

# **The Inter-Organisational Learning Process of China's Township Enterprises**

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## **Abstract**

This paper examines the learning processes of China's township enterprises in domestic and foreign trade. Some unique characteristics of the learning processes are discussed, including network facilitating mechanism, populations highly specialised township enterprises, selected learning behaviours, low-cost information flow, and shorter learning time. Based on past research on transaction cost economics, this paper explains the causes of the characteristics of the learning processes and discusses their implications in foreign trade.

## Introduction

Chinese township enterprises have developed rapidly in recent years. From 1981-1992, they grew at 31.3% a year, and in recent years, the growth rate was often over 40% a year. According to statistics from 1990-1994, the annual revenue of these enterprises increased from 958.1 billion Yuan to 4358.8 billion Yuan, and the number of their employees increased from 92.6 million to 120 million, including the number of workers in such supporting areas as transportation and marketing, China's township enterprises now offer over 150 million non-agricultural jobs for the country. At the end of 1994, the industrial output of these township enterprises reached 3233.6 billion Yuan, accounting for 47% of the country's industrial output. In China's domestic markets today, these township enterprises have obtained the leading position in the production of almost all labour-intensive products. For example, 80% of the clothes produced for the domestic Chinese market today are made by township enterprises (cf., China Township Enterprises Daily<sup>1</sup>, Sept. 29, 30, 1995, p. 1).

Chinese township enterprises are also playing more important roles in China's foreign trade. These enterprises have set up over 800 foreign subsidiaries, and over 130,000 of these enterprises in China export their products today (cf., China Township Enterprises Daily, Jan.

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<sup>1</sup>This is a daily published by China's Ministry of Agriculture.

30, 1996, p.1). For the past seven years, the value of exports of township enterprises has been increasing at the rate of 60% annually. Currently, China's township enterprises account for one third of the country's exports, and this number continues to increase.

Characteristics of Township Enterprises

the Chinese government defines township enterprises are those run by Chinese peasants (cf., Yu & Huang 1991). They are responsible for their own survival and growth. This is both an advantage and a disadvantage for these enterprises. On the one hand, they are not controlled directly by the government, and therefore have more flexibility and freedom in decision-making than do state-owned enterprises. On the other hand, they cannot enjoy the protection and subsidies that state-owned enterprises enjoy. For example, while the state enterprises often have stable supply of utility, protected market and favourable financial support, the township enterprises do not. This is especially true today because the majority of township enterprises now are in fact run by individuals (see Table 1).

**Table 1.**  
**Number of Township Enterprises Run by Individuals**

Year	Total Number of TVE in China (,000).	# of TVE Run by Individuals (,000).	% of TVE Run by Individuals
1984	6065	3296	54.3
1985	12225	9254	75.7
1986	15153	12332	81.4
1987	17503	14731	84.2

(Adapted from Table 2 & 3 by Yu & Huang 1991)

One interesting phenomenon about these township enterprises is their learning behaviour, which has many unique characteristics. For example, they often learn as a population consisting of hundreds of small enterprises located in the same town or village and producing similar products. They learn to make products not for local markets, but for national or international markets. Here are some examples of such learning populations:

(1) In Hailin county, Zhejiang province, there are over 200 township enterprises producing leather coats. They control over one third of the Chinese market and export to over 50 countries throughout the world (International Business<sup>2</sup>, Sept. 16, 1995).

(2) In Yishan area, Changnan county, Zhejiang province, there are over 2000 township enterprises engaged in textile production, using small pieces of orlon fabric recycled from state-owned textile factories. These township enterprises adopt a unique technique to turn the orlon fabric into orlon fibre, and then use the fibre to make sweaters, blankets, carpets and other relevant products. In the past 15 years, their products have sold well throughout China, and have been exported to many of China's neighbouring countries. As early as 1984, their annual sweater output had already reached 150 million pieces (cf., Sun, 1989: 218).

(3) In Qiaotou town, Yongjia county, Zhejiang province, there are over 600 township enterprises engaged in button production. They account for 70% of button production and 85% of button sales in China. Many of their products are sold in international markets (Guo, 1995).

(4) In Liushi town, Leqin county, Zhejiang province, there are 1400 township enterprises producing low-voltage switch gears and breakers, and they are famous for their competitiveness. Their sales have been growing rapidly in both domestic and international markets. For example, when they first exported their products to South Asia in 1990, the amount was just ten million Yuan. In 1994, their exports reached 170 million Yuan, with 12 countries in South Asia and the Middle East buying from them (cf., Xinhua Daily Telegraph, Sept 26, 1995, p. 2).

(5) In Lijiagu area, Dingzhou county, Hebei province, there are over 1500 township enterprises making steel wire nets. Their products sell well in 28 provinces of China, and are also exported to 15 countries, including the United States and Canada (Chen, 1993).

(6) In Zaolinpou town, Hebei province, there are over 160 township enterprises making leatherette shoes, which are targeted at women in rural areas. Their output has now reached over 100 million pairs of shoes a year, accounting for about one pair of shoes for

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<sup>2</sup> This is a daily published by China's Ministry of Foreign Trade and Economic Cooperation.

every five Chinese women in the rural areas. They also export to such countries as Russia and Yugoslavia (cf., China Township Enterprises Daily, August, 21, 1995, p. 2).

Reviewing the emergence of these populations and the changes they have undergone, one sees a common pattern in the way these populations learn from new events. According to past research, the emergence and survival of unique local organisational populations can often be attributed to one of two conditions, namely, local market conditions or local resources. In the former case, a local organisational population survives by focusing on a unique local market, such as the Italian local banks studied by Lomi (1995). In the latter case, a local organisational population emerges because of its proximity to some important resources, such as the knowledge-intensive populations in Silicon Valley and along Route 128, which are located near major universities where knowledge, expertise and government funding are relatively easy to obtain (Preer, 1992).

However, neither of these two conditions seems relevant to the Chinese local organisational populations discussed above. First, all of these populations have little relationship with their local markets. They are producing for national markets or international markets. Therefore, the emergence of these populations is unrelated to local market conditions. Second, all of these populations rely little on local resources or government funding, and their equipment and materials are purchased from other parts of the country. Furthermore, their production workers have frequently been hired from other places in recent years, which partially explains the movement of millions of peasants in China every year.

The common environmental condition observed for all of the above township enterprise populations in China is that they have emerged in counties with little arable land per person, as for example, the first four township enterprise populations discussed above, which are all in Zhejiang province. According to the Statistical Yearbook of Zhejiang (1994), these four township enterprise populations are in counties where the average arable land available for each person is below the national average (See Table 2). With such limited arable land, it is very difficult for the peasants in these counties to produce sufficient food for themselves. Therefore, before the reforms in 1978, these counties relied heavily on state subsidies.

**Table 2**  
**ARABLE LAND AVAILABLE FOR EACH PERSON (ha/person)**

Counties	ha/person
Hailin County (leather coats makers)	0.0523
Changnan County (orlon cloth makers)	0.0266
Yongjia County (button makers)	0.0285
Leqin County (electrical appliance makers)	0.0246

Adapted from Statistical Yearbook of Zhejiang (1994), p. 168.

After the reforms, peasants obtained the freedom to get rich by engaging in commercial or industrial production, and they began to start their own businesses. Initially, peasants in these counties made all kinds of small products. For example, many of the current button makers were making plastic decorations before they switched to buttons, and many of the current orlon cloth makers were making home-made cotton clothes. These peasants often faced two difficulties in their production activities: the limitation of the market and the limitation of raw materials. For example, however hard the makers of plastic decorations tried to sell their products, the market could only grow very slowly. For the makers of home-made cotton clothes, their raw material, cotton, was controlled by the government. Hence, it was difficult for them to obtain more cotton and increase their production even when the market demand increased. It was the need to overcome these difficulties that made the peasants keep their eyes open for relevant new events. Once these new events took place, the whole local population learned.

#### The Button Makers and Orlon Cloth Makers

To help one understand this process, we will elaborate on the cases of the button makers and orlon cloth makers mentioned above. In the case of button makers, the learning process of making buttons began at the beginning of 1980. One day, two brothers with the

surname, Ye, suddenly found that buttons sold well in the market. After the reforms in 1978, the first major change among the Chinese was that everybody began to buy more clothes, especially new, fashionable ones, and this increased the demand for all kinds of buttons. However, the Ye brothers did not seem to realise this at that time. The only thing they knew was that they could sell 400 Yuan worth of buttons a day in the market. After learning of this new event, all of their neighbours began to enter the button business. At first, they sold buttons bought from state-owned factories throughout the country. Later, worried that the products from the state-owned factories could not meet the demands of the market, they set up their own factories to produce buttons themselves. The first button producer appeared in the county in 1981, and by 1985, there were already 430 township enterprises making buttons in the same county (cf., Sun, 1989).

In the case of orlon cloth makers, the learning process of making orlon cloth began in 1978 after a new event occurred. Frustrated by being unable to find sufficient cotton for her family-cloth production, an old lady, Sun A-Cha, discovered a new technique which could turn small pieces of orlon fabric recycled from state-owned factories into orlon fibre. This fibre could be used as a substitute for cotton. With this new discovery, the raw material for cloth production was no longer a problem. Subsequently, almost all of the family cotton cloth producers switched to orlon fibre products, and people in other industries also set up orlon product businesses. By 1988, there were 23302 household businesses making orlon products, representing 90% of the families in that area (He, 1989, pp 45-48).

### Similarities and Differences between TVE Populations and Route 128/ Silicon Valley Populations

Comparing the population level learning experience among China's township enterprises with that among the two knowledge-intensive local populations along Route 128 and in Silicon Valley in the United States, one can see some similarities and some differences. The most important similarity is the intra-population relationships facilitating population learning. In his study on the Route 128 technopolis, Preer (1992: 97) noted: "During the

formation of the technopolis, information flowed freely among firms, universities, and research institutes. Most of the relationships were informal." In their observation of Silicon Valley, Rogers and Larsen (1984: 79-80) stated: "One ought to think of Silicon Valley not as just a geographical place, nor simply as the main centre of the microelectronics industry, nor even as several thousand high-tech firms, but as a **network**." In these networks, there is a mechanism facilitating the exchange of information, which is essential for learning among these local populations.

Among China's township populations discussed above, there exist similar relationships facilitating the exchange of information. For the orlon cloth makers, after an old lady invented the new technique, she taught it to her fellow villagers free-of-charge. That is why, when she died in 1982, hundreds of people attended her funeral paying tribute to her, and township enterprises there stopped production for three days to express their condolences (Yu & Huang. 1991: 228).

The local township enterprises in China not only exchange techniques among themselves, but also share market information. For example, the orlon cloth makers send over 1000 agents to all major cities throughout China. Every agent represents dozens of firms in the population rather than an individual firm. Whenever there is an order, these firms often work together to help fulfil the order. In the case of button makers, they have set up over 3000 special counters in all major department stores in Chinese cities. Whenever there is a demand, the local button makers will meet the demand together, each contributing according to the colours or the styles that the customer requires (cf., Sun, 1989). To understand this behaviour better, it would be helpful to point out that, within each of these local populations, the organisations are highly specialised and, at the same time, highly interdependent. For orlon product makers, about 500 township enterprises specialise in making orlon fibre from recycled orlon fibre pieces, 5000 specialise in spinning the fibre, 2000 specialise in weaving orlon cloth, and another 2300 make the final products, such as clothes, sweaters and carpets. Finally, there are another 1000 specialising in shipping and marketing orlon products. In 1986, this orlon production population employed fifty thousand people, of which three thousand were from

other counties or provinces (Shenzhen Special Economic Zone Daily, Dec. 5th, 1986).

In the case of the button making population, the level of specialization is also very high. In 1994, for example, there were already 500 button makers, each of them specialised in only a certain kind of buttons. Even so, many of their important production procedures, such as colouring and electroplating, are still handled by other independent specialists. In 1995, for instance, there were over 100 specialists doing colouring within that population (cf., Guo, 1995: 210). With such specialization and coordination, these township enterprise populations have achieved very high efficiency compared with state-owned enterprises. Take the orlon makers as an example: their orlon clothes can be sold at 1.29 Yuan a piece and still make a profit, while orlon clothes made by state-owned enterprises are selling at 20 Yuan a piece. Therefore, the products from these township enterprises are very competitive in both domestic and international markets.

In spite of the similarities discussed above, there are also some important differences in the way of learning from new events between China's township enterprise populations and those along Route 282 and in Silicon Valley. First, the content of learning is different. The populations in the United States pay more attention to events related to new products and new technology. They devote significant portions of their resources to research (Preer, 1992). Accordingly, the learning activities within these populations are mainly research-related activities, such as the learning process of overcoming difficulties in venture capital. On the other hand, the populations of China's township enterprises seek scale economies and low costs. Whatever learning behaviour that takes place within these populations is mainly cost-related. In other words, although these populations also use modern machinery (e.g., many of the orlon makers use imported new machines), their main focus is still on cost reduction through improving organisational management and cooperation within populations.

Another difference is that, compared with those in the United States, Chinese township enterprises as populations take a much shorter time to learn from a new event. For example, in only four years from 1981 to 1985, the number of button factories increased from one to over four hundred. At the end of 1985, only one button maker rented a counter in a major

department store in the Chinese capital, Beijing, to sell buttons. By 1987, the button makers had set up over 3000 counters in almost all major department stores throughout the country (cf., Zhang, 1987).

Sometimes these local populations learn so fast that they cannot even consider the outcome of their learning. For instance, there were several dozens of township enterprises making plastic shoes in south China's Bopu town (Wuchuan county, Guangdong province). For years, their products sold well because of their low cost and high quality. At the end of the 1980s, one firm began to adopt a policy of making low cost and low quality products, and all other firms in the same population followed suit. After adopting this wrong policy, tens of millions of pairs of their shoes could not be sold, and 50% of these shoe makers went bankrupt later (cf., Yuen, 1992: 190). Similar cases are difficult to find among the local populations in the United States because there populations take a longer time to learn from a new event, such as the introduction of a new product or a new standard. This difference can be attributed largely to the differences between market and "fief" structures. This issue will be discussed further in the next section.

Finally, although there are mechanisms facilitating the intra-population flow of information, these mechanisms seem to be quite different between different transaction-governance structures. Among the high-tech populations in the United States, the flow of information is realised by firm acquisition and by movement of personnel from firm to firm (Preer, 1992). For example, Bruno and Cooper (1982) showed that, among 250 firms set up in Silicon Valley during the 1960s, 32.4 per cent had been acquired by 1980. One of the main reasons for these acquisitions seems to be the acquisition of information and new technology. Also, turnover among engineers and managers in Silicon Valley was as high as 30 per cent a year in the 1980s (Rogers & Larsen, 1984). These engineers and managers possessed lots of important technological and business information, and their movements created a rich environment of information exchange (Preer, 1992).

Information flow among each of China's township enterprise populations is realised in a different way. Here, firm acquisition and personnel movement are negligible, although there

have been few cases of a large external investor wanting to purchase a township enterprise. Futhermoe, these township enterprises are seldom purchased. Instead, they attain scale economies through individual or family ownership (cf., Guo, 1995). The flow of information in these township enterprises is mainly through face-to-face communication among the local people.

#### Effects of the Fief Structure on Population Level Learning: A Model

The theory above fief structure was proposed by Boisot and Child (1988). On the basis of earlier research on the relationship between culture, information sharing and transaction-governance structure (e.g., Kroeber & Kluckhohn, 1952; Ouchi, 1981), the authors criticised the traditional markets-and-hierarchies frameworks for ignoring the role of culture and level of development. They argued that the frameworks provided too limited a set of options to account adequately for organisational problems in developing economies. After defining a cultural space that was described by the dimensions of information codification and information diffusion, the authors proposed a new model of transaction-governance structure. According to this model, markets, such as those in the western economies, are efficient and will prevail because of their high level of information codification and diffusion. On the other hand, fiefs, such as those in many developing countries, are also efficient and will prevail because their low level of information codification and diffusion. Boisot and Child (1988) identified the following important differences between markets and fiefs:

- (1) In markets, information is uncontrolled and widely diffused. In fiefs, on the other hand, information diffusion is limited by the lack of codification and face-to-face relationships.
- (2) Relationships in markets are impersonal and competitive, while relationships in fiefs are personal and hierarchical.
- (3) Markets are characterised by horizontal coordination through self-regulation, while fiefs are characterised by hierarchical coordination.
- (4) Finally, there is a necessity for people in fiefs to share values and beliefs, and submit to superordinate goals. This necessity does not exist in markets. With this model, Boisot and

Child (1988) further argued that China's transaction-governance structure has all the characteristics of fiefs.

Based on this theory, we argue that the fief structure affects the learning processes of China's township enterprises. First, among local populations, we see that markets and fiefs have different effects on the span of population level learning (See Table 3). Under the market structure, organisations take longer time to learn from a new event. For example, the population Silicon Valley took over ten years to adopt a new standard or to make a major change in production. For instance, before the 1970s, custom chip-making business was a boom. During the 1970s, the chip makers faced strong competition from the Japanese, which forced them to abandon custom chip-making and shift to high-volume production so as to reduce cost. It took about ten years for the major chip makers as a population to complete this change (cf., Saxenian, 1990). The 1980s saw the emergence of a new generation of chip makers producing custom, high-performance chips, mainly for niche markets (Preer, 1992), and a shift to flexible and agile organisational forms accommodating novelty, innovation and change (Bahrami, 1992). These changes lasted throughout the 1980s and are still going on today.

**TABLE 3****The Effects of Markets and Fiefs on Local Population Learning**

	<b>Compete for Local Market Only</b>	<b>Compete for National or International Markets</b>
<b>Markets</b>	<ul style="list-style-type: none"> <li>• Learning mainly through competition</li> <li>• Information flow through acquisitions and personnel movements</li> <li>• Longer learning time</li> </ul>	<ul style="list-style-type: none"> <li>• Learning mainly through collaborating and copying</li> <li>• Information flow through acquisitions and personnel movements</li> <li>• Longer learning time</li> </ul>
<b>Fiefs</b>	<ul style="list-style-type: none"> <li>• Learning mainly through competition</li> <li>• Information flow through face to face communication and cooperative data exchange</li> <li>• Shorter learning time</li> </ul>	<ul style="list-style-type: none"> <li>• Learning mainly through collaborating and copying</li> <li>• Information flow through face to face communication and cooperative data exchange</li> <li>• Shorter learning time</li> </ul>

Compared with local populations in the United States, the township enterprise populations in China spend much shorter time making major changes. As mentioned above, it often took only two to three years for them to complete a major change. In the case of the plastic shoe makers mentioned above, the population adopted a low cost/low quality strategy in such a short time that it did not even have time to see the consequence of this policy. This can be explained by the unique characteristics of fiefs. First, there is a necessity to share goals, values and beliefs in fiefs, and this creates social pressures, forcing organisations in a local population to learn faster. Second, information is uncontrolled and widely diffused in markets, which may allow organisations to know more about current developments inside and outside their local population. With more information and alternatives, organisations in markets may need more time to process the information, to compare different alternatives and to decide on what to learn. Accordingly, the selection and retention processes discussed by Miner and Haunschild should take longer time. In fiefs, on the other hand, information diffusion is limited by the lack of codification and face-to-face relationships. Therefore, organisations learn faster

simply because they have little information and hence have few alternatives to select from and retain. Finally, and most importantly, markets are characterised by horizontal coordination through self-regulation, while fiefs are characterised by hierarchical coordination (cf., Boisot & Child, 1988). In the development of China's township enterprises, one can see the critical effects of local government policies. Township enterprise populations survive and thrive only in those areas where the policies of local governments are favourable. Therefore, the behaviours of township enterprise populations are heavily influenced by the decisions of local governments. If the local government wants a township enterprise population to make a certain change or adopt a certain policy, this population often has no choice but to obey. In this situation, the township enterprise population has to learn faster. Of course, the organisations along Route 128 and in Silicon Valley are also influenced by the policies of their local governments (cf., Preer, 1992). However, compared with that in China, the local government influence in the United States is more indirect and weaker.

The difference in the way that information flows within a local population can also be explained by the difference between markets and fiefs. In markets, relationships are impersonal and competitive; people feel little obligation to work in one organisation all their lives or no compunction to compete with their former employers or friends. Therefore, leaving a company to join another or set up one's own company is always acceptable and even encouraged under a market structure. In fiefs, on the other hand, relationships are personal and hierarchical. Such relationships imply that people often feel obligated to pass information to their friends and relatives, even if they are not in the same organisation. In a small town where people know one another, this effect can be even stronger. Therefore, face-to-face communication is understandably the most common way for information to flow.

Table 3 also suggests that there is a difference in population level learning between local populations competing for local markets and those competing for national or international markets. Empirical observation of China's township enterprises suggests that, when a local population competes for its local market only, it learns mainly through competition. The most common examples reported in Chinese newspapers in recent years are

those of township enterprises defeating state-owned enterprises when competing for the local market, and then taking over or controlling the state-owned enterprises (cf., China News Analysis, No.1501, 1994). After that, the state-owned enterprises learn from the township enterprises and improve their own performance. One recent case is the local beer makers in Linhai county, Zhejiang Province. In 1992, the state-owned brewer, Tianming, lost 18 million Yuan. Hundreds of its employees had to be laid-off because there were no orders. A township brewer, Daliang, had been doing well in the same area. To increase its production, this township enterprise decided to take over Tianming in 1992. After some negotiation, Daliang took over Tianming and changed Tianming's management routines according to Daliang's. Three years later, Tianming turned around and made a profit of ten million Yuan in 1995 (cf., China Township Enterprises Daily, Oct. 31, 1995, p. 2).

Local populations targeting at national or international markets, on the other hand, learn from new events mainly through collaborating and copying. There is more collaboration than competition among them, and this collaboration seems to create social pressures on organisations, forcing them to copy some routines from one another so that they can operate as a population. Similar situations can be seen in international markets today. When Japanese car makers compete for international markets, for example, they also learn as a local Japanese car maker population by collaborating and copying among themselves.

### Implications

The learning behaviour of China's township enterprises has some interesting implications for their potential suppliers, customers or business partners in other countries. Since these township enterprises often learn and act as a population rather than a single small firm, their influence on international markets are often much greater than what most people think. Whether as a supplier or customer, these enterprises can have a much greater impact on the market when they act together. For an international supplier, knowing the learning processes of China's township enterprises can aid image building for its products or service. If this foreign supplier can prove the competitiveness of its product or service to a member of a

China's township enterprise population, the whole population will soon learn this, and this supplier can then get many orders from other firms in the same population.

It is also important for an international firm interested in purchasing from these township enterprises, to understand their learning processes. The production capacity of these township enterprises can increase rapidly without huge investment.

Finally, it is also important for an international firm interested in setting up partnership with a member of these enterprise populations, to understand the learning behaviour of these populations. Because these township enterprises often learn as a population, it is often difficult to prevent information from circulating among them. If an international firm needs to protect its intellectual property rights, such as new designs of products or new technologies, it should do so at the beginning of the cooperation. Chinese governments at different levels have repeatedly expressed their commitments in intellectual property protection. It would be a good approach to obtain their help. Since the learning processes under a chief structure are greatly influenced by the behaviours of the governments, the actions taken by local governments in protecting knowledge property can be very effective.

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