et dynamiques socio-institutionnelles du développement durable : une mise en perspective. *Géographie, économie, société*, 2010, vol. 12, n°3, p. 248.

[3] VAN TATENHOVE, Jan P.M., LEROY, Pieter. Environment and Participation in a Context of Political Modernisation. *Environmental Values*, May 2003, vol. 12, n°2, Special issue: Environment, Policy and Participation, p. 155-174.

circles are disregarded by farmers. Misunderstanding and lack of efforts to listen to the other groups are frequent, as this amazing anecdote illustrates:

> "This year, they [(the factory managers)] put a manager in charge of every district. In each district, the manager does "close management": they do a lot of meetings, so that they can teach the peasants how to use this pesticide or that. But […] farmers […] did not tell me the same thing as [the company] did, they told me that they had always grew trees on their own, that they knew how to plant trees and did not need any advice from them. Today, they launch some meetings, but maybe some farmers will listen to them, maybe some others won't. Last season, they tried to improve the results of farmers by launching a contest: the best farmers would go to Xiamen free of charge, but farmers did not understand. They thought that maybe they would have to pay something, so they did not want to participate to the best performance contest, but then they learnt about the "free of charge", and they regretted it."[1]

The last reason that explains why the marginalization of farmers has a strong effect on their unwillingness to change their farming practices is that *nongmin* are locked up in an isolated circle way too far from consumers. Food-processing enterprises, as was said above (Chapter 3), became non-removable intermediaries of the food chain. Small farmers, remote in rural areas, can easily hide behind these factories, which contribute to isolate them from the consumers and from these latest' concerns in terms of food safety.

The most recent surveys evaluating pesticides residue in fruits and vegetables confirm that major problems still exist on the side of unsustainable farming practices, detrimental both to the environment and to the health of consumers. The results of an investigation on pesticides residue in fruits and vegetables conducted by the AQSIQ in 2014 in 23 major Chinese cities are alarming, with highest passing rate at 72.4 percent and lowest passing rates at 47.5 percent[2].

[1] Interview with quality auditor, Jiangxi, October 2012.

[2] 郝晓明, 农药解毒酶让"舌尖"更安全, 科技日报, 2014年06月20日*Hao Xiaoming, Nongyao jiedu mei rang "shejian" geng anquan, Keji ribao, 2014/06/20* [HAO, Xiaoming, Pesticide-degrading enzyme to improve food safety, Journal of Science and Technology, 20/06/2014] http://digitalpaper.stdaily.com/http_www.kjrb.com/kjrb/html/2014-06/20/content_266279.htm?div=-1 The article also appears on the website of the People's Journal http://scitech.people.com.cn/n/2014/0620/c1057-25177468.html

3) **Industrial farming models and biodiversity losses**

For all these reasons, the strong involvement of rural food processing enterprises in agricultural modernization, even if it drives models towards more modern and more productive farms, has limited effects on the evolution of farming practices towards more sustainability, even though the number of trainings aimed at spreading knowledge on sustainability increased a lot over the recent years. In addition, the fact that local officials most exclusively rely on enterprises to steer agricultural modernization is likely to have adverse effects on biodiversity.

Agroindustrial players usually develop business models for a limited number of commodities: orchards I visited in Jiangxi were producing oranges and pomelos, whereas orchards in Shandong were specialized in the production of a single variety of apples. Farming tools and processing plants are adapted to the production of these commodities exclusively, and business relationships target specific clients buying large volumes of these products. In the other areas I visited – except from the horticultural farms around Beijing (which will be further detailed in the next chapter) – investors were usually coming in rural areas with the idea of growing a single type of crop.

Small farmers, on the opposite, usually cultivate a wider variety of products. A lot of farmers, for instance, still grow vegetables for their own consumption. In addition, plots are usually small and scattered in different places, sometimes because of the distribution process, sometimes because farmers inherited from the land of their children or neighbors. The small size of plots and the fact that they are not grouped together enable farmers to cultivate several varieties. In Anhui for instance, farmers were usually cultivating rice and cotton, whereas in Chongqing, they were growing maize and pepper. On the opposite, industrial players usually look for large plots to be able to mechanize the production of a single type of commodity.

Finally, plant rotational crops and agroecology used to be widespread throughout the country[1], and while these traditional farming practices are still used in many areas, they are usually neglected by industrial players.

[1] See King's description of Chinese traditional agricultural techniques (utilization of waste, conservation of soil fertility, multiple cropping, etc.) in KING, Franklin Hiram. *Farmers of forty centuries: Permanent agriculture in China, Korea and Japan.* London: J. Cape, 1949.

In Jiangxi, many entrepreneurs I met had bought forest land from the government in the middle of the 2000s. As fruit orchards are classified as forests, local governments had been able to sell hilly areas covered with wild trees to investors of the fruit business without changing the official land use – and without having to take into consideration biodiversity losses resulting from the conversion of forests into orchards and from the use of herbicides under trees. Through this example, it appears that the Chinese model encouraging investors to get involved in fruit and vegetable production to modernize the sector is likely to have adverse effects on the environment.

The debate on the impact of agricultural intensification and industrialized and large-scale production models on the environment is not unique to China. Defenders of productivism once argued that the intensification of agriculture could "spare land" through increases in yields, and, as a consequence, would in the end have positive effects on the protection of the environment[1] – and therefore on biodiversity. However, this theory, which relies on a fixed demand of food, has been strongly put back into question in recent years[2]. A major study conducted by an interdisciplinary team of researchers in 2009 using 1990-2005 FAO data for 161 countries and 10 major crop types concluded that "agricultural intensification was not generally accompanied by decline or stasis in cropland area at a national scale"[3]. Arild Angelsen and David Kaimowitz go a step further by stating that increases in yields can result in the expansion of cultivated areas and environmental degradation[4].

It would be untrue to say that agricultural intensification is always linked to the transformation of small agricultural structures into industrialized and large-scale production

[1] Among others: BORLAUG, Norman. Feeding a World of 10 Billion People: The Miracle Ahead. *Vitro Cellular & Developmental Biology – Plant*, March 2002, vol. 38, n°2, p. 221-228.

[2] For a thorough analysis of the series of critics expressing skepticism against Borlaug's theory, see: PIRARD, Romain, TREYER, Sébastien. Agriculture et déforestation: quel rôle pour REDD+ et les politiques publiques d'accompagnement ? *Iddri – Idées pour le débat*, Décembre 2010, n°10, 18 P.

[3] RUDEL, Thomas K., SCHNEIDER, Laura, URIARTE, Maria, TURNER II, B. L., DEFRIESC, Ruth LAWRENCE, Deborah, GOEGHEGAN, Jacqueline, HECHT, Susanna, ICKOWITZ, Amy, LAMBINH, Eric F., BIRKENHOLTZ, Trevor, BAPTISTAI, Sandra, GRAUJ, Ricardo. Agricultural Intensification and Changes in Cultivated Areas, 1970–2005. *Proceedings of the National Academy of Sciences*, December 2009, vol. 106, n°49, p. 20675.

[4] In particular, the authors reach this conclusion for the banana sector in Ecuador, for the cacao sector in Côte d'Ivoire and for the soybean sector in Brazil and Bolivia.

models. In China, the tremendous rise in the use of pesticides and fertilizers, which had strong negative effects on the environment, indeed took place while small agricultural structures still constituted the vast majority of farms. Situations of agricultural production are extremely diverse across countries and one should be cautious not to generalize the conclusions drawn from the analysis of a limited number of areas. However, the example of the conversion of forests into fruit orchards in Jiangxi at the beginning of the 2000s proves that the involvement of industrial players raises questions about the environmental sustainability of the model.

B - The sustainability of agricultural production

1) **Who will farm in the future?**

The marginalization of small farmers and the dominance of the frame of reference for agricultural modernization, which emphasizes the necessity of rural-urban migrations, are likely to raise questions in terms of food security in the future. The marginalization of farmers in the modernization process indeed leads to the impossibility, for them, to access better social and economic conditions through farming and encourages them to adopt a going-out strategy. By escaping the farming sector and rural areas, they have a greater chance of being freed from their social condition and to have access to better living conditions.

Insights from fieldwork showed that one of the main consequences of the fact that farmers were privileging a going-out strategy and that local officials were quite eager to see them leaving the farming sector, was that it was increasingly difficult for agri-food enterprises to find labor force for farming in a number of places.

In addition, most of the agricultural workers I met were about fifty or sixty years old. For these farmers, looking for jobs in cities is barely an option, considering their age and health condition – and sometimes, their engagement to look after their grandchildren in the countryside. It is very unlikely that their children will come back to the farming sector in the future, considering the conditions the job of farmer-worker currently offers them: seasonal work, low income without health coverage and retirement pension, and, above all, the absence of opportunities for career development and for the improvement of their living conditions – which is among the most important incentives for young rural dwellers to become migrants. As a consequence, questions arise about the sustainability of the farming workforce, and, as a corollary, about the sustainability of agricultural production.

Although these questions are not specific to China, the issue of the shrinking workforce in the agricultural sector, which is shared by many developed countries, is worsened in China because of the unattractiveness of farming and of rural areas in general, which are deeply associated to the "low *suzhi*" social category of *nongmin*. A survey conducted by the French CSA in 1998 (CSA, 22 septembre-5 octobre 1998), to the question that was asked to French farmers "When you think of the job of farming, what comes to your mind?", first rank answers included "freedom, independence, be their own boss" – answers that would never be given by Chinese farmers today and that would probably not be given in the coming decades as long as farmers remain marginalized.

2) **The debate on land ownership**

An increasing number of scholars have been advocating for land privatization, as a solution to social issues in rural areas[1] and as a way to secure land rights and attract more people in the farming business. Zhang and Donaldson, on the opposite, argue that "the participation of agribusiness in China's agriculture has helped to realize the central government's goal in reforming the agricultural sector", while the current system of collective land ownership would have provided farmers "with a tool to resist pressure from the companies", which would have had the result that "agricultural modernization in rural China has progressed in the more equitable ways described in these pages."[2] Insights from fieldwork are far from corroborating the claim of Zhang and Donaldson. Class inequalities are still important between farmers (or farmers-workers) and entrepreneurs. The capacity of farmers to negotiate with powerful investors that is described by Zhang and Donaldson was non-existent in the areas where I conducted fieldwork. The absence of private land ownership rights enables county and township governments to grab land in order to favor entrepreneurs. Farmers, deprived from a resource they could use to overcome the barriers of their social, cultural and economic marginalization, face tremendous difficulties to access a stable status of

[1] PROSTERMAN, Roy L., TEMPLE, Mary N., HANSTAD, Timothy. China: a fieldwork-based appraisal of the household responsibility system In PROSTERMAN, Roy L. (ed.). *Agrarian Reform and Grassroots Development.* Boulder, Colo. : Rienner, 1990, p. 103–138. See also SARGESON, Sally Sargeson. Villains, victims and aspiring proprietors: framing 'land-losing villagers' in China's strategies of accumulation. *Journal of Contemporary China*, 2012, Volume 21, Issue 77, p. 757-777.

[2] ZHANG, Qian Forrest, DONALDSON, John A. Donaldson. China's Agrarian Reform and the Privatization of Land: a contrarian view. *Journal of Contemporary China*, 2013, vol. 22, n°80, p. 255-272.

"farmer-owner-entrepreneur" that could be attractive for future generations of farming labor force, and remain stuck at the social level of farmer or "semiproletarian"[1] farmer-worker. Land privatization alone is unlikely to solve the issue, as this latest is also rooted in the institutional system – such as the *hukou* system – in cultural schemes and in established patterns of power in rural areas.

In addition, land ownership, in a number of developing countries, has proven to be detrimental to smallholders. As stated by Hans Binswanger, Klaus Deininger and Gershon Feder: "Land rights and ownership tend to grow out of power relationships. Landowning groups have used coercion and distortions in land, labor, credit, and commodity markets to extract economic rents from the land, from peasants and workers, and most recently from urban consumer groups or taxpayers. Such rent-seeking activities reduce the efficiency of resource use, retard growth, and increase the poverty of the rural population."[2] As a consequence, the establishment of land ownership is generally considered as risky given the current context of the Chinese countryside, not only by Chinese officials but also by a number of experts[3].

With or without the establishment of land ownership, the emergence of modern farmers able to take part in the process and become real levers of agricultural modernization will be one of the most important and arduous challenges of agricultural modernization in China.

[1] As stated by Zhang and Donaldson, who argue that farmers are semiproletarian when they work for production bases owned by industrial players but still possess use rights over their own land. (ZHANG, Qian Forrest, DONALDSON, John A. Donaldson. From peasant to farmer: peasant differentiation, labor regimes and land-rights institutions in China's agrarian transition. *Politics and Society*, 2010, vol. 38, n°4, p. 458-489).

[2] BINSWANGER, Hans P., DEININGER, Klaus, FEDER, Gershon. Power, distortions, revolt and reform in agricultural land relations. *Handbook of development economics*, 1995, p. 2659-2772.

[3] UNGER, Jonathan. The Third Plenum and Rural Property Rights : Decisions in the Right Direction In HARRIS, Peter (ed.) *China at the Crossroads: What the Third Plenum Means for China, New Zealand and the World.* Victoria: Victoria University Press, 2014.

Picture 17: Farmers-workers wrapping oranges in plastic bags in a factory, Jiangxi
(Photography by the author, Oct. 2013)

Picture 18 (left): Farmers collecting oranges on the land of a factory in Jiangxi
(Photography by the author, Oct. 2013)

Picture 19 (below): Farmer collecting oranges on the land of a factory in Jiangxi
(Photography by the author, Oct. 2013)

C - Social consequences: finding jobs out of the farming sector?

The rapid spreading of the dominant frame of reference for agricultural modernization, and particularly the spreading of the idea that modern agriculture necessitates the migration of rural dwellers to cities in order to enable farmers staying in the countryside to cultivate wider surfaces of land, is likely to have adverse social effects that would go well beyond rural areas (in addition, as demonstrated above, the migration of farmers to cities does not necessarily lead to the transfer of arable land to farmers staying in the countryside, because of the imperfections of the *hukou* and of the land tenure system).

Firstly, the question arises, whether a slowing down economy will be able to provide jobs for the hundreds of millions of people that local officials would like to force out of the farming sector on a permanent basis, so that they would give up on their land. Until today, the booming industrial sector has provided farming labor surplus with jobs that did not require specific skills. However, questions about the sustainability of the growth of the Chinese industrial sector arise today. Firstly, the worldwide economic slowdown has already had negative effects on the country's exports – even though the recent recovery of the US economy holds out the hope that exports recover on a longer period of time. Secondly, the growing environmental concerns that are linked to industrial development question the entire model of the Chinese economy. For a number of scholars indeed, the slowdown of industrial growth resulting from aggravating environmental issues is likely to become a worldwide trend in the next decades. As Bruno Dorin, Jean-Charles Hourcade and Michel Benoit-Cattin put it: "Industrial production might increase more slowly in the future due to the increasing cost of oil and other non-renewable resources, strengthened environmental regulations, market saturation in industrialized countries, and slower wage increases in developed economies not fully compensated for by an increase of incomes in developing countries"[1].

The dominant frame of reference of agricultural modernization, in China, strongly echoes the theory of the Lewis path for development. According to the Lewis path, agriculture is the first step of economic development, as agriculture provides labor, savings and low-cost food to the process of industrialization and urbanization. Industry, in turn, is supposed to provide increasingly cheaper agricultural inputs that improve yields, rising labor productivity

[1] DORIN, Bruno, HOURCADE, Jean-Charles, BENOIT-CATTIN, Michel. A World Without Farmers? The Lewis Path Revisited. *CIRED Working Papers*, 2013, n°47, p. 16.

of the rural economy, and, consequently, drawing up wages and eliminating poverty[1]. As summed up by Dorin, Hourcade and Benoit-Cattin, the Lewis path is "anchored in economic theories about interrelated structural changes between the 'traditional' (agriculture) and 'modern' (non-agriculture) sectors (Lewis, 1954) and in the historical experience of 'modern economic growth' (Kuznets, 1966)" and ultimately leads to "world without agriculture"[2] – a theory of modernity which, by the way, shares interesting similarities with the concept of *suzhi*.

In their analysis, the three researchers argue that the Lewis path is actually one path among four contrasting developmental paths that do not necessarily converge. The authors demonstrate that switching from one path to a Lewis path can be difficult – if not impossible – for a number of countries. For instance, they argue that mega-urbanization will lead to considerable challenges in emerging countries. While the Lewis Path was facilitated in European countries, where cities managed to retain low-density populations thanks to the migration of 60 million people to the "New Worlds", this possibility is not offered to developing and emerging countries, where urban space is continuously shrinking. Drawing on the example of India, the authors build two alternative scenarios, in addition to a baseline scenario. In the first variant, that they call "Lewis trap", farmers cannot migrate rapidly enough to crowded urban shantytowns and are "condemned to stay with a business whose natural capital declines (soil, biodiversity, safe water) while their own capabilities are diminished due to poverty (nutrition, health, education)"[3]. The resulting growth of disparity between rural and urban areas then puts high-performing Asian economies at the risk of facing severe social crises coming from the countryside, likely to threaten their economic development. In the second variant, the disparity problem transfers to cities, with the co-existence, in urban areas, of highly skilled and highly paid labor with highly labor intensive and low wage services, leading to similar social issues. For the authors, "Asia cannot replicate [the] experience [of Western countries] nor share the utopia of a few large-scale farmers and agro-industries feeding the bulk of humankind in huge megacities"[4].

[1] DORIN, Bruno, HOURCADE, Jean-Charles, BENOIT-CATTIN, Michel. *Ibid.*, p. 3.

[2] DORIN, Bruno, HOURCADE, Jean-Charles, BENOIT-CATTIN, Michel. *Ibid*., p. 3.

[3] DORIN, Bruno, HOURCADE, Jean-Charles, BENOIT-CATTIN, Michel. *Ibid*., p.16.

[4] DORIN, Bruno, HOURCADE, Jean-Charles, BENOIT-CATTIN, Michel. *Ibid*., p.18.

Although the authors mainly build their analysis by drawing on the example of India, their conclusions match the conclusions drawn by this research on the analysis of Chinese case studies. If China persists in trying to apply the Western model of agricultural modernization on its territory, the country is likely to let two development pathways emerge, both socially and economically unsustainable: the first variant of the "Lewis trap", where farmers, unable to find jobs outside the farming sector, would be condemned to stay in rural areas, where they would not be able to make a living out of farming; the second variant of the Lewis trap, where migrants would leave the countryside (raising issues in terms of agricultural labor) and would come to live in cities where they would coexist with well-off citizens with whom they would not share the same rights. In a vast country such as China, it is probable that the two variants emerge at the same time, in different areas of the territory.

Similar conclusions about the impossibility of the Western model for agricultural modernization to fit China's specificities were also reached by a number of Chinese scholars, as the following sentence, which quotes a scholar of the CASS, illustrates: "What is becoming shared knowledge among many rural support intellectuals is clearly stated by Yang Tuan, a scholar at CASS. The US/Western model, associated with de-peasantization [qu nongmin hua], industrialization, and urbanization, is a model that works for a small number of capitalist farmers and corporations who enjoy big government subsidies, while China needs to find a way to sustain a large rural population (T. Yang 2011,38)."[1] In spite of the clear limits the lever of rural exodus has in the process of agricultural modernization, the belief in the efficiency of the lever remains strong among local officials.

Conclusion

Rising environmental issues, in the agricultural sector, can hardly be efficiently taken care of by Chinese local public authorities, NGOs or the civil society. Farmers, on their side, are the sole stakeholders really capable of growing products, but usually lack knowledge, incentives and financial resources to improve their practices and make them more sustainable. In such a context, it appears that agri-food enterprises established in rural areas are the sole stakeholders really capable of leading the modernization of agricultural production towards more sustainable practices. However, the strong emphasis put on food security and social

[1] YAN, Hairong, CHEN, Yiyuan. Debating the rural cooperative movement in China, the past and the present. *The Journal of Peasant Studies*, 2013, vol. 40, n°6, p. 966.

stability goals and the "over-reliance" of local governments on food enterprises and on the lever of rural exodus create considerable difficulties to move agriculture on a more sustainable pathway, both socially and environmentally.

In spite of the recent attempts to develop farmers' cooperatives and to encourage them to take the lead of agricultural modernization alongside agri-food enterprises, farmers remain marginalized in the process, in the sense that they do not take any leading role in the creation of cooperatives (or, when they do, leave their *nongmin* status behind) and are considered as cheap and uneducated labor within them. Cooperatives indeed developed according to a mixed model of shareholding, where industrial stakeholders still play the most important role. The impossibility, for farmers, to access better living conditions and better social status through farming encourages them to adopt a going-out strategy. The consequences are twofold. Firstly, farmers staying in the countryside are far from eager to follow the recommendations of food enterprises managers in terms of environmentally-friendly farming practices producing safer products, as these recommendations are provided in a context – either trainings or close-management – where dual social structures are maintained and where the set of interests of farmers remains the same. Secondly, the willingness of local leaders to force labor out of the farming sector (with the aim of enabling farmers to cultivate bigger farms) is likely to lead to social issues both in rural and in urban areas, and raises questions linked to food security in the future – as in many areas investigated, labor was already lacking. To sum up, the marginalization of farmers, their lack of integration in the debate and the fact that local governments preferentially rely on enterprises to conduct agricultural modernization do not encourage farmers to join in the process and impede the evolution of farming practices.

The fact that current institutional and cultural schemes do not help China move towards environmentally and socially more sustainable agricultural practices in the areas that I investigated does not prove that this is the case for the whole country. The following chapter will re-consider the main argument of this thesis by exploring different cases that will put back the fragmentation of the state in the center of the analysis.

VII. Chapter 7: Alternative pathways?

Introduction

"In some ways the problem is redolent of the parable of the blind men and the elephant: analysts probing different parts of China's reforming political anatomy often produce substantially dissimilar sketchers of the body politic" Richard Baum and Alexei Shevchenko, *The "State of the State"*

The model of local developmental officials relying on agro-industrial entrepreneurial networks to stir agricultural modernization formed the major part of the argument of this research, because this situation prevailed in most of the areas I investigated, in case-study areas in Jiangxi and Shandong, but also in other places I went to such as areas in Jiangsu, Hunan, Anhui and Chongqing. Confronting the results of this research with the feeling of people with field experience in China proved again that the model was indeed widespread throughout the whole country[1].

However, the fragmentation of the Chinese state and the diversity of its territory create "isolated pockets", disconnected from the dominant model of agricultural investors leading modernization. This chapter, based on the analysis of two case-studies (agricultural development projects in the Huangmo county in Ningxia, and Community-Supported Agriculture projects around Beijing) and of the grain sector, presents these pockets of innovation and desertification, proving that in spite of the existence of a dominant frame of reference, the characteristics of local fragmented states are still crucial determinants of agricultural modernization models that are effectively implemented. The analysis of these cases, in particular, highlighted two main differences: in areas and sectors where private entrepreneurs lack or where they used to play a little role, public-private boundaries are more blurred than in the model of local officials relying on industrial capitalist networks. The other difference that could be observed was in the case of horticultural farms near Beijing, where environmental protection and food safety constitute major concerns – as opposed to the dominant model, in which food security still ranks first in priorities, impeding the evolution towards more sustainable farming practices.

[1] Most of the people linked to Chinese rural areas I met confirmed the existence of similar situations in their work or research areas.

I - Blurred public-private boundaries

A - The case of Ningxia

In areas suffering from tough economic and environmental conditions, such as the Huangmo county in Ningxia, investors are cruelly lacking. As a consequence, the model of industrial entrepreneurs that was described in the dissertation cannot apply, and other models appeared for agricultural development.

1) **The development challenge: overview of environmental, social and economic constraints of Ningxia province and Huangmo county**

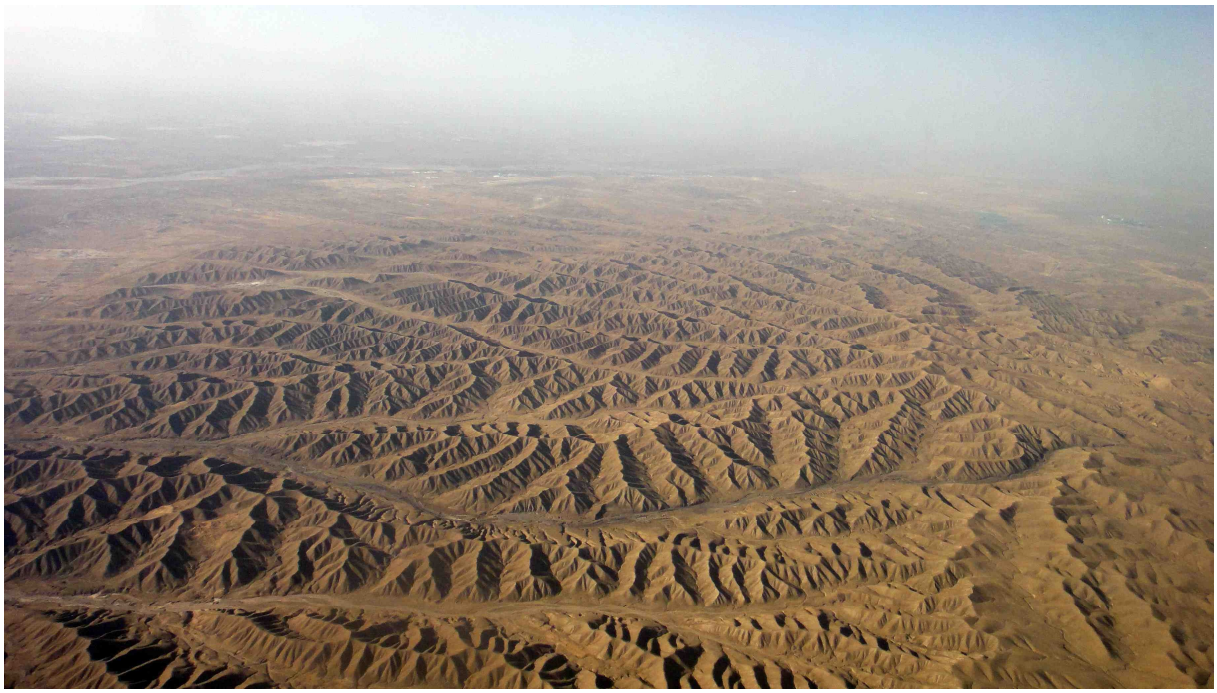
Ningxia is an autonomous region located at the upper and middle reaches of the Yellow River, at the eastern part of northwest China. It is bordered by Gansu province in the South, Inner Mongolia in the North and Shaanxi province in the East. The region is sparsely populated, with one of the smallest populations among Chinese provinces (6.47 million people) and one of the lowest population densities (less than 100 people per square kilometer).

Ningxia can be divided in three broad geographical areas: i) mountainous and loess hilly areas in the South; ii) desert regions in the central part of the province; and iii) an irrigated plain along the Yellow River. Apart from this last area, located on the borders the Yellow River, most of the province is poorly suited for agricultural development. Whereas East Central Ningxia suffers from poor annual precipitation, the southern part of the region has to cope with steep slopes, infertile soil, water erosion and soil loss. One of the consequences of these geographical features is that although the irrigated plain along the Yellow River accounts for less than one third of Ningxia's total farmland, its output value is above two thirds of Ningxia's total agricultural output.

Land use		Total area (in square kilometers)
Urban areas		2,103
Forests		5,100
Forestry		17,903
Grassland		30,141
Grain-sown areas		4,913
Among which	Rice	843
	Wheat	1,790
	Corn	2,459
	Pea/beans	360
	Tubers	2,157
	Oilseeds	884
Vegetable sown areas		1,116
Melon-like cultures		822*
Orchards		1,302

Table 27: Land use in Ningxia (2012)
Source: China National Bureau of Statistics database

Picture 20: Fields on the border of the Yellow River
(Photography by the author, April 2013)



Picture 21: Ningxia's hilly deserted areas (with Yellow River basin in the background)
(Photography by the author, April 2013)

In addition, over recent years, the highly vulnerable land of Ningxia severely suffered from the degradation of climate conditions. Average temperatures rose and rainfall dropped during crop growing periods. In addition, the number of severe dry spells increased dramatically[1]. If the trend continues, consequences on agriculture will be tremendous, as considerable areas of farmland currently depend on irrigation.

	Total area (in square kilometers)
Grain-sown areas	4,913
Irrigated areas	5,766
Drought affected areas	1,040
Drought affected crops	433

Table 28: Vulnerability of Ningxia land to climate change (2012)
Source: China National Bureau of Statistics data

[1] LI, Jianping, ZHENG Guangfen, LIU, Hui, WANG, Liping, TANG, Zhihai, SHI, Haixia, GUO, Wenfeng, WANG, Huirong. *Situation Analysis of Ningxia Province*. S.I.: China Climate Change Partnership Framework – Enhanced strategies for climate-proofed and environmentally sound agricultural production in the Yellow River Basin (C-PESAP), 2008.

The urbanization rate of Ningxia recently went beyond 50 percent. According to the National Bureau of Statistics, in 2012, 3.28 million people were living in cities, whereas 3.19 million people were living in the countryside. In terms of economy, agricultural production only accounts for 8.6 percent of the GDP of Ningxia[1].

This dissertation focuses on the county of Huangmo, located in the far east of Ningxia's autonomous region. Huangmo is an interesting case study for this research, for several reasons. Firstly, the county is located in the arid zone of Ningxia, where the annual rainfall is only about 270 mm, while natural rainfall is the main water resource for agriculture – and for drinking water in the southern part of the county. In addition, the area suffers from frequent natural disasters, among which droughts and sand storms. Water scarcity is coupled with imbalance in temporal distribution, as 65 percent of rainfall is concentrated in July, August

[1] In 2012, the GDP reached almost 233 billion RMB (2012年自治区GDP预计达到两千四百亿元, 宁夏自治区人民政府, 26/12/2012 *2012 nian zizhiqu GDP yuji dadao liang qian si bai yi yuan, ningxia zizhiqu renmin zhengfu* [The 2012 GDP of the autonomous region reaches 240 billion RMB, Government of Ningxia] http://www.nx.gov.cn/zwxx/zw/zwdt/47370.htm accessed on July 8th, 2014). Industrial output accounts for almost half of the GDP of the province, and the sector was the greatest contributor to local economic growth over the past few years (祁春梅, 宁夏回族自治区2012年国民经济和社会发展统计公报, 宁夏日报, 2013年03月18日 *Qi Chunmei, Ningxia Huizu Zizhiqu 2012 nian guomin jingji he shehui fazhan tongji gongbao, Ningxia ribao* [QI, Chunmei. 2012 Statictical Bulletin of Economic and Social Development of Ningxia Autonomous Province. *Journal of Ningxia*, 18/03/2013] http://www.nx.xinhuanet.com/2013-03/18/c_115063536.htm accessed on February 11th, 2014). Heavy industry forms the major part of Ningxia's secondary sector, and coal and electricity are the main pillars of the economy of the region, as the territory is rich in energy resources (徐秀梅, 2012年宁夏工业经济形势分析及2013年走势判断, 宁夏回族自治区人民政府研究、发展中心, 2013年8月22日 *Xu Xiumei, 2012 nian Ningxia gongye jingji xingshi fenxi ji 2013 nian zhoushi panduan, Ningxia Huizu Zizhiqu renmin zhengfu yanjiushi, fazhan zhongxin* [XU, Xiumei. Analysis of the 2012 industrial economy of Ningxia and determination of the 2013 tendency. Website of the research department and centre for development of the government of Ningxia, 22/08/2013] http://www.nxyjs.com/ReadNews.asp?NewsID=3528 accessed on February 11th, 2014). However, according to official documents, the sector started experiencing difficulties in the past few years. State-controlled industries play a leading role in the economy of the province. Their growth has been strong and contributed significantly to the regional economy, whereas the growth rate of non-public industries was below the average of the province. However, the central state recently decided to adjust its national macroeconomic policy, through a reduction of the expenditures aimed at stimulate the economy. Provincial investments in fixed assets thus started increasing at a much slower pace compared with before, affecting the growth of state industries. In addition, according to official documents, state industries were also impacted by the slow-down of consumption growth: domestically (the government gradually put an end to policies such as vehicle purchase tax concessions or subsidies for cars in the countryside, and the demand for motor vehicles and household electrical appliance is now entering an adjustment period); and internationally (foreign exports of raw material and commodities such as tires, metal or silicon, is following a downward trend). The slow-down of industrial activities in turn affects the energy consumption of the province, which has consequences on regional energy industries.

and September. Environmental issues in Huangmo are becoming increasingly severe. In 2012, the county had suffered from nine consecutive years of drought and desertified land accounted for 38 percent of the total area.

In addition, the county is characterized by its very scattered population, as the population density is less than 20 people per square kilometers, far below the national average (144 in 2011[1]). Distances between rural settlements and cities are extremely long, and going to remote villages for the purpose of fieldwork sometimes requires several hours road journey. The county is approximately 80 kilometers wide from west to east and 100 kilometers long from north to south. The road network, quite recently constructed, is of good quality. However, the last kilometers are still unpaved for a number of villages, which makes it difficult to reach remote places. In addition, some villages are located in hilly areas, thus inevitably lengthening the time needed to go to these places. Huangmo suffers from poor economic development, which is partly due to environmental conditions and to the remoteness of villages. Faced to this situation, many young people choose to migrate to cities to look for higher revenues and better living conditions. In villages, I mostly saw old farmers – the only young people being government employees. The situation of Huangmo strongly opposes the one of the borders of the Yellow River, where better environmental conditions are likely to attract investors and to stabilize farming labor. Analyzing agricultural modernization in Huangmo county, where such conditions do not exist – thus making it impossible for the "investor model" to develop – was particularly useful to complement the first conclusions of this research.

When the methodology was designed for this research, the aim was to focus on a county where environmental and economic conditions would constitute a significant obstacle for the development of modern agriculture. However, this research also wanted to avoid analysis bias linked to local ethnical issues such as can be observed in Xinjiang and Tibet, as ethnic minority issues significantly influence local policies. Although Ningxia is an autonomous province with rules related to Hui minority, minorities (少数民族 *shaoshu minzu*) account for only between 2 and 3 percent of the population in Huangmo (mostly Hui)[2].

[1] Source: Worldbank Database.

[2] Published on the website of the Statistics Information Bureau (统计信息局 *tongji xinxi ju*) of Huangmo county, accessed on July 11th, 2014.

The fact that the county is under the strong pressure of tough environmental conditions does not mean that agriculture does not exist in Huangmo. On the opposite, the agricultural population (农业人口 *nongye renkou*) still accounted for 80 percent of the total population of the county in 2012[1]. Agriculture thus remains an important economic activity for the territory and relies on 7.14 million mu of grassland and 1.34 million mu of arable land.

Huangmo is an important production area for coarse grain such as barley, oats, sorghum and maize – heavily irrigated (37,500 mu of irrigated land in total) – and is also famous for goat meat production. Today, the government focuses on the development of the exploitation of mineral resources, as Huangmo's underground is rich in oil (45 million tons of estimated reserves), coal (8100 million tons), gypsum (450 million cubic meters), and other resources.

Picture 22: Maize crop (left) with goat herd (right) in a village in Huangmo county
(Photography by the author, April 2013)

Agriculture is though not given up on, and several groups of stakeholders keep on dedicating time and efforts to its development. Local bureaus, such as the bureau of agriculture and husbandry (农牧局 *nongmuju*), are in charge of implementing agricultural policies at the county level. However, as we will see, a wide variety of actors in fact take part in the process.

[1] 张雯, [Huangmo]县简介, 新华网宁夏频道2012年04月23日 *Zhang Wen, [Huangmo] xian jieshao, xinhuawang ningxia pindao* [ZHANG, Wen. Presentation of [Huangmo]. Xinhua Web Ningxia Channel, 23/04/2012] http://www.nx.xinhuanet.com/2012-04/23/c_111826263.htm accessed on July 9th, 2014.

Picture 23: Potato fields and houses in another village of Huangmo county
(Photography by the author, June 2013)

2) The three models of agricultural development

a) Governmental associations and NGOs

An interesting actor involved in rural development is the county "association" for rural sustainable development ([Huangmo]县农村可持续发展协会 [*Huangmo]xian nongcun kechixu fazhan xiehui*). Registered in 2006 with the Bureau of Civil Affairs, the structure in fact already existed before and used to run projects under another name ([Huangmo]县农业产业化网络协会 *[Huangmo]xian nongye chanyehua wangluo xiehui*, [Huangmo] association for rural industrialization network).

Although the translation for *xiehui* is "association", the *xiehui* for rural sustainable development of Huangmo is in fact closer to a governmental structure than to the one of an association. Firstly, the bureau of the association is located inside the official buildings of the Huangmo government. In addition, at the time when interviews were conducted, five people were working at the *xiehui*, among whom three – including the secretary general – were government employees (政府官员 *zhengfu guanyuan*)[1].

[1] Interview with the secretary general of the Huangmo, June 2013.

The *xiehui* operates on a membership basis. At the time when I conducted interviews, the *xiehui* had 60 individuals (farmers 农民 *nongmin*) and 26 non-governmental organizations (非政府组织 *feizhengfu zuzhi*) registered as members. In appearance, the structure of the *xiehui* is thus similar to the membership structure of grassroots associations. However, the mode of operation of the *xiehui* differs significantly:

> "We do not fund projects. It usually goes this way: an NGO comes to look for us with a project in mind, and we support them (支持 *zhichi*). For instance, [Miss Wang[1]] from the RISE association of Tsinghua University does not know the area, she comes from the city and does not know who she can contact. We selected three villages in mountainous areas for her, where people encounter water issues. [Miss Wang] then selected the village that better suited her project."[2]

Half the managers of the association belong to the government and are responsible for "selecting" villages for development projects. The mode of operation of the *xiehui* is thus far from the one of grassroots associations or non-governmental associations and seems closer to a traditional top-down management scheme[3].

The association supports two types of projects, usually proposed by its "NGO members": i) short-term trainings for agricultural technology extension (农业技术培训 *nongye jishu peixun*); ii) small interest loans projects (低息贷款 *dixi daikuan*)[4], among which many support farmers. Most of the NGOs conducting projects in Huangmo come from external areas and lack local contacts and information on the context. They come seek the help of the *xiehui* for information and contacts they would otherwise have strong difficulties to gather by themselves, because of the remoteness of villages and because of local circulation constraints. The *xiehui*, on its side, closely related to the government, has a wide network of governmental contacts and can easily link NGOs with local government officials – without

[1] Pseudonym.

[2] Interview with the secretary general of the Huangmo, June 2013.

[3] Quite similar results were found by political scientists having conducting research in other sectors of the economy. Kenneth Forster, for instance, argues that associations are "new elements of the state's administrative system": "in the city of Yantai […] nearly all business associations […] are in essence appendages of government or Party organizations." (FOSTER, Kenneth W. Embedded within State Agencies: Business Associations in Yantai. *The China Journal*, January 2002, n°47, p. 43).

[4] In reality, the association is also supporting other projects such as individual water treatment technology.

whom nothing could be done. The control over the uncertainty of local conditions and local networks grants the permanent staff of the *xiehui* with significant power over its NGO-members.

County-level officials play a leading role in the daily activities of the *xiehui.* In addition, the creation of the *xiehui* itself seems to be stemming from policy guidelines. In 2001, the central government published a white paper on rural poverty alleviation and development. The document emphasized the necessity to "actively create the conditions to encourage non-governmental organizations to participate in and carry out governmental poverty alleviation projects"[1]. The county of Huangmo, as a former revolutionary base suffering from difficult economic conditions, was particularly encouraged to follow these guidelines, which would explain the creation of the association for rural industrialization network, and, later on, its evolution into the association for rural sustainable development.

b) Officials-entrepreneurs

Another interesting model of agricultural development, in Huangmo, was the one of agricultural cooperatives. In the previous chapter, agricultural cooperatives were depicted as organizations strongly invested by private stakeholders (Chapter 6, II.C.). In the county of Huangmo, in the absence of investors, agricultural cooperatives I investigated were created and headed by township-level government officials.

> "I decided to create this cooperative some years ago, in order to help the common people (老百姓 *laobaixing*). I provide them services such as joint purchasing of fertilizers, so they can have access to cheaper products. I help them sell their products. Here, peasants do not use pesticides, so we promote a green brand for potatoes we sell. […] I also provide them with training and education. […] The cooperative developed and reached a good production level for potatoes."[2]

Such an embeddedness of local political leaders within the Chinese economic sector was described by a number of scholars, such as the ones defending the theory of entrepreneurial state or the theory of developmental state. Jane Duckett, for instance, argues

[1] "要积极创造条件，引导非政府组织参与和执行政府扶贫开发项目" (Source: 国务院关于印发中国农村扶贫开发纲要（2001—2010年）的通知 *Guowuyuan guanyu yinfa zhongguo nongcun fupin kaifa gangyao (2001-2010 nian) de tongzhi* [State Council Outline for China Rural Poverty Alleviation and Development 2001-2010] http://www.gov.cn/gongbao/content/2001/content_60922.htm, accessed on July 9th, 2014).

[2] Interview with the leader of a farmers' cooperative in a village of Huangmo county, June 2013.

that in the 1990s, "individual departments across the state system have been setting-up new profit-seeking, risk-taking businesses"[1]. Marc Blecher and Vivienne Shue also found areas where administrative agencies of county governments were conducting development activities in order to achieve economic profits for themselves[2]. However, most of the research on the profit-seeking action of local officials in economic development focuses on the development of the industrial sector in the 1980s and 1990s[3]. Much less scholars concentrated on the involvement of local officials in agricultural activities, and many described this involvement as a direct descendent of the collective management system[4], not as a self-breeding new form of entrepreneurship. The involvement of local officials in agricultural cooperatives in Huangmo proves that the model depicted by the theory of entrepreneurial state is still valid in some rural areas and can be found in the agricultural sector as well, independently from the past of rural areas in terms of collective agriculture.

I could not investigate many agricultural cooperatives in the county of Huangmo and the purpose here is not to say that all of Huangmo agricultural cooperatives are led by state officials. However, it can be asserted that enterprises are far from being the major players in agricultural development and play a little role in the development of agricultural cooperatives. As was stated by the secretary general of the rural sustainable development association:

> "Among our members, there isn't any enterprise. Some enterprises belong to *xiehui* in China, but in our *xiehui*, there isn't any, because they don't want to invest money in agriculture in [Huangmo]".[5]

---

[1] DUCKETT, Jane. *The entrepreneurial state in China : Real estate and commerce departments in reforme era Tianjin.* London : Routledge, 1998, p. 3.

[2] BLECHER, Marc, SHUE, Vivienne. *Tethered Deer: Government and Economy in a Chinese County*. Stanford: Stanford University Press, 1996.

[3] BYRD, William A., GELB, Alan. Why industrialize? The incentives for rural community government In BYRD, William A., LIN, Qingsong. *China's Rural Industry: Structure, Development, and Reform*. Oxford: Oxford University Press, 1990; OI, Jean C. Fiscal Reform and the Economic Foundations of Local State Corporatism in China. World Politics, October 1992, vol. 45, n°1, p. 99-126; WALDER, Andrew G. Local Governments as Industrial Firms: An Organizational Analysis of China's Transitional Economy. *American Journal of Sociology*, September 1995, vol. 101, n°2, p. 263-301.

[4] CHEN, Weixing. The Political Economy of Rural Industrialization in China: Village Conglomerates in Shandong Province. *Modern China*, January 1998, vol. 24, n°1, p. 73-96; WONG, Christine P.W. Interpreting Rural Industrial Growth in the Post-Mao Period. *Modern China*, January 1988, vol. 14, p. 3-30.

[5] Interview with the secretary general of the Huangmo, June 2013.

c) Microcredit enterprises coming into the picture

In such a scheme dominated by government associations and government officials, private enterprises seem to play no role in agricultural development in Huangmo. This statement is not entirely true, as I managed to find one enterprise running agricultural development projects in the area: a microcredit enterprise.

The objective of H. enterprise is to develop microcredit for farmers in the county of Huangmo. Although the enterprise has strong links with the *xiehui* mentioned above, employees manage to operate relatively independently from county government officials. The usual procedure is the following one: employees of H. first go to villages through their own means and seek the support of the village leader (总主任 *zhongzhuren*). Employees admitted that village leaders were governmental employees, but insisted on the fact that they were social actors first, because most of them were actually farmers. Village leaders are then supposed to disseminate information to isolated rural dwellers in the village and try to win their support to launch microcredit.

In the second phase of the process, H. proposes to local relays – opinion leaders who live in the villages who have played a role in the development of local networks - to manage these latest on a permanent basis, on the behalf of the enterprise. The possibility for local people to access to a position with responsibility in the enterprise enables the building of stable relays and facilitates the establishment and maintenance of consolidated local networks. Thanks to this process, H., at the time fieldwork was conducted, employed 16 local relays (信贷员 *xindaiyuan*, "credit personnel"), through whom the enterprise could provide microloans to about 3,000 farmers.

The status of H. is ambiguous. H. used to be a *xiehui* (妇女发展协会 *funü fazhan xiehui*), then turned into a "non-governmental *danwei*[1]" (扶贫与环境改造中心 *fupin yu huanjing gaizao zhongxin*) in 2004, before becoming an enterprise in 2008. The decision to evolve towards the status of a private enterprise was taken on the basis of considerations linked to the development of activities:

> "In 2008, we officially became an enterprise. The main problem we had to face is that investors did not understand our project if we were registered as an NGO.

[1] Status close to the one of NGO.

> […] The main challenge we face in our development is to find financial partners."[1]

The evolution of H. into a private enterprise was motivated by a need to get more funds to become able to provide loans to more clients. Even though this evolution is still lived and described as a difficult step by the managers of the enterprise, the seeking of financial partners is in fact a sign of development, which demonstrates the success of H. and of its usefulness for farmers in rural Huangmo, deserted by investors. At the time when I conducted interviews, H. was one of the sole microcredit enterprise, throughout the whole country, that provided credit to farmers with the aim of helping them develop agricultural activities. Most of microcredit enterprises, in China, indeed still focus on the development of commercial and industrial activities for poverty alleviation in rural areas. However, the experience of H. proves that this model could be an interesting lever for development.

To conclude, it can be said that although agricultural investors were almost non-existent in the county of Huangmo at the time when fieldwork was conducted, other agricultural development models emerged and spread across the county, where a wide variety of stakeholders are involved, from county- and township-level officials to village leaders, government associations, NGOs and enterprises. However, two limits bound the conclusions drawn from the analysis of the county of Huangmo. Firstly, even though the lever of industrial players could not be part of the discourse of local officials, these latest were keeping on referring to the other elements of the dominant frame of reference: the lever of technology and the lever of rural exodus. For local officials, modernization mainly refers to an increased use of technology, as this quote from the secretary (书记 *shuji*) of a township in Huangmo illustrates:

> "In France, you have cellphones, right? Well, this is modernization."[2]

In addition, urbanization is considered as a key lever for agricultural development, even though local conditions do not lend itself to it[3]. According to the same township secretary:

[1] Interview with the founder and director of H., April 2013.

[2] Interview with township secretary, June 2013.

[3] As the majority of people staying in rural areas are above fifty or sixty years old.

"There are national urbanization targets. It is not problem if a share of the farming population goes to the city. People who stay here are encouraged to do family farming (家庭农场 *jiating nongchang*)."[1]

Or, according to the leader of the farmers' cooperative mentioned above:

"People living for cities are not posing a problem, because farmers cultivate very small areas. People who stay can take care of these areas."[2]

As these quotes illustrate, even though agricultural development models are different in the county of Huangmo than in other parts of the country, the ideas local officials share about modernization are quite similar to the frames of reference acknowledged in other areas. In addition, the fact that a wide variety of players take part in agricultural modernization does not improve the possibilities for farmers to evolve towards "modern farmers", as most of them remain isolated and suffer from difficult environmental conditions.

B - The case of grain crops

Interestingly, the blurred boundaries between public and private actors can be found not only in other geographic areas (such as least developed areas suffering from a lack of investors such as Huangmo), but also in other agricultural sectors. The case of grain markets, which used to be entirely managed by the state, clearly illustrates this point.

1) **Past and present involvement of the state**

The strong involvement of the state in grain production is not new, as grain has always been associated with social stability stakes (Chapter 1, III.A.3). In the 1980s, while most of the agricultural markets were liberalized, the government was reluctant to take the same steps in the grain market. The fear of a diminution of grain-sown areas and of the consequences it would have on the fall in the grain output encouraged the government to maintain dual trading structures and mandatory quotas until the beginning of the 2000s. Grain markets were completely liberalized only in 2004.

[1] Interview with township secretary, June 2013. As opposed to a number of countries where family farming is usually associated with small-scale farming, in China, farms have to reach a certain size to be granted the status of *jiating nongchang* – and receive subsidies accordingly. The minimum size varies depending on the type of production (>50 mu for grain, >30 mu for fruits, flower and other quality products, >500 heads for mutton and pork, > 50 heads for beef, etc.).

[2] Interview with cooperative leader, June 2013.

However, since then, far from having given up on its responsibility, the government has maintained a strong involvement in grain production and trading. The first involvement of the state is through state-owned farms. State-owned farms were established before the founding of the People's Republic in order to feed the CCP's red army, which was forced to a military retreat in the inhospitable northwestern China by the suppression campaigns of the Kuomintang troops. After the victory of the CCP and the founding of the PRC in 1949, the model of state farms was replicated in other parts of the country, especially at the border areas. According to Forrest Zhang, state farms aimed at addressing three "urgent needs" of the new regime, which were: employment for demobilized military personnel; border security for a "fragile new regime"; and food production, as a way to "help stabilize a national economy devastated by years of wars"[1].

In 2012, there were still 1,786 state farms, producing 33.71 million tons of grain on 4.726 million hectares[2]. Although state farms were established all across the country, a great number of them are concentrated in three areas: in the North-East (mainly in Heilongjiang province, but also in Jilin and Liaoning), in the North-West (in Xinjiang Autonomous Region) and in subtropical areas (in Yunnan, Guangdong and Hainan provinces)[3]. State farms produce a wide variety of agricultural commodities, from grain to meat and dairy products. However, as it clearly appears on the figure below, the grain output of state farms is way bigger than the output of other agricultural commodities.

[1] ZHANG, Forrest. *Reforming China's State-Owned Farms: State Farms in Agrarian Transition*. Paper presented at the 4th Asian Rural Sociology Association International Conference at Legazpi City, Philippines, September 2010.

[2] Data from the National Bureau of Statistics.

[3] ZHANG, Forrest. *Reforming China's State-Owned Farms: State Farms in Agrarian Transition*. Paper presented at the 4th Asian Rural Sociology Association International Conference at Legazpi City, Philippines, September 2010.

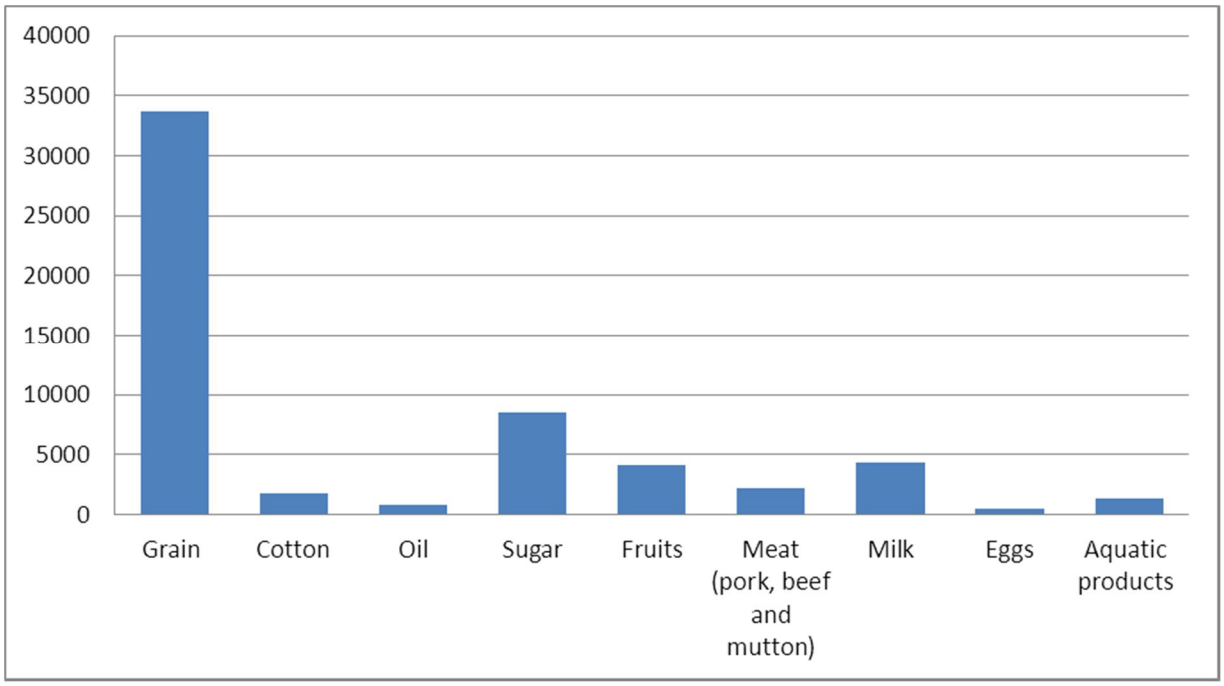


Figure 35: Output of agricultural commodities produced by state-owned farms (in 1,000 tons, 2013)
Source: Data from the National Bureau of Statistics

According to the testimonies I could gather, state farms of North-East China are heavily modernized, use large foreign-brand combines and can cover up to several hundred hectares. According to one interviewee, most of the recent progress achieved over the past few years in terms of grain productivity (wheat and maize mostly) would be owed to the modernization of state farms. A quick look at the figures – 5 to 14 percent of annual output growth rate, compared to 0.4 to 5.4 percent of annual growth rate in average[1] – confirms this view.

The second involvement the state is keeping in grain markets is through national grain reserves. The government indeed manages a massive national procurement and storage scheme, that mostly targets grain – although the government can also use the system to intervene in markets through the purchasing or selling of other commodities, such as pork. Grain purchase operates according to a system of minimum prices, which started being implemented in 2004 for wheat and rice and in 2008 for corn (for this latest, in the framework of "temporary storage policies" set up in the aftermath of the world food price crisis). Minimum prices are set annually by a committee gathering officials from the Ministry of Agriculture, from the State Administration of Grain, from the Ministry of Finance and from

[1] Calculations made with the data of the National Bureau of Statistics.

Sinograin (the most important SOE in charge of grain storage in the country). The average price is determined according to several criteria, such as the minimum price established for the previous year, the evolution of production costs, the stock levels in major producing areas and the expected levels of production. The average price is then adjusted according to the variety and quality of the grain and to the location (the program only targets the main producing provinces) and the period of purchase.

Rice	2700-3100 RMB/ton
Wheat	2330 RMB/ton
Maize	2220-2260/ton

Table 29: Average minimum prices for major grain crops (2014)

Whenever market prices at the farm gate fall below minimum prices fixed by the committee, Sinograin, along with two other SOEs, Cofco and ChinaTex, are requested to buy grain from farmers at the minimum price or above. These massive purchasing programs are supposed to trigger a market response that makes the price of grain rise again. In order to be able purchase grain at minimum prices above market prices, Sinograin, Cofco and ChinaTex benefit from loans of the Agricultural Development Bank as well as from subsidies per silo filled with grain.

The system aims at fulfilling two main objectives. Firstly, minimum prices are established to guarantee a minimum price to farmers, as a way to encourage these latest to keep on growing grain. In addition, reserves can be released on the market in case of major climatic events or in case of major price rises of basic staple products, as a way to protect Chinese consumers.

As the case of grain reserves and minimum prices demonstrate, the government still attaches strong importance to grain production and is willing to encourage farmers to keep on growing grain through minimum price policies – at enormous costs. For the past three years, the minimum price fixed by the government for rice, wheat and maize has grown by 15-20% annually, accordingly to the rise in production costs. In addition, there has been an important appreciation of the Chinese currency against the US dollar in the past few years. The results were that by 2011, the Chinese farm prices of most major commodities were 20-30% higher

than prices in the United States[1] and that the price of rice, wheat and maize have remained above international market prices since then.

The role played by these two types of state actors – grain state farms and grain traders – as well as the continuation of minimum price policies (in spite of the huge cost of their implementation) give an idea about the still strong involvement of the government in grain production and trading, in spite of the liberalization of grain markets in 2004.

2) In reality, a wide diversity of models

According to the National Bureau of Statistics, the grain output of state farms, in 2012, was 33.71 million tons, among a national grain output of almost 600 million tons. Taking these figures into account, it can be said that state farms only account for around 5% of the national grain production. The role that state farms have played in grain productivity achievements over the past few years was indeed limited to a small number of grain crops. On my fieldwork in Southern China, I could observe that rice was clearly out of this model of state farms leading the modernization of the grain production sector. In fact, what I observed for the rice production sector was quite similar to what I had observed in the fruits and vegetables sector. In Anhui and in Jiangsu, I met a lot of farmers still cultivating rice according to traditional methods, including traditional farming practices – usually labor intensive farming practices, very traditional (some of them still relied on buffalo plough in Anhui province) – as well as informal exchanges of land, tools, labor and small machinery.

[1] GALE, Fred. *U.S. Exports Surge as China Supports Agricultural Prices*. USDA Economic Research Service, October 2013. http://www.ers.usda.gov/amber-waves/2013-october/us-exports-surge-as-china-supports-agricultural-prices.aspx#.VIbMpdKG8wc.

Picture 24 (left): Farmers going to the fields with buffalo, Anhui
(Photography by the author, June 2014)

Picture 25 (below): Farmers transplanting rice by hand, Anhui
(Photography by the author, June 2014)

Investors were rare in this picture but not absent. I had the opportunity to meet some of them, especially in Anhui and Jiangsu provinces. According to the interviews I could conduct, their development models are very similar to what was described for enterprises above in this dissertation: investors were usually coming from outside of the farming sector, after having managed to gather funds and to establish relationships with local governments to obtain land and hire local farmers to grow rice.

Picture 26 (left): Farmer-worker at work for a rice growing company in Jiangsu
(Photography by the author, June 2013)

Picture 27 (below): Women farmers-workers working for a rice growing company taking a break in Anhui province
(Photography by the author, June 2014)

Picture 28: Local governments' officials and rice growing company's managers, Jiangsu province
(Photography by the author, June 2013)

Picture 29: Mechanized rice-transplanting (rice growing company, Jiangsu province)
(Photography by the author, June 2013)

To sum up, in spite of a recent liberalization of grain markets and in spite of the still strong involvement of the government in some grain production sectors and in the trading of grain, entrepreneurs models also developed in this sector, as the example of rice proves it.

II - Community Supported Agriculture as an alternative model?

On the other extreme of the Huangmo case, I investigated the rapidly emerging Community-Supported Agriculture in the suburban rural areas of the municipality of Beijing. It was interesting to explore green farms around Beijing, because it could provide elements on whether the CSA model could emerge as an alternative pathway to the widespread model of investors, which are likely to bring along a number of environmental and social issues.

A - Food challenges in Beijing

The rapid emergence of a network of green producers launching CSA projects in rural areas surrounding cities such as Beijing, Shanghai, Chongqing or Xiamen finds its rationale in the growing concerns linked to food safety, regularly fuelled by media revealing safety scandals. Food challenges experienced by Beijing are very similar to the challenges which are faced by the country as a whole. Beijing's huge urban population – almost 20 million according to the last national official survey (2010) – needs tremendous amounts of food, which cannot be produced by the sole resources of the administrative area of the municipality. Land is indeed scarce because of the continuous extension of urban areas, which drives prices up:

> "Beijing is a big city. The population is about 20 million people. [On the opposite] cultivated land is scarce, as there is only about 2 million mus. […] In counties such as Shunyi, Fangshan and Tongzhou, cultivated area is relatively big, about 2 mu per capita. In other counties, especially in hilly areas, cultivated area per capita is much less."[1]

In addition, water is rare and highly needed for the consumption of the urban population. According to the World Bank, water availability in the Hai River basin, which

[1] Interview with a director of the Beijing bureau of agricultural technology extension services, November 2013.

includes Beijing and Tianjin, was only of 300 cubic meters per person in 2007[1], way below the absolute water scarcity limit fixed by the FAO (500 cubic meters per year per capita).

Agriculture, as it only contributes to about 1 percent of the GDP of the municipality[2], is usually not considered as a priority when the consumption of local resources has to be arbitrated. As a consequence, only 30 percent of the food consumed by Beijing citizens comes from local areas.

In addition to food security issues, challenges in terms of food safety are also important. As about 70 percent of the food comes from outside of the municipality through long food chains, people lack confidence in the origin of products. The concerns of Beijing's citizens in terms of food safety are particularly high. This awareness of food safety issues, added to the geographical proximity of the population to ruling authorities[3] and to the wealth of citizens[4], provides a suitable ground for the development of alternative farming models and smaller food chains, such as Community-Supported Agriculture.

B - A worldwide movement which recently spread to China

The first forms of Community-Supported Agriculture were established in Japan. In associations known as "*teikei*" (提携), consumers buy agricultural products directly from farmers through a system of annual subscription. *Teikei* were born in the 1960s and originate from the growing concerns of urban mothers worrying about the safety of food products[5]. The movement really started spreading throughout the country after the creation of the Japan Organic Agriculture Association in 1971, which promoted organic agriculture as well as the

[1] XIE, Jian, LIEBENTHAL, Andres, WARFORD, Jeremy J., DIXON, John A., WANG, Manchuan, GAO, Shiji, WANG, Shuilin, JIANG, Yong, MA, Zhong. *Addressing China's Water Scarcity Recommendations for Selected Water Resource Management Issue*. The International Bank for Reconstruction and Development / The World Bank, 2009, p. 1.

[2] Interview with a director of the Beijing bureau of agricultural technology extension services, November 2013.

[3] Who are thus particularly vigilant in not letting population discontent grow.

[4] Beijing is one of the wealthiest provinces in terms of net income per capita in urban areas, with 41,103.1 RMB in 2012 according to the National Bureau of Statistics of China (only Shanghai exceeds this figure, with 44,754.5 RMB).

[5] AMEMIYA, Hiroko. Genèse du Teikei : Organisations et groupes de jeunes mères citadines In AMEMIYA, Hiroko (ed.). *Du Teikei aux AMAP : Le renouveau de la vente directe de produits fermiers locaux.* Rennes : Presses universitaires de Rennes, 2011, p. 44.

principle of consumers-farmers relationships[1]. *Teikei* were providing answers to the rise in consumers' food scares following the industrialization of farming and the worsening of environmental pollution[2], which raised the demand for domestically produced organic food.

In Western Europe, similar movements started emerging in parallel with the development of *teikei* in Japan in the 1970s and 1980s. In the middle of the 1980s, the concept spread from Switzerland and Germany to the United States with the two first CSA farms simultaneously created in 1986 in Massachusserts (the "Indian Line Farm") and New Hampshire (the "Temple-Wilton Community Farm")[3]. Today, the concept has expanded worldwide and forms of CSA now exist in North and South America, Australia, Africa, Asia and Western and Eastern Europe.

CSA farms worldwide share common principles. The main principle of CSA is that consumers purchase a membership and in return receive seasonal agricultural products (usually a box of vegetables on a weekly basis, all throughout the farming season). Such a system enables farmers to receive payment early in the season, which considerably improves their cash flow. Logistics is also eased, as the composition of boxes of vegetables is generally set by farmers, who do not have to cope with the variability in consumers' demand. Consumers, on their side, enjoy weekly supply of locally produced fresh organic vegetables at affordable prices with the insurance of knowing where, how and by whom they were cultivated.

Another important principle of the CSA model is risk sharing. In most CSA farms, members pay in advance and farmers do their best to provide them with an abundant box of products each week. In case of poor harvest due to unfavorable weather or pests, members are not supposed to be reimbursed. Consumers contracting membership in CSA farms thus are

[1] HENDERSON, Margaret, VAN EN, Robyn. *Sharing the Harvest: A Guide to Community Supported Agriculture*. S.I.: Chelsea Green Publishing Co., 1999.

[2] Among which the Minamata disease: the discharge of methyl mercury by a chemical factory in Minamata bay between the 1930s and the 1960s caused the death of nearly one thousand people and affected several thousand people with strong neurological syndromes resulting from mercury poisoning following the eating of shellfish and fish.

[3] HENDERSON, Margaret, VAN EN, Robyn, 1999, *op. cit.*

usually not only motivated by the quality of products, but are also engaged in supporting local farming[1].

Differences exist between CSA farms worldwide. They are linked to the way of sharing the farm budget (the duration of the engagement of consumers generally varies from one month to one year) and to the way of delivering products (for instance, French CSA farms – AMAP[2] – usually have a delivery points (farm, grocery store, school, enterprise, etc.) and set the day and hour for the picking up of vegetables by consumers).

The movement recently expanded to China. The first Chinese CSA farm was founded in 2008 by a Chinese scholar, following years of research on rural development in China as a graduate student and a Ph.D. candidate at the Renmin University and a few months spent in a CSA farm in the United States. Supported by academic and political networks, the project rapidly proved successful. Land was easily acquired in the suburban rural areas of the municipality and regular conferences held on the topic promoted the model in the urban community of Beijing consumers. Four years after its creation, the "Little Donkey Farm" already enjoyed the support of more than 1,000 regular clients. The success of Little Donkey Farm encouraged numerous investors to launch similar projects. There are today dozens of CSA-like farms around Beijing and their number has reached 200 throughout the whole country.

[1] "Quality of produce was cited by 93 percent of the members surveyed as an important reason for joining a CSA. […] Support for local farming was also an important factor for 97 percent of the CSA members surveyed." (COOLEY, Jack P., LASS, Daniel A. Consumer Benefits from Community Supported Agriculture Membership. *Review of Agricultural Economics*, vol. 20, n°1, p. 229).

[2] Associations pour le Maintien d'une Agriculture Paysanne [Association for the preservation of peasant agriculture].

Picture 30: Outdoor farmers' market gathering CSA farmers in front of the Agricultural Exhibition Center in Beijing (Photography by the author, April 2013)

Picture 31: Indoor farmers' market gathering CSA farms inside a mall in Beijing (Photography by the author, April 2013)

C - CSA farms with Chinese characteristics

1) A lack of governmental support?

In Beijing, the managers of CSA farms who I interviewed[1] frequently complained about the lack of interest of local officials in their projects and in agriculture in general. They claimed that they were experiencing financial difficulties and were not supported enough by

[1] Interviews were conducted in Beijing from the middle of 2012 to the end of 2013.

the government[1]. To a certain extent, CSA farms indeed suffer from a lack of interest of the government of Beijing, where agriculture accounts for a tiny share of the GDP and where officials are much more concerned about the challenges brought by urbanization in terms of pollution, transportation systems, electricity infrastructures and migrations. However, I met a certain number of government officials interested in CSA projects and willing to promote them. In fact, the political power is fragmented among an important number of officials, who can decide whether to support or not CSA projects for a wide number of reasons that sometimes have nothing to do with the context but much rather deal with their personal interests and concerns, personality and energy. As this quote from a manager of a CSA farm in Beijing illustrates it:

> "At the beginning, we did not tell the township authorities about our project here, and we started conducting the project without noticing them about it. Of course, the village committee knew about it. But not the township government. We haven't told the government for several months. Eventually they found out about us. And the leader of agricultural development of the township government started to be very interested in our project, because he is young and he really wants to do something. At the beginning of each year we have to report to him about our activity. In fact, everything really depends on individuals. It depends on personality."[2]

In addition, it would be unfair to say that officials do not care about CSA projects, as debates do exist in academic circles (the profile of the scholar and first founder of CSA proves it) as well as inside local bureaus such as the agricultural technology extension center. On the Picture 31, which is a photography of the front cover of the review published by the agricultural bureau and by the station for agricultural extension services of Beijing, we can read: "社区支持农业(CSA):城市居民参与农业的新模式" (shequ zhichi nongye (CSA): chengshi jumin can yu nongye de xin moshi), or: "CSA: the participation of urban citizens and new agricultural models". This proved that CSA is a matter of interest for a number of officials.

[1] Subsidies usually target farmers and not enterprises.

[2] Interview, manager of CSA farm, Beijing, April 2013.

Picture 32: Front cover of the review 北京农业 *Beijing nongye* [Beijing's agriculture], August 2013

2) CSA without citizen consciousness

However, the fact that people talk about CSA inside governmental and academic circles and the recent mushrooming of CSA farms around cities such as Beijing do not necessarily mean that the model is likely to scale up throughout the whole country. The development of Chinese CSA is limited by its characteristics, which are slightly different from the kind of Community-Supported Agriculture which developed in other countries.

The CSA farms I visited around Beijing usually operate according to the principle of membership for consumers, who pay in advance boxes of fresh vegetables – to which are sometimes added fruits and eggs. In that, they do not much differ from American, European or Japanese CSA farms. Chinese CSA farms usually deliver their products to farmers' markets (about five farmers' markets were operated in Beijing at the time fieldwork was conducted) or directly to the home of consumers.

The principle of risk sharing, however, was not enforced by the CSA farms that I investigated in the same way it is enforced by other CSA farms worldwide. Consumers do pay in advance for boxes of vegetables. However, managers of CSA farms told me that many consumers often wished to change the composition of boxes of vegetables according to their weekly or daily needs. They said that they frequently received calls, text messages or e-mails

– sometimes on the eve of the delivery – expressing requests for the composition of boxes (including demands for certain types and/or quantities of vegetables).

The price paid by consumers-members is tremendous compared to the price of vegetables that can be purchased in supermarkets. On Table 30, we can see that the price for 12 to 32 boxes of vegetables (of 8 to 10 jin[1]), weekly delivered, goes from 1,440 to 3,584 RMB, approximately 170 euros and 430 euros. Considering that the price of leafy vegetables and cucumbers of the species that I usually find in boxes of vegetables is around 2 to 3 RMB per jin on traditional markets, it means that the price of boxes of vegetables sold by CSA farms is 5 to 7 times the one of vegetables on usual markets.

CSA farms in fact built their success on the marketing of "safe" products[2], which became popular among middle-class urban consumers worrying about their health. These consumers, even though they have the possibility to visit CSA farms, usually stay removed from the realities of farming and expect a high level of service accordingly to the high amount of money they pay to get safe products delivered to their home. Receiving lower quantities of vegetables in case of bad weather conditions or pests was thus hardly acceptable for Chinese members of CSA farms. Interviews highlighted the fact that products sold by CSA farms were in fact "luxury" products. Chinese CSA is thus closer to a model of organic farms delivering safe products to a wealthy clientele contracting membership primarily for health purposes than to the model of CSA farms operating thanks to the involvement of conscious consumers-members willing to share risks and to preserve local agriculture and the environment.

套餐种类	每周菜量	配送频率	配送次数	份额菜金	送菜方式	月均消费
两人份套餐	约8斤	每周1次	32次	3584元	免费配送到家	448元
三人份套餐	约10斤/次		32次	4160元		520元
体验套餐	约8斤/次		12次	1440元		480元
鸡蛋套餐	10枚/次		32次	800元	需与蔬菜一起配送	100元
柴鸡套餐	1只/月		8次	960元		120元

Table 30 : Prices for 12 to 32 boxes of vegetables (8 to 10 jin), weekly delivered: 1,440 to 3,584 RMB
Photography of a flyer of a Beijing CSA farm

[1] 1 jin = half a kilogram.

[2] Most of the CSA farms I investigated were not selling food labelled as "organic", mostly because of the expensive price of labels and because of the lack of trust of consumers in organic labels.

2013年常季配送方案

家庭人口	每周菜量	配送频率	送菜次数	送菜总量	菜金	配送费	合计
二人家庭	8斤	一周一次	30次	240斤	1920元	450元	2370元
三人家庭	12斤	一周一次	30次	360斤	2880元	450元	3330元
四人家庭	16斤	一周两次	60次	480斤	3840元	900元	4740元
五人家庭	20斤	一周两次	60次	600斤	4800元	900元	5700元

2013年冬季配送方案

家庭人口	每周菜量	配送频率	送菜次数	送菜总量	菜金	配送费	合计
二人家庭	8斤	一周一次	22次	176斤	2112元	450元	2562元
三人家庭	12斤	一周一次	22次	264斤	3168元	450元	3618元
四人家庭	16斤	一周两次	44次	352斤	4224元	900元	5124元
五人家庭	20斤	一周两次	44次	440斤	5280元	900元	6180元

Table 31: Other tables of prices for 22 to 60 boxes of vegetables (8 to 20 jin), delivered on a weekly basis or twice a week: 2,370 to 6,180 RMB[1]
Photography of a flyer of a CSA farm

The fact that CSA food is considered as a luxury good does not help the dissemination of the model, which currently addresses a limited category of the population made of well-off residents of big cities worrying about their health. For most of Chinese citizens, who still dedicate one third of their expenditure to food, buying vegetables more than five times more expensive than in supermarkets or traditional markets is simply not an option.

3) CSA that does not shorten the distance between farmers and consumers

A final characteristic of the Chinese CSA farms that I investigated was the fragmentation of tasks. While the growing of products was taken care of by farmers (*nongmin*) exclusively, other tasks such as marketing, packing, delivering, etc. were performed by other people – usually the founder of the farm along with a recruited team of people coming from the city. None of the Chinese CSA farms investigated had been created by former farmers. The sociological profile of founders of CSA farms in fact varied little.

[1] Approximately 280 euros and 740 euros.

Founders usually spent several years working outside of the farming sector, in various fields, from industry to energy, real estate, hotel business, etc. Having worked for several years in lucrative sectors, they had managed to save money and to establish the necessary contacts to launch a business. Some – in particular, the ones having worked in hotels in rural areas – had also established useful contacts in rural areas.

One of the main motivations mentioned by founders was the desire to bring solutions to their own concerns in terms of food safety. Most of them told me that they had started seriously worrying about their health or the health of their newly born children, and that this constituted the triggering factor for their decision to launch a business in green agriculture. In addition to the wish to bring solutions to an issue directly affecting them, founders of CSA farms were rational economic actors as well, seeing in the development of green food production bases an opportunity to create their own enterprise and to make profits.

Chinese CSA farms rely on farming labor to grow products, usually made of unskilled[1] local farmers. Managers of CSA farms expressed difficulty in finding farmers to develop their activity or to replace labor on the eve of retirement. However, they were barely questioning the principle of task fragmentation, a principle they were justifying by the fact that "farmers are not good at writing or keeping data"[2]. CSA farms thus do not completely eliminate intermediaries between producers (farmers) and consumers, and poses social problems similar to the model of investors – in particular, the question of the replacement of retired workforce.

Conclusion

The main objective of this dissertation was to acknowledge: i) the existence of a dominant frame of reference for agricultural modernization, produced by central level authorities through the elaboration and promulgation of agricultural policy guidelines; and ii) the existence of a dominant mode of action for the implementation of agricultural modernization – *i.e.* local governments relying on rural food processing enterprises to modernize farmers.

[1] In the sense of they did not have any vocational training in their lives, not that they did not know how to grow crops.

[2] Interview, Beijing, April 2013.

This chapter focused on models developed in specific areas and sectors that were likely to propose alternatives to this dominant model that was depicted along the dissertation. As we see, the dominance of the frame of reference and of the mode of action for agricultural modernization does not impede the development of alternative models and China remains a decentralized country, in which the state operates through a network of government officials, who are, above all, rational and individual actors. Because of the fragmentation of the state and because of the diversity of the Chinese territory, areas lagging behind exist, where public-private boundaries are more blurred than in other places. At the extreme opposite, "pockets" of innovation developed as well, that dedicate more important amount of effort to environmental issues.

However, the existence of these fragmented pieces of the territory, outside of the prevailing path of agricultural modernization, does not put back into question the model described in this dissertation. This chapter rather demonstrated these models do not fundamentally put back into question the dominant frame of reference for agricultural modernization: while in Ningxia, local officials kept on referring to the other elements of the dominant frame and farmers were still locked in their position, innovation born near Beijing was not fundamentally proposing alternative solutions to environmental and social issues found elsewhere in the country – brought by the marginalization of *nongmin*.

In addition, the spreading of alternative innovative models is limited by a number of factors linked to the particularities of these models and of the cultural and social factors. Launching a business linked to organic food is indeed a behavior limited to the wealthiest and most environmentally conscious people in big cities and are probably not likely to spread to other layers of the Chinese society. For the rest of the Chinese consumers, strategies to curb food safety issues remain limited. Organic products are still unaffordable to the vast majority of consumers, considering the fact that the price of organic vegetables is more than 5 times the price of conventional products[1], and that Chinese households still spend more than the third of their expenditure in food[2]. In addition, the booming organic food sector is not tightly

[1] United States Department of Agriculture (USDA) Foreign Agricultural Service. Organics Report. *GAIN Report*, n°10046, 26/10/2010, S.I.: USDA Foreign Agricultural Service.

[2] As a comparison, in France, the food expenditure of the poorest quartile is about 20 percent of their total expenditure (Source: Insee).

enough controlled by the authorities and still lacks credibility[1]. At the exception of the wealthiest consumers and of a part of farmers who grow their own organic food, organic products are not an option yet to solve the issue of food safety – and, as a consequence, the issue of environmental degradation.

[1] 李家宇, 孟兴, 刘畅, "有机食品，想说爱你不容易" , 天津网, 31/10/2011 *Li Jiayu, Meng Xing, Liu Chang, Youji liangshi xiang shuo ai ni bu rongyu, Tianjin Wang* [LI, Jiayu, MENG, Xing, LIU, Chang. Saying "I love you" to organic products is not easy. Tianjin Network, 31/10/2011] http://www.tianjinwe.com/tianjin/tjcj/201110/t20111031_4495764.html Accessed on March 4th, 2014.

Conclusion

I - Summarizing the argument

A - Central policy guidelines laying the ground for a dominant frame of reference

In spite of the fundamental importance rural areas, agriculture and peasants had in the building of the CCP, the Chinese countryside had cruelly lost the interest of the government in the late 20th century. Local cadres had shifted their attention to industrial development as a way to steer economic growth in rural areas and to keep the political and economic control they had in the era of People's Communes. The central government, on its side, pressured by the growing stakes of industrial development and urbanization, had also turned its focus to such sectors and lost interest in rural areas and agricultural development.

At the beginning of the 21st century however, faced to rising challenges in terms of food security, social stability and economic development, the central institutions of the government started encouraging local officials to reinvest themselves in agricultural production, a sector they had deserted since the household responsibility system had put an end to planning and given back the reign of agricultural production choices to farmers at the beginning of the 1980s. In particular, from 2004 on, central institutions started promoting policy guidelines urging local officials to speed up agricultural modernization. These directives, promulgated, among others, in Five-Year Plans and Number One Documents, progressively built a frame of reference for agricultural modernization, defined by: i) two key goals: food security (in the sense of self-sufficiency) and rural development; and ii) three key levers: scientific and technological development, enterprises (and especially dragonhead enterprises) and the rural exodus.

B - The return of local states in agricultural production activities

Local officials followed the directives of the central government pushing them to re-establish links with the agricultural sector and to steer its modernization, because it was in their interest to do so. This dissertation showed that the reasons for the effective transmission of the dominant frame of reference for agricultural modernization down to local levels of the government did not only lie in the efficiency of traditional transmission mechanisms, but also in the fact that the key elements of the frame of reference matched path dependencies and the frame of interests of the local stakeholders holding power. "Classical" transmission

mechanisms such as the cadre promotion system and competition between government officials do play a role in the transmission of policy guidelines down to local levels. However, in the case of agricultural modernization, this research proved that policy guidelines were efficiently spread down to local levels of the government mainly because they matched existing patterns of relationships (economic networks made of local officials and entrepreneurs and marginalizing farmers) and the interests of local officials (the development of industrial entreprises contributing to local economic growth and local tax revenues, etc.).

The reinvestment of agricultural production activities by local governments, however, was not a direct stepping, but was mostly accomplished through a strong reliance on a network of private entrepreneurs encouraged to launch agricultural business. Path dependency and local patterns of power play a huge role in the transmission of the element of the frame of reference granting enterprises with a leading role in agricultural modernization. Local officials, at the beginning of the 2000s, were indeed already used to rely on enterprises to achieve development objectives - the modalities of the multiplication of TVEs in the 1980s and 1990s are a good illustration of the building of political and economic networks. On the opposite, they have few contacts with farmers they usually consider as poorly educated and refractory to modernization. In addition, relying on food processing enterprises is in the interest of local officials because it provides them with additional revenue through industrial and commercial taxes, whereas farming does not since agricultural taxes were abolished in 2006.

Incentives and control mechanisms were though carefully established by local officials to push and pull entrepreneurs, through the use of financial and non-financial resources (either material, human, reputational or normative) both in formal ways (through standardized and institutionalized procedures) and in informal ways (where social ties are of strong importance).

A form of governance mixing elements of the local developmental state, elements of the corporatist state and elements of the regulatory state emerged in the course of agricultural modernization. In rural areas, government agencies of the county and township levels act as local developmental states by choosing strategic sectors and entrepreneurs able to lead agricultural modernization. Entrepreneurs, on their side, engage in the field of opportunities offered by local governments, participate in the building of private food chains and

increasingly act as trainers for farmers, thus becoming multipliers – or corporatist structures – spreading the central state's concerns down to the multiplicity of small farmers. Local officials manage to keep control over this development of private entrepreneurship by relying on regulations, like a regulatory state, but in both formal and informal ways. The possibility to decide how to apply rules – in formal and informal ways – is enabled by the important decentralization of the Chinese state.

While their political participation remains limited, private entrepreneurs play a major role in agricultural modernization through the launching of economic activities in rural areas and through their increasingly direct involvement in farming methods – as evidenced, for instance, by the rising number of trainings they provide to farmers. As a consequence, we are not looking at a state-socialist economy characterized by planning anymore. Certainly, agricultural and food enterprises are firmly controlled by local governments through the use of mechanisms of which some are *legacies* of state socialism – such as the monopoly of control over political institutions[1], which, in turn, exercise power over resources. However, this dissertation demonstrated that local officials also use a multiplicity of indirect and less visible control channels that progressively developed into close-knit communities of political and economic actors, where both formal and informal rules apply.

As we see, China's agricultural modernization is a complex process that does not fit in any of the theoretical frameworks previously developed by political science – such as planned economy, developmental state, corporatist state or regulatory state. Rather, the process fits in a model made of a number of elements coming from different frameworks and helping at understanding the peculiarities of agricultural modernization.

Recently, the mode of operation of local governments for agricultural modernization evolved towards a wider and more complex network of economic and political actors, which increasingly includes stakeholders downstream or upstream in the food chain, a number of which operate from urban areas. However, this does not really put back into question the assumptions mentioned above. Simply, local states become less "local" and more "transversal" and include a wider variety of actors both in rural and urban areas, not necessarily sharing the same interests, but still agreeing on the main principles of the mode of

[1] LANDRY, Pierre F. *Decentralized Authoritarianism in China*, Cambridge University Press, 2008, p. 18.

operation for agricultural modernization framed by the central state: modern agriculture should be productive, technology intensive, large scale and leaded by industrial enterprises.

C - The impacts of the dominant frame on the sustainability of agriculture

The fact that a number of guidelines linked to environmental protection and to the development of grassroots structures are not efficiently transmitted is another clear demonstration of the fact that policy guidelines are efficiently spread down to local levels mainly because they match the interest of local officials.

The recent attempt of the central government to promote the establishment of farmers-led agricultural cooperatives again proves this point of the dissertation. Instead of showing a mushrooming of cooperatives created by empowered farmers, the fieldwork of this research rather proved that food factories established in rural areas were often behind the development of mixed forms of cooperatives gathering both industrial shareholders and farmers. Inside these "farmers' cooperatives" – a number of scholars name "fake" cooperatives – patterns of power are in fact very similar to what is usually observed in more classical forms of association between rural food enterprises and farmers, in the sense that agricultural cooperatives maintain the strong divide between *nongmin* and entrepreneurs.

These examples demonstrate that path dependency and local interests play a major role in the spreading of the frame of reference for agricultural modernization defined by the central level and greatly influence this frame. The efficient spreading of certain elements of the frame of reference designed by the central government has consequences on the agricultural modernization pathway, in the sense that it prevents the country from engaging on a path towards environmentally and socially more sustainable farming practices. The great emphasis put on the goal of food security and the strategy to rely preferentially on industrial players to trigger modernization in rural areas have particularly strong effects. During my fieldwork, I could acknowledge that food-processing enterprises and retailers were encouraged to conduct trainings to improve farming practices and the safety of food products. Interviews and fieldwork showed that an increasing number of trainings were indeed provided in rural areas. However, insights from fieldwork also demonstrated that the marginalization of farmers in the process of agricultural modernization considerably lowered the possibility of a real evolution of farming practices. The sociological models of agricultural modernization

indeed do not change the set of interests of farmers-workers, who are usually still paid according to the weight and appearance of the products they harvest. In addition, rural enterprises who conduct trainings in rural areas usually keep on relying on top-down methods for the spreading of agricultural knowledge, which maintain farmers-workers in a low social class that is strongly bounded, difficult to escape from and also difficult to reach from above. Farmers, isolated in their condition, are way too far from the concerns of consumers in terms of food safety to start thinking about changing their practices. Finally, the over-reliance on industrialized and large-scale agri-food enterprises looking for increased profits is likely to have adverse effects on biodiversity – a situation which is not unique to China.

The marginalization of farmers and the rapid spreading of the dominant frame of reference for agricultural modernization are also likely to have effect on the sustainability of agricultural output in the future. Indeed, the strong marginalization of farmers does not offer them the possibility to escape from their low social and economic condition through farming, encouraging them to adopt a going-out strategy. In addition, the spreading of the idea that modern agriculture necessitates the migration of rural dwellers to cities in order to enable farmers staying in the countryside to cultivate wider areas of land is likely to further deprive the agricultural sector from a precious labor force of young and educated rural dwellers, which raises questions about the sustainability of food production in the middle- and long-term.

Finally, social challenges are also likely to arise. In case the slowing down economy turns unable to provide jobs on a permanent basis for the hundreds of millions of people local officials wish to force out of the farming sector, consequences are likely to be severe in rural areas. In case farmers effectively migrate to cities without having access to the same rights of their urban neighbors, social consequences will probably spread beyond rural areas.

D - Pockets of innovation and desertification

In spite of the spreading of a dominant frame of reference for agricultural modernization and of a common mode of operation, the analysis of cases such as agricultural development projects in Ningxia, the grain sector or Community-Supported Agriculture in the suburbs of Beijing proves that China remains a decentralized country, where pockets of innovation and lagging exist. In the county of Huangmo, in Ningxia, poor environmental and economic conditions prevent the entrepreneurial model to emerge, but at the same time allow

other models to develop instead. These latest gather a wide variety of players belonging to state and non-state circles, between which boundaries are often blur – which is also the case in the grain sector, traditionally managed by the state. In Beijing, rising food safety concerns of wealthy urban consumers encouraged the development of CSA farms, which continuously innovate in terms of sustainable farming practices, holding out the hope that alternative agriculture consuming less pesticides and chemical fertilizers and using less resources emerges. However, the existence of these fragmented pieces of territory does not put back into question the dominant frame of reference for agricultural modernization, but rather demonstrates that the domination of a model for modernization is never incompatible with the existence of other models, which are almost unavoidable in a fragmented political and social environment such as China. In addition, the "alternative models" that were investigated were not fundamentally putting back into question the dominant frame of reference, as in Ningxia, local officials kept on referring to the other elements of the dominant frame and farmers were still locked in their social position, while Beijing innovative CSA farms were neither likely to spread their sustainable model to the whole country, nor fundamentally proposing alternative solutions to social issues brought by the dominant frame of reference for agricultural modernization.

II - Tensions and limits of the argument

Defining the frames of the Chinese state was a task to which many political scientists dedicated important amounts of effort. Driven by a desire to understand the peculiarities of an authoritarian state that demonstrated an "abnormally" strong resilient capacity, a number of scholars have built enlightening theoretical frameworks depicting the features of the Chinese state. These latest, in particular, include "fragmented authoritarianism"[1], "experimentation under hierarchy" [2] or "state-capitalism" [3]. The common element to these theoretical frameworks is that they all depict a regime that has been able to maintain a strong state capacity. I started this investigation with questions in mind strongly influenced by the basic

[1] LIEBERTHAL, Kenneth, LAMPTON, G., David M. (eds.) *Bureaucracy, Politics and Decision-Making in Post-Mao China*. Berkeley, Calif. : University of California Press, 1992.

[2] HEILMANN, Sebastian. Policy Experimentation in China's Economic Rise. Studies in Comparative International Development, March 2008, vol. 43, n°1, p.1-26.

[3] BERGERE, Marie-Claire. *Chine : le nouveau capitalisme d'État*. Paris: Fayard, 2013.

assumption of these frameworks. Where could be found traces of such state capacity in an area which had been abandoned by the state during two decades – agricultural production? Was the ongoing agricultural modernization process redefining the frames of the Chinese state? Could the analysis of this process shed new lights on above-mentioned research questions?

Going further in my research, it appeared unquestionable that "the" Chinese state was in fact made of an array of social actors and that each of these actors had their own set of interests and preferences. In addition, despite the fact that the Chinese state is often regarded as an entity conflicting with social and economic players, the limits of such an approach were rapidly met. Indeed, considering the state as a non-social entity does not faithfully reflect the diversity of relationships between players who, in addition, can have embedded political and economic roles. I chose to consider the Chinese state as an array of social players defined by their relationships with other stakeholders of the society. In addition, although I started with the idea in mind that the analysis of public policy was going to be crucial to answer the questions about the frames of the Chinese state, I rapidly realized that agricultural policies, in their details, varied greatly from one area to another. As a consequence, I chose to give more space to sociological approach – and sociological approach proved particularly useful to assess the peculiarities of agricultural modernization and its consequence on social and environmental sustainability of the sector.

I started my investigation with the intention of not favoring one group of players "conflicting" with the state at the expense of another group. I tried to analyze local patterns of power that were developing in the course of agricultural modernization, instead of state-peasants relationships in general (or state-entrepreneurs relationships, or state-NGOs relationships, etc.). The risk of being too broad of such an analysis encompassing that many stakeholders and policies was a risk that I felt I had to take. In addition, narrowing the focus of this research to the analysis of the social features of the contemporary agricultural modernization process and to a restricted number of sectors enabled me to delineate a reasonable field for investigation.

Another issue I had to deal with was the one raised by the combination of my willingness to describe the frames of "the Chinese state" and of my wish to consider at the same time that state actors were, first and foremost, social actors. This tension between

"statism" and sociological analysis is constant in this dissertation. Despite the fact that I tried to include all the players actually taking part in agricultural modernization at the local level, I remained closer to a statist approach. The main research question was indeed to depict the frames for action of the Chinese state, even if this latest was not considered as a coherent given entity but as an array of actors defined by their relationships with other social players. The idea was to get away from the notion of state but still had to find a coherent frame for the statist approach of this research, to which the main question was related. The debate was settled by saying that common institutions, common resources and common frames of reference and modes of operation were holding together the actors of local states – frames that were poorly challenged by alternative models developed in pockets of innovation or lagging.

I regret that the analysis, due to time constraints, could not investigate what was holding together other stakeholders of the society, who were studied as members of social groups. By relying on the analysis of interests and uncertainties of Crozier and Friedberg, this dissertation proved that there was a certain degree of coherence between the members of groups that were defined (managers of rural based food enterprises, farmers, NGOs, etc.). However, I believe that a more thorough investigation would be useful to go further in this research. Indeed, even though sets of preferences and interests hold them together, in reality, stakeholders experience agricultural modernization in very different ways and have different feelings and objectives that could not be detailed in this dissertation. Considering the whole set of local players taking part in agricultural modernization was a choice I made in order to better serve the purpose of answering the research question. However, this unavoidably led me to dedicate more time to the analysis of the most important actors of modernization – rural food industries, which form the basic element of the corporatist structure of the new agricultural production sector – at the expense of a thorough investigation of other groups of players such as farmers. Such an investigation would surely add rich details to this field of research.

III - Going further: perspectives for the future and global debates

Conclusions were drawn on the qualitative analysis of a limited number of areas. However, a consequent number of interviews were conducted – about 200 in total – and were

completed both with on-site observations and documents gathered during my investigation and with interviews collecting fieldwork experiences of people conducting projects in other areas of the country. Even though this analysis is just a preliminary one and would need to be supplemented by quantitative data – cruelly lacking at the time I conducted research – it still constitutes a solid base defining the social frames of agricultural modernization in China and shedding light on several theoretical frameworks in political science. In addition, this research gives a number of elements on the features of the pathway on which the Chinese agricultural sector is engaging, which is characterized by a certain number of rigidities that are likely to stand the test of time.

A - Triggering change in the future

According to the sayings of a number of central officials I interviewed, the situation of deserted areas is unlikely to change in very drastic ways. Arbitration for financial efforts needs to be done and I was told that the regions characterized by the fragility of their ecosystem or by their low potential for agricultural development were unlikely to be better supported by the central government in the future. This hypothesis is further strengthened by the policy guidelines promoted in recent central documents. As it is indeed emphasized in the 12th Five-Year Plan, strategic regions for agricultural production should be given priority for modernization: "Optimize agricultural production and accelerate the building of the system in […] agricultural main production areas […] 'the seven areas and twenty-three zones [七区二十三带 *qi qu ershisan dai*]"[1].

Pockets of innovation, on their side, will keep on existing: firstly, because of the fragmentation of the Chinese state and the diversity of interests of local officials; and secondly, because experimentation is in itself a model for evolution in China, as explained by a large body of literature[2]. However, for now, these areas of innovation and the models they

[1] 中华人民共和国国民经济和社会发展十年规划和第十二个五年规划zhonghua renmin gongheguo guomin jingji he shehui fazhan di shier ge wunian guihua [12th Five-Year Plan for National Economic and Social Development of the Republic of China (2011-2015)].

[2] For Sebastian Heilmann for instance, "experimentation under hierarchy" forms a distinctive feature of governance in China (HEILMANN, Sebastian. Policy Experimentation in China's Economic Rise. *Studies in Comparative International Development*, March 2008, vol. 43, n°1, p.1-26). See also: HEILMANN, Sebastian. From Local Experiments to National Policy: The Origins of China's Distinctive Policy Process. *The China Journal*, January 2008, n°59, p. 1-30; RAWSKI, Thomas G.

developed poorly put back into question the economic and social marginalization of farmers and seem unable to scale up and to address environmental issues brought by agricultural modernization at the national level.

Nevertheless, questions related to the possible evolution of the dominant agricultural modernization model are worth asking. As we saw, the spreading of certain elements of the dominant frame of reference designed by the central government had consequences on the agricultural modernization pathway that were likely to endure on the middle and long term. The fact that the sector engaged on this pathway indeed created a structural inflexibility that now prevents the country from engaging on more sustainable trajectories.

At the same time, the fissuring of the state's legitimacy is likely to make the central government increasingly in search of new sources for adaptation and power restoration. Until today, one of the most important sources for the legitimacy of the CCP was its ability to generate economic growth. Laliberté and Lanteigne, for instance, argue that economic performance is one of the three bases of the CCP's claims to legitimacy[1]. Even though economic development also took place in the countryside, rural areas are usually considered as having been left out of the process.

A lot of scholars have emphasized that there was in reality a multiplicity of sources of legitimacy for the Chinese state apart from economic growth. Alex Wang, for instance, argues that state legitimacy could be enhanced by reforms conducted inside the state administration such as reforms of the supervision and accountability system of cadres[2]. "Disciplining officials" is also described by Yanqi Tong and Lei Shaohua as a common state response to

---

Implications of China's Reform Experience. *The China Quarterly*, December 1995, n°144, p. 1150-73).

[1] LALIBERTE, André, LANTEIGNE, Marc (eds.). *The Chinese Party-State in the 21st Century: Adaptation and the reinvention of legitimacy*. London and New York: Routledge, 2008, p. 8-10. Even though considering economic growth as the basis of the CCP's legitimacy is an over-simplification for Heike Holbig and Bruce Gilley, the authors say that the importance attached to economic growth has remained high among the population (they cite the results of the question of the 2007 World Values Survey asking people to cite "the most important goal for the country", with positive answers accounting for 73 percent of responses (HOLBIG, Heike, GILLEY, Bruce. In Search of Legitimacy in Post-revolutionary China: Bringing Ideology and Governance Back In. *GIGA Working Papers*, March 2010, n°127)).

[2] WANG, Alex L. The Search for Sustainable Legitimacy: Environmental Law and Bureaucracy in China. *The Harvard Environmental Law Review*, 2013, vol. 37, n°2, p. 365-440.

social protests[1] – and is also one of the levers used by Xi Jinping to widen the base of his power. A number of analyses also reach the conclusion that state legitimacy could be improved by the evolution of modes of governance[2] or by ideology-based arguments[3]. For Beatrice Hibou, state power is not only about obedience and prohibition and is not necessarily imposed from above, but can also please desires, these "positive elements that influence the behavior of citizens". For her, the desire of modernization leads to the desire of state and therefore constitutes an important vector of domination[4]. Traditionally, the notion of modernization is associated with the development of capitalism and with urbanization. In China, although agriculture was considered as one of the main pillars of economic development during the Maoist era, the 1980s and 1990s acknowledged the triumph of the classical view, according to which urban areas are the best representatives of modernity[5] and agriculture and the countryside are everything but places where modernization can be expressed. In the last decade however, we acknowledged a return of modernization discourses for rural areas. Through the development of private agricultural entrepreneurship led by private entrepreneurs and dragonhead enterprises progressively building a modern and industrialized food chain, a new wave of modernization reached rural areas and got peasants on the board of modern China, likely to strengthen the legitimacy of the state.

However, even though such levers for legitimacy exist and even though the Chinese state has proven a strong capacity to find new sources for legitimacy in the past[6], at least two

---

[1] TONG, Yanqi, LEI, Shaohua. *Social protest in contemporary China, 2003-2010 : transitional pains and regime legitimacy*. Abingdon, Oxon ; New York : Routledge, 2014.

[2] Some authors reached the conclusion that China, although being an authoritarian state, had proven able to develop forms of democracy and a pluralization of the political process in order to enhance its legitimacy (see, among others: GUO, Baogang. *China's quest for political legitimacy: the new equity-enhancing politics*. Lanham, Md. : Lexington Books, 2010).

[3] DENG, Zhenglai, GUO, Sujian. *Reviving legitimacy : lessons for and from China*. Lanham, Md. ; Boulder, Colo. ; New York : Lexington Books, 2011.

[4] HIBOU, Béatrice. *Anatomie politique de la domination*. Paris : la Découverte, 2011.

[5] As stated by Emily Yeh, Kevin O'Brien and Jingzhong Ye: "[In the 1990s] cities became metonyms for development, and urbanization became a top goal of China's modernization strategy." (YEH, Emily T., O'BRIEN, Kevin J., YE, Jingzhong. Rural politics in contemporary China. *The Journal of Peasant Studies*, 2013, vol. 40, n°6, p. 917)

[6] LALIBERTE, André, LANTEIGNE, Marc (eds.). *The Chinese Party-State in the 21st Century: Adaptation and the reinvention of legitimacy*. London and New York: Routledge, 2008; GUO, Baogang. *China's quest for political legitimacy: the new equity-enhancing politics*. Lanham, Md. : Lexington Books, 2010 ; HEBERER, Thomas, SCHUBERT, Gunter (eds.). *Regime legitimacy in*

questions arise. The first one is linked to the possibility, for government officials, to link up with new circles of economic players – farmers – considering the importance of cultural factors, path dependencies and local sets of interests. Not taking into account the point of view of small farmers could be particularly detrimental for the legitimacy of the Chinese state, not only in rural areas but in urban areas as well. The second question is about the practical capacity of central and local governments to maintain their level of financial support in agricultural development[1]. Challenges therefore remain in the field of agriculture and state legitimacy. According to Almond and Powell, there are five dimensions of state capacity: extractive, regulative, distributive, symbolic and responsive[2]. The Chinese state, on the side of agricultural modernization, still has to prove its ability to develop regulative, distributive and responsive capacities. According to Remick, state-building is "the process in which state actors make a state organization grow in size, extend its reach and increase its functions"[3]. It is not sure yet whether the state-building process that started in rural areas with the 2004 Number One Document will last over time, as, for now, it still impedes the majority of small farmers from taking part in agricultural modernization.

What factors and what kind of change are likely to help the country overcome this challenge in the future? A wide body of literature exists on change. In particular, it insists on the fact that the institutional, regulatory and social context is not fixed and may vary over time and trigger change. For instance, the evolution of policy guidelines and the implementation of new political tools in the past proved that they could trigger change. New

contemporary China : institutional change and stability. New York ; London : Routledge, 2009 ; TONG, Yanqi, LEI, Shaohua. *Social protest in contemporary China, 2003-2010 : transitional pains and regime legitimacy.* Abingdon, Oxon ; New York : Routledge, 2014.

[1] Among others, questions arise about the financial capacity of the state to keep on supporting agricultural development. When I conducted fieldwork, debates were intense about the question of the abolition (or non-abolition) of minimum prices for grain. Even though these debates were not solely motivated by financial purposes – there were also market distortion issues – questions about the financial capacity of the Chinese state to keep on supporting agriculture on a sustainable way are worth raising, given the fact that the "state-led and export driven model has now almost exhausted its potential" (Yu Yongding, former director of the Institute of World Economics and Politics at CASS, cited by Cheng Li in LI, Cheng. Introduction: A Champion for Chinese Optimism and Exceptionalism In HU, Angang. *China in 2020: a new type of superpower*. Washington, D.C.: Brookings Institution Press, 2011).

[2] ALMOND, Gabriel Abraham, POWELL, G. Bingham. *Comparative politics: a developmental approach.* Boston, Mass. : Little, Brown, 1966, p. 190-212.

[3] REMICK, Elizabeth J. *Building local states : China during the republican and post-Mao eras*. Cambridge, Mass. ; London : Harvard University Asia Center, 2004, p. 12.

policy guidelines promoted by central documents and new financial support tools indeed had important effects on the modernization of the agricultural sector over the last decade.

In the past, the Chinese government demonstrated a strong preference for gradual reforms[1] – as opposed to "shock therapy". However, given the considerable challenge brought by environmental issues and their probable consequences on national food security in the middle term, major changes are likely to happen in the near future. Concrete reforms of the *hukou* scheme are already promulgated, considering the urgency to provide solutions to the unbearable situation of migrant farmers. For instance, migrants are now eligible for urban residency status in most small towns across the country. It is not sure however whether access to social security and education will outweigh a guaranteed allocation of agricultural land.

In addition, the Chinese government recently decided to promote family farming as another sociological tool to steer agricultural modernization, alongside dragonhead enterprises and farmers' associations. Family farming, which theoretically excludes industrial enterprises, could give a new importance to farmers and make them become real economic players of agricultural modernization. However, as the example of farmers' cooperatives depicted in the dissertation demonstrates, change mainly comes from stakeholders and social structures, even if the fact that sets of interests, preferences and strategies are never fixed and can vary according to contextual evolutions – for instance, the establishment of new regulations – holds out hope that the situation evolves.

Change can also come from institutions, through administrative reforms. Even though the recent evolution of the Chinese governmental structure left agricultural administrations relatively unimpaired, changes inside the general administration of the state could still affect the mode of implementation of agricultural policies. For instance, rising environmental issues increasingly push the central government to revise the cadres evaluation system, which could in turn lead to stricter supervision of agricultural policy implementation or to a rise in importance of environmental evaluation criteria – even though a number of studies proved that this mechanism had been inefficient so far[2].

---

[1] LIEW, Leong H. Gradualism in China's Economic Reform and the Role for a Strong Central State. *Journal of Economic Issues*, September 1995, vol. 29, n°3, p. 883-895.

[2] WANG, Alex L. The Search for Sustainable Legitimacy: Environmental Law and Bureaucracy in China. *The Harvard Environmental Law Review*, 2013, vol. 37, n°2, p. 365-440.

As we see, administrative reforms, the promulgation of new policy guidelines, the development of new political and sociological tools are likely to bump against sociological obstacles and local path dependencies. The implementation of change is often limited by the set of interests and the capacity to act of local officials and the effects of policies are likely to be narrowed down by the resilience of cultural factors[1].

As Bezes and Le Lidec's research emphasizes, "*les réformes institutionnelles, [...] souvent présentées au plan rhétorique comme le moteur de profonds changements, [...] n'ont pourtant pas nécessairement pour effet de modifier les structures de pouvoir, règles ou jeux antérieurs*".[2] The authors argue that the first necessary condition for the emergence of institutional reforms is the identification of "reform entrepreneurs"[3], capable of reconciling conflicting points of view and enabling compromise to be reached, in order to persuade large groups of actors to be part of a support coalition. As it appeared at the beginning of the dissertation, rural agri-food entrepreneurs could have played such a role of "reform entrepreneurs". However, the distance that is put between them and farmers-workers limits their ability to persuade these groups of actors to support the "curbing" of the current unsustainable agricultural pathway. A lot of work remains to be done to identify these social stakeholders of change.

B - Enlarging the debate to worldwide transition pathways

In the 1960s and 1970s, the promotion of the "Green Revolution" as a solution to address global hunger contributed to the emergence of input-intensive agricultural production

[1] While the capacity of local states was thoroughly investigated in the thesis, cultural factors, although mentioned, would deserve more detailed sociological investigation, even though comprehensive analyses already exist on the subject (MURPHY, Rachel. Turning peasants into modern Chinese citizens: 'population quality' discourse, demographic transition and primary education. The China Quarterly, 2004, n°177; ANAGNOST, Ann, The corporeal politics of quality (suzhi). Public Culture, 2004, vol. 16, n°2, p.189-208; THOGERSEN, Stig. Parasites or civilizers: the legitimacy of the Chinese Communist Party in rural areas. China: An International Journal, 2003, vol. 1, n°2; KIPNIS, Andrew. Suzhi: A Keyword Approach. The China Quarterly, June 2006, n°186, p. 295-313).

[2] [Institutional reforms […] often presented as drivers of change, […] often do not necessarily affect power patterns, rules or games inherited from the past] (BEZES, Philippe, LE LIDEC, Patrick. Ce que les réformes font aux institutions In LAGROYE, Jacques, OFFERLE, Michel. *Sociologie de l'institution*, Paris : Belin, 2010, p. 70).

[3] "Entrepreneurs de réforme" (BEZES, Philippe, LE LIDEC, Patrick. *Ibid.*, p. 86)

models, of which the environmental and social limits have recently been widely denounced[1]. According to Michel Griffon, not only would the Green Revolution have been unable to reach poor people – particularly landless peasants – in Asia and in South America, but it would also have caused a disastrous environmental degradation that now threatens the possibilities to ever achieve the first objective of the Green Revolution: solving global hunger.

The food price crisis of 2007-2008 revived the debates by proving that agricultural and food security issues are still to be addressed, both in developing and in developed countries. Since then, agricultural pathways arouse considerable controversy around the world. Although none of the agricultural transition models discussed in international debates can be proven to be silver bullet for the future, defining models and debating about their features are essential, because it gives a vision for the evolution of the agricultural sector – an evolution that has now become necessary.

By putting forward the sociological and cultural obstacles impeding the evolution of the agricultural sector towards more sustainable practices, this research wishes to inform the debate on the necessity to take into account stakeholders and to use sociology and behavioral studies and to warn against the risk to believe that implementation of standard political, economic and technological reforms will necessarily trigger change. As such, the 2015 World Development Report "Mind, Society and Behavior", which emphasizes that "development policies based on new insights into how people actually think and make decisions will help governments and civil society achieve development goals more effectively"[2], is a major step forward.

In addition, by showing the considerable importance of involving small farmers in agricultural transition and by underlining the difficulties agri-food enterprises are experiencing to become real "reform entrepreneurs", this research intends to contribute to the foundation of a corpus of research stressing the need to give a role to small farmers in agricultural transitions. Getting small farmers on board is not only a way to ensure the effective implementation of more sustainable farming practices. It is also a mean to enrich the general knowledge on sustainable farming practices. As underlined by Olivier De Schutter:

[1] GRIFFON, Michel. Révolution Verte, Révolution Doublement Verte : Quelles technologies, institutions et recherche pour les agricultures de l'avenir ? *Mondes en développement*, 2002, vol. 1, N°117, p. 39-44.

[2] World Bank. *World Development Report: Mind, Society and Behavior*. World Bank, 2015.

"Rather than treating smallholder farmers as beneficiaries of aid, they should be seen as experts with knowledge that is complementary to formalized expertise" [1]. At the beginning of the 20th century, Franklin King was already giving tribute to the richness of local practices – his book, Farmers of Fourty Century[2], was first published in 1911... Today, more than ever, the value of these practices needs to be better acknowledged.

The analysis of the Chinese case demonstrated that frames of reference promoted by agricultural policies and local patterns of power were likely to hinder the participation of small farmers in agricultural transformation. Even when there is willingness of central governments to implement solutions to voice out the views of farmers, it is often not sufficient to trigger change[3]. Could it possible to voice out their views and to frame the collective action of small farmers, for instance inside international forums that could influence, at the same time, the action of national governments and the one of local actors[4]? Which tools would allow to better communicate with marginalized groups of small farmers? These questions, which are clearly not unique to China, would deserve another doctoral dissertation…

[1] United Nations Special Rapporteur on the Right to Food. *Report submitted by the Special Rapporteur on the right to food, Olivier De Schutter. A/HRV/16/49*. Geneva: Author, 2010, p. 18.

[2] KING, Franklin. *Farmers of forty centuries; or, Permanent agriculture in China, Korea and Japan*. London : J. Cape, 1949.

[3] Similarly, a number of scholars underline the difficulty, for the Chinese state, to establish an audit regime, that would address the wake of social protests and reinforce the state capacity ("As the findings show, the evolution of the state audit capacity in China is not a simple, linear process, but rather it is associated with multiple changes in the legal and regulatory framework, inter-institutional relations and the norms guiding the behaviour of institutional actors." (GONG, Ting. Institutional learning and adaptation: developing state audit capacity in China. *Public Administration and Development*, 2009, n°29, p. 33-41).

[4] CORTELL, Andrew P., DAVIS, James W. Jr. How Do International Institutions Matter ? The Domestic Impact of International Rules and Norms. *International Studies Quarterly*, 1996, vol. 40, p. 451-478.

VIII. Bibliography

I - Primary sources

A - Chinese official documents

1) **Five-Year Plans**

中华人民共和国国民经济和社会发展第七个五年计划 *zhonghua renmin gongheguo guomin jingji he shehui fazhan di qi ge wunian jihua* [7th Five-Year Plan for National Economic and Social Development of the Republic of China (1986-1990)]

中华人民共和国国民经济和社会发展十年规划和第八个五年计划 *zhonghua renmin gongheguo guomin jingji he shehui fazhan di ba ge wunian jihua* [8th Five-Year Plan for National Economic and Social Development of the Republic of China (1991-1995)]

中华人民共和国国民经济和社会发展十年规划和第九个五年计划 *zhonghua renmin gongheguo guomin jingji he shehui fazhan di jiu ge wunian jihua* [9th Five-Year Plan for National Economic and Social Development of the Republic of China (1996-2000)]

中华人民共和国国民经济和社会发展十年规划和第十个五年计划 *zhonghua renmin gongheguo guomin jingji he shehui fazhan di shi ge wunian jihua* [10th Five-Year Plan for National Economic and Social Development of the Republic of China (2001-2005)]

中华人民共和国国民经济和社会发展十年规划和第十一个五年规划 *zhonghua renmin gongheguo guomin jingji he shehui fazhan di shiyi ge wunian guihua* [11th Five-Year Plan for National Economic and Social Development of the Republic of China (2006-2010)]

中华人民共和国国民经济和社会发展十年规划和第十二个五年规划 *zhonghua renmin gongheguo guomin jingji he shehui fazhan di shier ge wunian guihua* [12th Five-Year Plan for National Economic and Social Development of the Republic of China (2011-2015)]

2) **Number one documents**

2004 年中央一号文件 - 国务院关于促进农民增加收入若干政策的意见 *2004 nian zhongyang yihao wenjian – guowuyuan guanyu cujin nongmin zengjia shouru ruogan zhengce de yijian* [2004 Number One Document – State Council's opinion about policies to accelerate the rise in farmers' income]

2005 年中央一号文件 - 国务院关于进一步加强农村工作提高农业综合生产能力若干政策的意见 *2005 nian zhongyang yihao wenjian - guowuyuan guanyu jinyibu jiaqiang nongcun gongzuo tigao nongye zonghe shengchan nengli ruogan zhengce de yijian* [2005 Number One Document – State Council's opinion about policies to go a step further in the strengthening of rural work to raise the production capacity of agriculture]

2006 年中央一号文件 - 国务院关于推进社会主义新农村建设的若干意见 *2006 nian zhongyang yihao wenjian – guowuyuan guanyu tuijin shehui zhuyi xin nongcun jianshe de ruogan yijian* [2006 Number One Document – State Council's opinion on how to promote the building of the new socialist countryside]

2007 年中央一号文件 - 国务院关于积极发展现代农业扎实推进社会主义新农村建设的若干意见 *2007 nian zhongyang yihao wenjian – guowuyuan guanyu jiji fazhan xiandai nonghe zhashi tuijin shehui zhuyi xin nongcun jianshe de ruogan yijian* [2007 Number One Document – State Council's opinion about how to actively develop modern agriculture and to promote the building of the new socialist countryside]

2008 年中央一号文件 - 关于切实加强农业基础建设进一步促进农业发展农民增收的若干意见 *2008 nian zhongyang yihao wenjian – guowuyuan guanyu qieshi jiaqiang nongye jichu jianshe jinyibu cujin nongye fazhan nongmin zengshou de ruogan yijian* [2008 Number One Document – State Council's opinion about how to realistically reinforce the building of the basis of agriculture and go a step further in agricultural development and in the increase of farmers' income]

2009 年中央一号文件 - 国务院关于 2009 年促进农业稳定发展农民持续增收的若干意 *2009 nian zhongyang yihao wenjian – guowuyuan guanyu 2009 nian cujin nongye wending fazhan nongmin chixu zengshou de ruogan yijian* [2009 Number One Document – State Council's opinion about how to accelerate the stable development of agriculture and how to keep on increasing farmers' income]

2010 年中央一号文件 - 国务院关于加大统筹城乡发展力度进一步夯实农业农村发展基础的若干意见 *2010 nian zhongyang yihao wenjian – guowuyuan guanyu jiada tongchou chengxiang fazhan lidu jinyibu hangshi nongye nongcun fazhan jichu de ruogan yijian* [2010 Number One Document – State Council's opinion about how to enlarge the dynamic of

comprehensive rural and urban development and go a step further in the basis of agricultural and rural development]

2012 年中央一号文件 - 国务院关于加快推进农业科技创新持续增强农产品供给保障能力的若干意见 *2012 nian zhongyang yihao wenjian – guowuyuan guanyu jiakuai tuijin nongye keji chuangxin chixu zengqiang nongchanpin gongji baozhang nengli de ruogan yijian* [2012 Number One Document – State Council's opinion about how to accelerate the promotion of agricultural science and technology innovation and to keep on strengthening the ability to protect food security]

2013 年中央一号文件 - 国务院关于加快发展现代农业 进一步增强农村发展活力的若干意见 *2013 nian zhongyang yihao wenjian – guowuyuan guanyu jiakuai fazhan xiandai nongye jinyibu zengqiang nongcun fazhan huoli de ruogan yijian* [2013 Number One Document – State Council's opinion about how to accelerate the development of modern agriculture and go a step further in the strengthening of the vitality of rural development]

2014 年中央一号文件 - 国务院关于全面深化农村改革加快推进农业现代化的若干意见 *2014 nian zhongyang yihao wenjian – guowuyuan guanyu quanmian shenhua nongcun gaige jiakuai tuijin nongye xiandaihua de ruogan yijian* [2014 Number One Document – State Council's opinion about how to comprehensively deepen rural reform and accelerate the push for agricultural modernization]

3) Others

a) Central level documents

财政部，财政支持"三农"情况 *Caizhengbu, caizheng zhichi "sannong" qingkuang* [Ministry of Finance. *Financial support situation for the three rural issues*. Beijing, 2014] http://www.mof.gov.cn/zhuantihuigu/czjbqk1/czzc/201405/t20140507_1076149.html

Central Committee of the Communist Party of China. *Communiqué of the Third Plenary Session of the 18th Central Committee of the CPC.* Beijing, 2014 http://www.china.org.cn/chinese/2014-01/16/content_31213800_3.htm

Department of Sectoral Policy and Law of the Chinese Ministry of Agriculture. *2011 Policy Measures to Support Increase in Grain Output and Farmers' Income (Part II)*. Online

newsfeed of the Ministry of Agriculture, 19/04/2013, http://english.agri.gov.cn/governmentaffairs/pi/201304/t20130422_19488.htm

国家质量监督检验检疫总局《食品生产许可管理办法》(总局令第 129 号) *guojia zhiliang jiandu jianyan jianyi zongju « shipin shengchan xuke guanli banfa » (zongju ling di 129 hao)* [General Administration of Quality Supervision, Inspection and Quarantine. *Of the ways of managing food production licenses (General Order n°129)*] http://www.aqsiq.gov.cn/xxgk_13386/jlgg_12538/zjl/20092010/201210/t20121016_239328.htm

Information Office of the Chinese Ministry of Agriculture. Vice Minister Zhang prioritizes three major projects in agricultural sci-tech. Online newsfeed of the Ministry of Agriculture, 2013/03/04 http://english.agri.gov.cn/news/dqnf/201304/t20130409_12148.htm

关于改进地方党政领导班子和领导干部政绩考核工作的通知, 人民日报, 2013 年 12 月 10 日 *guanyu gaijin defang dangzheng lingdao banzi he lingdao ganbu zhengji kaohe gongzuo de tongzhi, renmin ribao* [Notice about the improvement of the evaluation of leading cadres and leadership ranks of local party and government administration. *People's Journal*, 10/12/2013] http://renshi.people.com.cn/n/2013/1210/c139617-23793409.html

中华人民共和国农民专业合作社法 *Zhonghua Renmin Gongheguo Nongmin Huanye Hezuoshe Fa* [People's Republic of China. *Law on Farmers' Specialized Cooperatives*] http://www.gov.cn/jrzg/2006-10/31/content_429182.htm

关于 2008-2013 年中央和地方预算执行情况与 2009-2014 年中央和地方预算草案的报告 *guanyu 2008-2013 nian zhongyang he difang yusuan zhixing hang qingkuang yu 2009-2014 nian zhongyang he difang yusuan cao'an de baogao* [Report on 2008-2013 central and local budget situation and 2009-2014 draft for central and local budget]

国务院关于印发中国农村扶贫开发纲要（2001—2010 年）的通知 *Guowuyuan guanyu yinfa zhongguo nongcun fupin kaifa gangyao (2001-2010 nian) de tongzhi* [State Council. *Outline for China Rural Poverty Alleviation and Development 2001-2010*] http://www.gov.cn/gongbao/content/2001/content_60922.htm

国务院研究课题室, 中国农民工调研报告, 北京: 言实出版社, 2006 *Guowuyuan yanjiu keti shi, zhongguo nongmingong diaoyan baogao, beijing : yanshi chubanshe* [Research office of the Chinese State Council. *Research Report on Migrant Workers*. 2006].

b) Local level documents

2012 年自治区 GDP 预计达到两千四百亿元, 宁夏自治区人民政府, 26/12/2012 *2012 nian zizhiqu GDP yuji dadao liang qian si bai yi yuan, ningxia zizhiqu renmin zhengfu* [The 2012 GDP of the autonomous region reaches 240 billion yuan, Government of Ningxia] http://www.nx.gov.cn/zwxx/zw/zwdt/47370.htm

2013 年章贡区具备农机购置补贴产品经销资质的农机经销商名单 (2013 *nian zhanggong qu jubei nongji gouzhi butie chanping jingxiao zhidi de nongji jingxiaoshang mingdan*) [2013 Name list of brokers of agricultural machinery for the subsidy system for the purchase of agricultural machinery of Zhanggong qu]

["Huangmo"] 2012 年农业机械购置补贴办理流程 (*["Huangmo"] 2012 nian nongye jixie gouzhi butie banli liucheng*), published on December 12th, 2012, on the website of Huangmo's government

关于印发 2013 年烟台市农业机械购置补贴工作实施方案的通知 *guanyu yinfa 2013 nian yantaishi nongye jixie gouzhi butie gongzuo shishi fang'an de tongzhi* [Information on Yantai's implementation program of subsidies for the purchase of agricultural machinery]

["Lanshui"] 2013 年第一批农业机械购置补贴政策简介 (*["Lanshui"]2013 di yi pi nongye jixie gouzhi butie zhengce jianjie*), published on June 24th, 2013, by Lanshui office of agricultural machinery (农机办 *nongjiban*), on the website of Lanshui government.

[Lushan]农机局:制定农机购置补贴政策实施三项管理制度 *[Lushan]nongjiju : zhiding nongji gouzhi butie zhengce shishi sanxiang guanli zhidu* [[Lushan] bureau of farm machinery: Establishing a three items-management system for policies regarding subsidies for farm machinery purchase], published on Lushan government's website on 24/02/2014.

举办全市农机购置补贴培训班 *juban quanshi nongji gouzhi butie peixun ban* [Lushan government: Organizing trainings for subsidies for the purchase of farm machinery] published on the government's website on 12/02/2014.

[Lushan]简化农机购置补贴发放程序 *[Lushan] jianhua nongji gouzhi butie fafang chengxu* [[Lushan] simplifies the procedure for subsidies for farm machinery purchase], published on Lushan government's website on 13/02/2014.

市农机局改革农机购置补贴程序 *shi nongjiju gaige nongji gouzhi butie chengxu* [Municipal agricultural bureau reforms the procedure for subsidies for the purchase of agricultural machinery] published on April 1st, 2013, by Lushan bureau of agricultural machinery (市农机局 *shi nongjiju*), on the website of Lushan government.

宁夏农业机械购置补贴办理流程 *ningxia nonye jixie gouzhi butie banli liucheng* [Ningxia procedure for subsidies for the purchase of agricultural machinery]

B - Other official documents

Loi n° 47/1775 du 10 septembre 1947 modifiée par la loi n° 92 643 du 13 juillet 1992. http://legifrance.gouv.fr/affichTexte.do?cidTexte=JORFTEXT000000684004

Code Rural et de la Pêche Maritime. http://www.legifrance.gouv.fr/affichCode.do?cidTexte=LEGITEXT000006071367

Coop de France. *Observations de Coop de France sur le projet de lignes directrices de l'Autorité de la concurrence sur le contrôle des concentrations – Annexe relative aux coopératives agricoles*. S.I. : Coop de France, 19 Avril 2013, http://www.autoritedelaconcurrence.fr/doc/coop_france_obs_ld_concentrations_2013.pdf

International Co-operative Alliance. *International Co-operative Alliance By-laws*. S.I.: International Co-operative Alliance, 1995 - revised in 2013, http://ica.coop/sites/default/files/attachments/ICA%20Bylaws%20-%20updated%202013%20-%20English_0.pdf

C - Journals

1) Sources in Chinese

专家八问主粮转基因化:我国究竟为何要盲目引进, 环球时报, 2013 年 08 月 21 日 Zhuanjia ba wen zhuliang zhuanjiyinhua : wo guo jiujing weihe yao mangmu yinjin, Huanqiu shibao [8 expert's questions on GM-staple grain: why exactly does our country import

unnecessary things ? *Huanqiu Journal*, 21/08/2013] http://news.xinhuanet.com/food/2013-08/21/c_125216637.htm

范子英, 加速农民工“市民化”, 财经, 2012 年第 19 期 Fan Ziying, jiasu nongmingong ‘shiminhua’, Caijing [FAN, Ziying. Accelerate the transformation of rural migrants into urban residents. Caijing, n°19, 29 July 2012]

宫靖, 镉米杀机. 财新《新世纪》, 2011 年第 6 期 Gong Jing, ge mi shaji. Caixin ‘xin shiji’ [GONG, Jing. The thoughts of killing of cadmium rice. Caixin New Century, 2011, n°6]

郝晓明, 农药解毒酶让“舌尖”更安全, 科技日报, 2014 年 06 月 20 日 *Hao Xiaoming, Nongyao jiedu mei rang “shejian” geng anquan, Keji ribao, 2014/06/20* [HAO, Xiaoming, Pesticide-degrading enzyme to improve food safety, Journal of Science and Technology, 20/06/2014] http://digitalpaper.stdaily.com/http_www.kjrb.com/kjrb/html/2014-06/20/content_266279.htm?div=-1

蓝方, 城乡鸿沟：农民市民化中那些待拆的壁垒, 财新《新世纪》, 07/01/2013 Lan Fang, chengxiang honggou: nongmin shimin hua zhong naxie dai chai de bilei, Cai xin “Xin shiji” [LAN, Fang. The gap between urban and rural areas: the barriers to the dismantlement of transformation of rural migrants into urban residents. Caixin New Century, n°1, 7 January 2013]

李家宇, 孟兴, 刘畅, “有机食品，想说爱你不容易” , 天津网, 31/10/2011 *Li Jiayu, Meng Xing, Liu Chang, Youji liangshi xiang shuo ai ni bu rongyu, Tianjin Wang* [LI, Jiayu, MENG, Xing, LIU, Chang. Saying “I love you” to organic products is not easy. Tianjin Network, 31/10/2011] http://www.tianjinwe.com/tianjin/tjcj/201110/t20111031_4495764.html

李雪娜. 湘粤米争溯源 . 财新《新世纪》, 2013 年第 20 期 Li Xuena, xiang yue mi zheng suyuan, Caixin “xin shiji” [LI, Xuena. Tracing to the source the rice controversy in Hunan and Guangdong. Caixin New Century, 2013, n°20]

刘玮宁, 张炜哲, 工程院士称全国 3 亿亩耕地受到重金属污染, 羊城晚报, *Liu Weining, Zhang Weizhi, Gongcheng yuanshi cheng quanguo 3 yi mu gengdi shoudao zhongjinshu wuran, Yangcheng wanbao* [LIU, Weining, ZHANG, Weizhe. Academician of the Chinese Academy of Engineering: 300 million mu of arable land are polluted by heavy metals.

Yangcheng Evening News, 12/10/2011] http://www.chinanews.com/gn/2011/10-12/3383763.shtml

陆铭, 自由迁徙的经济价值, 财经, 2012 年第 18 期 Lu Ming, Ziyou qianxi de jingji jiazhi, Caijing [LU, Ming, The economic benefits of the freedom of movement. Caijing, n°18, 16 juillet 2012].

国土部挂牌督办河北省永年县违法征占土地案, 中国国土资源部网, 16/05/2014 *Guotubu guapai duban hebeisheng yongnianxian weifa zhengzhan tudi an* [Ministry of Land and Resources hangs out the shingle of land right violation of the county of Yongnian in Hebei, Published on the website of the Ministry of Land and Resources of China, 16/05/2014 http://www.mlr.gov.cn/xwdt/mtsy/people/201405/t20140516_1317279.htm

国土部限期六地方政府整改土地违规, 中国国土资源部网, 10/04/2014 *Guotubu xianqi liu defang zhengfu zhenggai tudi weigui* [Ministry of Land and Resources rectifies and reforms land rights violations in six local governments, Published on the website of the Ministry of Land and Resources of China, 10/04/2014] http://www.mlr.gov.cn/xwdt/mtsy/qtmt/201404/t20140410_1311884.htm

祁春梅, 宁夏回族自治区 2012 年国民经济和社会发展统计公报, 宁夏日报, 2013 年 03 月 18 日 *Qi Chunmei, Ningxia Huizu Zizhiqu 2012 nian guomin jingji he shehui fazhan tongji gongbao, Ningxia ribao* [QI, Chunmei. 2012 Statictical Bulletin of Economic and Social Development of Ningxia Autonomous Province. *Journal of Ningxia*, 18/03/2013] http://www.nx.xinhuanet.com/2013-03/18/c_115063536.htm

汤敏, “让农村金融更普惠”, 《财经》杂志, 11/11/2012. *Tang Min, Rang nongcun jinrong geng puhui. Caijing Zazhi* [TANG, Min. Allowing rural finance to be more inclusive. *Caijing Magazine*, November 11th, 2012].

王培成, “农村金融破与立”, 《财经》杂志, 11/11/2012. *Wang Peicheng, Nongcun jinrong po yu yi, Caijing Zazhi* [WANG, Peicheng. Breaking and building rural finance. *Caijing Magazine*, November 11th, 2012].

徐秀梅, 2012 年宁夏工业经济形势分析及 2013 年走势判断, 宁夏回族自治区人民政府研究、发展中心, 2013 年 8 月 22 日 *Xu Xiumei, 2012 nian Ningxia gongye jingji xingshi fenxi ji 2013 nian zhoushi panduan, Ningxia Huizu Zizhiqu renmin zhengfu yanjiushi, fazhan*

zhongxin [XU, Xiumei. Analysis of the 2012 industrial economy of Ningxia and determination of the 2013 tendency. Website of the research department and centre for development of the government of Ningxia, 22/08/2013] http://www.nxyjs.com/ReadNews.asp?NewsID=3528

于猛, 评估报告称地方政府"土地依赖症"成体制性障碍, 人民日报, 2011 年 11 月 25 日 Yu Meng, pinggu baogao cheng defang zhengfu 'tudi yilai zheng' cheng tizhi xing zhan''ai, renmin ribao [YU, Meng. The local governments' sickness of land dependency is turning into an institutional obstacle. People's Daily, 25 November 2011] http://politics.people.com.cn/GB/70731/16387913.html

张 春. 环境公益诉讼 病在哪里？中外对话, 2013 年 17 月 15 日 Zhang Chun, huanjing gongyi susong bing zai nail? Zhongwai duihua [ZHANG, Chun. Where does the illness of legal proceedings for environmental public interests stand? China Dialogue, July 15, 2013] https://www.chinadialogue.net/article/show/single/ch/6206-Cadmium-pollution-in-Yunnan-reopens-debate-over-public-interest-litigation-

张德霖,进一步严格公正廉洁效能执法, 中国国土资源部网, 21/05/2014 *Zhang Delin, jinyibu yange gongzheng lianjie xiaoneng zhifa, zhongguo guotu ziyuan bao* [ZHANG, Delin. Going a step further in impartial fair honest and efficient enforcement of the law. Published on the website of the Ministry of Land and Resources of China, 21/05/2014] http://www.mlr.gov.cn/xwdt/jrxw/201405/t20140521_1317621.htm

张雯, [Huangmo]县简介, 新华网宁夏频道 2012 年 04 月 23 日 *Zhang Wen, [Huangmo] xian jieshao, xinhuawang ningxia pindao* [ZHANG, Wen. Presentation of [Huangmo]. Xinhua Web Ningxia Channel, 23/04/2012] http://www.nx.xinhuanet.com/2012-04/23/c_111826263.htm

郑道. 拯救大米. 财新《新世纪》, 2013 年第 20 期 Zheng Dao, zhengjiu dami, Caixin "xin shiji" [ZHENG, Dao. Save rice. Caixin New Century, 2013, n°20]

郑道, 宫靖. 大米镉超标争议, 财新《新世纪》, 2013 年第 20 期 Zheng Dao, Gong Jing, Dami ge chaobiao zhengyi, Caixin "xin shiji" [ZHENG, Dao, GONG, Jing. The cadmium rice controversy. Caixin New Century, 2013, n°20].

2) Other sources

Cadmium Rice' Is China's Latest Food Scandal. *New York Times*, 20/05/2013 http://rendezvous.blogs.nytimes.com/2013/05/20/cadmium-rice-is-chinas-latest-food-scandal/?_php=true&_type=blogs&_r=0

China's poultry industry wants to hush up bird flu news in damage control bid. South China Morning Post, 05/02/2014 http://www.scmp.com/news/china-insider/article/1421319/chinas-poultry-industry-wants-hush-bird-flu-news-damage-control

China moves to improve vegetable supply. *Xinhua*. 18/08/2010 http://www.chinadaily.com.cn/china/2010-08/18/content_11172694.htm, accessed on May 1st, 2014.

MTCP Second Sub-regional Farmers' Forum in Southeast Asia and China was Launched in Nanning of China. *China Farmers' Cooperatives*. http://www.cfc.agri.gov.cn/cfc/html/205/2012/20121108145225497501848/20121108145225497501848_.html

'Sunshine' project to offer rural people job training, People daily, 18/02/2004 http://english.people.com.cn/200402/18/eng20040218_135081.shtml

WANG, Xiaodong, WANG, Zhuoqiong, SHAN, Juan. China Dairy measures start at source. China Daily, June 21, 2013 http://www.chinadaily.com.cn/business/2013-06/21/content_16642075.htm

D - Websites

Database of the FAO, http://faostat3.fao.org/faostat-gateway/go/to/home/E

Database of ASTI (Agricultural Science and Technology Indicators, led by IFPRI), http://www.asti.cgiar.org/data/

Database of the National Bureau of Statistics of China, http://data.stats.gov.cn/workspace/index?m=hgnd

Database of the World Bank, http://data.worldbank.org/

World Value Survey 2010-2014, http://www.worldvaluessurvey.org/WVSDocumentationWV6.jsp

II - Secondary sources

A - Books, Contributions and Reports

ADDAMS, Lee, BOCCALETTI, Giulio, KERLIN, Mike, STUCHTEY, Martin et al. *Charting our Water Future*. S.I.: 2030 Water Resources Group, 2009.

ALMOND, Gabriel Abraham, POWELL, G. Bingham. *Comparative politics: a developmental approach.* Boston, Mass. : Little, Brown, 1966.

AMEMIYA, Hiroko. Genèse du Teikei : Organisations et groupes de jeunes mères citadines In Du AMEMIYA, Hiroko (ed.). Du Teikei aux AMAP : Le renouveau de la vente directe de produits fermiers locaux. Rennes : Presses universitaires de Rennes, 2011, p. 29-54.

ANDERSON, James E. *Public Policy-making: an Introduction*. Boston: Houghton. Mifflin, 2003.

ARSENE, Séverine. *Internet et politique en Chine. Les contours normatifs de la contestation*. Paris, Karthala, coll. « Recherches internationales », 2011.

BADIE, Bertrand. *L'Etat importé : essai sur l'occidentalisation de l'ordre politique.* Paris : Fayard, 1992.

BADIE, Bertrand. *La fin des territoires : essai sur le désordre international et sur l'utilité sociale du respect*. Paris : Fayard, 1995.

BAUM, Richard, SHEVCHENKO, Alexei. The State of the State In GOLDMAN, Merle (ed.) *The Paradox of Reform in China.* Cambridge MA: Harvard University Press, 1999.

BECK, Ulrich, GRANDE, Edgar. *Cosmopolitan Europe*. Cambridge; Malden, Mass.: Polity, 2007.

BEJA, Jean-Philippe. The changing aspects of Civil society in China In ZHENG, Yongnian, FEWSMITH, Joseph (eds.) *China's opening society, The non-state sector and governance*. London: Routledge, 2008, p. 71-88.

BERGERE, Marie-Claire. *Chine : le nouveau capitalisme d'État*. Paris: Fayard, 2013.

BERNSTEIN Thomas, LÜ Xiaobo. *Taxation without representation in contemporary rural China.* Cambridge ; New York : Cambridge University Press, 2003.

BEZES, Philippe, LE LIDEC, Patrick. Ce que les réformes font aux institutions In LAGROYE, Jacques, OFFERLE, Michel. *Sociologie de l'institution*, Paris : Belin, 2010.

BLECHER, Marc, SHUE, Vivienne. *Tethered Deer: Government and Economy in a Chinese County*. Stanford: Stanford University Press, 1996.

BONJEAN, Alain, SCHWOOB, Marie-Hélène, BOINET, Delphine, LY, Carole. Nourrir 1,5 milliard de Chinois en 2030 : Les mutations des agricultures chinoises et leurs conséquences sur les marchés agricoles et agro-alimentaires, *Bruxelles : De Boeck*, 2014.

BORD, Gustave. *Histoire du blé en France. Le Pacte de famine, histoire, légende*. Paris, 1887.

BOUVIER Charles. *La collectivisation de l'agriculture : URSS – Chine – Démocraties populaires.* Armand Colin, 1958.

BOWIE, Robert R., FAIRBANK, John K. Foreword In *Communist China 1955-1959: policy documents with analysis*. Cambridge : Harvard University Press, 1962.

BOYD, Richard, NGO, Tak-Wing. *Asian states : beyond the developmental perspective*. New York, N.Y. : RoutledgeCurzon, 2005.

BRÄUTIGAM, Deborah. *Chinese aid and African development: exporting green revolution*. Basingstoke: Macmillan, 1998; New York: St Martin's Press, 1998.

BROWN, Lester R. *Who will feed China?* New York: W.W. Norton, 1995.

BURNS, John P., PETERS, B. Guy, WANG, Xiaoqi, LI, Jing. Food safety policy coordination in three Chinese cities. Paper prepared for the Conference on 'Regulation in the Age of Crisis', Third Biennial Conference of the Standing Group on Regulatory Governance of the European Consortium for Political Research ECPR and the Regulation Network 17-19 June 2010, University College Dublin.

BYRD, William A., GELB, Alan. Why industrialize? The incentives for rural community government In BYRD, William A., LIN, Qingsong. *China's Rural Industry: Structure, Development, and Reform*. Oxford: Oxford University Press, 1990.

CHEN, Chunlai, FINDLAY, Christopher. *China's domestic grain marketing reform and integration.* Canberra : Asia Pacific Press, 2004.

CHEN, Theodore Hsi-en. *The Maoist educational revolution*. New York : Praeger, 1974.

CHEN, Xi. *Social protest and contentious authoritarianism in China*. Cambridge ; New York : Cambridge University Press, 2012.

CHEN, Zhuoyong. Urbanization and Spatial Structure: Evolution of Urban System in China. S.I. : Institute of Developing Economies, Japan External Trade Organization.

China Development Research Foundation. *China's new urbanization strategy*. Abingdon ; New York : Routledge, 2013.

CHIEN, Shiuh Shen. Prefectures and prefecture-level cities: the political economy of administrative restructuring In CHUNG, Jae Ho, LAM, Tao-Chiu. *China's Local Administration: Traditions and changes in the sub-national hierarchy.* London ; New York : Routledge, 2010.

CHUNG, Jae Ho. Prefectures and prefecture-level cities: political economy of administrative restructuring In CHUNG, Jae Ho, LAM, Tao-chiu. *China's Local Administration: Traditions and changes in the sub-national hierarchy*, London ; New York : Routledge, 2010.

Coop de France. *Observations de Coop de France sur le projet de lignes directrices de l'Autorité de la concurrence sur le contrôle des concentrations – Annexe relative aux coopératives agricoles.* S.I. : Coop de France, 19 Avril 2013.

CROZIER, Michel, FRIEDBERG, Erhard. *L'Acteur et le Système*. Paris: Editions du Seuil, 1977.

DE JANVRY, Alain, SADOULET, Elisabeth, ZHU, Nong. *The Role of Non-Farm Incomes in Reducing Rural Poverty and Inequality in China*. Working Paper Series, Calif., Berkeley: Department of Agricultural & Resource Economics, UC Berkeley, 2005.

DE JONG, Martin, LALENIS, Konstantinos, MAMADOUH, Virginie. *The theory and practice of institutional transplantation: experiences with the transfer of policy institutions*. Dordrecht ; Boston : Kluwer Academic Publishers, 2002.

DELISLE Hélène. *Patterns of urban food consumption in developing countries: perspective from the 1980's*. Rome: Food Policy and Nutrition Division FAO, 1990.

DENG, Zhenglai, GUO, Sujian. *Reviving legitimacy : lessons for and from China*. Lanham, Md. ; Boulder, Colo. ; New York : Lexington Books, 2011.

DICKSON, Bruce J. *Red capitalists in China : the party, private entrepreneurs, and prospects for political change.* Cambridge, UK ; New York : Cambridge University Press, 2003.

DIKÖTTER, Frank. *Mao's great famine : the history of China's most devastating catastrophe, 1958-62*. London : Bloomsbury, 2010.

Directorate-General for Trade of the European Commission. *Trade European Union, Trade in goods with China*. Bruxelles, 16/01/2014, http://trade.ec.europa.eu/doclib/docs/2006/september/tradoc_113366.pdf

DUCKETT, Jane. *The Entrepreneurial State in China: Real Estate and Commerce Departments in Reform Era Tianjin*. London: Routledge, 1996.

FAO. *An Introduction to the Basic Concepts of Food Security*. S.I. : EC - FAO Food Security Programme, 2008.

FAO (Food and Agriculture Organisation of the United Nations). *The state of food insecurity in the world 2012: Economic growth is necessary but not sufficient to accelerate reduction of hunger and malnutrition.* Rome: Food and Agriculture Organisation of the United Nations, 2012.

FAO (Food and Agriculture Organisation of the United Nations). *The state of food insecurity in the world 2013: The multiple dimensions of food security* Rome: Food and Agriculture Organisation of the United Nations, 2013.

FAVELLE, Adrian, GUIRAUDON, Virginie. *Sociology of the European Union*. Houndmills; New York: Palgrave Macmillan, 2011.

FEWSMITH, Joseph (eds.) *China's opening society: the non-state sector and governance*. London ; New York : Routledge, 2008.

Food Safety and Inspection in China, The US-China Business Council, 2007.

FOUILLEUX, Eve. Standards volontaires : entre internationalisation et privatisation des politiques agricoles In HERVIEU, Bertrand, MAYER, Nonna, MULLER, Pierre, PURSEIGLE, François, REMY, Jacques. Les mondes agricoles en politique. Paris : Presses de Sciences Po, 2010, p. 371-396.

FRENKEN, Karen. *Irrigation in Southern and Eastern Asia in figures*. AQUASTAT Survey, Rome: FAO Land and Water Division, 2011.

FROISSART, Chloé. Quelle citoyenneté pour les travailleurs migrants en République Populaire de Chine ? : l'expérience de Chengdu. Thèse : Sciences Politiques : Paris : Institut d'Etudes Politiques, 2007.

GALE, Frederic. U.S. *Exports Surge as China Supports Agricultural Prices*. USDA ERS, October 2013 http://www.ers.usda.gov/amber-waves/2013-october/us-exports-surge-as-china-supports-agricultural-prices.aspx#.VIbMpdKG8wc.

GOULET, Frédéric. Chapitre 1: Nature et ré-enchantement du monde In HERVIEU, Bertrand, MAYER, Nonna, MULLER, Pierre, PURSEIGLE, François, REMY, Jacques. *Les mondes agricoles en politique*. Paris : Presses de Sciences Po, 2010, p. 51-72.

Greenpeace. *Chinese Herbs: Elixir of Health or Pesticides Cocktail?* S.I.: Greenpeace, 2013.

GUO, Baogang. *China's quest for political legitimacy: the new equity-enhancing politics*. Lanham, Md. : Lexington Books, 2010.

HALL, Peter. *Governing the Economy: The Politics of State Intervention in Britain and France*. New York: Oxford University Press, 1986.

HAN, Zhuang. *De l'autonomie des entreprises d'Etat en droit chinois: le « gradualisme » de la réforme chinoise*. Paris ; Budapest ; Torino : L'Harmattan, 2003.

HANDLIN SMITH, Joanna F. Chinese philanthropy as seen through a case of famine relief in the 1640s In Ilchman, WARREN Frederick, KATZ, Stanley Nider, QUEEN, Edward L. *Philanthropy in the World's Traditions*, Indiana: Indiana University Press, 1998.

HEBERER, Thomas, SCHUBERT, Gunter (eds.). *Regime legitimacy in contemporary China : institutional change and stability.* New York ; London : Routledge, 2009.

HENDERSON, Margaret, VAN EN, Robyn. Sharing the Harvest: A Guide to Community Supported Agriculture. S.I.: Chelsea Green Publishing Co., 1999.

HERVIEU, Bertrand, PURSEIGLE, François. *Sociologie des Mondes Agricoles.* Paris: Armand Colin, 2013.

HIBOU, Béatrice. *Anatomie politique de la domination*. Paris : la Découverte, 2011.

HO, Peter, EDMONDS, Richard Louis (eds). *China's embedded activism: opportunities and constraints of a social movement*. London; New York: Routledge, 2008.

HUANG, Jikun, ROZELLE, Scott. *Développement agricole et nutrition: Politiques à l'origine du succès chinois*. Document Hors Série n°19, Programme Alimentaire mondial, Novembre 2009.

IKENBERRY, G. John. Conclusion In PAUL, Thazha Varkey, HALL, John A., IKENBERRY, G. John (eds.). *The nation-state in question*. Princeton, N.J. : Princeton University Press, 2003.

JACOBY, Wade. *Imitation and politics: redesigning modern Germany*. Ithaca, N.Y.: Cornell University Press, 2000.

JOHNSON, Chalmers. *MITI and the Japanese Miracle: The Growth of Industrial Policy, 1925-1975*. Stanford: Stanford: Stanford University Press, 1982.

JOHSON, Chalmers. The Developmental State: Odyssey of a Concept In WOO CUMINGS, Meredith (ed.). *The Developmental State.* New York: Cornell University Press, 1999.

JONES, Charles O. *An introduction to the study of public policy*. Belmont, Calif.: Wadsworth Pub. Co., 1970.

KING, Franklin Hiram. *Farmers of forty centuries: Permanent agriculture in China, Korea and Japan.* London : J. Cape, 1949.

KNOEPFEL, Peter, LARRUE, Corinne, VARONE, Frédéric. *Analyse et pilotage des politiques publiques*. Genève: Helbing und Lichtenhahn, 2001.

KNOKE, David. *Comparing policy networks : labor politics in the US, Germany and Japan*. Cambridge : Cambridge University Press, 1996.

KOHLI, Atul, SHUE, Vivienne, MIGDAL, Joel S. *State power and social forces: domination and transformation in the Third World*. Cambridge: Cambridge University Press, 1994.

KORTEN, David C. *When Corporations Rule the World*. London: Earthscan, 1995.

KUNG, James. The evolution of property rights in village enterprises In OI, Jean C., WALDER, Andrew (eds.). *Property Rights and Economic Reform in China*. Stanford: Stanford University Press, 1999.

LALIBERTE, André, LANTEIGNE, Marc (eds.). *The Chinese Party-State in the 21st Century: Adaptation and the reinvention of legitimacy*. London and New York: Routledge, 2008.

LAMPTON, David. A Plum for a Peach: Bargaining, Interests, and Bureaucratic Politics in China In LIEBERTHAL, Kenneth G., LAMPTON, David M. (eds.) *Bureaucracy, Politics, and Decision Making in Post-Mao China. Bureaucracy, politics, and decision making in post-Mao China.* Berkeley, Calif. : University of California Press, 1992.

LANDRY, Pierre F. *Decentralized Authoritarianism in China*. Cambridge University Press, 2008.

LE GALES, Patrick. Gouvernance In *Dictionnaire des politiques publiques*. Presses de Sciences Po, 2010.

LI, Cheng. Introduction: A Champion for Chinese Optimism and Exceptionalism In HU, Angang. *China in 2020: a new type of superpower*. Washington, D.C.: Brookings Institution Press, 2011.

LI, Huaiyin. *Village China under socialism and reform: a micro history, 1948-2008.* Stanford, Calif.: Stanford University Press, 2009.

LI, Jianping, ZHENG Guangfen, LIU, Hui, WANG, Liping, TANG, Zhihai, SHI, Haixia, GUO, Wenfeng, WANG, Huirong. *Situation Analysis of Ningxia Province.* S.I.: China Climate Change Partnership Framework - Enhanced strategies for climate-proofed and environmentally sound agricultural production in the Yellow River Basin (C-PESAP), 2008.

LI, Lillian. *Fighting Famine in North China: State, Market and Environmental Decline, 1690s-1990s*. Stanford: Stanford University Press, 2007.

LI, Xiaoyun, WANG, Dongmei, JIN, Leshan, ZUO, Ting. *Impacts of China's agricultural policies on payment for watershed services*. London: College of Humanities and Development; Beijing: China Agricultural University and International Institute for Environment and Development, 2006.

LIEBERTHAL, Kenneth, LAMPTON, G., David M. (eds.) *Bureaucracy, Politics and Decision-Making in Post-Mao China*. Berkeley, Calif. : University of California Press, 1992.

LEIBERTHAL, Kenneth. China's Governing System and Its Impact on Environmental Policy Implementation In AARON, Frank (ed). *China Environment Series (1st edition)*, Washington D.C. : The Woodrow Wilson Center, 1997.

LIN, Justin Yifu, CAI, Fang, LI, Zhou. *The China miracle: development strategy and economic reform*. Paris: Economica, 2000.

LOUIS, Augustin-Jean, ALPERMANN, Bjorn (eds.) *The political economy of agro-food markets in China: the social construction of the markets in an era of globalization*. Basingtoke: Palgrave Macmillan, 2014.

LU, Yiyi. NGOs in China: Development Dynamics and Challenges In ZHENG, Yongnian, FEWSMITH, Joseph (eds.) *China's opening society: the non-state sector and governance*. London ; New York : Routledge, 2008, p.83-105.

LU, Yiyi. *Non-Governmental Organizations in China: The rise of dependent autonomy.* London; New York: Routledge, 2009.

MARIN, Bernd, MAYNTZ, Renate. *Policy networks: empirical evidence and theoretical considerations*. Boulder, Colo. : Westview ; Frankfurt am Main : Campus Verlag, 1991.

MARSH, David, RHODES, Roderick A. W. *Policy networks in British government*. Oxford : Clarendon Press, 1992.

MAYNTZ, Renate. Die Implementation politischer Programme In *Implementaion politischer Programme Empirische Forschungsberichte I Empirische Forschungsberichte*. Königstein : Verlagsgruppe Athenäum, Hain, Scriptor, Hanstein, 1980.

MENY, Yves. *Les politiques du mimétisme institutionnel : la greffe et le rejet*. Paris : Harmattan, 1993.

MIGDAL, Joel S. *State in Society: Studying How States and Societies Transform and Constitute One Another*. Cambridge University Press, 2001.

MOLLARD, Amédée. L'agriculture entre régulation globale et sectorielle In BOYER, Robert et SAILLARD, Yves. *Théorie de la régulation, l'état des savoirs*. La Découverte, 2002.

MULLER, Pierre. *Le technocrate et le paysan : essai sur la politique française de modernisation de l'agriculture : de 1945 à nos jours*. Paris : Ed. ouvrières, 1984.

NEE, Victore, OPPER, Sonja. *Capitalism from Below: Markets and Institutional Change in China.* Cambridge, Mass. : Harvard University Press, 2012.

NI, Hongxing. *Agricultural Domestic Support and Sustainable Development in China*. S.I.: ICTSD Programme on Agricultural Trade and Sustainable Development, May 2013.

OECD (Organisation for Economic Co-operation and Development). Réforme de la politique agricole en Chine. *Synthèses*, Novembre 2005, S.I.: OECD.

OI, Jean C. *Rural China takes off: the institutional foundations of economic reform*. Berkeley, Calif. : University of California Press, 1999.

PERRY, Elizabeth J., SELDEN, Mark Selden (eds.). *Chinese Society: Change, Conflict and Resistance*. London: Routledge, 2000.

PETERS, Guy B. Managing the Hollow State In ELIASSEN, Kjell, KOOIMAN, Jan. *Managing public organizations: lessons from contemporary European experience*. London : Sage, 1993.

PRESSMAN, Jeffrey L., WILDAVSKY, Aaron B. *Implementation: how great expectations in Washington are dashed in Oakland or why it's amazing that federal programs work at all, this being a saga of the economic development administration as told by two sympathetic observers who seek to build morals on a foundation of ruined hopes*. Berkeley, Calif. ; Los Angeles ; London: University of California Press, 1973.

PROSTERMAN, Roy L., TEMPLE, Mary N., HANSTAD, Timothy. China: a fieldwork-based appraisal of the household responsibility system In PROSTERMAN, Roy L. (ed.). *Agrarian Reform and Grassroots Development.* Boulder, Colo. : Rienner, 1990, p. 103–138.

REMICK, Elizabeth J. *Building Local States: China during the Republican and Post-Mao Eras*. Cambridge, Mass. ; London : Harvard University Asia Center, 2004.

RICHARDSON, Jeremy John, JORDAN, A. G. *Governing under pressure: the policy process in a post-parliamentary democracy*. Oxford: Robertson, 1979.

ROSE, Richard. *Lesson-drawing in public policy: a guide to learning across time and space*. Chatham House, 1993.

ROSENAU, James N., CZEMPIEL, Ernst-Otto. *Governance without government: order and change in world politics*. Cambridge: University Press, 1992.

SABATIER, Paul A., JENKINS-SMITH, Hank (eds) *Policy Change and Learning: An Advocacy Coalition Approach*. Boulder (Colo.): Westview Press, 1993.

SALISBURY Harrison E. *The Long March*. London ; Sydney : Pan books, 1985.

SCHMITTER, Philippe C. *Corporatism and public policy in authoritarian Portugal.* London; Beverly Hills: Sage Publications, 1975.

SHUE, Vivienne. State Power and Social Organization in China In KOHLI, Atul, SHUE, Vivienne, MIGDAL, Joel S. *State power and social forces: domination and transformation in the Third World*. Cambridge: Cambridge University Press, 1994.

STEINMO, Sven, THELEN, Kathleen, LONGSTRETH, Frank. *Structuring politics: historical institutionalism in comparative analysis.* Cambridge: Cambridge University Press, 1992.

STONE SWEET, Alec, FLIGSTEIN, Neil, SANDHOLTZ, Wayne (eds) *The institutionalization of Europe*. Oxford: Oxford University Press, 2001.

SUN, Shuyun. *La Longue Marche*. Paris : J.-C. Lattès, 2006.

SWINNEN, Johan F. M., ROZELLE, Scott. *From Marx and Mao to the market : the economics and politics of agricultural transition*. Oxford ; New York : Oxford University Press, 2006.

TONG, Yanqi, LEI, Shaohua. *Social protest in contemporary China, 2003-2010 : transitional pains and regime legitimacy*. Abingdon, Oxon ; New York : Routledge, 2014.

TONGEREN, Frank W. van and HUANG, Jikun (eds.) *China's food economy in the early 21st Century; Development of China's food economy and its impact on global trade and on the EU*. The Hague: Agricultural Economics Research Institute (LEI), 2004.

UNGER, Jonathan, CHAN, Anita. Corporatism in China: a Developmental State in an East Asian Context In *China after socialism: in the footsteps of Eastern Europe or East Asia?* Armonk, N.Y.: Sharpe, 1996.

UNGER, Jonathan. The Third Plenum and Rural Property Rights : Decisions in the Right Direction In HARRIS, Peter (ed.) *China at the Crossroads: What the Third Plenum Means for China, New Zealand and the World.* Victoria: Victoria University Press, 2014.

United Nations. *Rio Declaration on Environment and Development*. Rio de Janeiro, 1992.

United Nations Development Program. *Human Development Report, 2010: The Real Wealth of Nations: Pathways to Human Development*. New York: United Nations Development Program, 2010.

United Nations Special Rapporteur on the Right to Food. *Report submitted by the Special Rapporteur on the right to food, Olivier De Schutter. A/HRV/16/49*. Geneva: Author, 2010.

United Nations. *The Global Social Crisis. Report on the World Social Situation 2011*. New Ork: United Nations, 2011.

United States Department of Agriculture (USDA) Foreign Agricultural Service. *Fertilizer – China.* GAIN Report, n°CH9082, 14/12/2009, S.I.: USDA Foreign Agricultural Service.

United States Department of Agriculture (USDA) Foreign Agricultural Service. *Organics Report*. GAIN Report, n°10046, 26/10/2010, S.I.: USDA Foreign Agricultural Service.

United States Department of Agriculture (USDA) Foreign Agricultural Service. *Agricultural Biotechnology Annual 2012*. GAIN Report Number CH12046, 13/07/2012, S.I.: USDA Foreign Agricultural Service.

WHITING, Susan H. *Power and Wealth in Rural China: The Political Economy of Institutional Change*. Cambridge: Cambridge University Press, 2000.

WILSON, Dick. *The Long March 1935: The epic of Chinese Communism's survival*. London: H. Hamilton, 1971.

WILSON, Frank Lee. *Interest-group politics in France*. Cambridge: Cambridge University Press, 2012.

WOETZEL, Jonathan, MENDONCA, Lenny, DEVAN, Janamitra, NEGRI, Stefano, HU, Yangmel, JORDAN, Luke, LI, Xiujun, MAASRY, Alexander, TSEN, Geoff, YU, Flora, et al. *Preparing for China's urban billion*. McKinsey Global Institute, February 2009.

World Bank. *Le coût de la pollution en Chine*. S.I. : World Bank, 2007.

World Bank. *Food price watch*. Washington, D.C.: World Bank. February 2011.

World Bank. *World Development Report: Mind, Society and Behavior*. Washington, D.C. : World Bank, 2015.

WU, Fulong, ZHANG, Fangzhu, WEBSTER, Chris (eds). *Rural migrants in urban China: enclaves and transient urbanism*. London ; New York : Routledge, 2014.

XIE, Jian, LIEBENTHAL, Andres, WARFORD, Jeremy J., DIXON, John A., WANG, Manchuan, GAO, Shiji, WANG, Shuilin, JIANG, Yong, MA, Zhong. *Addressing China's Water Scarcity Recommendations for Selected Water Resource Management Issue.* The International Bank for Reconstruction and Development / The World Bank, 2009.

YANG Benjamin. *From Revolution to Politics; Chinese Communists on the Long March*. Boulder, Colo.: Westview, 1990.

YANG, Dali L. *Remaking the Chinese leviathan: market transition and the politics of governance in China*. Stanford, Calif.: Stanford University Press, 2004.

ZHANG, Xiaomin. The New Generation of Migrant Workers in Labour Market in China In PRIES, Ludger (ed.). *Shifting Boundaries of Belonging and New Migration Dynamics in Europe and China*, Palgrave Macmillan, 2013.

B - Articles in Periodicals

AHN, C. S. Government-Party Coordination in Japan's Foreign Policy-Making: The Issue of Permanent Membership in the UNSC. *Asian Survey*, April 1997, vol. 37, n°4, p. 368-382.

AIRD, John S. Population studies and population policy in China. *Population and Development Review*, June 1982, vol. 8, n°2, p. 85-97.

ALPERMANN, Björn. Institutionalizing Village Governance in China. *Journal of Contemporary China*, May 2009, vol. 18, n°60, p. 397-409.

ANAGNOST, Ann, The corporeal politics of quality (suzhi). *Public Culture*, 2004, vol. 16, n°2, p.189-208.

ASH, Robert F. The Agricultural Sector in China: Performance and Policy Dilemmas during the 1990s. *The China Quarterly*, September 1992, n°131, Special Issue: The Chinese Economy in the 1990s, p. 545-576.

ASH, Robert F. Squeezing the Peasants: Grain Extraction, Food Consumption and Rural Living Standards in Mao's China. *The China Quarterly*, December 2006, vol. 188, p. 959-998.

AUBERT, Claude. The grain trade reforms in China: an unfinished story of State v. peasant interest. *China Information*. Winter 1998, vol. 12, n°3, p. 72-86.

BAI, Zhanguo, DENT, David. Recent Land Degradation and Improvement in China. *Ambio*, May 2009, vol. 38, n°3, p. 150-156.

BALME, Richard, TANG, Renwu. Environmental governance in the People's Republic of China: the political economy of growth, collective action and policy developments – introductory perspectives. *Asia Pacific Journal of Public Administration*, 2014, vol. 36, n°3, p. 167-172.

BENNETT, Colin J., HOWLETT, Michael. The lessons of learning: Reconciling theories of policy learning and policy change. *Policy Sciences,* August 1992, vol. 25, n°3, p. 275-294.

BERNSTEIN, Thomas P., LÜ, Xiaobo. Taxation without Representation: Peasants, the Central and the Local States in Reform China. *China Quarterly*, September 2000, n°163, p. 742-763.

BEZES, Philippe. Construire des bureaucraties Wébériennes à l'ère du New Public Management ? *Critique Internationale*. 2007, vol. 35, n°2, p. 9-29.

BINSWANGER, Hans P., DEININGER, Klaus, FEDER, Gershon. Power, distortions, revolt and reform in agricultural land relations. *Handbook of development economics*, 1995, p. 2659-2772.

BLECHER, Marc, WANG, Shaoguang. The Political Economy of Cropping in Maoist and Dengist China: Hebei Province and Shulu County, 1949-90. *The China Quarterly*, March 1994, n°137, p. 63-98.

BORD, Gustave. *Le Pacte de famine : histoire-légende*. Paris : A. Sauton, 1887 ; CAHEN, Léon. Le Pacte de famine et les spéculations sur les blés. *Revue Historique*, mai-juin 1926, n°152, p. 32-43.

BORLAUG, Norman. Feeding a World of 10 Billion People: The Miracle Ahead. *Vitro Cellular & Developmental Biology – Plant*, March 2002, vol. 38, n°2, p. 221-228.

BOTHA, Christo. From mercenaries to "private military companies": the collapse of the African State and the outsourcing of State security. *South African Yearbook of International Law*, 1999, vol. 24, p. 133-148.

BRUINS, Hendrik J., BU, Fengxian. Food security in China and contingency planning: the significance of grain reserves. *Journal of contingencies and crisis management*, September 2006, vol. 14, n°3, p. 114-124.

BURNS, John. The People's Republic of China at 50: National Political Reform. *The China Quarterly*, September 1999, No. 159, Special Issue: The People's Republic of China after 50 Years, p. 580-594.

CAHEN, Leon. Le Pacte de famine et les spéculations sur les blés. *Revue Historique*, Mai-Juin 1926, n°152, p. 32-43.

CAI, Yongshun. Between State and Peasant: Local Cadres and Statistical Reporting in Rural China. *The China Quarterly*, Sept. 2000, n°163, p. 783-805.

CHELAN LI, Linda. Working for the Peasants? Strategic Interactions and Unintended Consequences in the Chinese Rural Tax Reform. *The China Journal*, January 2007, n°57, p. 89-106.

CHEN, An. The 1994 Tax Reform and Its Impact on China's Rural Fiscal Structure. *Modern China*, Jul. 2008, vol. 34, n°3, p. 303-343.

CHEN, Weixing. The Political Economy of Rural Industrialization in China: Village Conglomerates in Shandong Province. *Modern China*, January 1998, vol. 24, n°1, p. 73-96.

CHENG, Enjiang. Market Reforms and Provision of Credit for Grain Purchases in China. *The China Quarterly*, Sep. 1997, n°151, p. 633-653.

COOLEY, Jack P., LASS, Daniel A. Consumer Benefits from Community Supported Agriculture Membership. *Review of Agricultural Economics*, vol. 20, n°1, p. 227-237.

CORTELL, Andrew P., DAVIS, James W. Jr. How Do International Institutions Matter ? The Domestic Impact of International Rules and Norms. *International Studies Quarterly*, 1996, vol. 40, p. 451-478.

CROOK, Frederick W. China's "governor's grain bag policy": concerns about food security. *China Information*, Winter 1998, vol. 12, n°3, p.87-103.

DENG, Hengshan, HUANG, Jikun, XU, Zhigang, ROZELLE, Scott. Policy support and emerging farmer professional cooperatives in rural China. *China Economic Review*, 2010, n°21, p. 495-507.

DICKSON, Bruce J. Integrating Wealth and Power in China: The Communist Party's Embrace of the Private Sector. The China Quarterly, December 2007, n°192, p. 827-854.

DOLOWITZ, David, MARSH, David, Who Learns What from Whom: a Review of the Policy Transfer Literature. *Political Studies*, June 1996, vol. 44, n°2, p. 343-357.

DOLOWITZ, David P. Special issue on policy transfer. *Governance* (Oxford), 2000-01, vol. 13, n°1, p.1-70.

DORIN, Bruno, HOURCADE, Jean-Charles, BENOIT-CATTIN, Michel. A World Without Farmers? The Lewis Path Revisited. *CIRED Working Papers*, 2013, n°47, 22 P.

DUCHATEL, Mathieu. Comment éviter de nouveaux scandales alimentaires ? *China Analysis*, March-April 2011, n°33, p. 26-28.

ECONOMY, Elizabeth C. The Great Leap Backward? The Costs of China's Environmental Crisis. *Foreign Affairs*, September-October 2007, vol. 86, n°5, p. 38-59.

EDIN, Maria. State Capacity and Local Agent Control in China: CCP Cadre Management from a Township Perspective. *The China Quarterly*, March 2003, 173, p. 35-52.

FAN, Hongping, YE, Zhihua, ZHAO, Weijun, TIAN, Heshan, QI, Yamei, BUSCH, Lawrence. Agriculture and food quality and safety certification agencies in four Chinese cities, *Food Control*, vol. 20, 2009, p. 627-630.

FOSTER, Kenneth W. Embedded within State Agencies: Business Associations in Yantai. *The China Journal*, January 2002, n°47, p. 41-65.

GAO, Jie. Governing by goals and numbers: a case study in the use of performance measurement to build state capacity in China. *Public Administration and Development*, 2009, vol. 29, p. 21-31.

GENSCHEL, Philipp, ZANGL, Bernhard. L'État et l'exercice de l'autorité politique Dénationalisation et administration. *Revue française de sociologie*, 2011, vol. 52, n°3, p. 509-535.

GOBEL, Christian. Uneven policy implementation in rural China. *The China Journal*, January 2011, n°65, p. 53-76.

GONG, Ting. Institutional learning and adaptation: developing state audit capacity in China. *Public Administration and Development*, 2009, n°29, p. 33-41.

GREER, Alan. Policy coordination and the British administrative system: evidence from the BSE enquiry. *Parliamentary Affairs*, October 1999, vol. 52, n°4, p.598-615.

GRIFFON, Michel. Révolution Verte, Révolution Doublement Verte : Quelles technologies, institutions et recherche pour les agricultures de l'avenir ? *Mondes en développement*, 2002, vol. 1, N°117, p. 39-44.

GUANG, Lei, ZHENG, Lu. Migration as the Second-Best Option: Local Power and Off-Farm Employment. *The China Quarterly*, March 2005, n°181, p. 22-45.

GUO, Xiaolin. Land Expropriation and Rural Conflicts in China. *The China Quarterly*, June 2001, n°166, p. 422-439.

GUO, Zhenglin, BERNSTEIN, Thomas P. The impact of elections on the village structure of power: the relations between the village committees and the party branches. *Journal of Contemporary China*, May 2004, vol. 13, n°39, p. 257-275.

HAAS, Peter M. Introduction: Epistemic Communities and International Policy Coordination. *International Organization*, Winter 1992, vol. 46, n°1, Knowledge, Power, and International Policy Coordination, p. 1-35.

HALL, Peter. Policy Paradigms Social Learning and the State. *Comparative Politics*, 1993, vol. 25, n°3, p. 275-296.

HAMDOUCH, Abdelillah, ZUINDEAU, Bertrand. Introduction. Diversité territoriale et dynamiques socio-institutionnelles du développement durable : une mise en perspective. *Géographie, économie, société*, 2010, vol. 12, n°3, p. 243-259.

HARRISON, James P. *The Long march to power: A history of the Chinese Communist Party, 1921-72*. London: Macmillan, 1972, p. 161-165.

HEBERER, Thomas, TRAPPEL, René. Evaluation Processes, Local Cadres' Behaviour and Local Development Processes. *Journal of Contemporary China*, 2013, vol. 22, n°84, p. 1048-1066.

HEILMANN, Sebastian. From Local Experiments to National Policy: The Origins of China's Distinctive Policy Process. *The China Journal*, January 2008, n°59, p. 1-30.

HEILMANN, Sebastian. Policy Experimentation in China's Economic Rise. *Studies in Comparative International Development*, March 2008, vol. 43, n°1, p.1-26.

HERVIEU, Bertrand, PURSEIGLE, François. Des agricultures avec des agriculteurs, une nécessité pour l'Europe. *Revue Projet*, 2011, vol. 2, n° 321, p. 60-69.

HIBOU, Béatrice. Retrait ou redéploiement de l'Etat ? *Critique internationale*, 1998, vol. 1, p. 151-168.

HO, Peter. Embedded Activism and Political Change in a Semi authoritarian Context. *China Information*, July 2007, vol. 21, n°2, p. 187-209.

HOLBIG, Heike, GILLEY, Bruce. In Search of Legitimacy in Post-revolutionary China: Bringing Ideology and Governance Back In *GIGA Working Papers*, March 2010, n°127.

HOLT-GIMÉNEZ, Eric, SHATTUCK, Annie. Food crises, food regimes and food movements: rumblings of reform or tides of transformation? *The Journal of Peasant Studies*, 2011, vol. 38, n°1, p. 109-144.

HOLZ, Carsten A. Institutional Constraints On the Quality of Statistics in China. *China Information*, 2002, p. 16-25.

HUANG, Philip C.C. Rural Class Struggle in the Chinese Revolution: Representational and Objective Realities from the Land Reform to the Cultural Revolution. *Modern China*, January 1995n vol. 21, n°1, Symposium: Rethinking the Chinese Revolution. - Paradigmatic Issues in Chinese Studies, IV, p. 105-143.

HUANG, Jikun, ROZELLE, Scott. Technological Change: Rediscovery of the Engine of Productivity Growth. *China's Rural Economy Journal of Development Economics*, vol. 49, n°2, p. 337-369.

HUANG, Philip C., YUAN, Yuan, PENG, Yusheng. Capitalization without Proletarianization in China's Agricultural Development. *Modern China*, April 2012, vol. 38, n°2, p. 591-629.

HUCHET, Jean-François. The Emergence of Capitalism in China: An Historical Perspective and Its Impact on the Political System. *Social Research*, Spring 2006, vol 73, n°1, p. 1-26.

INGLEHART, Ronald. Globalization and Postmodern Values. *Washington Quarterly*, 2000, vol. 23, n°1, p. 215-228.

JAHIEL, Abigail R. The Organization of Environmental Protection in China. *The China Quarterly*, December 1998, n°156, Special Issue: China's Environment, p. 757-787.

JIANG, Shigong. Written and Unwritten Constitutions: A New Approach to the Study of Constitutional Government in China. *Modern China*, January 2010, vol. 36, n°1, p. 12-46.

JIN, Xiangcan, XU, Qiujin, HUANG, Changzhu. Current status and future tendency of lake eutrophication in China. *Science in China Series C: Life Sciences*, December 2005, vol. 48, n°2, Supplement, p. 948-954.

JUA, Xiaotang, XING, Guangxi, CHEN, Xinping, ZHANG, Shaolin, ZHANG, Lijuan, LIU, Xuejun, CUI, Zhenling, YIN, Bin, CHRISTIE, Peter, ZHU, Zhaoliang, ZHANG, Fusuo. Reducing environmental risk by improving N management in intensive Chinese agricultural systems. *PNAS*, March 2009, vol. 106, n°9, p. 3041-3046.

KANG, Xiaoguang, HAN, Heng. Graduated Controls: The State-Society Relationship in Contemporary China. *Modern China*, January 2008, vol. 34, n°1, p. 100-114.

KING, Desmond, LE GALES, Patrick. Sociologie de l'Etat en recomposition. *Revue Française de sociologie*, 2011, vol. 52, n°3, p. 453-480.

KELLIHER, Daniel. The Chinese Debate Over Village Self-Government. *The China Journal*, Jan. 1997, n°37, p. 63-86.

KENNEDY, John James. From the Tax-for-Fee Reform to the Abolition of Agricultural Taxes: The Impact on Township Governments in North-west China. *The China Quarterly*, March 2007, vol. 189, p. 43-59.

KERKVLIET, Ben, CHAN, Anita, UNGER, Jonathan. Comparing the Chinese and Vietnamese Reforms: An Introduction. *The China Journal*, July 1998, n°40, p. 1-7.

KIPNIS, Andrew. The Disturbing Educational Discipline of "Peasants". *The China Journal*, July 2001, n°46, p. 1-24.

KIPNIS, Andrew. Suzhi: A Keyword Approach. *The China Quarterly*, June 2006, n°186, p. 295-313.

KUNG, James Kai-Sing, CAI, Yong-Shun. Property Rights and Fertilizing Practices in Rural China: Evidence from Northern Jiangsu. *Modern China*, July 2000, vol. 26, n°3, p. 276-308.

LI, Hongbin, ROZELLE, Scott. Privatizing Rural China: Insider Privatization, Innovative Contracts and the Performance of Township Enterprises. *The China Quarterly*, Dec. 2003, n°176, p. 981-1005.

LI, Hongbin, ZHOU, Li-An. Political turnover and economic performance: the incentive role of personnel control in China. *Journal of Public Economics*, 2005, n°89, p. 1743-1762.

LI, Lianjiang Li. Elections and Popular Resistance in Rural China. *China Information*, 2001, vol. 15, n°2, p. 1-19.

LI, Lianjiang, O'BRIEN, Kevin J. Protest Leadership in Rural China. *The China Quarterly*, March 2008, n°193, p. 1-23.

LIN, George C.S., HO, Samuel P.S. The State, Land System, and Land Development Processes in Contemporary China. *Annals of the Association of American Geographers*, 2005, vol. 95, n°2, p. 411-436.

LIEW, Leong H. Gradualism in China's Economic Reform and the Role for a Strong Central State. *Journal of Economic Issues*, September 1995, vol. 29, n°3, p. 883-895.

LYONS, Thomas P. Feeding Fujian: Grain Production and Trade, 1986-1996. *The China Quarterly*, September 1998, n°155, p. 512-545.

MA, Weihong Ma, CHENG, Joseph Y.S. The Evolution of Entrepreneurs' Social Networks in China: patterns and significance. *Journal of Contemporary China*, 2010, vol. 19, n°67, p. 891-911.

MULLER, Pierre. L'analyse cognitive des politiques publiques : vers une sociologie politique de l'action publique. *Revue française de science politique*, 2000, n°2, p. 189-208.

MURPHY, Rachel. Turning peasants into modern Chinese citizens: 'population quality' discourse, demographic transition and primary education. *The China Quarterly*, 2004, n°177, p.1-20.

NGO, Thi Minh-Hoang. A Hybrid Revolutionary Process: The Chinese Cooperative Movement in Xiyang County, Shanxi. *Modern China*, May 2009, vol. 35, n°3, p. 284-312.

O'BRIEN, Kevin J. Villagers, Elections, and Citizenship in Contemporary China. *Modern China*, Oct. 2001, vol. 27, n°4, p. 407-435.

OI, Jean C. Fiscal Reform and the Economic Foundations of Local State Corporatism in China. *World Politics*, October 1992, vol. 45, n°1, p. 99-126.

OI, Jean C. Two Decades of Rural Reform in China: An Overview and Assessment. *The China Quarterly*, September 1999, n° 159, Special Issue: The People's Republic of China after 50 Years, p. 616-628.

OI, Jean C., SINGER BABIARZ, Kim, ZHANG, Linxiu, LUO, Renfu, ROZELLE, Scott. Shifting Fiscal Control to Limit Cadre Power in China's Townships and Villages. *The China Quarterly*, Sept. 2012, vol. 211, p. 649-675.

PASTOR, Robert A., TAN, Qingshan. The Meaning of China's Village Elections. *The China Quarterly*, June 2000, n°162, p. 490-512.

PEARSON, Margaret M. The Business of Governing Business in China: Institutions and Norms of the Emerging Regulatory State. World Politics, vol. 57, n°2, Jan. 2005, p. 296-322.

PETERS, Guy B., PIERRE, John. Governance without Government? Rethinking Public Administration. *Journal of Public Administration Research and Theory*, April 1998, vol. 8, n°2, p. 223-243.

PEI, Xiaolin. The Contribution of Collective Landownership to China's Economic Transition and Rural Industrialization: A Resource Allocation Model. *Modern China*, 2002, vol. 28, n°279, p. 279-314.

PIRARD, Romain, TREYER, Sébastien. Agriculture et déforestation: quel rôle pour REDD+ et les politiques publiques d'accompagnement ? *Iddri – Idées pour le débat*, Décembre 2010, n°10, 18 P.

POUX, Xavier. Biodiversity and agricultural systems in Europe: drivers and issues for the CAP reform, *Iddri's Study*, February 2013, n°3, 34 P.

PUN, Ngai, LUN, Huilin. Unfinished Proletarianization: Self, Anger, and Class Action among the Second Generation of Peasant-Workers in Present-Day China. *Modern China*, September 2010, vol. 36, n°5, p. 493-519.

PURSEIGLE, François. Introduction. *Etudes rurales*, 2012, vol. 2, n°190, p. 19-23.

RAWSKI, Thomas G. Implications of China's Reform Experience. *The China Quarterly*, December 1995, n°144, p. 1150-73.

RHODES, Rod A. W. The Hollowing Out of the state: the changing nature of the public service in Britain. *Political Quarterly*, April 1994, vol. 65, n°2, p. 138-151.

ROZELLE, Scott, PARK, Albert, HUANG, Jikun, JIN, Hehui. Bureaucrat to entrepreneur : the changing role of the State in China's grain economy. *Economic Development and Cultural Change*, January 2000, vol.48, n°2, p.227-252.

ROZELLE, Scott, HUANG, Jikun, OTSUKA, Keijiro. The Engines of a Viable Agriculture: Advances in Biotechnology, Market Accessibility and Land Rentals in Rural China. *The China Journal*, January 2005, n°53, p. 81-111.

RUDEL, Thomas K., SCHNEIDER, Laura, URIARTE, Maria, TURNER II, B. L., DEFRIESC, Ruth LAWRENCE, Deborah, GOEGHEGAN, Jacqueline, HECHT, Susanna, ICKOWITZ, Amy, LAMBINH, Eric F., BIRKENHOLTZ, Trevor, BAPTISTAI, Sandra, GRAUJ, Ricardo. Agricultural Intensification and Changes in Cultivated Areas, 1970–2005. *Proceedings of the National Academy of Sciences*, December 2009, vol. 106, n°49, p. 20675-20680.

SARGESON, Sally Sargeson. Villains, victims and aspiring proprietors: framing 'land-losing villagers' in China's strategies of accumulation. Journal of Contemporary China, 2012, Volume 21, Issue 77, p. 757-777.

SCHMITTER, Philippe C. Still the Century of Corporatism? *The Review of Politics*, January 1974, vol. 36, n°1, The New Corporatism: Social and Political Structures in the Iberian World, p. 85-131.

SCHWOOB Marie-Hélène. L'éveil vert de la société chinoise ?. *Ecologie & politique*, February 2013, n° 47, p. 27-37.

SCHWOOB Marie-Hélène. L'intégration des immigrés de l'intérieur. *China analysis*, Avril 2013, n°42, p. 8-12.

SCHWOOB, Marie-Hélène. La réforme de la finance rurale. *China Analysis*, Décembre 2013, n°46, p. 38-42.

SCHWOOB, Marie-Hélène. L'administration de l'agriculture chinoise et la réintegration de l'Etat dans les campagnes. *Revue Française d'Administration Publique*, 2014/2, n°150, p. 453-466.

SCHWOOB, Marie-Hélène. Towards sustainable agriculture? Local level reliance on economic networks and the consequences for China's agricultural modernisation pathway. *Asia-Pacific Journal of Public Administration*, 2014, vol. 36, n°3, p. 220-232.

SCHWOOB, Marie-Hélène. Modernisation agricole chinoise, entre domination d'un modèle et émergence d'alternatives durables. *Iddri Working Papers*, avril 2014, n°6, 20 P.

SHEN, Chunli, JIN, Jing, ZOU, Heng-fu. Fiscal Decentralization in China: History, Impact, Challenges and Next Steps. *Annals of Economics and Finance*, May 2012, vol. 13, n°1, p. 1-51.

SHIUE, Carol H. Local Granaries and Central Government Disaster Relief: Moral Hazard and Intergovernmental Finance in Eighteenth- and Nineteenth-Century China. *Journal of Economic History*, March 2004, vol. 64, n°1, p. 100-124.

SMIL, Vaclav. Who Will Feed China? *China Quarterly*, September 1995, n°143, p. 801-813.

SMITH, Graeme. Political Machinations in a Rural County. *The China Journal*, July 2009, n°62, p. 29-59.

SMITH, Graeme. The Hollow State: Rural Governance in China. *The China Quarterly*, September 2010, Volume 203, p. 601-618.

TAKEUCHI, Hiroki. Survival Strategies of Township Governments in Rural China: from predatory taxation to land trade. *Journal of Contemporary China*, vol. 22, n°83, p. 755-772.

TAO, Ran, LIU, Mingxing, SU, Fubing, LU, Xi. Grain Procurement, Tax Instrument and Peasant Burdens during China's Rural Transition. *Journal of contemporary China*, 2011, vol. 20, n°71, p. 659-677.

THOGERSEN, Stig. Parasites or civilizers: the legitimacy of the Chinese Communist Party in rural areas. *China: An International Journal*, 2003, vol. 1, n°2, p.200-223.

THORNTON, Patricia M. University Crisis and Governance: SARS and the Resilience of the Chinese Body Politic. *The China Journal*, January 2009, n°61, p. 23-50.

TILT, Bryan. Industrial Pollution and Environmental Health in Rural China: Risk, Uncertainty and Individualization. *The China Quarterly*, June 2013, vol. 214, p. 283-301.

TSAI, Kellee S. Adaptive Informal Institutions and Endogenous Institutional Change in China. *World Politics*, October 2006, vol. 59, n°1, p. 116-141.

UNGER, Jonathan, CHAN, Anita. Inheritors of the Boom: Private Enterprise and the Role of Local Government in a Rural South China Township. *The China Journal*, Jul. 1999, n°42, p. 45-74.

VAN TATENHOVE, Jan P.M., LEROY, Pieter. Environment and Participation in a Context of Political Modernisation. *Environmental Values*, May 2003, vol. 12, n°2, Special issue: Environment, Policy and Participation, p. 155-174.

WALDER, Andrew G. Local Governments as Industrial Firms: An Organizational Analysis of China's Transitional Economy. *American Journal of Sociology*, September 1995, vol. 101, n°2, p. 263-301.

WALDRON, Scott, BROWN, Colin and LONGWORTH, John. State Sector Reform and Agriculture in China. *The China Quarterly*, June 2006, n°186, p. 277-294.

WALKER, Jack L. The Diffusion of Innovations among American States. *The American Political Science Review*, 1969, vol. 63, n°3, p. 880-899.

WANG, Alex L. The Search for Sustainable Legitimacy: Environmental Law and Bureaucracy in China. *The Harvard Environmental Law Review*, 2013, vol. 37, n°2, p. 365-440.

WANG, Honglin, DONG, Xiaoxia, ROZELLE, Scott, HUANG, Jikun, REARDON, Thomas. Producing and procuring horticultural crops with Chinese characteristics: The case of Northern China. *World Development,* 2009, vol. 37, n°11, p. 1791-1801.

WANG, Juan. Going Beyond Township and Village Enterprises in Rural China. *Journal of Contemporary China*, February 2005, vol. 14, n°42, p. 177-187.

WONG, Christine P.W. Interpreting Rural Industrial Growth in the Post-Mao Period. *Modern China*, January 1988, vol. 14, p. 3-30.

WONG, Koon-Kwai. Greening of the Chinese mind: Environmentalism with Chinese characteristics. *Asia-Pacific Review*, 2005, vol. 12, n°2, p. 39-57.

XIONG, Wei, CONWAY, Declan, LIN, Erda, XU, Yinlong, JU, Hui, JIANG, Jinhe, HOLMAN, Ian, LI, Yan. Future cereal production in China: The interaction of climate change, water availability and socio-economic scenarios. *Global Environmental Change*, n°19, 2009, p. 34-44.

YAN, Hairong, CHEN, Yiyuan. Debating the rural cooperative movement in China, the past and the present. *Journal of Peasant Studies*, 2013, vol. 40, n°6, p. 955-981.

YAO, Yusheng. Village Elections and Their Impact: An Investigative Report on a Northern Chinese Village. *Modern China,* Jan. 2013, vol. 39, n°1, p. 37-68.

YEH, Emily T., O'BRIEN, Kevin J., YE, Jingzhong. Rural politics in contemporary China. *The Journal of Peasant Studies*, 2013, vol. 40, n°6, p. 915-928

YEP, Ray. Containing Land Grabs: a misguided response to rural conflicts over land. *Journal of Contemporary China*, 2013, vol. 22, n°80, p. 273-291.

YU, Hongyuan. Global governance against global warming and China's response: an empirical study on climate change policy coordination in China from 1992 to 2002. *Current politics and economics of Asia*, New York, 2008, vol. 17, p. 267-295.

YU, Xiaohua, ZHAO, Guoqing. Chinese Agricultural Development in 30 Years: A Literature Review. *Frontiers of Economics in China*, vol. 4, n°4, p. 633-648.

ZHA, Daojiong, ZHANG, Hongzhou. Food in China's international relations. *The Pacific Review*, 2013, vol. 26, n°5, p. 455-479.

ZHAN, Jing Vivian Zhan. Decentralizing China: analysis of central strategies in China's fiscal reforms. *Journal of Contemporary China*, 2009, vol. 18, n°60, p. 445-462.

ZHANG, Fangzhu, COOKE, Philip, WU, Fulong. State-sponsored Research and Development: A Case Study of China's Biotechnology. *Regional Studies*, 2011, vol. 45, n°5, p. 575-595.

ZHANG, Jianyun, WANG, Guoqing, YANG, Yang, HE, Ruimin, LIU, Jiufu. Impact of Climate Change on Water Security in China. *Advances in Climate Change Research*, 2009, vol. 5 (suppl.), p. 34-40.

ZHANG, Qian Forrest, DONALDSON, John A. Donaldson. China's Agrarian Reform and the Privatization of Land: a contrarian view. *Journal of Contemporary China*, 2013, vol. 22, n°80, p. 255-272.

ZHANG, Qian Forrest, DONALDSON, John A. Donaldson. From peasant to farmer: peasant differentiation, labor regimes and land-rights institutions in China's agrarian transition. *Politics and Society*, 2010, vol. 38, n°4, p. 458-489.

ZHANG Weili, TIAN, Zhexu, ZHANG, Ning, LI, Xiaoqi. Nitrate pollution of groundwater in northern China. *Agriculture, Ecosystems & Environment*, October 1996, vol. 59, n°3, p. 223-231.

ZHANG, Xiaoyong, HUANG, Jikun, QIU, Huanguang, HUANG, Zhurong. A consumer segmentation study with regards to genetically modified food in urban China. *Food Policy*, vol. 35, 2010, p. 456-462.

ZHAO, Quansheng. Epistemic Community, Intellectuals, and Chinese Foreign Policy, *Policy and Society*, 2006, vol. 25, n°1, p. 39-59.

ZHOU, Xueguang. The Institutional Logic of Collusion among Local Governments in China. *Modern China,* January 2010, vol. 36, n°1, p. 47-78.

ZHOU, Xueguang, LIAN, Hong, ORTOLANO, Leonard, YE, Yinyu. A Behavioral Model of "Muddling Through" in the Chinese Bureaucracy: The Case of Environmental Protection. *The China Journal*, July 2013, n°70, p. 120-147.

ZHOU, Yi. State–Society Interdependence Model in Market Transition: a case study of the 'Farmers' City' in Wenzhou during the early reform era. *Journal of Contemporary China*, 2013, vol. 22, n°81, p. 476-498.

ZHOU, Yixing, MA, Laurence J. C. China's Urban Population Statistics: A Critical Evaluation. *Eurasian Geography and Economics*, 2005, vol. 46, n°4, p. 272-289.

ZHOU, Zhang-Yue. Grain marketing systems in China and India : a comparative perspective. *Modern Asian Studies*, May 1998, vol.32, n°2, p.459-512.

IX. Annexes

I - Annexe 1: Interview outlines

A - Interview outline for central officials and researchers

INTERVIEW OUTLINE N°1 – Political stakeholders and academics at the central level
I/ General perception of national stakes at hand a. General perception of agricultural development issues: what stakes are currently at hand for China? (food security/economic growth/poverty alleviation/rural-urban gap) Which are the most important issues to address? Are some stakes contradictory?
II/ Policies - How to achieve agricultural development? a. Which policies should be implemented? At the central level? At the local level? a.1) Examples of recent policies implemented in areas having successfully achieved agricultural modernization? b. Examples of alternative/new/innovative policies?
III/ Agricultural structures to achieve modernization a. What kind of agricultural structures should be developed to address current issues? b. Alternative/new/innovative agricultural structures: in case they wish to promote large-scale industrial agriculture, are they aware of the potential environmental, social and even productivity potential impacts? Did they hear about family farming? What do they think about it?
IV/ Stakeholders taking part in agricultural modernization a. Who should lead agricultural modernization (private enterprises, NGOs, farmers, government)? Which stakeholders should the government rely on? What would be the ideal model? Which role should each stakeholder play? How could stakeholders concretely take part in agricultural modernization? Who has the workforce, who has the investment capacities? a.1) Investors: Who should invest? How should they invest? Are they already investing? a.2) Society: Is there a role that the civil society should play in this process (farmers' associations, NGO)? How can people express their opinion (through which mechanisms)? Can they protest if they are not satisfied with implemented policies? b. How should the government help stakeholders take part in agricultural modernization? Did the government implement innovative governance mechanisms?
V/ Reasons for agricultural development inequalities in different areas in China a. Why do they think agricultural development gaps still exist between provinces? Why do they think some areas are performing worse than others? (proposed answers: responsibility system

issues, not efficient transmission mechanisms, local resistance to conduct reforms (like the land tenure reform), contradiction of agricultural development with other local targets, etc.)
VI/ Transfers a. Do they exchange with people on this? Who? (industries, researchers, foreigners…)
VII/ Background a. Where do they come from? Why did they choose to work in this bureau/research center? Is it easy (was it easy, is it easier now)? Where did they get their educational background? Which are their plans for the future?

B - Interview outlines for stakeholders in local areas

1) Interview outline for local officials

INTERVIEW OUTLINE N°2 – Local political stakeholders
I/ General perception of national and local stakes at hand a. General perception of agricultural development: what stakes are currently at hand for China? (food security/economic growth/poverty alleviation/rural-urban gap) Which are the most important issues to address? b. What are the stakes at hand for their own region? What level of importance has agriculture in the area? Why (is it or is it not important)? Who (thinks that)? What is the local context, what are the local institutional/social/economic constraints agricultural modernization has to face? Did they acknowledge evolutions recently?
II/ Policies - How to achieve agricultural development at the local level? a. Which policies should be implemented? a.1) Examples of recent policies implemented in their own area? b. Examples of alternative/new/innovative policies? (whether in their areas or in another one)
III/ Agricultural structures towards agricultural modernization a. What kind of agricultural structures should be encouraged to answer current stakes at hand? b. Alternative/new/innovative agricultural structures: if they wish to promote large-scale industrial agriculture, are they aware of the potential environmental, social and even productivity potential impacts? Did they hear of family farming? What do they think about it?
IV/ Stakeholders taking part in the agricultural modernization a. Who should conduct China's agricultural modernization (private enterprises, NGOs, farmers,

government?) Which stakeholders should the government rely on? What would be the ideal model? Which role should each stakeholder play? How could stakeholders concretely take part in agricultural modernization? Who has the workforce, who has the investment capacities?

a.1) Investors: Who should invest? How should they invest? Are they already investing?

a.2) Society: Is there a role that the civil society should play in this process (farmers' associations, NGO?) How can people express their opinion (through which mechanisms)? Can they protest if they are not satisfied with implemented policies?

b. How should the government help stakeholders to conduct agricultural modernization? Did they implement innovative governance mechanisms?

V/ Reality of things? Situation in their area

a. Are they satisfied with the agricultural development in their own region? Do they wish to implement policies/projects in the near or far future?

VI/ Reasons for agricultural development inequalities in different areas in China

a. Why do they think that agricultural development gaps still exist between provinces, that some areas are performing worse than others (proposed answers: responsibility system issues, not efficient transmission mechanisms, local resistance to conduct reforms (like the land tenure reform), contradiction of agricultural development with other local targets, etc.)

VI/ Transfers

a. Do they exchange with people on agricultural modernization? Who? (industries, researchers, foreigners…)

VII/ Background

a. Where do they come from? Why did they choose to work in this bureau? Is it easy (was it easy, is it easier now)? Where did they get their educational background? Which are their plans for the future?

2) Interview outline for local entrepreneurs

INTERVIEW OUTLINE N°3 – Enterprises
I/ General questions on the enterprise and on interviewees' personal background
a. When did they create the enterprise? What did they do before? Why did they choose to engage in agricultural business? Where are they from?
b. What do they cultivate? Have they always cultivated these agricultural products? In case not, why did they decide to change?

c. How many mu[1] do production bases and buildings cover? Is it land they rent by themselves (to the government) or do they rent it to farmers? (Since when, how did it happen…)

d. Do they own enterprises' infrastructures? (office, factories…)

e. Who are their clients? What do they ask for? Did they recently acknowledge changes in their demand?

II/ Government

a. Did the government help them when they created the enterprise? Which bureau? How? (Did they provide land, investment, infrastructures, tax abatements, subsidies, which ones? Others?)

b. Who invested? Did they rely on banks to invest?

III/ Employees (workers and farmers)

a. How many people work on the factory? Where are they from? Is it easy to find people to work there? How much are they paid (by week, by month, contract, whole year long or not, etc.)? Do they have other activities (seasonal)?

b. Do they rent the land by themselves? Do they have special contracts with farmers? How are farmers paid? (per kg, contract, etc.) Do farmers also work in the factory?

c. What it the current management system? Can they influence agricultural practices (through trainings, contracts, etc.)? How can they assess the efficiency of their management system?

IV/ Difficulties

a. How are production levels? Is agriculture an easy activity? Why (why not)?

b. Does the government help them now? Which government? How? Did they acknowledge changes in the situation recently?

V/ Projects

a. Are they satisfied with their situation? With their enterprise's situation? What would they like to do in the coming years? What would they need to achieve their goals?

3) Interview outline for farmers

INTERVIEW OUTLINE N°4 – Farmers

[1] The « mu » (亩) is the Chinese area unit which is the most commonly used. 15 mu equal one hectare.

I/ General questions on the farm and on people's background and history a. How many mus do they cultivate? Do they rent the land themselves? What do they cultivate? Have they always been cultivating these agricultural products? In case not, why did they decide to change? How much do they earn (per month/per year)? How much time do they have to work on the farm each day/each month? Do they have other complementary activities? During winter time, what do they do to make their living? Do they sometimes lend their land to other farmers? b. Where are they from? What did they do before? What did their parents do before?
II/ Difficulties a. How are production levels? Is agriculture an easy activity? Why (why not)?
III/ Government a. Does the government help them? Which bureau? How (loans, tax abatements, subsidies? others?)? Did they acknowledge changes in the situation recently?
IV/ Trade/access to market a. Who are their clients? Which type of contracts do they have with them? (formal/informal, exclusive/non exclusive…) Can they bargain?
V/ Projects a. Are they satisfied with their situation? What would they like to do in the coming years? What would they need to achieve their goals?

4) Interview outline for NGOs

INTERVIEW OUTLINE N°5 – NGOs
I/ General opinion about national and local stakes at hand a. General opinion about agricultural development: what stakes are currently at hand for China? (food security/economic growth/poverty alleviation/rural-urban gap) Which are the most important stakes to deal with? b. What are the stakes at hand for the region where they conduct projects? What level of importance has agriculture in the area? Why (is it or is it not important)? Who (thinks that)? What is the local context, what are the local institutional/social/economic constraints to conduct agricultural modernization? Did they acknowledge recent changes?
II/ General questions on the NGO and on people's backgrounds a. When did they create the NGO? What did they do before? Why did they choose to engage in

this activity? Where are they from?
III/ Government a. Did the government help them when they created their NGO? Which bureau? How? Do they help them now?
IV/ Projects a. Are they satisfied with their situation? With their NGO's activities? What would they like to do in the coming years? What would they need to achieve their goals?

II - Annexe 2: List of interviewees

A - Central level interviews

1) Central officials and researchers

UNIVERSITIES AND RESEARCH CENTERS: 50 researchers			
Beijing: 37 researchers			
Institution	Sub-institution	Main field of interest	
Peking University	College of Environmental Sciences	Sciences	3
Tsinghua University	School of Public Policy and Management & Institute for Rural Studies	Agricultural policies	3
Renmin University	School of Agricultural Economics and Rural Development	Agricultural policies	4
Chinese Academy of Sciences	Bureau of Sciences & Technology Resources & Environment	Sciences	1
	Center for Chinese Agricultural Policy	Agricultural policies	4
Chinese Academy of Agricultural Sciences	Institute of Agricultural Resources and Regional Planning	Agricultural policies	1
	Institute for Agricultural Economics and Development	Agricultural policies	9
	College of Resources and Environmental Sciences	Land reform	2
Chinese Agricultural University	Soil and water resources department	Sciences	5
	Department of Humanities and Development Studies	Agricultural policies	3
Chinese Academy of Social Sciences	Rural Development Institute	Agricultural policies	2
Other places: 13 researchers			
Institution		Main field of interest	

Northeast Agricultural University	Sciences	1
Jiaotong University	Sciences	2
Tongji University	Sciences	4
Shanghai Institute of Plant Physiology and Ecology	Sciences	2
Nanjing (Chinese Academy of Sciences)	Sciences	4

Table 32: Number of researchers interviewed in Beijing and other places

Central government: 15 officials		
Institution	Main field of interest	
Ministry of Agriculture	Agricultural and rural policies	7
Ministry of Commerce	Agricultural trade policies	1
Ministry of Finance	Agricultural and rural support policies	1
State Administration of Grain	Agricultural policies	1
NDRC	Rural policies	2
Central Agr.Broadcasting and Television School	Agricultural education	1
China Non-staple Food Circulation Association	Food enterprises	2

Table 33: Number of central-level officials interviewed in Beijing

2) Complementary interviews: international cooperation agencies and international organizations

Foreign international cooperation agencies: 13 officials		
Institution	Main field of interest	
French embassy and consulates	Agr. and environmental policies & Academic cooperation	7
French development agency	Environmental policies	1
EU Delegation to China	Agricultural policies	4
U.S. Department of Agriculture	Agricultural policies	1

Table 34 : Number of officials interviewed in foreign cooperation agencies based in China

International organizations: 9 agents		
Organization	Main field of interest	
United Nations, Food and Agriculture Organization	Agricultural development	3
United Nations, World Food Program	Food	1
United Nations Development Program	Agricultural development	1
IFPRI	Agricultural development	2
World Wide Fund	Environmental protection	2

Table 35: Number of agents interviewed in international organizations based in China

B - Local level interviews

Type of actor	Huangmo	Lushan	Lanshui	Beijing	Other
NGO members	6	1	0	0	3
Enterprises managers	5	16	10	14	3
Details on enterprises	*(Micro-credit enterprises)*	*(Among which: 7 from retail enterprises, 9 from supply factories)*	*(Among which: 2 from retail enterprises, 8 from supply factories)*	*(Among which: 6 from retail enterprises/markets, 8 from CSA farms)*	
Local officials	3	2	4	3	2
Farmers/workers	4	8	4	5	6
Sub-totals	**18**	**27**	**18**	**22**	**14**
Total					**99**

Table 36: Number of people interviewed in each case study

III - Annexe 3: List of related published books, papers and articles

- BONJEAN, Alain, SCHWOOB, Marie-Hélène, BOINET, Delphine, LY, Carole. Nourrir 1,5 milliard de Chinois en 2030 : Les mutations des agricultures chinoises et leurs conséquences sur les marchés agricoles et agro-alimentaires, *Bruxelles : De Boeck*, 2014.
- SCHWOOB, Marie-Hélène. L'administration de l'agriculture chinoise et la réintegration de l'Etat dans les campagnes. *Revue Française d'Administration Publique*, 2014/2, n°150, p. 453-466.
- SCHWOOB, Marie-Hélène. Towards sustainable agriculture? Local level reliance on economic networks and the consequences for China's agricultural modernisation pathway. *Asia-Pacific Journal of Public Administration*, 2014, vol. 36, n°3, p. 220-232.
- SCHWOOB, Marie-Hélène. Modernisation agricole chinoise, entre domination d'un modèle et émergence d'alternatives durables. *Iddri Working Papers*, avril 2014, n°6, 20 P.
- SCHWOOB, Marie-Hélène. La réforme de la finance rurale. *China Analysis*, décembre 2013, n°46, p. 38-42.

■ SCHWOOB, Marie-Hélène. L'éveil vert de la société chinoise ? *Ecologie & politique*, 2013/2, n° 47, p. 27-37.

■ SCHWOOB, Marie-Hélène. La stratégie de sécurité alimentaire chinoise. *China Analysis*, juin 2013, n°43, p. 28-32.

■ SCHWOOB, Marie-Hélène. L'intégration des immigrés de l'intérieur. *China Analysis*, avril 2013, n°42, p. 8-12.

■ SCHWOOB, Marie-Hélène. Sécurité alimentaire en Chine: quels arbitrages ? Quels acteurs ? *Iddri Working Papers*, décembre 2012, n°22, 26 P.

■ SCHWOOB, Marie-Hélène. La politique rurale: nouveau défi pour la stabilité sociale. *China Analysis*, mai 2012, n°37, p. 30-33.

■ SCHWOOB, Marie-Hélène. The land issue: Power struggles between the central government and local authorities. *China Perspectives*, 2012/1, p. 66-67.