

Market Structure and Enterprise Competitiveness: Strategic Choices Facing China's Organic Food Industry

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Abstract

China's organic food industry has been developing over the past 10 years and in recent years has displayed significant growth in output, varieties and productivity. However this rapid development has also brought significant problems for the future of the industry. In particular there is a severe shortage of nationally and internationally recognized organic food Chinese brands, and this is compounded by an industrial structure which is fragmented into many small scale enterprises. The advantages of economies of scale and scope have so far eluded the industry. In addition the legal framework for the industry in relation to quality standards and authentication is still under development and this imposes severe constraints on export potential. Nevertheless the Government has instituted policies to address these issues. This Paper presents an analysis of the current situation of the Chinese organic food industry and a discussion of options for the future in terms of market structure, re-organisation and marketing strategy. A brief comparison with the organic food industry in the UK is also provided in order to highlight the extent and nature of the problems that the industry in China is facing – many of which are still a problem for the UK industry.

Key words Organic food industry, market structure, competitiveness promoting, market strategy,

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I Introduction

China's organic food industry has expanded rapidly since 1990. There has been remarkable growth in the number of enterprises, variety development, production and international trade volumes. The organic food industry is playing an ever-growing role in farmers' incomes, China's agricultural structural adjustment and in economic growth at the local and national level.

These developments have sprung from an initially small base and there remains a number of key questions regarding the very low industrial concentration ratio in this market. The vast majority of organic food producers are small scale enterprises, with very few well known brands, and it is this structure which may represent a serious threat to the continued development of the industry in China.

The fundamental proposition from this paper is that if China's organic food industry is to develop in a healthy and sustainable way, a significant and strategic readjustment in the structure of the market is essential to enhance the competitiveness of the enterprises. The industry's national policy guidance and development plan, is to enable enterprises to develop more strongly, advance the production base and develop the market 'network'. In order to achieve these goals we argue that 'cooperative competition' will be the most effective way forward. The theory of cooperative competition argues that, for industries still in the stages of development, the promotion of all kinds of cooperation, innovative management systems and product quality control, are fundamental requirements in adjusting market structure and enterprise's competitiveness.

This argument is radically different from the Schumpeterian view of the 1960's that 'small is beautiful' – indeed it implies that an industry such as the 'organic food' food industry actually requires a significant number of large enterprises, cooperative strategies between small enterprises and an industrial size mix more akin to that found in electronics, steel, car and other modern industrial sectors. At the same time, development of the organic food industry along these lines does not necessarily mean a reduction in competition or in quality of output or an increase in prices. Indeed, implementing such a strategy is more likely to improve the first two while reducing prices. China's organic food industry is at a critical stage in its development and the accession of China into the WTO has made the issue of strategy a fundamentally critical one. The rest of this paper develops the above argument in detail.

What is Organic Food?

There are many definitions that could be used to describe food that has been produced in the absence of man-made inputs that rarely if ever occur naturally. These can be summarised as follows:

- Food that maintains or increases the long-term fertility and biological activity of soils using locally adapted cultural, biological and mechanical methods as opposed to reliance on artificial inputs.

- Food that maintains and encourages agricultural and natural biodiversity on the farm its surroundings through the use of sustainable production systems and the protection of plant and wildlife habitats.
- Food that can be produced utilising biodegradable, recyclable and recycled inputs and packaging materials.

In practice it may not always be possible to meet the requirements of the above definitions completely but where farmers claim that their food is ‘organic’ it is usually the case that at least some of these requirements are in place. As regards foreign trade in organic food there are several ‘standards’ in force that represent a serious attempt to ensure some degree of universality in the recognition of what is organic as opposed to non-organic food. In China the organic food industry and the Government have been actively promoting such standards in order to expand trade in agriculture. This Paper presents an analysis of the Chinese organic food industry and the current strategy to promote its output. In Section II we discuss the recent developments in the industry including some of the problems it has been facing. Section III presents an analysis of recent policy initiatives and in Section IV we focus on the key issues still to be addressed. In Section V a particular problem facing the industry is addressed – its current market structure and the problem of market entry mode. Finally we present a set of conclusions.

II The recent and current situation of the organic food industry in China

In 1990 when the organic-food project was implemented, there were noticeable achievements in product quality, volume of production and marketing efforts. Since 1996, the industrialization of organic food and the introduction of specialized processes have been accelerated along with the introduction of new varieties.

From 1996 to 2003, the numbers of organic food enterprises, the cultivation area, output of organic food and domestic sales have increased at annual average rates of 49%, 35%, 114% and 52% respectively while the number of varieties has increased by an astounding 67% annual average rate. And between 1999 and 2003 the export value of organic food has increased eightfold. This is shown in Table 1.

By any standards these are extremely impressive growth rates, albeit from a relatively small production base. However if we consider this expansion more closely we find several elements that should be of some concern to both the industry and policy makers in China. The average size of acreage per enterprise has actually fallen between 1996 and 2003, from 4.85 acres to 3.8 acres indicating that the number of small enterprises has risen relative to the number of large enterprises in the market. However the output per acre has risen from 0.16 tons to 0.42 tons in the same period (see Table 1). These two rates of change are difficult to reconcile unless we accept that either all organic food enterprises have achieved significant productivity improvements or the larger enterprises are achieving spectacular productivity gains

while the smaller ones are still ‘plodding’ along. Given the many difficulties faced by the smaller enterprises it is more than likely that the latter is actually the case.

Table 1: China’s Organic Food Development

Year	Number of Enterprises	Production Area (000’s acres)	Production (000’s of tons)	Sales (100M RMB)	Varieties Produced	Exports (Million US\$)
1996	463	2248	363.5	155.3	712	0.09
1997	544	3213	629.7	240.5	892	0.7
1998	619	3385	840.6	285	1018	0.7
1999	742	3563	1105.8	302	1353	1.3
2000	964	5000	1500	400	1831	2.0
2001	1217	5800	2000	500	2400	4
2002	1756	6670	2500	597	3046	8.4
2003	2047	7710	3260	723	4030	10.8

Source: Organic Food Statistics Annual Report (1997-1999) and China Organic Food Marketing Report (2002-2004).

This supposition is given considerable credence if we consider the value of sales: despite impressive growth rates in every aspect (as per Table 1) the value of sales from organic food production has only increased from 33.5 million RMB per enterprise (1996) to 35.2 million RMB per enterprise (2003). This suggests that the vast majority of sales are still taking place at the local level and not in the context of a national marketing strategy designed to generate higher value added for the producers. This is perfectly consistent with a dominance of small (non-cooperating) enterprises that are restricted in terms of spatial markets, strategy formulation, management ability and marketing skills. Hence the need for a strategy of cooperative competition in the China organic food industry is clearly evident. A major advantage that China (potentially) has in this respect is the regional concentration of organic food production.

The output of organic food in China tends to be concentrated in a small number of Provinces. Seven provinces currently account for 55% of the total number of organic food enterprises in the country. In specific products the spatial concentration is even higher: 48% of total organic rice production is accounted for by just three provinces (Heilongjiang, Jilin and Jiangsu). The organic dairy products of Inner Mongolia and Heilongjiang account for 41.4% of total output. Over 50% of organic tea production comes from Hunan, Fujian and Jiangxi. The organic vegetables of Shandong, Fujian, Hebei and Beijing account for over 30% of all production. These very high regional concentrations provide an opportunity for a cooperative competition strategy to be introduced effectively and reasonably quickly. Forming of specialization centres and exploiting economies of scale ought to be made more practicable under these

conditions than could otherwise be the case. We will return to the twin issues of economies of scale and regional advantage later in the Paper.

As indicated above there are more large organic food enterprises in China (mainly in the seven provinces identified) than only a few years ago. In 1996 there were just ten enterprises with sales volumes of over 100M RMB (defined as large enterprises) but by 1999 there were fifty such enterprises. In 2002 there were just over 400 enterprises with sales volumes of over 50M RMB (defined as medium enterprises) but less than 100 of these existed in 1996. Nevertheless, although the number of these organic food enterprises are rising they still represent a small proportion of the total, particularly those at the larger end of the scale (only 2.8% of all organic food enterprises). But they accounted for 8.4% of total sales value in 2003 indicating clearly the importance of economies of scale and of a non-spatially constrained marketing strategy. (Wang, 2003)

This expansion in the number of such enterprises has been accompanied by an increase in the variety of products marketed. Products developed over the past fifteen years include grain and oil, vegetables, fruit, beverage, beasts, birds, egg, milk, aquatic products and drinks. The characteristic process of these developments has been first, the product structure is adjusted to reflect more closely the food consumption patterns of urban and rural residents; second, product complexity changes from simple, basic varieties to deep processed varieties and third, the production enterprises develop from small scale area focused entities to medium and larger scale units with a much greater spatial market. However it remains the case that the supply chain for organic food in China remains much less developed than that for mass produced food. This was recognised as a continuing problem in the UK in the late 1990's (Latacz-Lohmann and Foster, 1997). It remains a serious issue in China even though productivity growth has been very impressive.

By the start of 2003, deep processed products accounted for 42.1% of all organic food produced in the seven Provinces, preliminary processed food accounted for 26.4%, and the primary products accounted for 31.5% of the total. In the early 1990's the latter accounted for over eighty percent of total organic food production. The increase in varieties, deep processing and the development of medium and larger scale enterprises has also resulted in a dramatic change in the geography of China's organic food markets.

From 1999 to 2003, growth in export value of organic food was dramatic – expanding from a mere 1.3M USD to over 10M USD by the end of 2003 (see Table 1 above). This rapid expansion has been significantly aided by the 'Organic mark' recognition agreement within Asia and to a lesser extent by recognition of specific standards by the EU and the USA. However, under the WTO framework it is expected that export markets in the latter two economic blocs will also be expanded significantly in the future. Development work on a negotiated authentication system is still ongoing relative to both the EU and the USA markets (Organic Food Statistics Annual Report, 1997-1999; China Organic Food Marketing Report, 2002-2004).

III Organic Food Policy Developments in China

The 1994 'Agenda for the 21st Century' introduced enabling legislation at the Provincial and District levels to strengthen the monitoring of food safety including the faster development of the organic food industry. The policy focus for the organic food industry was iterated to be "The promotion of organic food production actively whilst protecting the agricultural ecological environment". Four of the seven main production Provinces implemented this quickly and to date there are 15 Provinces with a fully fledged development plan for organic food. The main centres of organic food production have also introduced regulations relating to labeling, management procedures and standards for organic food including Heilongjiang and Liaoning Provinces.

In addition four Provinces (Heilongjiang, Jilin, Jiangsu and Shandong,) have also introduced special development funds for the organic food industry. In the last three years (02 – 04) 10 Provinces have held regional organic food fairs and product exhibitions and three have been actively involved in overseas fairs, international trade association networking and other active (as opposed to passive) trade promotion. These initiatives have been strongly encouraged by both provincial and national Government in China and are viewed as an essential compliment to the policy framework laid down in 1994. (Xue, 2003)

These developments have also been paralleled by the promotion of internal networks in the industry, the development of a wholesale market, introduction of specialized retail outlets and campaigns to raise awareness of 'fake' or 'pirated' products along with specific legislation dealing with the latter. What these developments clearly demonstrate is a serious and determined attempt to successfully develop the organic food industry in China for both the internal and export markets. (Wang, 2003)

However, even with the rapid growth of output and variety, of sales volumes and export value there remain a number of key issues that the organic food industry in China must deal with if recent trends are to be continued or improved in the future. We address these key issues in the following section.

IV Key Issues

There are four key issues that potentially present a binding constraint on the further development of the organic food industry in China. These are categorized as follows: Market share, Brand development, Quality standards & Legal framework

Market Share

Despite the rapid growth in the number of organic food enterprises in China the majority of operators are still small scale and hence have not been able to raise market share significantly or capitalize on economies of scale. For example, the 500 beer manufacturing enterprises with an annual production under 50,000 tons account for nearly seventy percent of the market and are mostly small and medium-sized

enterprises. Of the 1600 dairy products enterprises, only 10 enterprises have a processing ability up to 300 tons per day. The market concentration of the organic food industry is low and the scale of the enterprises is small, which severely constrains the ability of enterprise's in raising their market share, raising product quality and developing strong brands in both the domestic and international market via technological innovation. However small scale is not the only constraint facing such enterprises. In the United Kingdom the industry faces many barriers to development most of which also exist in China (IGD,2002). These are summarised in Table 2 below:

Table 2 Factors Influencing the Growth of Market Share for Organic Food

Factors Depressing Market Value	Factors Increasing Market Value
Low general price inflation Price focus/competition Increased international sourcing Increased competitiveness Low population growth Economic recession Increased foodservice offer	Greater non-food offers Consumers pay more for greater convenience Supply side shock/upsurge in inflation

Source: Grocery Retailing 2002, IGD

Other factors that influence the UK sourced share of the organic market are:

- The price of UK produced organic products;
- The price of imported organic products;
- The availability of UK organic supplies;
- The availability of organic supplies from outside the UK;
- Consumer demand for organic products that cannot be produced in the UK;
- The availability of organic produce that provides convenient meal solutions;
- Distortions in the market due to regulatory and subsidy differences between countries;
- R&D and extension effort in the UK to improve the efficiency of organic production (IGD, 2002).

The industry in the UK is already more developed than in China but nevertheless continues to face very serious problems. This helps to put into perspective the scale and difficulty of the constraints facing the industry in China and one of the biggest problems in the latter is the question of brand development.

Brand Development

Brand names play an important role in the marketing of products and services in their acceptance by the public (Charmasson, 1988). A number of studies have focused on

the criteria for developing brand names (e.g. Shipley, et al., 1988; Chan and Huang, 1997). In general the criteria for developing a good brand name are: the short length of brand name, the ease of pronunciation, packaging needs, adaptability to the advertising medium (Chan and Huang, 1997). Based on that, one of the most important elements Chinese companies should pay considerable attention to on developing the organic food market is the brand name.

The organic food 'brand' in China is mixed and disorderly. For instance organic rice in Heilongjiang Province has over 40 brands yet nationally famous brands of organic rice number only three! This is a common problem for many organic products in several Provinces and makes it very difficult for consumers to distinguish which is better and which is worse, This problem has also led to the introduction of fake organic food using the brand name of the few nationally recognized enterprises. If the organic food market in China is to continue its rapid development (especially in terms of exports) enterprises must strengthen quality, brand consciousness, and more effectively promote the grading of product quality.

In terms of organic food the proportion of products and varieties that carry the AA grade is small. Products carrying the single A grade developed rapidly, from 273 in 1996 to 2978 in 2003 and account for 97.8% of the total amount of organic food. But for the higher quality standard (AA grade) only 68 products met this by 2003. This makes it very difficult to promote Chinese organic foods nationally and internationally. It therefore becomes evident that future industry strategy needs to address the lamentably low proportion of organic products that meet the higher standard and represent the vast majority of the export earnings of the industry.

Quality Standards & Legal Framework

For any country to become a recognised organic food producer, it must be registered with one of the certification bodies and the land has to be converted (farmed under organic standards). Any produce from land not converted and certified to organic land cannot be sold as organic food. The process of conversion typically takes two years and it is the responsibility of the certification body to inspect the producer on a regular basis to ensure that the producer is complying with organic standards.

In the UK, until 2003, the certification body has been the UK Register of Organic Food Standards (UKROFS) which provides baseline organic standards for the UK., and approves and monitors the work of UK certification bodies. Within the UK, there were twelve certification bodies at the start of 2003 which set their own organic standards based on the UKROFS basic standard as a minimum. The process essentially means that it is the production system that is being certified, not the output.

Within the EU, organic farming is a legally defined production system as set out under Council Regulation (EEC) 2092/91 and its amendments. Within the regulation, each member state is required to establish a competent authority to implement the regulations.

In China the organic food industry is not yet 'mature' in terms of nationally recognised legal quality standards and enforcement or authentication of these standards and this is already a critical issue. Development of a sound, recognized and internationally consistent set of quality standards and authentication system is an essential foundation for the future development of the organic food industry in China. Quality monitoring, enforcing the quality standards rigorously and implementing an international system of quality control will be a key building block for the industry's future. In addition, strengthening the enterprises' ability in authentication is also a major pre-requisite for the future. There is clear evidence that the government also sees the latter as very important - Liang Zhichao, of the China Organic Food Development Centre (CGFD) stated recently that:

"China has pinpointed organic food as a vanguard to break the barrier and boost agricultural exports. The development can also greatly improve the agricultural environment." [China People's Daily, 24 November 2004]

This commitment has also been supported by action such as China has built a nationwide network providing authentication monitoring, technical services and quality inspection of organic food producers, whose products are specifically regulated by some 80 clauses of state requirements. However it remains the case that out of the 2047 'organic' enterprises in operation in 2003 (see Table 1) just over 1,000 of these are registered with the CGFD.

This presents a major problem for exports in particular since several developed economies have introduced non-tariff barriers for organic food mainly in relation to environmental considerations. Hence, meeting increased quality standards, improving monitoring and authentication and enforcement of the (existing) legal framework are all necessary conditions for the further development of China's organic food industry. However they will not be sufficient on their own. A key problem facing the industry in China is one of market structure and we turn to this in the next Section.

V Market Structure

As argued above a key problem is the small scale of most organic food enterprises in China. In order to improve the development level of organic food in China and its international competitiveness, Government needs to devote more efforts to supporting the production base of organic food and develop conglomerates further on the basis of the industry's development plan for organic food. The encouragement of mergers and cooperation between producers will be a key requirement for further productivity improvements and will also accelerate the industry towards the nationwide application of standards sought by the CFGD. The existing regional concentration of the industry is a major advantage in this regard as well as presenting an opportunity for exploiting the potential economies of scale and scope that so far have eluded most of the organic food producers.

In developing the organic food industry, cultivating and developing leading enterprises is a key element of any strategy. Fostering and developing a batch of national-level organic food leading enterprises, to lead and promote core brands is another key element in the development strategy for organic food in China. This has begun to happen in some industries such as milk and brewing but is yet to be rolled out other sectors containing many of the small scale organic enterprises. It has already been shown that the proportion of 'tradeable' organic products (AA grade) is extremely small – this is unlikely to change if the strategies described above are not implemented in the next few years. Essentially the market structure of the industry is such that it cannot hope to compete internationally in terms of costs, prices or quality without a significant move towards larger scale operations, core brand development and coordinated marketing.

VI Market Entry Mode

Possibly, no issue in international business has received the same level of attention from researchers as the entry mode choice (Sharma and Erramilli, 2004, p. 2). Particularly in relation to China and its rapid pace of development the economy has become an important focus of international companies. Many international companies target the domestic market in China using FDI (Sun, 1999). However there is very little attention paid to the involvement of Chinese companies outside the China mainland.

For Chinese companies to involve themselves internationally, especially with a sensitive product such as food, they will need to grasp learning opportunities through exposure to new markets and different cultures. However a critical issue to be faced by these organic food companies is the selection of the entry mode strategy. The latter is critical because it impacts heavily on control over subsidiaries, parent-subsidiary relations, and vulnerability to external changes in a host country (Root, 1994).

Chinese companies entering a foreign market may have to consider the type of entry mode in relation to the level of control and resource commitment that they desire. Such decisions will be made in relation to the company's capabilities as well as the host country business environment. Companies that lack international experience may prefer to select a low degree of involvement measured by a low level of control and low resource commitment such as exporting using local agents. Using this strategy and after a reasonable market share has been acquired they can then expand by adding an export department to company structure in order to manage foreign sales. At this stage, the company gains experience as well as becoming familiar with the host country market which reduces the level of uncertainty with the overseas market environment and only then should it consider moving to toward a higher degree of involvement (Root, 1987; Omar et al., 2004).

Companies with international experience might prefer a joint venture entry mode. Many firms in China are involved in this but in the context of the domestic economy, and very few overseas. In bringing together firms with different skills, knowledge bundles and organizational cultures, joint ventures create unique learning opportunities

for partner firms (Sharma and Erramilli, 2004; Zander and Kogut; 1995). This may well be the preferred strategy for the organic food enterprises in China but first the predominance of small scale units must be addressed, as discussed above.

On the other hand, companies with high international experience and high resources might prefer a high degree of control involvement such as wholly owned subsidiaries. According to transaction cost theory, when the cost of adaptation and, performance and protecting the company strategy against the other party's opportunistic behavior is very high, companies will prefer to take control over the decision making by selecting the wholly owned subsidiary mode rather than joint venture (Hennart, 1982). It is very unlikely that any of the organic food enterprises in China are in a position to adopt this approach.

The very low market concentration rate in organic food at present, prevalence of small-scale enterprise, very few 'famous' brands and weak marketing strategies point to a situation of an industry requiring major restructuring and re-alignment in China. A key element of greater cooperation (including mergers) is the need for innovation in all aspects of China's organic food industry. At present China's main markets for organic food exports (albeit still small) are the U.S.A., Japan and Southeast Asia. Focusing on these exclusively represents a significant risk therefore the number of overseas markets needs to be increased while the product focus per market needs to be differentiated to meet the specific demand in each market. This will also require a significant effort on the part of the relevant agencies and trade representatives to reduce the entry barriers for organic food, an argument already discussed above.

A parallel strategy must include the careful identification and selection of partners in the importation of technology and managerial techniques specific to organic food as well as partners in the production process itself. This is a strategy that has been applied successfully in China across a range of industries – electronics, automobiles, construction, tourism and several others – it is yet to be applied to China's potentially very large organic food industry.

A critical factor influencing the **past** development (and **future**) of the industry is the organization of production and the skills of management. By combining scientific know-how with modern and efficient management major advances in product development and productivity could be made in a relatively short time period.

VII Conclusions

This short paper had three objectives – first to present an analysis of the current position of the organic food industry in China, second to discuss the key constraints facing the industry and finally to suggest a strategy for future development. There is no doubt that the industry has been expanding rapidly in recent years however this expansion has done little to develop internationally acceptable organic food varieties so that the level of exports remains woefully low. This is not to say that barriers to entry for Chinese organic food do not exist (fair or otherwise), they do. But this in

itself should not prevent the development of 'world class' organic food in China since the domestic market itself is potentially very large. A critical factor in the industry's future development will be the creation of larger enterprises infused with sound scientific and management techniques designed to raise standards and productivity and to develop internationally recognized brands. This is likely to require the development of strategic partnerships with overseas firms and will fundamentally require a clear and unambiguous vision for the industry on the part of both regional and national Government bodies.

As has been argued above, similar strategies have been successfully applied to other industries in China and there are signs that the Government is attempting to apply (at least) some elements of these to the organic food industry. Nevertheless there remain many obstacles to the development of this industry in China, not least the problem of management skills and the plethora of very small-scale enterprises. The strategic advantages of economies of scale and economies of scope, central to entering international competition on a significant scale, continue to elude the Chinese organic food industry.

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