

# Understanding the Adoption of Organic Farming in Zaolinwan Village, China

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## Summary

Organic farming can be referred as an organism, in which all the component parts- the soil minerals, organic matter, micro-organisms, insects, plants, animals and humans- interact to create a coherent whole (Lampkin, 1993). Organic farming is treated as a social movement, or a reverse to the conventional agriculture which focused much on the capital input on the land. It has long been treated as a good method for smallholders to compete with large-scale mechanized agricultural farmers in the market for its demand on intensive labor and relatively small-scale of field. This study aims at gaining information on the case of organic farming in Zaolinwan village about the motivations for the farmers to choose the organic farming; the driving force behind the organic farming value chain; and the different positions the stakeholders in the value chain have.

China has become an emerging power in the organic farming area, where a leap on the organic farming can be witnessed: organically managed land increased from 342,000 ha in 2003 to 978,000 ha in 2005 (Xie *et al.*, 2005). Lots of researches have been published focusing on the discussion on the pros and cons the organic farming has brought to China. However, very few researches have been done on the exact fruits the organic farming has brought to the rural area in detailed cases. And the motivations and drivers behind the adoptions of organic farming is also missing, *let alone* the understanding on the farmers' perceptions about the organic farming and the possible reasons they take part in the shift or resist it. To understand the whole issue, the model of understanding farmers' practices from Leeuwis (2004) was adopted. Through the research, the driving forces of the adoption of organic farming from farmers are the social pressure from others, higher income from the organic farming project, and the relatively lower risk from it.

The value chain can be considered as an economic unit of a particular commodity or a group of commodities that encompasses a meaningful grouping of economic activities that are linked vertically by market relationships (UNCTAD, 2000). Since farmers are not isolated actors and are influenced by different actors who offering various activities when they make their choices, it is also important to introduce the value chain theory into consideration. Farmers also shape their perceptions based on the influences from other stakeholders, therefore it is of great importance to understand the driving force behind the organic farming value chain in Zaolinwan village. And according to (Kaplinsky and Morris, 2001), the value chain can be categorized by its driving force into buyer-driven and producer-driven. In Zaolinwan case, a new type of buyer-driven value chain can be seen which is different from the past cases.

Keywords: China, Organic farming, motivation, Value chain

# Chapter I Introduction

## 1.1. Introduction

China's 122 million ha of farmland represents all climatic zones, from tropic area in the very south near Vietnam to zones of cold climate next to Russia, but the temperate zone, which is suitable for agriculture, forestry, animal husbandry and fishing, is predominant. The main crops are rice, millet, buckwheat, soybeans, tea, mulberry, ramie, abutilon, pears, peaches, oranges, litchis, longans, hawthorns and kiwis. China has abundant resources for aquatic production along its coastline (China Statistical Yearbook, 2009). China is also a country with thousands years' history of experiences in agricultural production. Now China is facing several difficulties as follows.

First of all, the property right form of land in China is still in a vague condition and due to historical legacy, farm land in China is fragmentary and owned by separated farmer household. After the establishment of China PR in 1949, a national movement towards collective farm for transformation of socialism had undermined the tradition of agricultural heritage. The symbol of that time's agriculture is work point system (gongfen), production team system and communal dining. As mentioned by Adam Smith, 'we expect our dinner from people's regard to their own interests', however during that period of time, you got the same payback whether you work hard or just pretend to be hardworking, therefore the production efficiency stayed stagnation while the agricultural output barely kept pace with population growth which resulted in the Chinese famine of 1959-1961. Since 1978, the Chinese government has implemented a series of major reforms including the most important emergence and eventual prevalence of the household responsibility system (HRS). (Justin Yifu Lin *et al.*, 2007). All these methods raised the motivation of farmers and spurred the agricultural production growth. But at the same time, problems remained that since the base number of farmers is so large, when we even calculate in household level the land distributed to every family is quite limited, which means few chances of adaption to modern industrial agriculture, in other words, farmers still need to depend on the traditional agriculture tools and the adoption of large machinery is limited, what is more, the profit of a Chinese farm is often at a very low level. After the further development of market oriented economy, small scale farmer households cannot compete individually in the market. Since the lack of effective collaboration of farmers, farmers have little power on market price of their production and the necessary inputs. The fact is the price for agricultural production stays at the relatively low level while the prices of inputs such as chemical fertilizer, chemical herbicide and even the water increase dramatically. Furthermore, as the property right of farming land is still under the name of the country, left to the farmers only the right of usage in the name of renting for thirty years, fewer farmers would focus on the long-term effect of their agricultural behaviors which means a usual extreme exploit of resources which will damage the local biodiversity and the soil fertility.

Secondly, after the introduction and spread of chemical inputs in China, the adoption of chemical fertilizer and chemical pesticide or herbicide had seen an enormous increase. That had left Chinese agriculture dangerously dependent upon excessive inputs of chemical fertilizers, pesticides and herbicides and hence a consequence of damage to both environment and human health. Yet the application of chemical inputs continued to rise in the reform period and its immediate aftermath: the period 1978–1984 saw a doubling in the application of chemical fertilizers in the Chinese country side, the period 1984–1994 saw a further doubling. By 1990, the average annual application of chemical fertilizer, at 13.9kg per hectare, was already the highest in the world, yet its application continued to rise year on year throughout the 1990s (Richards Anders, 2006). Although it is still too early to come to the conclusion that China had reached its optimized economic point of chemical materials usage, it is without any doubt that the chemical inputs into agricultural production have caused severe problem both to the rural environment and the farmers living in the environment as well. As stated by Richards Anders, plants' ability to use nutrients efficiently is reduced as a result, crop yields decline and to maintain those yields the application of chemical fertilizers has to be accelerated: the text book case of diminishing returns (Richards Anders, 2006), which means the ratio of chemical inputs' unit profits to the costs will get lower and lower, and only through more investment of chemical inputs can the farmers get the same level of crop yields. Richards Anders further gave out the calculation for the ratio of profits to the costs for the period from 1990 to 2000: In 2000, chemical fertilizer application had risen to 41.46m, an increase of 60% on the 1990 figure. Yet the total area sown to crops increased in the same period by only 5%. Recent year, the chemical inputs' price is rising rapidly according to various factors, this situation dramatically encroaches the profit of farmers. What is more, the toxicity of chemical inputs also has had dramatic impacts: China's Ministry of Agriculture, for example, reported that more than 100,000 people were poisoned by pesticides and fertilizers during 1992 and 1993 and that more than 14,000 of them died. According to author's personal experience, the rural area suffers a lot from the pollution of chemical materials. Oxygen-enriched oxidation can often be noticed on the water area and during the plant season the smell is too acrid for people to get close to the field.

Thirdly, the economic gaps between farmers living in the remote rural areas (especially the ones from the middle and west part of China) and the citizens from the urban areas (especially the ones from east, coastal areas) are getting wider and wider. This fact is largely due to several elements as follows. 1) Policies favored for cities. A strict regulation has been set ever since the 1950s to control farmers from migrating to the cities. And a biased education resource allocation further hinders farmers to leave their current location to seek prosperity in the city. Therefore, the farmers in the remote area can hardly change their lives by immigration. 2) After the start of reform and opening up, a great amount of foreign investment has been injected into the coastal areas in favor of their advantages of affluent resources, favorable policies and convenient external traffic. Although some of the farmers can work as migration workers in the cities, the pay is

often at a very low level and the phenomenon of overdue salaries is also agitating the farmers. 3) Conventional agriculture can hardly bring profits to the farmers. As mentioned above, traditional agriculture in China which focuses more on the quantity of total production jeopardize the farmers' ability to earn profit. Although the demand for agricultural products is high, the products offered by the farmers in the market are highly homogenous and the quality of them remains at a relatively low level.

## **1.2. Background**

### **1.2.1. Development background**

According to the definition by International Federation of Organic Agriculture Movements (IFOAM), an international umbrella organization for organic organizations established in 1972, organic agriculture is "a production system that sustains the health of soils, ecosystems and people. It relies on ecological processes, biodiversity and cycles adapted to local conditions, rather than the use of inputs with adverse effects. Organic agriculture combines tradition, innovation and science to benefit the shared environment and promote fair relationships and a good quality of life for all involved...". And lots of agribusiness executives, agricultural and ecological scientists, and international agriculture experts both from natural and social area hold a belief in organic farming, claiming the organic farming will bring benefits of higher soil organic matter and nitrogen, lower fossil energy inputs, and conservation of soil moisture and water resources (especially advantageous under drought conditions) (Pimentel *et al.*, 2010). Conventional agriculture can be made more sustainable and ecologically sound by adopting some traditional organic farming technologies. In nowadays world where environment issues draw more and more concerns, all these claims mentioned above can be really interesting and encouraging. However, supporters will never walk alone. There are also respectable opposers from various areas accusing that all these benefits of organic farming are exaggerated if not faked by its supporters. From their point of view, organic farming cannot yield the sufficient crops to support the world's growing population, *let alone* the doubtful effect of preservation of environment. And a so-called price premium is not fully guaranteed in long-term run if more farms transfer to organic farming. And they further doubt how organic farming can gain enough nutrients (Connor, 2007). For them, a widespread transition to organic farming will bring hunger to the society and impoverish the farmers at the same time.

In China, organic farming has also drawn much attention. The first organic product which gets its access to the market is the organic tea in southern Zhejiang Province certified by a Dutch certification organization. Since the mid-1990s, organic food has become better known, and more and more researchers, government officials, and producers have begun to get involved in organic farming. In 1994, the Rural Ecology Sector of NIES (Nanjing Institute of Environmental Sciences) was restructured as the Organic Food Development Centre of SEPA (OFDC-SEPA) in Nanjing, and since then has been devoted to promoting the organic sector of China. Organically managed land increased from 342,000 ha (0.26%) in 2003 to 978,000 ha in 2005(Xie *et al.*, 2005). Many believe China has even more potential to be one of the leading powers in organic food industry

because of its long history of highly labor-intensive farming, and a relatively cheaper price for the labor- a key element of organic farming.

In China, the spread of organic farming is mainly driven by a top-down mechanism. Motivated by the global market demand for organic products, the Chinese government firstly set several farm bases to adopt organic farming process according to the mainstream regulations concerning organic farming. During the process, Chinese government also started to introduce series of local regulations and standards to manage the agriculture production and to bolster the system by diversified labeling policy. The diversified labeling policy contains three different types of agricultural products other than conventional counterparts as: non-public-harm products (wu gong hai), Green Food (lu se shi pin), and organic products or products converted to organic. In order to help conventional farms to achieve the transition to organic farms, government further diversified the Green Food standard into two levels: the Grade A, and Grade AA, and then to incrementally converge the local Green AA standard with internationally accredited organic standards, and proliferate it, test it, hide it out of the international spotlight. This strategy has facilitated the rapid uptake of organics in China (John Paul, 2008). The major differences between Green Food A and Green Food AA is that the chemical materials are completely banned in the latter one while within the former one only a reduction of chemical materials is needed. These two food standard both demand an involvement of biological technology and physical measures. (Xiao Qing-liang *et al*, 2007)

In recent years, the living standard and consequently the consciousness of health and environmental protection among the Chinese people have been increasing. This has led to growing demands for more ecologically-friendly and safer foods. Although at present, organic products produced in China are mainly exported to developed region such as North America, the EU, and Japan. The major export products are processed vegetables, soybeans, honey, grains, green tea, herbal medicines, and beans. The most important places to make contacts regarding exports are expositions such as Biofach in Germany. It is also believed that the potential market for organic product in China is enormous. And organic food has already been sold in big supermarkets and expositions of major cities like Beijing, Shanghai, and Guangzhou. There are also a few specialty stores for organic products.

However, the channel for the organic products to reach the consumers is still limited. The distribution system and markets for organic farming are still in an immature condition. One limiting factor for the development of a domestic market is the high price of organic products. The price of organic products is often 3-5 times higher than that of conventional food, which restricts the domestic market to a special group of consumers in the major cities. Local media, in their efforts to promote organic food, have sometimes twisted the concept of organic food with the non-public-harm food, and the Green Food, which has reduced ordinary consumers' confidence in it. There is a growing interest in these products, including textile fibers such as cotton, but current organic production is



not able to satisfy the foreign market demand. Another major factor limiting exports are the trade barriers caused by the importing countries' regulations and standards on organic farming.

### **1.2.2. Regional background**

Yangzhou is a prefecture-level city in central Jiangsu province, People's Republic of China. Sitting on the northern bank of the Yangtze River, it borders the provincial capital of Nanjing to the southwest, Huai'an to the north, Yancheng to the northeast, Taizhou to the east, and Zhenjiang across the river to the south. It contains seventy towns plus two villages, which is 6634 square kilometers in total. Now more than 4.6 million people are living in Yangzhou.

The place for field research is named Zaolinwan village, where organic vegetables have been grown. It has long been deemed as the poorer area in Yangzhou, where most of the local farmers made their livings on agriculture or working in the urban areas. Some more detailed information about the village will be shown in the part of the field results.

### **1.3. Objective and Research Question**

Based on the introduction above, the objective of this research is to identify key factors behind both the adoption and non-adoption of farmers who live in Zaolinwan village by using the model for understanding farmers' practices. Besides that, a further scrutinization and comparison over the organic farming value chain and the conventional value chain has been implemented in order to see the factors in both of the chains to motivate and hinder farmers' choices.

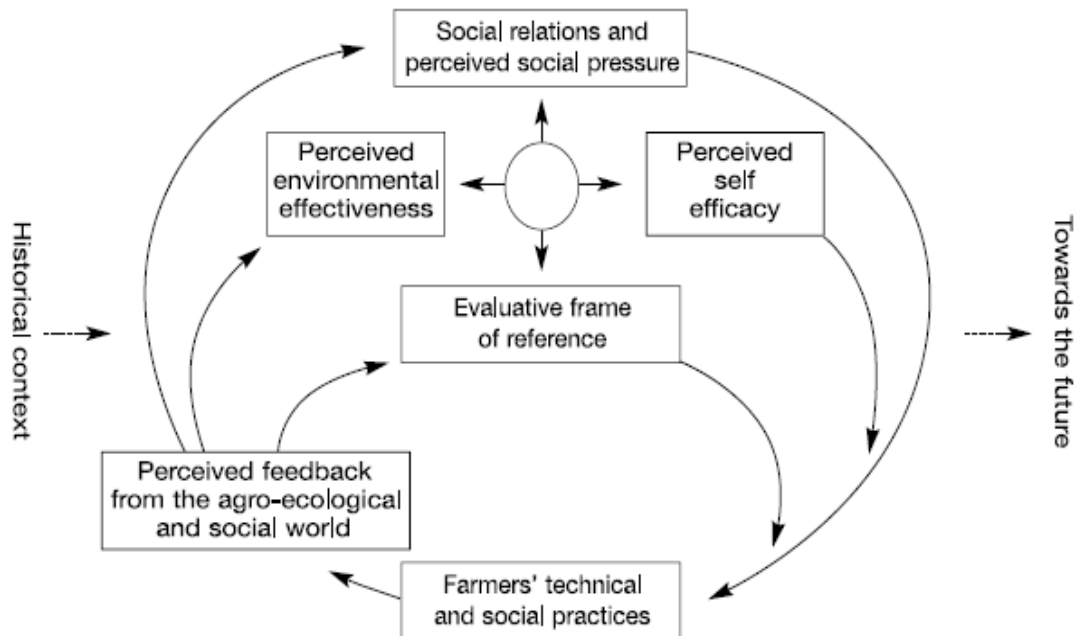
## **Chapter II Theoretical Framework**

In this part, I will further explain the two concepts of the model for understanding farmers' practices and the value chain. However, these two concepts cannot be separated or treated as two isolated concepts. In fact, they are highly interlaced and I will make the attempt to explain them in a connected way after giving out general definitions of them.

### **2.1. A model for understanding farmers' practices**

In Leeuwis & Van Den Ban, practices are referred to things people 'do' (and 'do not do') on a more or less regular basis. Thus, when a person engages in similar actions over time and/or if many people act in a particular way we can speak of a 'practice'. In our case, the practice refers to both the adoption and the non-adoption of the organic farming from the farmers in the specific area.

In order to understand the factors behind farmers' practices, we make use of Leeuwis and Van Den Ban's model for understanding farmers' practices (Leeuwis & Van Den Ban, 2004). According to this model, farmers may have different sorts of reasons for engaging (or not) in specific practices, which can be captured under four composite variables.



### 2.1.1. Evaluative frame of reference

The variable 'evaluative frame of reference' is the fundamental factor which may exert numerous influences on farmers' practices. It is consisted of three aspects as follows:(Leeuwis & Van Den Ban, 2004).

First of all, farmers' perceived (technical and socio-economic) consequences. Since farming is a complex and coordinated practice, even small change in it may incur dramatic consequence. Farmers often have some ideas about the possible consequence based on various reasons before any change occurs. In our case concerning the organic farming, based on different resources of information and experience, farmers may expect that the adoption of organic farming leads to improved quality of yield; change in the quantity of yield; changes in labor requirements at particular procedure and time; decreased or no dependency on chemical inputs like chemical fertilizer and seed; a future price premium from the market; a more tight relation with the actors along the organic farming value chain; etc. However, despite farmers' knowledge and expertise, they are not all-known and may lack at times the insight to draw inferences. This is often the case when the phenomena are hard to observe.

Secondly, the perception of (un)certainty, likelihood and risk from the farmers. Since farmers are exposed to continuous change of weather conditions, market prices and the trend of consumers' preferences, etc. they are very aware of the importance of risk and uncertainty. In such circumstances when facing the adoption of an innovation, farmers may consider risks in each of the domains as 'technical', 'economic', and 'social-organizational'. Risk can be defined as a measure of the probability and severity of adverse effect (Haimes Y.Y., 1998). As we know, risks are very hard to predict.

Especially in our case of organic farming, which a mandatory three-year transitional period is awaiting for all farmers who coin the adoption (FrankEyhorn et el, 2007 ), the risk may be even harder to predict. According to Doug Hubbard(Douglas Hubbard "How to Measure Anything: Finding the Value of Intangibles in Business", John Wiley & Sons, 2007), uncertainty is a state of having limited knowledge where it is impossible to exactly describe existing state or future outcome, more than one possible outcome. The main distinction between the 'uncertainty' and 'risk' is that risk exists when a probability based on past experience can be attached to an event, whereas uncertainty exists when there is no objective way to place a probability on an event (Knight, F.H. (1921) Risk, Uncertainty, and Profit. Boston, MA: Hart, Schaffner & Marx; Houghton Mifflin Company).

Finally, farmers' valuation of such consequences in relation to a set of aspirations is also of a great importance. A subjective preferences and aspirations are linked with the perceptions about consequences, likelihood and risks. In other word, a consequence may have little or none influence on farmers' practices if they consider it is of no concern with them. Several types of aspirations may play a role in the valuation process: first, farmers may have 'technical/ economic' goals and interests in their mind. A reduction of labor or/and the chemical pesticide usage may motivate the farmers. A second type of aspiration involves 'relational' goals and interests. Farmers may adopt or not adopt certain farming practices because they want to maintain a good relationship with others. The third aspiration is more cultural, and involves social norms and values about what is 'good' or 'bad'. In many cases, the relationships between the emotional interests and the practice are indirect and often the emotional and more rational evaluations influence each other and go hand in hand (Leeuwis & Van Den Ban, 2004).

### **2.1.2. Perceived self-efficacy**

The second variable that shapes the application of farming practices is 'perceived self-efficacy' which can be related to their confidence in their own capacities. Sometimes even certain kind of practice is beneficial, farmers may or may not adopt it according to the beliefs in their own capacities (Bandura, 1977). Several dimensions of perceived self-efficacy can be distinguished, including 'perceived ability to mobilize resources', 'perceived availability of skills and competence', 'perceived validity of the evaluative frame of reference', and 'the perceived ability to control or accommodate risks'.

A mixture of resources is needed when applying a particular practice which requires farmers' perceived ability to mobilize resources. Resources include labor, cash, and land, etc.. For example, if the farmers do not feel like they have the potential capability to meet the demand of intensive work-load needed, and an access to money or loan to support them (e.g. to pay for the fees of certification offered from concerning organizations), they may abandon the idea of adopting organic farming.

The second dimension is quite related to the first one. They are special resources needed to adopt practices as 'skills and competence'. For farmers to practice organic farming, for example, farmers may need to be able to (a) know the life circle and how to

observe it; (b) adopt the methods of crop rotation and green manure to help to provide nitrogen through legumes; (c) integrate cultural, biological, mechanical, physical and chemical tactics to manage weeds without synthetic herbicides.

In the third place, a perceived validity of the evaluative frame of reference is very important. For farmers, in order to take the consequences, risks, and aspirations into evaluation of farmers' practices as mentioned above, the farmers need to depend on the knowledge they obtained from many sources. But it is not certain for the farmers to consider whether the knowledge is relevant and valid enough to the specific situation. They may expect a higher profit gained from organic farming, but at the same time feeling doubtful about it. When farmers distrust in their own knowledge of certain practices they may reconsider such practices and/or further check their knowledge.

Lastly, farmers' perceived ability to control or accommodate risks is also an important point. Whether or not certain risks are accepted or 'taken for granted' can depend on a number of factors. If confronted with an unknown risk, people will actively seek information concerning the risk (René Lion *et al*, 2002). The skill to control, accommodate or get to know the risks thus is related. Besides, the willingness for stakeholders to take risk to adopt certain practices is also different according to the resources different stakeholders possess. Because a more affluent resource means a stronger ability to handle bad effect might be caused by the risk. The more resources one has, the more he may be willing to take the risk.

### **2.1.3. Perceived environmental effectiveness**

In addition to individual abilities, farmers' practices are also shaped by their assessment of the effectiveness of their social environment to whether it will adequately accommodate and support them or not. This is captured by two variables as 'perceived effectiveness of the agro-support network', which relates essentially to the issue of trust in others, and 'the perceived effectiveness of (inter)community organization'.

Behind every technology or practice, there is a network of support relationships that makes it possible. In other words, one needs factors such as well-functioning and reliable organization of input supply, valuable advices from various stakeholders, organization of marketing, government price policy, road systems, credit system, land tenure arrangements, organization of water delivery and/or drainage to be the basis for any adoption of certain practices. In relation to various farming practices, farmers depend not only on the effectiveness of the wider support network, but also on the practices and behavior of their colleague farmers. For example, one organic farmer cannot expect well-qualified and high grade yield from his farm in the case when his colleague farmers still linger to the conventional farming way and the usage of chemical pesticide and/or herbicide. And also an adoption of certain farming practices may be viable only if other farmers adopt the practices as well, so that overhead costs (e.g. equipment, transport, storage) can be shared. For example, one single farmer or a limited number of farmers may need to share the equipments required by the organic farming.

#### **2.1.4. Social relations and perceived social pressure**

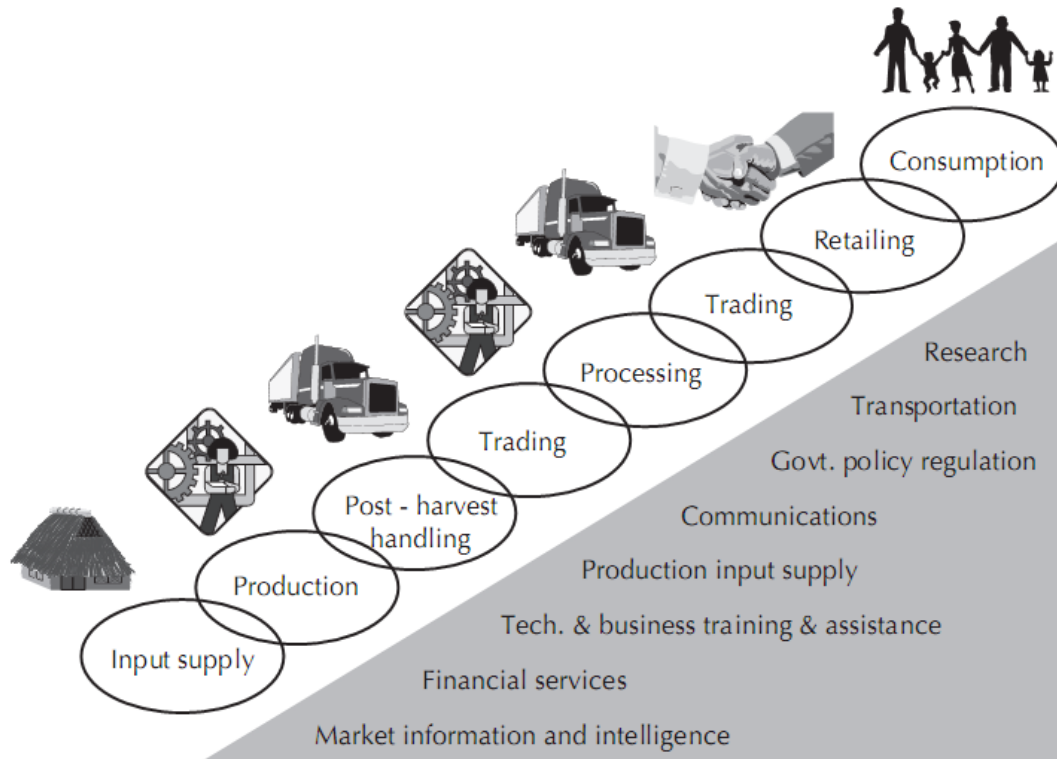
Finally, farmers' practices are also shaped by pressures that they experience from other people and the relationship with others they have. This fourth variable is labeled as 'social relationship and perceived social pressure', and can be seen to include dimensions such as the perceived desires and expectations that other actors are seen to have regarding the performance of certain practices, the resources (including rewards and sanctions) that such others are perceived to mobilize in order to make farmers comply, and farmers' valuation of the involved expectations, resources and relationships in view of a variety of aspirations. This variable may be of particular importance in China, and can be further explained by the introduction of the concept as 'face'. Face is the respect of the group for a man with a good moral reputation: the man who will fulfill his obligations regardless of the hardships involved, who under all circumstances shows himself a decent human being (Ko Ling Chan, 2006). Face is composed of two basic wants: the desire to have one's attributes and actions approved of by significant others (positive face) and the desire to maintain autonomy and be free from unnecessary constraints (negative face). People assess their own behavior and the actions of interactional partner(s) in terms of what is implied about both parties, in part, because many actions have the potential to threaten face (face effect). Since farmers need to operate their practices highly according to the community's rule they belong to. And any aberrance may incur a breakage of the interpersonal relationship. Finally, the fourth type of aspiration can be referred to as 'emotional' interests.

#### **2.2. Value Chain**

Another concept I find important for this research is the value chain. It enables people to observe a complicated issue from a much more comprehensive way. Since a much more integrated and market-oriented agriculture than ever before and the growing trend of division of work, the connection among stakeholders is becoming tighter and tighter in the era of globalization. Farmers' choices are more and more influenced by other stakeholders in the value chain. They need to establish connections with various stakeholders in order to survive in the market. It is unthinkable for people to consider the issue in agriculture by isolating all the stakeholders involved. In other words, we can hardly imagine any problems facing by the farmers can be merely explained by looking from the farmers' angle and tackled by giving solutions aiming solely at them. A more systematic way of thinking is required. Therefore putting organic farming into a value chain scope is of great importance.

The value chain describes the full range of activities which are required to bring a product or service from conception, through the different phases of production (involving a combination of physical transformation and the input of various producer services), delivery to final consumers, and final disposal after use. They do not exist in the sense of a tangible reality: they are simply a framework for trying to understand how the world works (Kaplinsky R, 2000). Most agricultural production is increasingly integrated in value chains with forward (marketing) and backward (input supply) linkages. Urban

markets often cause supply chains to grow longer; in turn, shelf-life, handling requirements, and other market requirements are of greater importance for agricultural products. Before reaching the consumer, traditional staples may pass through the hands of several agents (assembly agent, miller, wholesaler, retailer, and baker), and more value may be added in the food processing stage than in production. Agricultural production is increasingly based on a wider range of purchased (or free) inputs: seed, fertilizer, pesticides, machinery and water that must be combined and used judiciously to arrive at sustainable production systems. Each of the links in these “production-to-consumption” systems constitutes a value chain and provides new opportunities for innovation (Hall A *et al*, 2007). A value chain can, therefore, be considered as an economic unit of a particular commodity (e.g. milk) or group of commodities (e.g. dairy) that encompasses a meaningful grouping of economic activities that are linked vertically by market relationships (UNCTAD, 2000). The emphasis is on the relationships between networks of input suppliers, producers, traders, processors and distributors (Ponniiah A *et al*, 2009). The value chain concept also emphasizes on the addition of value as the product progresses from input suppliers to producers to consumers. A value chain, therefore, incorporates productive transformation and value addition at each stage of the value chain. At each stage in the value chain, the product changes hands through chain actors, transaction costs are incurred, and generally some form of value is added. During this process, more practices are included as the negotiations among stakeholder (e.g. the production sector needs to negotiate with the post-harvesting handling sector in order to have a better bargain over the price of the product), the alignment along the value chain and so on. Value addition results from diverse activities including bulking, cleaning, grading, packaging, transporting, storing, and processing. The value chain concept enables us to incorporate the backward and forward linkages and realize the entire contribution of a particular sector and/or commodity to the overall economy. It also allows us to address issues beyond the farm boundaries.



Source: adopted from Ferris, 2007.

Value chains can be classified into two types: buyer-driven value chains, and producer-driven value chains (Kaplinisky *et al.*, 2001). The main characteristics of these two value chains can be found in the following table.

	Producer-Driven Commodity Chains	Buyer-Driven Commodity Chains
Drivers of Global Commodity Chains	Industrial Capital	Commercial Capital
Core Competencies	Research & Development; Production	Design; Marketing
Barriers to Entry	Economies of Scale	Economies of Scope
Economic Sectors	Consumer Durables Intermediate Goods Capital Goods	Consumer Nondurables
Typical Industries	Automobiles; Computers; Aircraft	Apparel; Footwear; Toys
Ownership of Manufacturing Firms	Transnational Firms	Local Firms, predominantly in developing countries
Main Network Links	Investment-based	Trade-based
Predominant Network Structure	Vertical	Horizontal

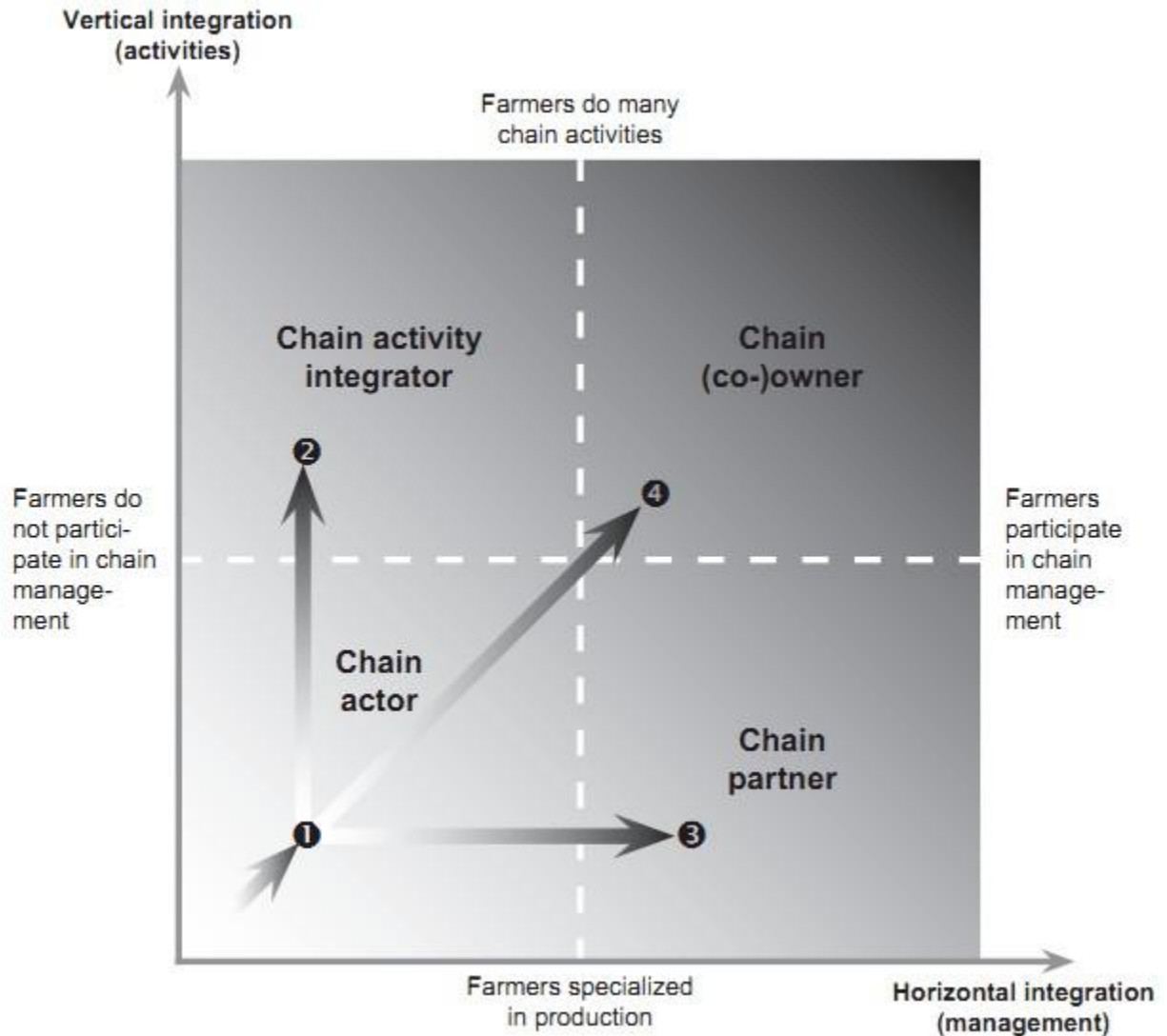
Adapted from Gereffi 1999

Buyer-driven chains are usually labor intensive industries, buyers undertake the lead coordination activities and influence product specifications. The buyer-driven value chain is not limited to the industrial section, but can be also seen in the agricultural section as well, for example In China, the markets in urban areas for agriculture products are becoming more and more dominated by supermarkets as it is becoming a trend and supported by the government that consumers go to the supermarket to purchase agriculture products. According to Hu (Hu *et al.*, 2004), supermarket sales are growing by 30-40% per year, 2-3 times faster than in other developing regions. The supermarkets and their suppliers have the strength to control the value chain since they have the financial and information advantages, while the farmers are in a weak position competing with them. In producer-driven value chains which are more capital intensive, key producers in the chain, usually controlling key technologies, influence product specifications and play the lead role in coordinating the various links (Kaplinisky *et al.*, 2001). The producer-driven value chain can also be regarded as the conduit which technologies are disseminated among producers, traders, processors and transporters; and information on customer demand preferences are transmitted from consumers to



producers and processors and other service providers (Ponniah *et al*, 2009).

According to Vellema and Danse (2007), the concepts of value chain development and market access have come to the fore as ways to encourage entrepreneurship by linking smallholder producers to agribusiness and food industry as well as promising markets. The chain approach holds promise in terms of secured markets and value addition for rural communities (Peppelenbos *et al.*, 2007). Also according to Peppelenbos and Verkuil, smallholder farmers can participate in value chain in many different ways. These forms of participation can be assessed according to two broad dimensions: (a) the types of activities that farmers undertake in the chain; and (b) the involvement of farmers in the chain governance. But the positions the farmers have are not fixed and can change according to their involvement on the management and activities in the value chain. For example, if the farmer adopt more activities in the value chain (for example, procuring inputs, drying their crop, sorting and grading, processing, transporting and trading), then (s)he maybe shift from a chain actor to chain activity integrator as the matrix below has shown. And (s)he may also further get involved in the decision making about issues that affect them like for example the decision of the specific crops oor animals the farmer is willing to grow or raise then the decision makes the farmer from a chain activity integrator to a new position as the chain (co-)owner. However, the examples given above are only a simplified way for explaining the change of farmers' positions. It is not necessary for a farmer to shift strictly from one role to another, and it is also possible that the specific farmer may be located at random position of the matrix.



Adapted from Peppelenbos 2007

However, it does not necessarily mean that any of the position in the matrix is more ideal than the others. In fact, it all depends on the specific situation, and may change over time. As farmers shift from chain actors into chain owners, they add “economic rent” to their business (they increase their share of benefits), increase their control over the chain, and protect themselves better from competition. But this brings with it greater risks and responsibilities, which the farmers should be able and willing to bear. The costs may outweigh the benefits (Peppelenbos *et al.*, 2007).

Via the theory of value chain analysis, the study aims at exploring the driving force of the development in the value chain of organic farming, and the positions of the farmers in the value chain in Zaolinwan village.

### 2.3. Research questions

- What are the motivations behind the farmers' choice of organic farming in Zaolinwan village? How do the farmers see the present development of the organic farming and the prosperity in it?
- What is the driving force behind the organic farming value chain in Zaolinwan village? What are the benefits and risks for the different stakeholder (notably the farmer community)?

### **Chapter III Research methodology**

First of all, the research is a qualitative approach. Qualitative approaches of research are interested in meaning: how people make sense of their lives, experiences, and their structures of the world. The researcher physically goes to the people, setting, site, or institution to observe or record behavior in its natural setting (Creswell, 2009 Research Design: Qualitative and Quantitative Approaches) The most important reason to use the approach is that we will try to dig out and understand the different reasons for farmers to adopt organic farming or stay in conventional farming, and through executing the behavior above the study has built an insight into part of the organic farming and conventional farming value chain in specific case. Through qualitative research it is hoped to generate in depth information of different perspectives.

Secondly, the research is an exploratory or descriptive study. Exploratory research is an approach which seeks to find out how people *get along* in the setting under question, what meanings they give to their actions, and what issues concern them (Schutt, 2004). The result of an exploratory study can give us a direction or notion of the existing perspectives or ideologies the different stakeholders have and why they have them. Besides, the existing knowledge does not seem sufficient and 'in depth' enough to justify a broader study. Finally, the limited available time and budget is a reason to choose for a small scale study.

So the research is based on primary and secondary sources. Primary sources are created at the time of an event, or very soon after something have happened (Patton, 2002). The primary sources can be the results of field visits, in-depth interviews, and semi-structured interviews. The secondary sources are analysis of documents from the relative areas; the documents were in English and Chinese. They are called secondary sources because they are created after primary sources and they often use or talk about primary sources. (Patton, 2002)

To accomplish the research objectives and to answer the research questions of the research, a field work was undertaken between the period of December 2010 to March 2011 in the city of Yangzhou, Jiangsu Province, China. Yangzhou is a city with large scale of both geographic and political area and various stakeholders who are potentially getting involved exists there. The reason will be shown in the coming paragraph for me to finally decide to further narrow down my focus to a relatively small area- a local village named Zaolinwan, which have an organic vegetable field in it. But before I actually

visited the village, I got quite limited information on the village: both on the situation of the village and the operation of organic farming there. However, not many selections had been left for me due to the limitation on resource and time.

I tried to limit the stakeholders to such as farmers, operators along the value chain, local extensionists, and staffs from ministry of agriculture etc. And finally my field work includes field visits to local farmers (farmers who adopt the organic farming and farmers who did not adopt the organic farming), and the organic field, however it was not easy to get the access to the government agencies such as local ministry of agriculture and extension section, and the management level of the company. As a student, I lack the necessary information and maybe social capital to get the contact with them. I visited two locations with the organic farming, and the Zaolinwan village is not the first place I went to. Before I went back to China, I contacted the informant via the social connection of my parents, according to the informant, the village is perfect for my topic, since it had a large area of organic rice field and the village is rewarded for its pioneer in organic development. And in fact, the village really contains beautiful organic field, however the place is so famous for its organic production that the government had already decided to make it as an example, and an experiment field for organic farming technology. The first time I went to the village with the informant and received warm welcome there, the local officials even held an informal discussion for me. But after that, I cannot go deeper by myself, I tried to collect the data in the village but the technicians in the field are afraid that I would try to steal information and data from them, while the local officials never show again. Because of these depressed obstacles, I have no choice but to shift my research site to the Zaolinwan village. Though the situation in Zaolinwan village did not change a lot, but due to the fact that the organic field in Zaolinwan village is operated mainly by a company, so it is relatively open to the outsiders as I am in the sense that the farmers in the projects are still willing to talk and the agricultural workers hired by the company are also like to share some of their ideas. However, I got no clue on the starting point of carrying out the observation of the value chain activities happened outside the field. So I was forced to leave my plan on the observation of the process of the value but do some other analysis of documents of the similar cases all over the world.

### **3.1. Field Visits**

The field visit proved to be very important in my research for it gave me the chance to acquire the insight into the operation and process of organic farming, and a deeper understanding of different stakeholders' behaviors. As I have mentioned before, little information did I have before the first time I have been to Zaolinwan village. And only after I visited there several times, can I establish the understanding of the connections between different stakeholders and the identification of various agents. I finally had the opportunity to understand the farmers' roles and activities in the organic farming value chain, and to experience the real situations around different stakeholders. Through the visits to farmers, I got the first image of the situation concerning the conventional and organic farming, about the stakeholders involved, the impacts the stakeholders exert on

farmers and so on. I also planned to visit entities such as local ministry of agriculture, extension service agencies, and the other stakeholders along the value chain (in the case, the Singaporean company). However, it is difficult to get the access to these stakeholders for one reason or another (for example, I was not able to reach the staff from the company since they mainly controlled the management of the organic field by indirect methods as telephone).

### **3.2. Semi-structured interviews**

I used semi-structured interviews along the research. A semi-structured interview is flexible, allowing new questions to be brought up during the interview as a result of what the interviewee says (Lindlof, 1995). A set of questions were designed beforehand, but the questions were also adapted according to the real situation, for example sometimes the interviewees were quite open-minded and willing to share their opinions on certain issues then relevant questions would be asked concerning the issue. Since some of the farmers were reluctant to answer the questions and some of them even tried to escape from any form of interviews, it proved to be better to start from an ordinary conversation. But in general, the farmers are willing to be interviewed after I gave a short self-introduction and the reason for my activity in the village.

### **3.3. Identification of possible stakeholders**

At the beginning of the field research, there is no strict line on the selection of the interviewees since at this stage the main goal for the researcher is to gather as much information as possible, though some of them may offer overlapped or irrelevant information. And as the accumulation of cases, the researcher started to choose according to the interviewees' position in the organic farming. And a short identification of the interviewees about his or her general information was made. However, it would be impolite to 'give up' any interviewees if they turned out to be able to offer the similar information. Therefore, a courtesy interview would also be given. The length of the interview highly depended on the interviewees' cooperation, the information that they could provide, and the time they could give. This period of time ranged from 30 minutes to around two hours. I have met with interviewees answering the questions with 'yes', 'no', and 'I do not know'. But there are also some interviewees who are willing to express. Language is very important to understand the meanings, and it was firstly not considered an obstacle since the researcher is also from the same country, but in fact the researcher found himself a little confused about the accent the interviewees held at the very beginning.

After the field research, the meanings of adoption and non-adoption in Zaolinwan village have changed comparing to my understanding before the field research. Before the field research, my personal understanding of the farmers' adoption (non-adoption) is that the farmers should take their initiatives to (or not to) grow his or her land in the organic farming methods under several regulations and demands. That is to say (s)he needs to manage the techniques of organic farming, faces the risks of the organic farming may bring, and so on mainly by himself or with the support from other entities and individuals. However, from my perception the farmers hardly have this kind of initiatives in Zaolinwan

case. In fact, the organic farming is somehow 'pushed' by others for the farmers. Therefore, it is very dubious to still call the farmers' practices in this context as 'adoption' (non-adoption). The reality in the field really put me in trouble since most part of my research design is based on the former assumption of 'adoption' (non-adoption), and the result I got from field is somehow around the assumption, so the only thing I can do is to broaden the farmers' practice of 'adoption' (non-adoption): not only refers to running their field in the organic farming way; but also refers to, in the case of Zaolinwan village, the leasing of land from farmers, and the choices of working in the field or not. This mistake may be a deadly weakness which can undermine the overall thesis.

### **3.4. Analysis of documents**

Documentary resources are very important for the research, because only using interviews the different stakeholders may only give limited and subjective information. Documents can provide information about the settings being studied, or about their wider contexts, and particularly about key figures or organizations (Green *et al.*, 2009). Sometimes this information is of a kind that is not available from other sources. In our case, some information about the land acquisition all over the world has been collected.

Nowadays both the internet and computer-mediated communication have become a major resource to acquire information. A pre-knowledge always exists even before the researchers 'jump' into the field to start the research (Hammersley *et al.*, 2007). There are abundant materials concerning this issue from informal to formal sources as the newspapers, television programs, and websites of different stakeholders. Formal documents that will be used are the reports from the ministry of agriculture. Furthermore articles in magazines can be used. If accessible, the reports from the organic farming meetings in China will also be analyzed.

### **3.5. Ethical responsibilities**

During the research, the ethical responsibilities were taken good care:

Firstly, the informed consent principle which demands individuals' agreement on participating to the interview (Green *et al.*, 2009). During the research, every interviewee was asked for the permit to continue the interview first. And no interview was forced to join the interview. In fact, it is impossible for the researcher to force them.

Secondly, the research should be an open or overt one which means that the interviewees will know what kind of research is done as well that the researchers will answer all the questions and explain what is done with the data (Green *et al.*, 2009). Only after the researcher showed his identification, would the interviewees accept the interview. All through the interview, some of the interviewees always kept a cautious eye on the interviewer.

## **Chapter IV Field results: farmers' motivations to get involved in organic farming**

The village in which the field research was carried out is named Zaolinwan village. And a total of thirty-one farmers were interviewed through the field research, among which 21 of them are currently working in the organic farm themselves. The field research is centered on the model of understanding farmer's practice and responses.

The Zaolinwan village is a collection of several minor villages. It is not far away from the nearest city. Thanks to its convenient access to the urban area, local authorities from the city level have chosen it to be a scenic spot combining both the rural and natural views. And with the help of the unpolluted natural environment, the village leaders from a minor village in Zaolinwan cooperated with the company from Singapore to establish the organic vegetable farming land. The products are mainly exported to foreign market as Singapore and Japan; only very few of them will stay in domestic market. The organic farming land was firstly converted to the organic method of production in the late of 2009; the land is nourishing broccoli and cabbage.

The calculation of the acreage of the land is 1400 MU (around 93.3 hectares). And which is worth the whistle is that 'higher' rank people, such as the leader of the village, and the workers hired by the company side know much deeper than the local farmers about the development and future plan of the organic farming. One of them told me that the project will be further expanded to a much larger one, which will contain several greenhouses and processing factory as long as the investment is in place. He said, "Next time your come here again, you may see a total change of landscape for the whole area. Over there you will see an organic vegetable processing and cold storage center, and there will be a trading center."

The organic field is mainly planted by the specialized workers hired by the company and the local farmers. The local farmers followed the instructions from the specialized workers, and the local farmers can only handle the repetitive routine work while the specialized workers take the responsibilities of the technical part of the field operation. The specialized workers are not the local inhabitant. They moved a long distance from their original place (the Jilin province, a province which is famous for its fertility of soil, and corresponding agriculture yield) to Zaolinwan village. These specialized workers are actually technicians who have experience in organic farming. They need to be in charge of the daily management of the whole organic field operation, including the technical support, the supervision on the local farmers who worked in the field, and they also need to report the situation to the boss from the company.

Due to the fact that individual farmer in China only possesses a quite small area of cultivation land (usually less than five MU, which approximately equals to 0.3 hectare), the organic farming land in Zaolinwan is a huge giant when compared to. Based upon

the fragmented land which may be originally cultivated by various farmers, the establishment of the organic field requires a complex integration of land. This means all of the farmers in the area of the project have changed dramatically (e.g. the farmers are moved from the houses they live for long time for the environmental demand of the organic farming), and some of them may even never have the access to cultivate on the land again.

In our context, the farmers participated in the organic farming through the lease of their lands either on their own free will or not, and some of them may also chose to work in the organic farm. In this sense, all these farmers are involved in the organic farming. Therefore, the author labeled all the farmers as the 'adopters' of organic farming. And there is a further classification which is also made as the 'content adopters' and 'discontent adopters'. However, for the so-called content and discontent adopters, they are not the two extremes on the line which means some of the content adopters may also be dissatisfied with certain status in quo, while the discontent adopters may appreciate some of the benefits they can get. For example, a content adopter who work in the organic farm may also complain about the working intensity in the organic field, and in the meantime a discontent farmer is happy about his relief from the harsh work in the field. It is very difficult to clearly draw the boundary between the two groups of people like what we do to the 'adopters' versus 'non-adopters', which is quite a 'black and white' reality. Therefore, the author decided to pose all the pros and cons the farmers conceived the organic farming have brought to them and try to figure out in the end why some points outweigh the others and dominate the farmers view on the organic farming.

#### **4.1. Evaluative frame of reference**

Evaluative frame of reference can be of great importance when a farmer attempts to reason about the natural, economic and social world. And in China, economic factors always enjoy the first priority, and the saying of 'well fed, well bred' has its long history in China. In our case, if a farmer circulated his(her) land, (s)he will get a monthly five hundred YUAN (fifty to sixty Euros according to the exchange rate between Euros and YUAN which normally stays at the level of 1:9) as the rent for one MU of land. And the farmer will also get five hundred kilos of rice for one MU of land every year or (s)he can choose to receive the money equaling to the price of the rice. Although the rent is for every month, the money will be distributed by the village leader yearly, since the company will pay the rent to the village yearly according to the contract. Due to the Chinese habit that every account will be settled at least before the Spring Festival, it is the busiest time for the village leader during the winter time when every farmer asked for its money. If the farmer works in the organic farm, the pay for every day of working is fifty to sixty YUAN (around six Euros) per day and the pay is decided by the intensity of the work. In sum, a farmer who circulated the land and work in the organic farm can theoretically get up to two thousand YUAN per month (200 to 250 Euros) in return when it is the busy season for intensive activities as sowing the, while in spare time such as the winter time, the workload in the field is very little if not none and the income for the



farmers in this period of time can be approximately estimated to zero. Therefore, unlike the rent it is very hard to well estimate the exact salary for working in the organic field. A coarse estimation is given based on one farmer's complaint about the late payment for his work, according to him he should have been paid for 3000 YUAN for the whole year work.

The income of the farmers according to the farmers when they were doing the conventional farming is really not much, which can be generalized as 'neither can you get wealthy by growing rice and wheat, nor will you die out of growing them.' The income for farmers to receive from one MU of land is encroached by the continuously rising prices of agricultural inputs such as the chemical pesticides and manures. A farmer who is now working in the organic farm stated that he can only get less than 300 YUAN per MU in return for each harvest season after taking off the expenses on the inputs when doing conventional agriculture, and he held almost three MU of land before. The farmer planted rice two times a year, he said the price for one hundred kilo of rice is 204 YUAN and the yield of rice for per MU is around four hundred to five hundred kilos. And since the farmer sell the yield to the middleman from outside, the middleman got a discount for the rice from the farmer that the actual price for his rice is 198 YUAN for one hundred kilo of rice. For one MU of rice, the farmer needed to spend 900 to 950 YUAN for the inputs including the seed, the manure, the pesticide, the weedicide, and the water. Finally, the farmer also got the subsidy from the government for planting the rice for 135 YUAN/MU.

Table 1

	The income for farmers who rent their land	The income for farmers who rent their land and also work in the organic field	The yearly income for farmers before they rent their land
1. Yield outcome of land for per MU (YUAN/Year)	None	None	$(500 \times 1.98 - 900 + 135) \times 2 = 450$
2. Land lease rent for per MU (YUAN/Year)	$500 \times 12 = 6000$	$500 \times 12 = 6000$	None
3. Compensation in rice or in money per MU (YUAN/Year)	Five hundred kilos of rice; Or 500 YUAN	Five hundred kilos of rice; Or 500 YUAN	None
4. Wages for	None	55 to 60 YUAN for each	None

labor (YUAN/Year)		day of work	
Total income out of one MU (YUAN/Year): 1+2+3+4	0+6000+500+0=6500	0+6000+500+(3000)=9500	450

- For some of the farmers, they even decided to only plant rice one time a year before they leased their lands, because they either felt it is beyond their capabilities to plant twice a year; or they felt it is not profitable to plant twice a year

When we examine the table, we can get the conclusion that the income for farmers to receive from one MU of land has been increased dramatically. And the conclusion is also somehow confirmed by the attitudes of farmers towards the income which the organic farming has brought to them. Basically they are happy for the money they can get from the organic farming. According to a farmer quoted as follow, 'I don't need to go out of the village to seek the fortune, I can live in the village, you know, transportation also costs a lot and during every new year, it is hard for you to get a return ticket and I am too old to find a job in the city, but now I can earn some money in my village and I can also purchase some gifts for my grandson sometimes. What is more, the status now is steady, at least based on the leaders' words, we can get regular money no matter how the situation changes, regardless of the more or less money the boss earned, we will get the same money. Finally, see, we somehow have a tie of emotion with the land, we get used to farm the land, if we don't work for the company, there will be nothing to do for us, and then some of us may even do gambling.'

This interviewee is an elder farmer, and he is now living with his grandson. His grandson is studying in the primary school in the nearest town, so after the talk he immediately on his way picking up his grandson. The farmer used to work in the urban area not far from the village as a construction worker and gave his field to his friend for planting, but he finally decided to come back to the village after he heard about the message that the village was going to take back the lands from the farmers who no longer plant on them. No one can confirm the message, but the farmer feels lucky that he kept the land. Another reason for him to come back to the village is he needed to take care of his grandson. After his return to the land, he continued to be a conventional farmer until he rented his land to the company and work in the organic field. His wife died several years ago. His two daughters and one son all work in the urban area. The farmer gets money from his son every year after the family's reunion for the Spring Festival. According to him, the money required for him is not much. But his grandson is in need for money (education fees, daily expenses and so on). And that is the main reason for him to continue working in the field.

However, the tie of emotion with the land mentioned above is not very common among all farmers. It is a feeling that many of the farmers in the organic farm are eager to be

relieved from the burden of growing the land. These farmers stated that they have to various extent of problem with their body. Most of them suffer from the continuous backache because of the long time stoop labor of harvesting. And many suffer from rheumatism caused by the contact with the cold water of the rice field. The reasons to the farmers staying in the farm are basically because they have to. Since all the farmers lack fundamental endowment insurance, they must rely on their children and themselves to support their living. If it happens that their children are not willing to take the responsibilities, then they can only count on themselves. Sometimes the farmers decide voluntarily to keep work in the farm because they have grand children living with them and they need to bring them up.

One farmer's hands are badly damaged by years of harsh working in the field: his fingers are short and the joint parts of the fingers are big. He just returned from the local clinic for his legs. The legs are terribly hurt when rainy days come. He is one of the rare people who have never been searching a job in the urban area. According to him, farming the land really had its golden time. During the 1980s, the farmers are even richer than the citizens. He said at that time, even you just grew rice can make a fortune since the government loosen the control over the agricultural product market, and the farmer can sell the product they grew instead of handing in to the government. And at that time, one hundred YUAN is really a big amount of money. However, the income from the land has increased very little for years, while the price for everything other than agricultural product rose rapidly. Before he rented his land to the company, he tried the fish-farming; he also tried to grow vegetables, but all his attempts failed. Then he found he was too old to seek his fortune in the urban areas. And now he has to surrender to the lingering bad healthy condition. Now his major source of income is the yearly rent from the land he leased to the company. He said he is not able to work in the organic field because his legs are not in a good condition. He would try to run a small store in the village, but was also in fear of his lack of experiences. He said he did almost nothing after he leased the land, and had very limited ideas about his future.

While there are also some farmers who saw the risks in the organic farming. According to a farmer who is working in the organic farm, 'I do believe there must be some risk, for example, I heard from the leader that one kilogram of broccoli can be sold several times higher than conventional one. Who can afford to buy it? If nobody buys it, how can the company survive?' While a farmer who is not working in the organic farm stated more directly, 'the whole stuff is nonsense, and nobody would pay that much to buy so small a vegetable. The organic farming is doomed to be a failure, while I just want my land back and continue growing in the old way, you know, the price for any agricultural production is rising rapidly, I must make a fortune if I grow the land myself. Otherwise I can feed myself if no money can be earned.'

But even the most determined opponent farmer cannot deny the superiority of the infrastructure and natural resources for the organic farming and the changes in their lives brought directly or indirectly by the organic farming. They gave their opinions in

comparison with the past. One farmer stated as follow: 'The natural environment is quite good in our village, I guess that is the fact the boss values very much. And I do believe the village makes its every effort to attract the boss, before the boss was here we don't have the access to the cement road to the outside, the only road we got is a muddy one and was not very suitable for vehicles to pass. But now you can come to our village by car. Also I guess the water system is upgraded too, before we need to depend on water from well, but now nearly every household gets the systematical water supply, and the usage of electricity is convenient.' So the researcher posed the question as 'have you ever thought about the idea of doing organic farming by yourself?' And the answers are negative, that they never heard about the concept of organic farming before they join it. And if they have ever heard about the concept, it is still too hard for them to adopt by themselves.

#### **4.2. Perceived self-efficacy**

During my visit to the village, most of interviewees I met are old people or female farmers with no exception, which is usually summarized as the NO. 386199 Army (in which 38 states the women, 61 means the new born or youth, and 99 equals to elder farmers). The farmers hired by the company, who come from another distant province told me 'the only labors we can get is all those old guys or women, young people all flow into the city to seek their fortunes there. Though we pay a relatively high price of money, the young people are still not willing to stay. All the production depends on the old people and women, it is really troublesome. And sometimes we are even afraid that the old guys may fall into trouble during their work in the field.' I also discussed the situation with a leader from the village level, his statement is as follows: "how old are your parents? Forty-five to fifty probably?" "Yes." "Ahh, almost the same age as I am. You know, I cannot speak about other villages, but as far as I know, the farmers who are involved directly in the agricultural production are mostly at the same age with me or the ones who are even older than me. And the young farmers in our village are not capable of doing farming practice at all. They do not know how to grow rice or wheat or whatever, and they are not interested in staying in the village any more. Actually, the only they are eager for is wait till they are grown enough so that they can migrate to the cities to work in the construction site or factories or restaurants. Also, due to the birth control, the chance for seeing new comers of farming is quite low. And it is really hard to teach the old people new skills, you cannot even count on them to one hundred percent fulfill their daily workload."

Unlike other farmers who prefer the cloth shoes and rubber shoes, the village leader wore a pair of leather shoes, though they are old-fashioned and somehow dirty. And he prefers to wear the suit, though the upper half and the lower half are not a set of. He belongs to the major family in the village which shares the same family name. And he is the pioneer in the village who established a small weave workshop. He said he is quite sad about the current situation in the rural area, but he felt helpless. He knew farmers blame him for corruption behind his back sometimes, but he stated that he is innocent. He possessed around four MU of land, but he quit farming long time ago, and leased his

land to other farmers. The reasons for him to do so is firstly he need to focus more on the workshop, and secondly he did not care much about the income from the land. So he gave up the right on the yield from his land, and only asked for some rice and vegetables for return. He said it is already a luck that he did not need to pay others to grow his lands, and now it is nearly a gift that he can gain something from his land after leasing it.

The concerns of the village leader and the worker from the company side were agreed by the farmers. A farmer accepted as follow, 'Yes, it is true. I guess after the people like me died, there will be very few people who can cultivate the farm. My body situation is increasing worse, and I am not sure how long can I insist.'

The farmer is walking with stick that his leg was badly damaged during an accident several years ago falling down from the wall when he worked as a brick layer in the near town. He said he is fifty two years old, but when you judged from his appearance, the farmer is almost ten years older than his actual age. He spent around ten years working in the urban area. The accident is one reason for him to return to the village as a farmer, on the other hand, he felt he can never be accepted by the cities. 'The city is good, but when you are getting older, you cannot actually survive in the city. You do not have a house there, the price for everything is so high, and what is more, no people know you, there will be nobody lifts your coffin after your death.' He is satisfied with the current status, but he also suggests maybe it is also possible for the government or the company to leave a small area of land to the farmers in order to guarantee the farmers to grow some vegetables for consumption themselves.

When asked about the working hour and intensity in the organic farm, and a possible comparison between organic and conventional farming. Most farmers who have the experience of working in the organic field refer the organic work as more 'laborious' to the conventional counterpart and most if not all stated that they are not competent on implementing organic farm by themselves. They need to take good care of the land preparation first, which means they need to flat the land and make sure the soil is into broken bit. After the land is well-prepared, they will spread the organic manure. Then they also need to set the anti-pest net. Only after all the preparations are done, they can sow the seed. The distance between each seed is around half meter, in case of letting the seed get enough space and nutrition to grow. During the whole growing process, several pests should be treated carefully. The treatment includes both the physical methods as catching some pests by human, and equipments (such as yellow stick traps) and a seldom usage of organic pesticide. The harvest of vegetables is also an important sector, farmers need to be very cautious about the broccoli, since it is very fragile, and farmers should move or hold the broccoli lightly. Usually the workload of mowing the weeds in a unit land of one MU is fulfilled by two to three persons in no less than eight hours per day. A farmer told me that "before, I usually grew rice and wheat and after I sowed the seed the only thing I need to do is to spread the manure, pesticide or herbicide, make sure the land is going well with the climate or other factors, and irrigate the land. But now I need to handle the weed all by my hands and I also need to help the

vegetables get rid of the pest which is a bigger threat after the land was converted into organic farming. We now have a joke that the organic farming is really special, not only because of the vegetables, but the pest as well." And if the weather is not so suitable, more workload is needed and sometimes even goes beyond people's capacity. This summer, on account of the rare drought all over China, the organic land meets a 'boom' of pest. One farmer described to me that, 'all water in the channel is dry, we need to carry the water from the nearest water storage here, but afterwards it is even difficult to get water from the storage, and then we can get water from nowhere. No rain has visited us so far, and the pest is madly spreading. Few days before you came here, there are likely to be hundreds of worms in single vegetable. We did our best to get rid of them, but they are so overwhelming. The only thing we can do is to watch them eat all the vegetables. Most of the vegetables are eaten to almost nothing.' The demand for the hardworking is also the reason for farmers to be a non-adopter of the organic farming, firstly some of the farmers who work in the organic field quitted, and then some farmers are not eager to respond to the recruit of the village to work in the farm even though the promised salary is increased by the company. As one farmer mentioned, 'working there is too exhausted to continue, since we are working for the company and we need to fulfill a certain amount of workload everyday there. Before I can take a rest like smoking a cigarette but now I am supervised and even monitored, if I show any sign of laziness I would be punished for a cut on my salary. Anyway, my children are working in the cities, I can receive some money from them every year, though it is not much. Why should I work there like a cow when my age is almost twice as much as the workers from the company?'

#### **4.3. Social relations and perceived social pressure**

As mentioned in the perceived self-efficacy part, the main farmers who stayed in the village are elder farmers, female farmers, and children. After the field research, it is likely those groups of people are more susceptible to others' influence when they made the decision to circulate their land and work in the organic farm. Among all the farmers I met, most of them stated that one crucial reason for them to make the decision is that 'my child/husband said it is good'.

As one elder farmer said, 'My son has been working in the city. He is a small leader of several migrant workers working in the construction site. And for years he had told me that I should leave the land and maybe rent the land to somebody else to cultivate it. From his point of view, it is just a waste of time to grow the grain, since I can only receive very limited money from that. And I am getting older; the hard work in the field may eventually destroy my health, and the cost for them to heal me is far beyond the money. I never treated his suggestion carefully, and we had many quarrels around this issue. However, I am now 67, and I find myself more and more tired when I came back from the field after working there. So when the village leader came to me, I knew it is the time.'

As mentioned in the theoretical framework, the concept of 'face' can play a very crucial

role in social relations and sometimes can be turned to prominent social pressure among persons in China. This is an even more remarkable situation in rural part of China, where tradition still possesses the dominant position. Therefore, if we want to understand the influence of social relations and perceived social pressure on the farmers' practices, we cannot evade from the 'face'. And after the field work in the rural area, a concept concerning the 'family' has emerged out of the water. The concept of 'face' and 'family' together exert great influence on the behavior of farmers. In the village, the farmers' majority share the same family name, which indicates they have some kinships, the kinship can include the relationship of blood and the marriage, whether the relationship is close or far. And although the family cannot decide the village's affair independently, it plays an important role in the procedure of village's making a decision. Village's affairs include daily affairs and some crucial decisions concerning the direction of the village. And more often, the village's leaders are elected out of the big family. The decisions made by the village level are somehow biased to the family member.

All those two factors constitutes one phenomenon that in a village's decision, (for instance in our case, the decision to rent the land to join the organic farming), during the discussion for making out the decision, some farmers may avoid themselves from contradicting the village leader for fear of making the leaders lose their faces, and some minorities' opinions may be ignored even they expressed them since the majority of the farmers who share the same family name or have certain kinds of kinship tried to keep no difference towards certain decision. In this village, the minorities of farmers are the farmers who migrated to this village before and they usually do not have any relatives with the majority. Since they are in a relatively weak position in the decision of village affairs comparing to the dominant family in the village, their interests were often harmed or oppressed that the distrust and grievance were fermented among them, furthermore they tended to challenge any decisions made by the village. All these lead to a result that even a unanimous discussion can be full of oppressed conflicts. According to a farmer, he said, 'Why should there be any opposite voice? If others all agree, why should a person disagrees?' Another farmer said, 'The leader you saw is my relative. We grow from children together; we saw each other's ass from very young. So you know, he will not let me down, and vote the decision from him is with great advantages for me.' And he admitted that he benefited indirectly from the leader in the joining of the organic farming that he can also work in the farm to earn more money. While on the other hand, the village's minorities' interests may be suppressed or even sacrificed. And this minority contains the people who preferred to keep their land for cultivation. They are very reluctant to the join of organic farming, since they were afraid of not being able to maintain the land. Even though they expressed their opposition, finally they were still forced to join in. In our case, farmers were pre-informed about the importance of the organic farming for the village or even the whole area. And they were also informed that the conversion to organic farming is something initialized by the village leader. The village leader's underlying statement is that any block for this project is unacceptable. A farmer stated, 'before the meeting, the village's leader often told us the plan is very important for the village, and even plays an important role in the whole image of the

whole district. They let us keep all those in mind. And on the day of the meeting, the leader brought a truck of people to our village. Anyone who resisted at signing the contract has been forced to leave their fingerprints on the contract of circulation of the land.'

Besides that, the leaders also made his promises, one farmer said, "(promise?)That's for sure, otherwise why I join? During the meeting and some words before the meeting from the village, they guarantee us if we cooperate, we can be hired and get an extra income for working there. It is very attractive for me, I do not need to care about all the things, I do not need to care about whether the yield is good or not, the input, and I do not need to be bothered about how can I sell the yield. I feel quite content."

#### **4.4. Perceived environmental effectiveness**

As mentioned in the theoretical framework part, an effective social environment can be a prominent factor for farmers to adopt certain practices. In our context, the research is more focused on the network of support relationships, as the extension service system, the input and product access and market.

When asked about the question as where do the farmers mostly get their inputs from before and after the join of organic farming? Most of the farmers mentioned the organization named as supply and marketing cooperative as the place they used to get the inputs from. However, after they joined the organic farming, they no longer need to care about the input, since everything is handled by the company or simply because some of them never need to care about farming activities.

For the adopters, the company will regularly provide necessary inputs such as organic seeds, tools, and so on. One farmer said, 'Ten or more than ten years ago, the supply and marketing cooperative is the most powerful agency in our village, it is owned by government, directed by government, and controlled the flow of inputs. What is more, the cooperative was also in charge of the goods of everyday use. All girls in the village are willing to get married to the boys there, but nowadays the situation changed a lot: the government opened the market for the inputs and the commodity, and we do not need to count only on them for purchasing the inputs and commodity. Before we need to take care of their emotion that we must please them but now we do not care about it anymore, sometimes we still purchase some stuff from them, but we are quite equal now just like the relationship between the customers and the shops. And since I join the organic farming, I do not need to be bothered by getting everything for the farming as before. Before I joined it, I need to buy the manure pesticide and seed and everything from the cooperative. That was a great amount of money, but now that is OK. "

Concerning about the question as how do the farmers consider the technical extension service before and after the join, farmers felt a lack of such kind of service during their production even they join the organic farming. They can hardly get direct service from any extension agencies, or they need to face the workshop that cannot meet their



demands. Some states they seldom get any form of technical or business training and services from any extension agencies. Before the farmers joined the organic farming, they usually grew the rice and wheat as their main crop, plus some small area of vegetables. Nearly all farmers will breed poultries like chicken in their household, or livestock as pigs. But those animals are mainly for self-consuming, one farmer said 'in the past, children's happiest time is the spring festival, at that time we will slaughter the pigs we breed so long, the slaughtering itself even became a festival for people will get around to watch the whole process, and after the slaughter people will get some parts from the pigs as a gift. Unlike today, we do not cherish it that much, since meat is not that valuable as before.' People will only sell animals more than needed to the nearest market for exchange of money. Only few people will cultivate cash crops as their main crops. They said it is something in their nature to grow all these crops and they did not need to take much care to the animals, so they did not demand much help from others. What is more, due to a trend of peeling the extension agencies from pure fiscal support, the price for the services is getting much higher for individuals to purchase, and the extension workers need to collect the resource themselves to support the continuation of the agencies. Even now the farmers join the organic farming, the situation does not change very much. The farmers still cannot get direct services from specialized agencies. Farmers need to learn from the village leaders and the workers hired by the company side in the field all over the work. They lack an intensive and focused class in advance. According to a farmer, "Before I join the organic farming, I only grew some rice, wheat and vegetables, how come I need any support? It is true I may get several lessons on farming from the extension agency, but I guess there must be a target goal for them to achieve and I do not really pay much attention to that. And the people from the agency, they need to do their best to earn money to support them now, I guess they cannot have the energy to help us. Also, how do you expect an old person like me to learn a lot? Even if I want to learn, I get no person to ask, since the agents are not competent enough because if you want to grow fish they do not know how to do it! As speaking of now, the situation doesn't change a lot, the village leader will go to the city to have their training and after coming back, they will teach us what to do. And we are also working under the guidance by some of the workers from the company, we will learn in the whole process. So sometimes, we really do not know what to do, or how to do some jobs. This is the situation..."

The workers from the company side are all from the other province which is far away from here. They settled themselves to a completely new environment, which they are still struggling to get used to. They came here with their family members, and one worker's child is a little girl who had not even attended the primary school. The little girl's parents are worried about her future for fear of the change of living environment.

When farmers were still doing the conventional farming, they sell their yield mostly to the middlemen, who will come to visit their village in every harvest time. And they need to negotiate with the middlemen about the detailed price and demand of the products. Usually the middlemen will be in charge of the transport, and the deal will be done after

the money is paid. The farmers can also sell their products to governmental warehouse. There are some merits out of selling to the governmental warehouse that you will get protective prices, and theoretically speaking, the governmental warehouse will buy as much product as possible. However, the farmers said, 'in the past, some governmental warehouses do not possess the adequate money to buy our products in cash, so they will sometimes gave us a 'white paper' as the bill of debt. This situation is not so often currently, but the warehouses sometimes cannot buy all the products, then if we carry our crops there, they will refuse to buy them.' When comes back to the choice of selling to the middlemen, on the one hand you will get direct cash, but on the other hand, the price is often suppressed by them even the market's demand is high. One farmer said, 'Before joining the broccoli project, I still grew the land, however some of the farmers chose to abandon the land. But even for me, the passion for farming is not that much comparing with before. And I need to farm nearly all by myself; therefore, the yield is not high. And when the time for selling the yield, I just wait for the grain dealer to come to my home and then I will sell the yield to them. The price will be decided mainly by them, I do not have much influence on that, and I do not care about it either.' After the join of the organic farming, the farmers do not care about the products any more. They cannot claim their right on the products.

## **Chapter V The buyer-driven value chain development over the world**

In the case of Zaolinwan village, the organic farming value chain is a buyer-driven one since it consists of several characteristics that a buyer-driven value chain should hold: a buyer-driven chain usually refers to those industries in which large retailers, marketers, and branded manufacturers play the pivotal roles in setting up decentralized production networks in a variety of exporting countries, typically located in the third world (Gereffi, 1999). But instead of purchasing from the producers, the Singapore based company integrated the whole value chain by taking control over the production process: they offer the supply to the farmers for the production, they are also in charge of the access of the market, and in the future it is also possible that they would extend the value chain to vegetable process by establishing a processing factory in the village. While the farmers only offer their lands to the investors and at most work in the field (or potentially in the factory in the unpredictable future), in fact the farmers are more likely to be the production factors rather than a part of the value chain. By doing so, the investors can firstly guarantee their absolute rights on the yield from the field; secondly, they can reduce the risk in the value chain to the minimum extent, for example they will not be bothered by the quality of the products, and they will not face the problem of repetitive discussion with single farmer about the details of the contract; however, they need to bear the negative effects through the chain, for example, in the Zaolinwan case, the investors must swallow the fact that months of efforts are gone that no vegetables can be sold or processed. From my perspectives, this phenomenon found in Zaolinwan village reflected the new development of buyer-driven value chain in agricultural section all over the world. This new trend of backward integration is a responsive strategy towards the changing situation in the agricultural section, and can be found elsewhere all

over the world in the form of land acquisition.

Acquisition of agricultural land has been a heated issue all over the world again especially after the media's rediscovering via reveal of several huge projects. According to these reports, the quantitative inventories have documented an overall total of more than two point five million hectares of approved land allocations since 2004 in five countries in Africa, which excluded allocations below 1000 hectares (Cotula *et al.*, 2009). The scale of land acquisition maybe is not so enormous when you make a comparison of it with the total irrigated area of Africa, which is estimated by FAO to 210 million hectares (FAO, 2005). However, the speed of this trend is accelerating rapidly that according to a study of the media reports on recent land acquisitions put together by the non-governmental organization GRAIN and other sources suggests that close to 6 million hectares of farmland has been or is being earmarked for possible development by foreign entities. That does not include the Republic of Congo's proposal to a South African farmers union to lease 10 million hectares for a variety of food crops and livestock (Laisley, 2009).

### **5.1. The developing land acquisition**

However, agricultural land acquisition is not a new phenomenon at all. We can hardly forget the Great Britain's attempt in the 1940s to turn some land in the south of Tanzania into the biggest peanut plantation. Nor shall we forget that during the first part of the 20th century, foreign-owned fruit companies had nearly turned some Central American countries nearly to "banana republics." And in the early 1990s, after the collapse of the Soviet Union, foreign investors rushed into the former Soviet republics to acquire former state-owned collective farms. What is more, vivid as the media's reports, the number of implemented investments, as Hallam notes, "appears to be less" than what the media are reporting, and land controlled by foreigners "remains a relatively small proportion" of total land. Additionally, while government funds are fueling the deals to an extent, investors are "primarily" from the private sector.

Therefore, the question is raised that 'May the new trend merely to be another 'history recalls itself'? While in fact, the new trend of land acquisitions does hold some differences to itself.

Firstly, for the government-led investment, it is not simply wealthy countries targeting the developing world. In fact, North African countries are investing in sub-Saharan Africa, while Southeast Asian countries are keeping eyes on others' land. An occupying of land within the country is also shown for example in China. The eviction of smallholders from their lands and the companies' desire to gather the land has already intensified the conflicts among farmers, agricultural companies, and the government. Secondly, the emphasis has been shifted to staples instead of the cash crops more recently. For example, China has 800 million US dollars investment to expand one hundred thousand to five hundred thousand metric tons of rice production in the country (Adusei, 2010).

## **5.2. The drivers behind the new trend**

Why are we now witnessing this trend all over the world, and what launches its engine? The main reason is food security.

Food security concerns in some investor countries, particularly in the Gulf, are a key driver of government-backed investment. These concerns relate to both supply of and demand for food at national and global levels. Take Saudi Arabia as an example, this country can depend on its own production of wheat via its extensive subsidies in agriculture and intensive water production in agriculture. However, imports restarted in 2007 and, following a recent policy change, wheat production will be phased out completely by 2016 (Karam, 2008). In 2008, world food prices reached their peak levels since the 1970s. The rapidly rising costs of staples and edible oils initiated riots across the globe—particularly in the developing world, where many people spend most of their income on the food consumptions. Some food-exporting countries, in order to prevent domestic food price rises and to ease the anger of the people, set strict regulations on food exports. Such regulations, by taking large amounts of grain supplies off the global market, exacerbated the food insecurity of food-importing nations dependent on such staples (Derek, 2011).

Although the prices have now stabilized and the world food crisis has been out of the media's spotlight, food costs remains at a high level and the regulations of the exporting countries are still influential. Therefore, some of the importing countries decided to solve the food security issue by bypassing the global food market and growing the food in other countries by themselves. Crops are harvested on this land and then sent back home for consumption. In addition to food security, some countries are eager to secure their domestic energy support by growing biofuel overseas; while suffering from the severe financial crisis, some private companies look to agriculture as a relatively peaceful harbor for their capital.

On the demand side, population growth, increasing urbanization rates (may increase the number of people who need to purchase their daily food) and changing diets (such as growth in meat consumption in industrializing countries) all contribute to the increasing global food demand. For example, while cereal agriculture in the Gulf countries is in irreversible decline, the population of the region is expected to double from 30 million in 2000 to nearly 60 million by 2030. Dependence on food imports, now at 60% of total demand, will grow as a result (Woertz, 2009). And China is expecting a rapid urbanization which the ratio of city population to the total population will reach to 51% in late of 2015 comparing to current 47.5%, which means another millions of people would flood into urban area. And in the meantime, the change of diet for Chinese people is dramatic that the demand of meat and milk is increasing instead of conventional cereal consumption.

Unlike the opposition that may be heard in the past agricultural land acquisition cases by the host countries' governments, they actually did their best to encourage this activity.

For example, the Pakistani government has been on a talk with the Saudi government about a huge land lease project about five hundred thousand acres (more than two hundred thousand hectares) of farmland. This is a possible result out of the Pakistani government's campaign named 'farmland road shows' across the Arab Gulf to attract investor interest (Mughal, 2009). The government also offered tax incentives and a strong security force to protect investors' interests. Host governments like Pakistani government hope that foreign capital will enhance agricultural technology, boost local employment, refresh agricultural sectors, and ultimately improve agricultural yields. They are also drawn to the new roads, bridges, and ports that some land investors promise to build. With such tantalizing incentives, many host-nation governments have no regret on holding farmland sales.

In addition, rising food prices in the global market make agriculture more and more attractive to investors. In recent years, the agricultural value chains have focused more on the returns from food processing and distribution, while the risks were mainly on agricultural production and bore by the farmers. The agricultural production was long being treated as a disincentive for investment in agriculture. Now the upward trend in commodity prices is changing the situation by increasing the risks to processors and distributors. They need to be concerned about finding the sources of raw materials, and in the same time boosting returns from production (Selby, 2009). This increases the attractiveness of agricultural production as an investment option, including the acquisition of land as such, but also of shares in companies holding land, producing fertilizers, providing management services or otherwise involved in upstream agricultural activities (The Economist, 2009). Some agribusiness stakeholders used to get involved in processing and distribution are adopting vertical integration to move upstream and handle production directly. That is the rationale mentioned by Lonrho as behind the recent land acquisitions in Angola, Mali and Malawi (Lonrho, 2009). Direct involvement of crop production enables agribusiness firms to avoid buying from the market (where prices remain at a high level and the uncertainty about the supply is lingering).

Besides the reason of food security and the market's rise and fall, another motivation is the biofuel. The EU renewable fuels target specifies that 10% of transport fuels will be supplied by renewables by 2020 (Andrew *et al.*, 2011). With the expectation that 80–90% of this target is likely to be met by biofuels, European firms have responded to the market with widespread investment in production of biofuel raw materials, not only in the Europe, but also in Asia, Africa and South America. The US Renewable Fuel Standard has also provided a financial incentives for US firms, which are searching for raw materials from the US and Brazil. Such renewable fuel targets provide a commercial incentive for investment in biofuel raw materials production and associated land acquisition that would not be driven by market forces alone (Dufey *et al.*, 2007). In the longer term, expectations of returns linked to rising oil prices are likely to be a key driver for biofuel investments.

### **5.3. The benefits and the risks**

This trend of land acquisition has produced controversies and polarized attitudes. Some believe it to be the new opportunity for both the investors and the people in the host countries and even think it as the next 'green revolution'; while some others stand strongly against it, and call it as a "new colonialism" or "land grab". Supporters believe this trend can help decrease the global grain prices and reduce the future risk of food crisis by boosting agricultural productivity. Opposition faction worries about worsen impacts on small farmers, including the loss of their land, the exacerbation of their livelihoods, and the degradation of the environment. Some argue that the deals' benefits could become meaningless if they result in mass displacements, land degradation, and resource shortages (Da Vià, 2011).

The basic start point for the supporters of the land acquisition is the possible investors' commitment on the local investment about the employment opportunities, trainings, and infrastructure improvement, and the succeeding increases in the yield and the food security. According to IFAD (IFAD, 2009) that 'increased investments in food and agro-fuel production flowing to rural areas of developing countries could present important benefits and opportunities for poor rural communities'. These include: the development of processing industries; increased agricultural productivity through the provision of improved seed varieties, know-how, financial services, and new technologies; livelihood diversification and employment generation through contract farming/out-grower schemes; and increased access to reliable markets.

According to the FAO, developing countries need an annual gross investment of US\$209 billion (which includes the cost of renewing depreciating investments) with the result of a separate study that estimated that developing countries on average invested USD 142 billion (USD of 2009) annually in agriculture over the past decade. The required increase is thus about 50 percent. But most of the developing countries especially the ones which just recovered from a long period of civil wars or an extreme weather conditions are hardly able to put the large amount of money into the agriculture sectors, and it is also not possible for smallholders (who are common in developing countries) to investigate. Therefore, the gap between the demand and real invest in the agriculture sector is growing larger. In fact, commitments on infrastructure development seem prominent in some deals. In Mali for example, investors granted long-term leases are required to develop irrigation infrastructure as a condition for their lease. Similarly, the Syria-Sudan deal requires the government of Syria to develop irrigation for Sudan. And the commitment to infrastructures is not limited to agricultural area, the government of Qatar offered a loan of several billion dollars to construct a deep sea port for Kenya in return for forty thousand hectares of fertile land.

However, as the benefits that the land acquisition may bring about, Hallam underscores that large-scale foreign investments in agriculture 'raise complex and controversial issues'. The first concern goes directly to the fact that the various stakeholders have 'lopsided' strengths: foreign investors are typically large, wealthy transnational firms or rich governments, while host governments are poor, at war, or trapped in political

conflict. The host governments often find them in an embarrassing position that they rarely have the power to compete with the investors and to protect their people. And the local farmers also have little political voice and are not well organized. Their economic contributions are often overlooked by policymakers. And even among the local communities, the farmers may also find themselves be divided that some farmers may see the land acquisition as an opportunity while some others be further impoverished (Spielloch *et al*, 2009).

Another concern is about the argument that whether the land acquisition may boost the agricultural production or not, since some of the 'unused' land may be also developed. Government officials often claim that the land they plan to sell or lease is unused. However, what the government may categorize as wasteland might very well be meeting an important share of rural people's household needs. Farmers often use uncultivated land as a source for wild foods, medicinal plants, and water. Indigenous use of this fallow land to satisfy resource demand is particularly significant given the world's scarcity of healthy land and natural resources. The writers point out that two-thirds of the world's agricultural land is currently degraded, and by 2025 nearly two billion people could live in water-scarce regions. And yet the authors argue that the industrial, large-scale agricultural production envisioned by foreign investors will further exacerbate this environmental blight. Fresh water will disappear; soil nutrients will be depleted "at unsustainable rates"; and fossil fuels will be heavily expended to support fertilizers, pesticides, and farm machinery (Spielloch *et al.*, 2009).

What is more, the possible natural resource degradation may increase food insecurity and undermining the livelihoods of the poor. According to UN, the land degradation has already been a major threat to nearly 900 million people, and influenced two-thirds of the agricultural land all over the world (UN, 2007). Besides that, it is estimated that 1.8 billion people will live in regions facing water scarcity by the year of 2025, and that two-thirds of the world's people could be suffered to water shortage if the trends continue. Investment that restores agricultural land to ecological health would be a significant investment in a country's future prosperity and in the well-being of local communities. UNCTAD and the United Nations Environment Program (UNEP) have recommended the organic agricultural production by sharing the successful experiences in East Africa (UN, 2008). However, investment in industrial agriculture still remains to be the dominant model for large-scale investment in agriculture. That form of agriculture tends to use large amounts of fresh water, depletes the soil of nutrients at unsustain-able rates, and depends heavily on fossil fuels (for machinery, fertilizer, pesticides, storage, and transportation), which in most developing countries are an expensive import.

#### **5.4. The zoom-in of the images**

In the following chapter, several cases will be presented on different kinds of land acquisition in Africa about the influences it may bring to the host country and its local communities.

#### 5.4.1. Land acquisition concerning biofuel project

It is evitable to consider the fees and compensation paid by the investors as the first benefits to the farmers who lost their land. However, for the local communities which directly influenced by the land acquisition, they seem to receive less or even none from the fees and compensation due to the fact that the formal land right is mostly owned by the government in Africa. And a low fee and compensation is often used by the host government to attract the investment according to the box 1.

##### *Box 1*

*In Mozambique, land fees are extremely low, ranging between two and 30 meticaïs per hectare; In Ethiopia, rent was required in four deals out of the six projects examined in greater detail, with prices ranging from US\$3–10 per hectare per year; and In Mali, no upfront payment was required, but a fee of US\$6–12 per hectare per year was required in two projects (Vermeulen et al., 2010).*

Governments consider the direct value of investment projects to come not through direct financial gain but rather through broader economic benefits, such as employment generation and infrastructure development. Although there is no guarantee that those benefits will go to the farmers who have lost their land, broader communities may benefit, particularly in three areas: employment, value chain involvement and infrastructure.

Jobs are considered to be the key local benefit. Although these jobs tend to be unskilled, short-term and small in number relative to the size of the investment. Out of 150 Ethiopian land deals recorded in the quantitative study, 130 offered fewer than 50 full-time equivalent jobs, and there was no trend towards higher levels of employment with higher capital investment (another case in the box 2). What is more as Kapstein argues, “It is only when countries already have an existing stock of human capital that they are able to reap the rewards of FDI” (Kapstein, 2002). It demands the local people to be able to overcome the challenge of ‘reverse engineering’, which requires the close observing and imitating of the foreign investors’ affiliates (Saggi, 2002). And without this minimum threshold, FDI will fail to benefit the people from the host country, instead providing the advantage to foreign investors. This situation will be even worsening if the gap of education background is huge between the investing country and the host country.

##### *Box 2*

*The GEM deal in Madagascar does not involve rental fees for the farming rights over 450,000 ha, but instead promises to bring local development benefits and local employment, with around 4,500 part-time workers in the field at various times (Benetti, 2008).*

African governments also tend to require that investors contribute to local development through direct involvement of local farmers and small-scale businesses in the value chain. New policy in Sierra Leone requires that five to 20 percent of the shares be held



by Sierra Leoneans and inclusion of outgrower schemes (MAFFS, 2009). Provisions for small-scale farmers can also feature in contracts. The Varun deal in Madagascar combines contract farming with lease arrangements, and also includes a clause on 'local content' in which the company agrees to conduct a certain proportion of business with local enterprises and the local workforce (Topmada, 2009). Most outgrower schemes and other inclusive approaches to production are, however, voluntary rather than a response to government regulation. The biodiesel company Diligent in Tanzania is sourcing *Jatropha* from a network of small-scale farmers under loose contractual terms (van Eijck, 2009).

Recompense in terms of infrastructure for local communities may not be well resulted towards those who have lost their land and resource rights. High capital infrastructure, such as irrigation equipment, typically returns to the government at the end of the project lifespan and does not provide direct benefits to rights' holders or their communities. Sometimes land deals may involve infrastructure unrelated to the agricultural project itself. According to media reports, the government of Qatar plans to lease 40,000 ha of land on the north coast of Kenya in return for a loan of several billion dollars to construct a deep-sea port elsewhere (Mathenge, 2009).

**Box 3**

*With its plan to lease 40,000 hectares to Qatar, Kenya joins the growing number of nations that are granting their potential food production land to oil-rich countries. In the deal, the Gulf state will, in exchange for the land, fund the construction of a new multi-billion-shilling port in Lamu. This will become Kenya's second port after Mombasa.*

#### **5.4.2. Land acquisition for direct food production**

Increasing cases of land acquisition are driven by the demand of cheap and stable food crops. Food supply has been worsen due to the constraints from the scarcity of water and fertile farming land, and the bottlenecks in storage and distribution, and also by the biofuel production, which is an important competing use of land nowadays. As mentioned above, the increasing urbanization rates and changing diets are also pushing up global food demands. The rise of the food price has been witnessed very much recently.

The countries highly counting on the imports as the important source of their domestic food market are seeking to widen the source by directly investing in foreign countries especially in Africa to buy or lease vast areas of farming land. These countries believe this to be a long-term strategy to feed their populations at a good price and with greater security. Now lots of countries have joined the 'global purchase'. The biggest players are China and the Gulf States, while countries such as Saudi Arabia, Japan, Malaysia, India, South Korea, Libya and Egypt are hunting for fertile farmland in places like Uganda, Madagascar, Mali, Somalia, Sudan and Mozambique, as well as in the Philippines,

Indonesia, Laos, Thailand, Vietnam, Cambodia, Pakistan, Burma, Brazil, Argentina, Kazakhstan, Ukraine, etc. (Taylor *et al.*, 2009).

**Box 4**

State-owned firms from Qatar, Dubai and other Gulf States are reported to be involved in the formation of a joint holding company to produce food in Sudan and other countries for export to Arab markets. A consortium of Saudi agricultural firms recently announced plans to invest USD 400 million in food production in Sudan and Ethiopia, following investment in 10,000 ha of barley, wheat and livestock in Egypt. Other investors are looking for land in Angola, Mali and Malawi. Finally, Abu Dhabi plans to acquire 400,000 ha in Africa and Asia, with the aim of limiting food imports from other countries (GRAIN, 2008).

**Box 5**

According to the media coverage, the 1.3 million hectares deal between the South Korean company Daewoo Logistics and the government of Madagascar is revealed. The deal was reported to involve the acquisition of land in the west and east of the country in order to grow maize and palm oil mainly for export to South Korea. However, the deal ran into trouble and was then suspended by the new government of Madagascar (Cotula *et al.*, 2009).

### **5.4.3. Large-scale tourism**

Another trend of land acquisition which concerning the large-scale tourism cannot be neglected. Many developing countries now encourage investments in tourism, because it is believed that tourism can offer possibilities for rapid economic growth. Although it is hard to obtain a whole image of the process, the impact on the local communities is often strong. The local communities will be excluded by the foreigners who either seek their fortunes or come to visit the natural scenery. The Cape Verde islands are a good example. The country's economy has risen dramatically after the wide development of the tourism. According to the Human Development Index, the country jumped from a 'poor' to a 'middle-income' country. At the local level, however, the situation is somewhat different. The island of Boa Vista, for example, is populated increasingly by Italians, and migrants from the African mainland, who are looking for work in those hotels. The original population has largely emigrated or now receives remittances from abroad. More Cape Verdeans live abroad than in their own country: there are 476,000 Cape Verdeans spread over the 10 islands, while 500,000 live in Europe or the USA. The number of international migrants visiting the islands each year is rising steeply (Zoomers, 2010).

Along with the trend in the investment of large scale tourism, the private individuals and international organizations have become actively engaged in the purchase of large areas of land in regions for nature conservation or ecotourism purposes (or a combination of the two). This, combined with the official nature reserves and, on some occasions, territories for indigenous groups instituted by governments, is putting increasing

pressure on local land markets. In Africa's countries as South Africa, Kenya, Namibia, Zambia, etc., the private sector is playing an expanding role in wildlife production and commercial 'conservation', often developed in close relation to tourism promotion (Brandt *et al.*, 2009). Keeping private nature reserves can increasingly be seen as lucrative business and productive land is converted into newly created 'wilderness' landscapes.

## **Chapter VI Analysis & Conclusion**

This study gave an impression of the farmers' involvement in organic farming in Zaolinwan village with the help of the model that explains the reasons behind people's practices of doing or not doing. And by making use of the value chain analysis, it also gives the insight into what drivers along the chain make the change.

In summary, around four hundred farmers have leased their land to the organic farming project which is a rough estimation based on the total area of organic field and the average area of land the individual farmer possessed (the total area of the organic field is 1400 MU, and the average land area is around 3-4 MU per household). Many of the farmers in Zaolinwan village have gone to seek their fortunes in the urban area by working at the construction site or factory, only the elder farmers, and some of the female farmers still continued on farming. And they also need to count on their relatives working in the urban area to sustain while the farming is merely a way of supplement. The revenue these people can get from the land was limited, and the main crops the farmers grew in the field are staple crop as rice. After they joined the organic farming, an increase on the annual revenue has been witnessed so far- more than 6500 YUAN after the organic farming project comparing to around 450 YUAN before. However, most of the farmers who lease their land have lost the opportunity to work since the work opportunity in the field is limited and the work is tedious.

The organic farming in Zaolinwan village is a quite profit-oriented project driven by the Singaporean company which is currently aiming at the export of products to foreign markets. Combined with the concept of organic farming and the land acquisition, the Zaolinwan case is more about agribusiness rather than a style of living and agriculture or a social movement as we have seen in the western counterparts where lots of non-profit and non-government organizations have involved in organic farming. What is more, the understandings of the organic farming are different. In China, the concept of organic farming focuses more on the final products, it is an understanding that organic products are more tasty and nutrient than conventional ones. But in western society, it is the ecological production process matters most.

### **6.1. What are the motivations behind the farmers' choice of organic farming in Zaolinwan village? How do the farmers see the present development of the organic farming and the prosperity in it?**

In the Zaolinwan case, the factor as the social relations and the perceived social pressure exerted strong influence on the farmers. First of all, as mentioned above, the farmers who stay in the village are influenced by their close relatives a lot (e.g. the children of the elder farmers, and spouses of the female farmers). Most of them do not work in the field, and the land is treated as not important to them either because the low revenue they see from the land, or because the lack of farming abilities for some of them that hinders them from succeeding the agricultural activities in the future. Therefore, they are indifferent to the land and some of them even tended to persuade the farmers staying in the village to quit the farming and leave the land or possibly find a chance like the organic farming project brought to the village to lease out the land. Most of the farmers who staying in the village can hardly reject the opinions from the relatives, because the income from the relatives which supports the staying farmers' lives. Secondly, Chinese farmers usually tend to keep the harmony with other family members and cherish the consciousness of saving face for people with privilege. In Zaolinwan village, the village leader is elected out of the major family and it is understandable that the farmers from the same family would remain silent even if they are against the project while the opinions of the farmers' from minor family would be ignored. Finally, the organic farming project was promoted by the village leader as a project very important to the village even to the neighboring areas, and the result of failing to accept it would bring terrible results, which also enhanced by the leaders' promises of securing job opportunity and a rumor that the village leader brought 'rogues' to the village to watch the farmers' signing of the contract. So in the Zaolinwan case, the social relations and perceived social pressure played a very important role in influencing farmers' practices.

However, we should not neglect other factors in influencing farmers' choices. Most of the farmers who have been interviewed are satisfied with the current situation after the joining of the organic farming. Basically, the farmers are happy with the rent they can get from leasing their land. And since it is mandatory for the company to pre-pay the rent for the farmers' field, the risks the farmers need to face are little if not zero. Some of the farmers are also willing to work in the organic field to earn some extra income because they do not need to take care of the inputs and they can just follow the instruction from the agricultural workers hired by the company, even when they never heard about organic farming and lacked the ability or input to manage it. Only two farmers expressed their anger over the method of bringing people to make sure their signing. But they could give no idea about what they are willing to do if they withdraw the land from the company. 'We'll just wait and see.' As one farmer stated.

### **6.2. What are the characteristics of the value chains and the positions the farmers holding in Zaolinwan village before and after the organic farming?**

There is tremendous change on the value chains before and after the organic farming in Zaolinwan village. Firstly and obviously, the way the commodity goes through the chains

are completely different: before, it was mainly the value chain for staple crops; and after the organic farming, the value chain is centered on the organic vegetables. Because the dramatic change in the commodity, the production methods are also different and thus the extent of integration of the value chain is also different.

In the conventional farming value chain, each stakeholder in the chain performed its own function and the value chain is heavily influenced by the government (or actually controlled by the government). For example, according to one of the farmers, the supply and market cooperatives which support the farmers with necessary inputs as seed, pesticide, and manures are seen as a department of government and enjoy great privilege. And then it was the farmers' responsibilities to grow the land (in China, farmers are usually considered to be a born identity rather than an occupation which is strictly controlled by the policy of 'hukou' system: two identities can be seen in the hukou system and there is strict boundary between them- the citizen who is born in the rural area and the villager who is born in the rural area. Usually farmers enjoy less welfare from the government and are forced to do agricultural activities though few changes in farmers' identities may be possible by for example becoming a soldier or a undergraduate student) (Liu, 2004), and sell the crops to specific government departments which in fact are the only place the farmers can sell their products according to the policy the government settled before Chinese Reform and Opening up (Ishihara, 1987). And after the reform, the middlemen were permitted to purchase the agricultural products from farmers. Although they partially change the style and features of the market, the government department still holds great share of purchasing the farmers' crop. And then it went to another government departments or a certified private company to process the products. All along the chain, certain companies or entities both state-owned and private would be in charge of the transportation. Only after all these, can the products be put on the shelves to the consumers. Most of the farmers grew staple crops as rice, and there is limited space for them to shift to other products, since it is rational for the farmers to stick to the strategy to grow staple crops. Because the staple crops always have their market since the government will guarantee the purchase and the protective price of staple crop in order to stabilize the market although, and the farmers can also keep some of the staple crops for self-consumption. Besides that, a path dependency had also established on the farmers to follow the route they had got used to. What is more, any failure of shifting to a new product may lead to bankruptcy of the farmers since the abilities of farmers to resist the risk are too low.

As for the value chain after the organic farming, the Singaporean company played an important role and we can even state that the value chain is not only integrated by the company but single-handedly established by it. Not much information I gathered on this company due to the lack of source and no access to the management level of the company, however by piecing together the fragmented information from the interviewees, a possible mechanism of the value chain is: firstly, the company collected the farming land from the farmers through the village level government since the land right is actually owned by the village collectivity, while the farmers only own the right of

use over the land, in return the company will pay annual lease rent to the farmers and promise to offer job opportunity to the local farmers, by collecting the farmland, the company took the guarantee for absolute control over the organic products. The company also took the control over the input to the organic field in order to make sure the crops out of the land meet the demanded requirements. It also hired experienced agricultural workers from other region to give the technological support, and the farmers who work in the field only need to follow the instruction from them. After the harvest of the vegetables, the company is also responsible for the transportation and exportation to the foreign market. Now the organic vegetables the company export to foreign market is still in a relatively raw form which requires further processing by other entities other than the company. However, the situation will not last long since the company is trying to also take the control over the process by constructing a process factory nearby the village.

According to (Kaplinisky, 2001), value chain can be categorized into two types based on the driven power of it. Firstly, the buyer-driven value chain, which the buyers undertake the leading coordinate activities and influence product specifications; and secondly, the producer-driven value chain, which key producers who control the capital, and technologies, play the leading role in the value chain. However, when we have a close look at the case of Zaolinwan village, we can hardly put the value chain before the organic farming into either of those two categories. And we cannot neglect the influence the government played in these two value chains. From my consideration, the former value chain is somehow still the heritage from communism time and shares some common points with the planned economy, for example the guaranteed price for the staple crops which controlled by the central government. This value chain is intensively intertwined with the self-sufficient agriculture and it is still alive though little energy inside. As for the value chain after the organic farming, it is a buyer-driven one which is monopolized by the company. The company came with the sufficient capital and necessary technology, though we may be a little bit uncomfortable when looking at the farmers about their being control and losing the right to their land, yet it still brought the change to the local community and hopefully under the very guidance from various stakeholders may lead to a prosperous future.

It is easier for us to understand the change of farmers' positions in Zaolinwan village before and after the organic farming if we examine the farmers' position in the value chain by putting them into the matrix adapted from Peppelenbos. In fact, two changes on the farmers' positions in the value chain have been witnessed before and after the organic farming value chain.

The first change: the first change is basically a change that can be described as the farmers in Zaolinwan village have more involvement in the various activities of the value chain and can make more decisions on the issues concerning the activities. Their positions are shifting from the chain actors towards the chain (co-)owners. The change of farmers' positions in the value chain is majorly due to the policy of Reform and Open up, and the trend in the agriculture section to give more space to the farmers by

government. As mentioned above, the farmers after the change had gained the right to sell their products to middlemen other than the governmental departments, and they were also able to decide on the products they are willing to produce in response to the market demand. Although most of the farmers made their choices to stick to the staple crops, it was still their decisions. And after the introduction of organic farming into the village, the farmers' positions step back to the original status before the first change. Most of them even excluded from the value chain, since they no longer participate in the basic activity in the value chain as production.

However, as Peppelenbos stated (Peppelenbos *et al.*, 2007), any positions in the value chain cannot be described as most ideal for the farmers, it is also true in the case of Zaolinwan village. Although the farmers can only grow the organic products under the instruction from the company, and cannot sell the products yielded from the field, their income still increased considerably and the risks are reduced comparing to the time when they get more involvement in the value chain.

### **6.3. How does the buyer-driven value chain work out in Zaolinwan village? And what are the benefits and risks for the different stakeholders?**

*For the investor:*

Land acquisition as the project actually is, it is very important to compare the Zaolinwan case with its counterparts over the world. Comparing to the other cases of land acquisition over the world, the case in Zaolinwan village shares some of the common points with its counterparts. First of all, like the other cases, the main motivation behind the investors to seek the opportunity of land acquisition is the increasing demand on agricultural products and a growing attractiveness of agricultural production as a relatively low-risk investment- in Zaolinwan case, the organic farming plays the role to attract the foreign investors. The first reason for the Singaporean company to choose organic farming as the aim should be contributed to the growing market for organic products in some of the Asian countries. The Asian market for organic products is growing by about 15 to 20 percent in 2008 and the main consumption countries are Japan, South Korea, and Singapore (Sahota, 2009). However, due to the limitation on the main consumption countries' land resource and high price for their domestic labors (for example, the arable land in Singapore is 600 hectares), those countries mainly import the organic products from other countries as India, China, and Indonesia. Besides the demand of organic products from foreign market, an increasing awareness of healthy food has also emerged in Chinese market in response to the continuous crisis over the food safety, and the concept of organic farming fits in with the trend very well which may be a guarantee for the future consumption market [in China, people who live in the urban area tend to have more trust on the agricultural products produced by the farmers in traditional way. There is a rumor about the agricultural products that the chicken wandering around the grass field is more delicious than the chicken which are locked in the cave. And also people prefer to buy vegetables affected by the pests (holes on the leaf of the vegetables) since this kind of vegetables are believed to be grew with less

chemical pesticide].

Based on the above perception of increasing demand on organic products from the foreign market and the emerging demand from Chinese market, the foreign investors came to Zaolinwan village with the intention to make even more profits by reaping the benefits as follows: 1) relatively cheaper price for renting the land and hiring the labor comparing to the price in Singapore; 2) the short distance and convenient access to the major harbor in Shanghai and what is more the access to the foreign market. Shanghai has tight economic contact with the countries as Japan, South Korea, and Singapore. The harbor in Shanghai is prosperous, and the region where Zaolinwan village locates is in the south-east of China where only 3 to 4 hours of driving to the harbor; 3) most importantly, the governmental support both on the form of preferred policy and infrastructure: the local government made its best to attract the Singaporean company to invest in the village. The organic project also draws very high attention from the provincial government, and the company benefited a lot from the attention by lobbying for the tax cut and financial subsidies. Since I got no access to the management level of the company, the detailed information on the point of possible tax cut and financial subsidies is mainly based on the fragmented information from the interviews with the local farmers and agricultural workers hired by the company: according to one of the agricultural workers, the company got the tax cut and even subsidies for its investment in organic farming, since the government officials believe the organic field complies to the governmental policy of developing 'modern agriculture' and could be a perfect example for showing the path of the modern agriculture and a win-win solution for foreign investment. Besides the preferred policy, the investor can also benefit from the infrastructure the government established- the water reservoir, the electricity network, and the road system. However, the government usually has different priority on the establishing of infrastructure which sometimes may render negative influence on the investor. For example, a high standard road has been planned and will be built in the coming future very near the organic field. Though one agricultural worker expressed his question to the necessity of the road, he stated the existing road is enough for the road can enable a cars to pass easily and steadily and it is quite enough for the truck to visit the field to carry away the products. After the future rebuild of the road, the road can allow four cars to pass in the same time, however he is concerned about the possible influence on the organic field from the 'better road' project and he also expressed his little dissatisfaction that the village cannot support the field with sufficient irrigation support that they need to carry water from the nearby water reservoir. Finally he made his assumption that there may be more visitors to the field from government and that might be a good thing the high standard road can bring about.

*For the government:*

Secondly, the local government is enthusiastic to see the change the company is able to bring: 1) the foreign investment on the land: in China, the development is largely dependent on the foreign direct investment and the investment is considered to be one of the key elements because accompanying with the invest comes the new technology



and way of thinking as well. The importance of foreign direct investment can be partially proven by the fact that the amount of the investment the officials can attract to the area actually is one of the most crucial indexes for appraising the competence of the government officials. And the amount of investment attracted can even influence officials' future politics careers since it is linked with the promotion of the official directly. The deep reason behind the importance of foreign investment is the lack of fiscal income. According to a village leader I interviewed, Zaolinwan village actually lacks the money- the village has no factory *let alone* rich local company, therefore the tax income is quite limited which is mainly counting on agricultural activities, but since the profits of agriculture are staying at the low level and more and more farmers are moving to work in the urban area, the major source of income is becoming exhausted. Then the only choice they can make is 'selling' the land mostly the farming land to the entities with affluent capitals (in China, land is not allowed to be privatized, so the term of selling the land is not precise indeed, in fact it is only the transfer of right of use); 2) better-off of the local community. As mentioned above, the foreign investment plays an important role in supporting the governmental fiscal income. And it is the governmental fiscal income to provide the public service and commodities. For example, in Zaolinwan village, an asylum has been operated by the village. It can offer basic living safeguard to the elder farmers around the village who have no source of income, and have no support from other people. This asylum is firstly proposed by the village leaders, though many farmers support the proposal, very few of them can offer financial support. And now the expense for the asylum is mainly dependent on the governmental subsidies.

However, the case in Zaolinwan also possesses several different points from its counterparts. First of all, the farmers experienced the increase in their incomes comparing to the situation before the organic farming which can be shown from the interviews concerning the evaluative frame of reference. Yet in some cases in some African countries (Box 1), the fee and compensation, which is usually considered to be the major income for farmers who leave their lands, was kept in a very low level. Secondly, the conventional style of farming almost reached its upmost in the area under current condition; so the government seeks the upgrade of the agricultural activities on the land and the improvement of the land management via the introduction of new way of thinking about the farming. So the Zaolinwan case is not only initiated by the investors but also a choice from the government to make the change. According to the policy published by Chinese National Development and Reform Commission, it is recommended for the foreign investors to participate in the reform of agricultural land with limited yield (Foreign investment industrial guidance catalogue, 2007). What is more, the local government has a plan to adapt the whole area including this village to a visiting site with good natural environment, and the introduction of organic field may add value to the whole plan. An integrated conference center has already been constructed in a neighboring village, the organic field is also treated as an important part of the conference center. In the near future, the conference center wants to attract business conferences and the visit to the organic field is going to be part of the entertaining 'menu'. And according to a waiter working in the canteen of the conference center, the

restaurant is also willing to purchase the products from the organic field directly.

#### **6.4. What are the possible development and the gains of the organic farming for the farmer community in Zaolinwan village?**

The market development of organic farming still remains uncertain. Though the company decided to promote the organic products via the cooperation of several supermarkets in China, the market for the organic products is still quite small in current China. And only after years of cultivation, can the market be mature. First of all, the concept of organic farming is vague. Most of the Chinese do not understand the concept and cannot differentiate the organic product with some other agricultural products of different standard. And some companies or farmers even sell their products in the name of organic farming in order to gain higher return while the qualification is suspect. For example, a company in China started to promote its 'organic' rice which proved to be fake (Zhang, 2011). For ordinary consumers, the organic products are not attractive because of their higher prices and their less charming appearances. And due to the uncertainty of the extreme climate in China, the yield of organic farming is not guaranteed comparing to the fruit of Green Evolution and GMO. This summer the organic field suffered great loss after the drought, and the salary for farmers' work in the field is still unpaid.

Besides the income from the project, the farmers' gains are doubtful. The job opportunity is quite limited, and what is more, the organic farming can hardly bring new style of living and working to the local community. The average local farmer hardly has an education background over the graduation of primary school. Thus the gap between the investors and the local community is so big that the farmers can hardly perceive the benefits from the organic farming. They do not see the organic farming as a way to bring sustainable and ecologically friendly way of living, instead they believe the organic farming is somehow based on the good natural environment. What is more, they even complained about the working condition of the organic farming, saying it is too laborious. However, the better working condition the organic farming can bring to the farmers is long being treated as the major benefits farmer can get from it. In fact, nearly none of the farmers will choose to adopt the organic farming method in the future if one day the company decided to quit the project. This is partly because of the farmers' perception of their self-efficacy, but a more important reason may be they also do not appreciate the intrinsic value of organic farming.

Since the organic farming in Zaolinwan village is driven by a multinational company which keeps large reserve of capital, it is obvious that the whole project may be penetrated more by the agribusiness way of think. And also because the labor is getting scarcer in the village, it may be natural for the company to invest more capital on the field which may result in the trend according to Ruck (Ruck, 1997) as the 'conventionalization of organic farming': a wider adoption of farm machinery instead of the farmers to work in the field and the construction of processing factory nearby.

## Chapter VII Reflection

The reasons from my perspective behind the differences in the results of buyer-driven value chain are as follows:

First of all, the driven power behind the 'land acquisition' is different. Unlike the other cases which are common to be the powerful company taking control over the whole process while the government has little strength, Chinese government actually plays the driving power behind the project. Chinese government is very cautious over the land on the right over it especially when it is concerned with the entities from foreign countries. What is more, Chinese government always holds a strong stance when facing the foreign investors and the government has rich experience of negotiating with foreign investors about the condition of invests. Therefore, it is unimaginable for the project to be carried out without the approval from the government. What is more, the speedy urbanization and the tremendous demand for the labors in the urban area creates enough job opportunity outside the rural area. Chinese farmers are willing to seek the job opportunity in the cities because of the higher income and modern style of living, and even though they may finally go back to live in the villages after they are less capable to work in the cities, most of them do not or even cannot go back to the agricultural activities. For them, staying in the agriculture activity with the connection to land is an old fashioned way of living according to the long lasting bias that a farmer is a relatively lower class. Even for the stayers, land is not a big deal and they will be very happy to escape from the land.

Farmers were supposed to be the main actor in my research, however it is maybe a little bit disappointing that they are actually playing a less important role in the organic farming in Zaolinwan village. I was astonished to know the truth about the farmers' position, which is laughed at by my informant and parents as naïve. I had my good intention about the organic farming that it may help the smallholders to compete in the market, but I was too awkward to accept the simple truth that organic farming cannot adopted only by the farmers especially when the farmers do not get any knowledge and experience on it.

I am also regretful for the choice of farmers in the study. I got the contact with the farmers who are working in the organic field. On the other hand, a limited number of farmers who are not working in the field have been visited. It may deliver biased information from the interview, since the number of farmers who working in the field only contains a small proportion of the total farmer population. What is more, the number of farmers interviewed was small compared to the number of farmers involved in the organic project. A minimum estimation of the farmers who get involved in the organic farming is hundreds, however I can only get the time and capacity to interview 31 of them. A bigger sample might have added some different views. And new ideas may appear. During and after my field research, I found the results are somehow overlapped. Therefore I might only get a limited view of the complete image.

As for the research approaches, I found the model of understanding farmers' practices quite useful. It gave me the direction about the field research, and guided me through the whole research. However, I am little concerned about the truth that some of the questions may not get direct or satisfying answer. Sometimes it is impossible to cover all the points included in the model. As for the value chain theory, I shall say it is not very easy for me to get to understand the detailed information all over the value chain due to the various restrictions. So I made the compromise to make a comparison. However, it still undermines the basis of the usage of the theory.

If I got the opportunity to redo the thesis, several things I would be more cautious about: first of all, it would be better if I got more preliminary experience about the research objective and the research site. Since before I went to the field, little information did I possess about the situation of the organic farming and the area. And the situation turned out to be very different from my understandings from the literatures. Secondly, to be frankly, I would choose to be part of the campaign or project operated by the NGO or governmental organizations. Although being a 'free' researcher enables me to observe the whole issue from a more independent position, it also increased the difficulty to do the research without the possible and convenient access to the stakeholders or even the research field. Finally, I would try to narrow down the topic my thesis is about to study. Since the topic of my thesis is still bigger than I can manage.

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