Survey of the organic food market in China

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Abstract:

The recent development in the organic agriculture space in China has been interesting from a business perspective. While China is traditionally a strong producer of organic products, most of the output are exported. However, domestic demand has increased significantly in the past decade, which brought about a growing market. The expansion of this market will not only benefit the companies involved, but also the consumers as food safety issues continue to build up in China. In this paper, we first provide an overview of the history and discuss the state of the related markets, and then present a summary of a field trip we conducted in June 2014, and finally point to areas that deserve further investigations.

Keywords:
China, Organic, food safety

Introduction

The recent growth of domestic demand for organic food spurred widespread interest in media and entrepreneurial communities, who are usually the first ones attending to any emerging trends. However, there has not been much energy devoted into this area from academia, and a summary of available studies would be valuable to people who need to use the result either in further researches or in their own ventures.

In addition to theoretical analysis that focuses on big pictures and aggregate numbers, field trip often brings insights from a different angle. A field trip in some of the important organic food markets in China has been conducted, and a summary of findings can be useful to people interested in this area.

This paper looks at the development of organic food market and some related markets in China from both angles. A brief review of the recent development of the market is presented first, followed by a summary of the field trip conducted in June and July of 2014. In the end, some potential areas deserving further investigation are suggested.

Review of the Recent Development

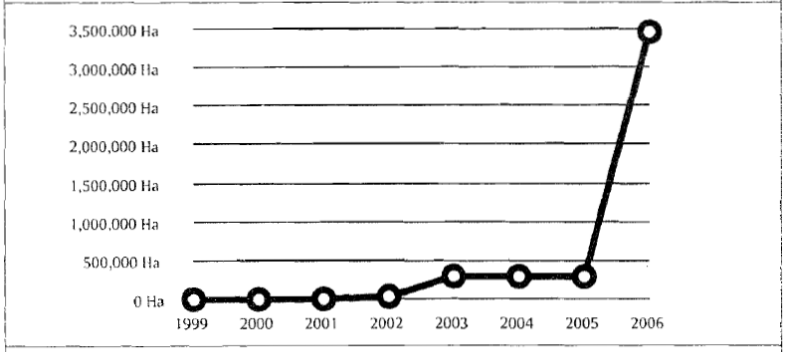
One year ago, when we were talking about recent trends in China, one common observation was people's rising concern for food safety. For example, the baby milk powder scandal of Sanlu Group and many other biggest dairy companies seriously hurt consumer confidence in domestic dairy products; the issue with McDonald's meat supply from OSI Group and other media exposures cast shadow even on the more established food providers. Things like man-made eggs or pork filled with water is no news to any Chinese person who is concerned about food safety, and the exacerbating pollution adds more weight to this problem.

Following incidents like Sanlu Group's and OSI Group's scandals among many others, people began to lose faith in any domestic food brand or even "traditional" food in general. On the other hand, as a natural substitute and safer alternative, the market of organic food began to be favored by consumers. Using Beijing residents as a sample, researchers found that those who are aware of organic options are willing to pay a 5-6% premium (Wang et. al, 2009, and Wang et. al, 2008), which, in contrast to the lack of premium previously, indicates that demand for food safety is emerging as food safety becomes a product attribute valued by Chinese consumers.

Another factor that might have contributed to the rapid increase of domestic demand for organic food is the increase in disposable incomes. According to the National Bureau of Statistics of China, the disposable income per capita of Chinese citizens grew from around 5,000 Yuan to around 28,000 Yuan since 2001. This gives households many more options in their diet selection, and might have contributed to the rise of demand for more expensive but healthier food products.

On the supply side, the growth occurred even earlier. From 2000 to 2006, China boosted its position from 45th to second in the world in terms of hectares of land under organic management, and accounted for 63% of the increase in world's organic land in 2005/2006 alone. (Paull 2008). The graph below from Paull (2008) illustrates the rapid growth.

Figure 1: Organic Hectares in China 1999 to 2006; No Data Available Prior to 1999



Sources: Willer & Yussefi, 2000a; Willer & Yussefi, 2000b; Willer & Yussefi, 2001; Yussefi & Willer, 2002; Yussefi & Willer 2003; Willer & Yussefi, 2004; Willer & Yussefi, 2005; Willer & Yussefi, 2006.

However, a large portion of the organic production was exported, and those sold domestically were sold without an organic price premium prior to 2006 (Kledal et. al, 2007). Therefore the primary driver for farmers had always been trade and export, until the recent change happens.

While both demand and supply went up, the supply chain that links producers and consumers is not sufficiently developed. Only recently did some of the pioneers begin to enter the market to better coordinate the supply chain. For example, E-commerce companies such as Yihaodian (partially owned by Walmart) and JD.com both invested heavily in this area. JD.com announced investment in this area as one of the major use of fund from its IPO. Delivery companies like SF also launched its own platform of fresh food delivery.

Our hypothesis is the following: traditionally (since before 2006), China has been a large producer of organic products, with trade and export being the primary motivator of farmer behaviors. Recently, domestic demand shot up due to food safety issues and increase in willingness to pay for organic premiums. Yet to be seen is the establishment of a supply chain system that sells domestic products to local consumers, and this area is where business opportunities are most concentrated.

The field trip

The field trip surveyed some fastest growing regional markets for organic food, mainly Beijing and Shanghai. We visited and interviewed people and organizations involved in different positions within the industry value chain, such as organic farm owners and managements, farmers, distributors, as well as startups and NGOs within this space. Below is the summary of takeaways from the field trip. Some numbers about costs and prices are found in conversations as well as observations, but they are not sufficiently systematic for us to build any valid model. However, we were able to identify some challenges as well as opportunities for the industry from the interviews and observations.

Challenges

First of all, on the demand side, we found that public awareness of organic standards is very low even in economically advanced cities like Beijing, and the effort to educate people is severely lacking. As researches of Wang et. al, (2009), and Wang et. al, (2008) indicate, the awareness of specific requirements for “organic certificate” is one of most prominent factors in creating the premium for organic product, and such a lack of awareness would greatly hinder the growth of demand for it. Most organic brands sold in Itoyakado, a regional premium supermarket in Beijing, have no indication of “organic practice” other than the certificate logo on their product packages. Apparently, educating the customers about the advantages of organic food

would bring about real demand growth for the product, but the challenge lies in the implementation – who is the one to spend the time and energy to do it?

Second, on the supply side, we were surprised by the length of the investment and production cycle of organic agriculture. From the interview with the General Manager of DuoLi Farm, the largest fully vertically integrated organic farm in China, we learned that the time period for an average piece ofland to be converted to arable land that conforms to organic standards is at least three years. It takes some additional years to be producing at full capacity. Some unlucky people might even spend years getting their products "certified" as organic as a result of the complex land and soil regulations. This means any newly converted organic farm will see more than five years of cash outflow at the beginning, which simply shuts the door for small companies without a deep pocket, as they cannot survive the long period of cash outflows. As confirmed by our interview with investing professionals, capitals are more available to less risky businesses such as quality agricultural chemical producers. DuoLi was able to afford such investments because it gained governmental support with the credentials of its founder, a long-time expert in this industry. However, the General Manager still refused to comment on the profitability of DuoLi.

Moreover, the ability of farmers to navigate the new technology as well as changing governmental regulations add to the barrier, and there is not enough support available. During the meeting at China Federation of Organic Agriculture Movement (CFOAM), a non-profit that helps to drive business development in the Chinese organic market, two kinds of questions were raised most frequently by participants – how to use the internet and mobile platform to promote their products, and how to get through the organic certification process. Some of them do not have the time to research into these topics, other simply do not have the level of education to do so. Most participants are interested in converting into organic, but few were able to do so.

Finally, there are challenges to the middle part of the industry chain – the distribution channels. During the Wharton Summit in Beijing, we met with Gang Yu, the CEO of Yihaodian, one of the major E-commerce stores in China. Interestingly, when asked about his opinion on door-to-door delivery service of organic products, he posed only one question: "How much money are you ready to burn?" As he introduced to us, competition is increasingly fierce in the space of fresh food delivery service, and large amounts of funding are required to establish the distribution channel in order to compete in this area. Hence, it is difficult for startup players to enter this space, since they tend to have only limited funding, while supply chain network is an economy of scale. This is confirmed by recent evidence, as all the newly entrants are backed up by huge corporations, such as SF, Tencent, Alibaba, and so on.

Insights and opportunities

First of all, we should focus on promoting public awareness of organic standards. Increased awareness of organic practices will increase customers' willingness to pay, raise the premium that producers can charge, and thus lead to faster market growth rate. While we recognize that education is hard, it would provide large benefit to both producers and consumers. Government agencies are in the best position to provide such kind of education, as it is a common good that will be enjoyed by the society. There needs to be a more transparent and official public platform for people to learn and get familiar with the national organic standards. They need to provide a clearer scientific explanation for the derivation of these standards and educate the masses on the perks of organic consumption. Furthermore, those companies competing in the sector of organic food should also be interested in educating their customers, as this will likely result in broadened profit margin.

Second, we should look for ways that can best help players in the market to develop their businesses. Currently, the support for small farmers and small businesses are very little, as we learned from the meeting at CFOAM. NGOs such as CFOAM are mostly in the very primitive stage. Many farmers are interested in converting to organic production, and many dealers are interested in utilizing the online and mobile platform, but few can find sufficient support to actually implement. We recommend further investigation into how we can most efficiently provide support for these people.

Third, as we learned from the interview with a graduate student Tsinghua whose researches focus on organic certification, further development of food safety practices should be encouraged to focus on Traceability. Traceability means for every package of product, we should be able to identify all parties involved in its production, from raw material supplier to retailer. This is a very crucial because traceability deters unscrupulous behavior from irresponsible players in the market. Traceability technologies can help governmental agencies to hold companies responsible when their products do not meet their stated standards. In addition, this greatly increases the level of trust that consumers have on these products. Again, increased trust leads to higher willingness to pay, which leads to higher profit margin, higher production, and finally expansion of the market.

Finally, interviews with HaSi Farm and DuoLi Farm helped us identify an increasingly popular business model in this space – HaSi is a local player in urban Beijng while DuoLi is a regional player in Shanghai area. This model involves operating the entire supply chain from top to bottom. In this model, the business conducts research, executes farming, packaging and delivery activities and provides end-to-end customer service all on its own. The main target customer group is typically the upper-middle income population who values healthy living. The business grows over time to serve an increasing amount of living communities – communities created by real estate developers. Fresh produce will be delivered door-to-door to households in each community on a subscription basis. To reach customers,

word-of-mouth and social marketing through WeChat will be the main marketing tactics. As the business grows, the main challenge shifts from marketing and farming technologies (in the case of HaSi) to supply chain management (in the case of DuoLi). This model partially solves the problem of traceability by simply integrating the entire chain of production. This practice increased accountability by holding the business accountable for anything that might arise from its product. They were thus able to gain higher level of control over the quality of their product, and charge higher premium for the "safety guarantee" that comes with it.

The itinerary and details for our field trip can be found in Appendix I.

Conclusions

In this paper, we provided a rough outline of the current product market through two different angles – a review of the history of the market through some events and existing literatures, and a field trip to the most developed regional organic markets in China – Beijing and Shanghai.

Our analysis brings insights into the development of this market. Production has been high and demand is catching up domestically, and what remains to be developed is the distribution channel. We have seen increasingly fierce competition in this space as the big players with deep pockets, such as Alibaba and Tencent, enter the market and compete for market share. At the same time, the environment is somewhat hostile toward small players who lack the ability to either establish delivery networks or to sustain the first few years of cash outflow on the production side.

We identified several main barriers to the rapid development of the market: low public awareness of organic practices, insufficient support for small businesses, and long cycle of investments. We also proposed responses to the challenges: government agencies should carry the responsibility of raising public awareness, future regulation of organic product should focus on traceability, and NGOs should be encouraged in order to provide sufficient support for small business development.

Due to the small scope of our research, there is a gap between our theoretical review and our field trip research. The review is mostly on the aggregate level whereas the field trip summary focuses on detailed observations. Thus we propose the following questions for future researchers to answer: how would the competition of giant players in the market impact the strategies of the small ones? How should government modify regulations to both encourage entrepreneurship and be fair to giant players? And finally, what is optimal level of organic production?

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Appendix I: Field trip details

Beijing

We arrived in Beijing at about 11PM on June 6 and found our way to a small hotel close to the fifth ring of Beijing which gives us more convenient access to places we wanted to visit over next few days. Before going to bed, we sorted a bunch of business cards we have gathered from our network in China (most of them coming from an agricultural conference a couple of month ago) and decided to reach out to a few realistic organizations/companies for potential market research/interview. Afterwhich, we spent about 30 mins figuring out the agenda for the next day's visit to ItoYokado Beijing - a Japanese-branded supermarket that sells organic produce.

An introduction to Itoyakado can be found here:
http://en.wikipedia.org/wiki/Ito-Yokado.

June 7 - Distributor: Itoyakado 华堂超市

We arrived early at ItoYokado so as to avoid the midday crowd. Because we were not able to secure an appointment with the branch manager beforehand, we wanted to see if we could speak with him for about an hour or so during his lunch time. As Xinpeng stepped aside to reach out to the cashier for his manager, the two of us closely examined the organic produce section and specifically wanted to find out a little more about where these organic produce came from and who the supplier was. While most of them did not have any supplier information on that other than the 'Certified To Be Organic' tag, a few of them such as lettuce and tomatoes did have supplier information. Most of them come from the places within 100KM of Beijing. We took

out our phone cameras and wanted take pictures of these supplier tags. However, some retail staff reacted immediately and sternly questioned our intention. They have a policy of disallowing photos on premise. On hindsight, we thought of two reasons: 1) they had somewhat exclusive and limited supply of these organic produce and fear competitors sourcing from the same producers; 2) their organic produce was probably not fully certified to be organic.

Takeaway: Public awareness of organic practices is low, and education would be a hard job to do.

At the end of things, we were not able to reach out to the manager to conduct a thorough research but did speak with retail staff to understand a little about their supply chain operations. They had sourcing managers who would source for these organic produce on a daily basis pending availability of each selection. Then these organic produce was delivered by truck in the wee hours from outside of Beijing to the supermarket directly using their leased/company-owned trucks. We inferred that the cost of operating these company-owned trucks were probably high based on their ambiguous answers when we asked about the cost structure.

Takeaway: Organic food requires freshness, which means either physical adjacency or high delivery cost. This can be a challenge to startups who are not deeply funded.

June 8 - Supplier: HaSi Organic Farm 哈斯农场

Through some friends, we discovered that there was an organic producer door-to-door delivery service, HaSi Organic Farm 哈斯农场, growing on the popular WeChat platform. While initially we thought that they were only distributors/marketers of organic produce sourced elsewhere, they turned out to be owning and operating the entire supply chain from research, farming, packaging to delivery. We were pretty amazed by that despite their relatively small scale with annual revenue of about 10 million RMB.

We paid a visit to the actual farm located about an hour outside of Beijing. Fortunately, we were able to secure a tour of the farm and had the Vice President of the farm explaining to us the details of how they operated the farm. According to her, they have been in the business for a long time starting out in Inner Mongolia where she and her husband (the President of the farm) ran an organic farm. They expanded to Beijing seeing a potential market here. In Beijing, their business targeted upper-middle income customers who placed an emphasis on healthier living and have been operating for about three years now. They grew at steady pace and expanded themselves based on living communities (小区). They had to make sure that there was critical mass of customers before committing to providing door-to-door services for a living community because the cost structure simply did not make sense for a small, sparse group of customers. It was also costly and difficult to scale quickly given their limitation in production and handling massive fast distribution logistics given that organic produce seem to be very perishable. They need arable land that is certified to be capable of producing organic food before they can legally append the 'Certified To Be Organic' tag on their produce - such land availability is limited in and around Beijing where heavy chemical industrials take place.

June 9 - Tsinghua University 清华大学 - speaking with graduate student researching topics related to food safety

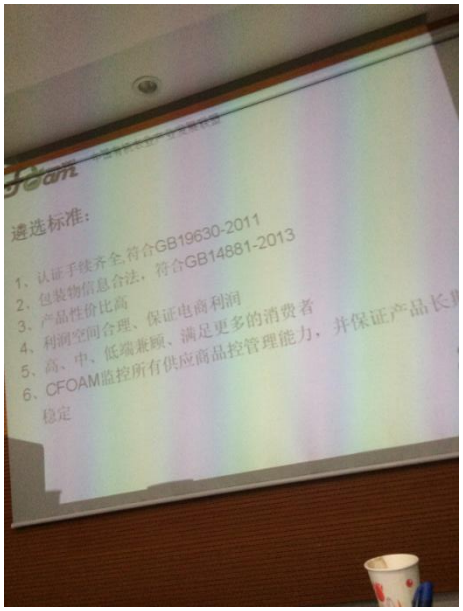
We visited Tsinghua University's library and spent some time reading through organic agriculture materials. Organic agriculture seemed to be a relatively new topic in agricultural studies in China based on the limited availability of academic resources in the library. Most of the research were focused on food safety - which has been a hot topic in China in the past decade. It occurred to us that people, at least the ones in the academic/research community, were more concerned with eating safe as opposed to eating healthy. It seemed natural that only when food safety is guaranteed can people start to focus on food quality.

After lunch, we met up with a Canadian grad student to talk about his research into organic certification. He was trying to build a startup in China that provides organic certification as a service (OCaaS) because he knew that in China, organic producers have a really hard time trying to get themselves certified. While his startup will possibly address the problem, he mentioned that it has been really hard to organic produce (whether offline or online) commerce to take off because of the tedious process of certification and the risk of denial. Few companies, regardless of where they are in the supply chain, are willing to invest in this complex and risky process which has not proven to be very profitable in the short run.

Takeaway: The interview with the Tsinghua University graduate student shows both challenges and opportunities. The challenge is that the certification process is lengthy and too costly to be justified in the short run for many companies. Therefore, the

incentive to shift to organic production will be tampered. The opportunities come from the same direction. Traceability is key to food safety and standardization of organic food production practices. There is intrinsic business value.

June 10 - China Federation of Organic Agriculture Movement (CFOAM) 中国有机产业发展联盟



We got in touch with CFOAM through a business card contact. CFOAM is a non-profit organization in China (mostly in and around Beijing) helping to drive commerce in the organic produce market in China. We were invited their inaugural Organic Produce & E-Commerce session to find out more about how they support online businesses that try to get into the business of selling organic produce directly to consumers. We saw 20-30 participants at the session and most of them were organic producers who are trying to get online - what this meant was that many of those interested in the organic ecommerce business were all starting with an existing offline business or supply. The problems that they raised at the sessions were issues like access to certification authorities and most importantly how to integrate their offline business with an online presence and the use of software to enable this process. Also, many were worried about the logistics involved in fresh produce that may not make sense for the scale of their local businesses.

June 13 - Chat with Gang Yu about organic food delivery at Wharton Global Forum Beijing and dinner with professionals working in agricultural investments and trading

We had the opportunity to network with Gang Yu, CEO/Founder of Yihaodian (where Walmart China is a majority owner) because we knew that Yihaodian also has a online department that sells fresh produce locally in Shanghai and Beijing. We had him for about 15 min over coffee break when we were able to ask him about his opinion on the business model of selling organic fresh produce door-to-door to customers. The first thing he said is "how much money are you ready to burn?". It became apparent that the burn rate for selling organic fresh produce on his ecommerce site is a lot larger than his other merchandise. We inferred that it was somewhat easier for him to reach customers given his already successful customer base in the non-perishable products. He only introduced the fresh produce department to Yihaodian after rolling it out in small scale and evaluating business feasibility. He sees that this market will definitely grow over the next few decades in China but whether the belongs to large market players or startups is a tough question though he inclines to believe that the former will have a much easier time.

Later in the night, we had dinner with two agriculture professionals - one of them works at New Hope Private Equity 新希望私募基金 while the other works in agriculture futures trading. The buy-side story in this area seems to be that they typically invested much higher up in the supply chain. For instance, they invested in quality agricultural chemicals, automated agricultural equipments, and startups focusing better enabling logistics using information technology. They expected producers to be natural players in the distribution/marketing process of the supply chain in the future.

Shanghai

June 15 - DuoLi Organic Farm 多利有机农庄

We discovered there is only one company in China that sells fresh organic produce door-to-door on a regional scale (every others were mostly conducting business locally). This company is called DuoLi Farm 多利农庄. We were lucky to have been introduced to the General Manager of the farm through our attendance at the CFOAM session. They are 100% vertically integrated in the supply chain as they believe they can gain economies of scale if they can grow volume fast. They have been growing relatively quickly in the last five years - mostly in the higher portions of the supply chain by procuring arable land from local governments to prepare the land for growing organic agriculture. Apparently, the lands they procure need at least three years to be ready for organic growth. It seemed clear to us that the way they have been growing result in an extremely high cash burn rate. The GM told us that the founder has nationally-acclaimed credentials in agricultural research and has been backed by the government with venture funds on the order of the billions to expand quickly and develop a market for organic agriculture. When asked about profits, the GM declined to comment but said they are still growing and focusing on investments.