CLUSTER STRATEGY：AN EFFECTIVE WAY OF DEVELOPING SMES

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Abstract：The global economy today is getting dominated by business clusters. SME clusters reveal that the immediate environments outside the enterprises play important roles. Cluster policy and strategy have been recommended and popularized by international organizations such as UNIDO and OECD.

In China, clusters are divided into two categories according to their initial power. One category is the spontaneous and endogenous industrial cluster that is represented by clusters of a range of small and medium-sized private enterprises such as in Zhejiang. The other type represents those that are attracted by the foreign direct investment (FDI) such as those in Guangdong and Jiangsu.

This research is an attempt to analyze the role of FDI in the development of SME clusters. It also tries to explain how existing clusters attract new FDI. The factors that constrain the promotion and development of SME clusters are also examined. A use of comparison analyses methods indicates that a specific type of SME cluster has its own advantages and shortcomings. Government plays important roles during the different phases of SME cluster development and it will need to adjust it's policy measures accordingly, especially when promoting a cluster's transition from 'man foster' to 'nature up growth', and when promoting a cluster's transition from enterprise cluster to an industry cluster.

Key words: clusters; small and medium-sized enterprises (SMEs); foreign direct investment (FDI)

1 Introduction

1.1 An empirical study on industry cluster

The global economy today is getting dominated by business clusters i.e. critical masses in one area of unusual and competitive success in particular fields. The enduring competitive advantages in a global economy depend increasingly on local factors that the more distant rivals cannot match. These factors include knowledge, relationships, incentives and dreams. Competition in the market has evolved from simple enterprise development strategies to the development of clusters. The United Nations Conference on Trade and Development 2001 pointed out that cluster advantage had already exceeded low cost advantage and became a dominant power in attracting FDI. A business cluster policy and strategy have been recommended and popularized by international organizations such as The United Nations Industrial Development Organization (UNIDO) and The Organization for Economic Cooperation and Development (OECD).

More and more research results revealed that many developed countries have driven economy flying-off through the development of industrial clusters. Here are some examples: Silicon Valley, 128 highways of microelectronics industrial cluster in USA; the surgical appliance industrial clusters in Germany; the environmental protection and processing enterprise clusters in Finland, etc. Advantages of Industrial clusters of SMEs in Japan are outstanding even more. Usually small and medium-sized enterprises take the big enterprise as the core of clusters. Italy is known as a kingdom of small and medium-sized enterprises. More than 70% of the manufacturing industry, more than 30% of the

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employment, more than 40% of the exports were realized through specialization. Italy initiated a new mode of industrial district theory of clusters with both cooperation and competition of small enterprises. In Italy, There are 199 professional clusters; exports were more than 20 billion U.S. dollars every year offered mainly by 66 cluster districts. The industrial distribution in western countries has offered the powerful evidence for the value of clusters' theory of SMEs（Liu Youjin, 2004）. In order to imitate clusters with high competitiveness in the world, many countries have turned the public policy to local cluster strategy, cultivated local enterprise clusters, and impelled development and upgrading of clusters.

1.2 Cluster theory

Overseas scholars have done thorough research on:

1.2.1 The classification, definition and features of industry clusters:Spatial concentration(Alfred Weber,1929;Baptista,1996;Swann,1998;Porter,1998), flexible specialization (Piore and Sable,1984),cooperation network(Keeble,1999) and social culture(Mashall,1964;Bacattini,1978；Saxenian,1994；Poter,1998；Wang jici,2001).

1.2.2 Innovation advantage:Mainly in the knowledge spillover effect caused by clusters(Mac Dougall,1960； Audretsch,Freldman,1996； Rui Baptsta&Peter Swann,1998), the availability of innovation resources(A.Saxenian,1994), chasing effect, pulling effect(Michael E.Poter,1990) and embeddedness(Granovetter,1985;Uzzi,1996;Johannisson,2001), etc.

1.2.3 The mechanism of the creation of innovation advantage:saving transaction cost(A.J.Scott,1986;Storper,Harrison,1991), sharing value linkage(Michael E.Poter,1985), complementing resources(M.A.Hitt,1995),exterior knowledge and exterior scale economy(Marshall,1920;Krugman,1991).

1.2.4 The evolvement of cluster:The clustering and outlying behavior of enterprises, interior and exterior conditions and cluster policies(Liu Youjin,2004).

Clusters represent a kind of new spatial organizational form in between arm's-length markets on the one hand and hierarchies, or vertical integration, on the other. A cluster, then, is an alternative way of organizing the value chain. Compared with market transactions among dispersed and random buyers and sellers, the proximity of companies and institutions in one location and the repeated exchanges among them fosters better coordination and trust. Thus clusters mitigate the problems inherent in arm's-length relationships without imposing the inflexibilities of vertical integration or the management challenges of creating and maintaining formal linkages such as networks, alliances, and partnerships. A cluster of independent and informally linked companies and institutions represents a robust organizational form that offers advantages in efficiency, effectiveness, and flexibility（Michael E. Porter， 1998）.

1.3 Cluster strategy and the development of SMEs

Cluster strategy is often fixed on small and medium-sized enterprises. Because numerous small enterprises can get the competition advantage similar to the big enterprise through the optimization of industrial organization and cooperative effect of the clusters, including external large-scale production effect, reduced space transaction costs, knowledge and technological innovation overflow and regional brand effect, etc. It offers an effective regional organizational form and policy guidance for the development of SMEs.

1.4 Cluster and international industries shift

Since the 21st century, a new round of international industry shifts have been taking place. During the course of it, the trend for the enterprises and industry to gather geographically has occurred

obviously. A lot of industries are shifting to the areas with well-developed infrastructure, lower costs such as inexpensive land, labor and energy, a favorable tax system and geographical advantages as an export base, social stability, faster response, better complete set district and so on. And the international industry shifts from the original individual project, individual enterprise, the individual industry into industry chain now, not only transformation of manufacturing center, but also the transformation of R &D, purchasing, selling and after-sale service. Industrial clusters have become an important attracting factor for FDI and promote clusters themselves end for end.

1.5 Types of clusters in China

In China, since the 1990s, the enterprise clusters have promoted the fast development of the economy of our country. Coastal areas such as the Yangtze Delta and Pearl Delta, etc. have been developed into the international production base of manufacturing industry and the export base gradually.

The economy of Guangdong and Jiangsu & Zhejiang are two major bright spots of China's regional economy. Custers are divided into two categories according to their initial power. One category is the spontaneous and endogenous industrial cluster that is represented by clusters of a range of small and medium-sized private enterprises such as in Zhejiang. The other type represents those that are attracted by the foreign direct investment (FDI) such as those in Guangdong and Jiangsu. Here are some examples: The new hi- tech clusters in Shenzhen；the PC and fittings clusters in Dongguan；the home appliances clusters in Shunde；The IT product clusters in Suzhou, Kunshan and Wujiang. There are four major reasons why foreign manufacturers are gravitating to China today: abundant low-cost labor, huge market potential, expectations of improved business laws and practices due to China's accession to the WTO, and the development of industrial clusters.

2 Comparison of two kinds of different clusters in China

2．1　Characteristics of clusters in Zhejiang

Clusters in Zhejiang are known as "the block-shaped economy" traditionally. The most typical feature is "every village has its own characteristic product, and every town has its own characteristic industry". Most products are produced in traditional industries, such as agricultural and sub- products, textiles and other light industrial products.

2．1．1 The reasons for which clusters have formed in Zhejiang include the development of traditional folk handicraft industry, the prosperity of commercial history, the classical way of thinking, the Eastern human environment and the blood relationship. Humanities network with blood relationship and geography as the link contributed to the formation of the small and medium-sized enterprise clusters in Zhejiang. At the same time, the reform and opening policy, the market cultivating system condition as well as the survival choices under competition condition enable the small and medium-sized enterprise clusters to come into existence with the characteristic of network.

2．1．2　From the structural point of view, Zhejiang's small and medium-sized enterprise clusters take the specialized market as the backing, the specialized division of labor as the foundation, and the specialized product as the main industry. Small and medium-sized enterprise sub-community of both production type and business trade service type are developed in parallel and harmoniously.

2．1．3　From the viewpoint of the developing process of specialized labor division, Zhejiang's specialized division of labor of small and medium-sized enterprise clusters experienced three development stages, namely production specialization stage, production craft specialization stage as well as production service specialization stage.

2．1．4　From the viewpoint of the changes of economic scale, the enterprise clusters had adopted

two different kinds of expansion pattern. In the initial stage forms of clusters, the development pattern of “the home position expansion” is mainly adopted. When clusters enter their mature stage, its development ways changed from “the home position expansion ” to “different areas incubating”, that is to incubate new homogeneous enterprise clusters in a different far-distance place, in order to break through the development limit, and explore new development space.

2．1．5 Advantages and shortcomings: Zhejiang “the spontaneous and endogenous” industrial clusters’ development speed was relatively slower, and the forming process was relatively longer**.** However, enterprises in the clusters had strong industrial relationship, and clusters had strong gathering function effect, which made clusters quite stable. Enterprises in clusters were well rooted in the areas.

2．2 Characteristics of clusters in Guangdong and Jiangsu

Different from Zhejiang’s “ spontaneous and endogenous ” clusters, the most prominent characteristic of small and medium-sized enterprise clusters in Guangdong and Jiangsu is “imbedding type” clusters. The Guangdong specialized towns were founded mainly through the government’s policy and guidance. They depended upon the geography superiority, the policy superiority, and the low cost superiority of Guangdong to attract direct investment from external enterprises. They established the export-oriented processing manufacture industry bases, and gradually formed the industry gathering scale. For example, in Guangdong, there are 7000 foreign-investment enterprises that have absorbed 15million people to work and 98% of the enterprises are SMEs employing less than 500 employees.

Being adjacent to Hongkong, and located between Guangzhou and Shenzhen, Dongguan in Guangdong city has a very good location advantage. It used to be famous for its processing industry featured with high labor intensity, such as clothes, shoes and toys. Nowadays, Dongguan has been developed into one of the most important production bases of computer and communication products. In the 1990s, with the international transfer of IT industry, Dongguan absorbed Taiwan capital, and has been taken into the global production net system of Taiwan’s IT industry. In Dongguan, there are more than 2800 electronics and information enterprises whose computer magnetic head, computer cases and semi-finished products take up 30% of the global market share, advanced capacitance 25%, and 10 products such as scanners and keyboards 10%（Zhang Bingshen,2003）.

Suzhou in Jiangsu province is located in the middle of the Yangtze Delta, and adjacent to Shanghai. During the late 1990s, Suzhou has been successfully transformed from the traditional manufacturing industry to the production base of electronics and IT industry. The local government made full use of its advantageous location and human resources, and has built industrial estate such as Suzhou industrial estate and Singapore industrial estate, etc. The local government also provided favorable investment policies, plus considerate, efficient and transparent service environment to attract investment in electronics and IT industry. Since Suzhou’s comprehensive investment environment is superior to Dongguan, and Suzhou is adjacent to Shanghai, in the second round of Taiwan IT capital transfer in the late 1990s, Suzhou has replaced Dongguan and become the major beneficiary of Taiwan capital. This round of transfer is different from the way Dongguan attracted foreign investment in that its total industry level is higher than the previous investment in Dongguan. Taiwan capital being taken as the main source of investment, Suzhou also attracts investment from multinational companies from many places. At present, the investment in Suzhou’s electronics and IT industry has surpassed 10 billion USD, and is increasing rapidly by 40% each year. Among Suzhou’s hi-tech enterprises, foreign funded enterprises take up 45%, while among electronics and communication manufacturing industry , foreign funded enterprises take up 85%（Xiao Ying，2004）.

The IT industry clusters of both Dongguan and Suzhou are mainly pushed by Taiwan and other foreign capital. The traditional superior location of the two places played an important role to attract foreign investment at the initial stage. With the entering of large enterprises, supporting SMEs and competing corporations also developed and formed industrial relations in the region, the upper and lower reaches of the supply chain become more and more complete. In the forming and development of these clusters, the advantages produced by the scale clusters, in turn, become important factors to further attract foreign investment.

2．2．1 Government's functions: In 1999, Guangdong province started the specialized town development plan, and authorized 46 specialized towns to be experimental areas, The experimental goal was mainly to explore the following important problems: how should the government and the universities frame the specialized town development plan together, how to impel the industrial promotion and establish characteristic service net for specialized towns, how to let the small and medium-sized enterprise to obtain the information about technical development and the means, how to obtain the social network, and how to reduce the dependence purely on the low cost superior. In Guangdong's specialized town development plan, governments' functions were to build the clusters platform for SMEs. Governments' energy concentrated on the development of industrial foundation and optimized investment environment.

2．2．2 Advantages and shortcomings: Guangdong and Jiangsu's "imbedding type" clusters had relatively quicker starting speed, and the formation process was relative shorter; However, enterprises' industrial relationships were weaker in the clusters, the industrial correlations were loose and FDI did not take the local enterprises into its industrial chain. Clusters are unstable and enterprises lack embeddedness. The local enterprises' extrovert supporting capability is not sufficient, either. According to the information provided by the economic and technical development research committee of Suzhou, in the 14 nation-level and province-level development zones, there were more than 2100 foreign-funded enterprises, among which only 175 foreign-funded enterprises from 5 development zones have established supporting production relations with 134 local enterprises in Suzhou, the other 9 development zones have done nearly nothing in the supporting projects(Xiao Ying,2004).Because China's industrial estate are mostly "policy districts", which means that some favorable policies (favorable policies on taxes, credit, land, and offices, etc.) are given to a particular district (instead of to a particular industry) in order to develop enterprises. The scattered "policy districts" which are different from "industry preferential" "policy districts", are not good for the linkage and integration of industries, and make it difficult to form effective cluster units.

It is believed that industrial estate should undertake strategic transformation from "policy district" to "function district", and from cultivating competitive enterprises to cultivating competitive industry clusters.

3．The countermeasures of promoting industry clusters and development of SMEs

A use of comparison analyses methods indicates that a specific type of SME cluster has its own advantages and shortcomings. Government plays important roles during the different phases of SME cluster development .Government can either be the enlightened government, like Zhejiang, who does not directly intervene the enterprises' behaviors, but open green lights to them; or like Guangdong, the local authority acts as "the first propelling force" to the specialized town /clusters with the help of platform construction.

The "spontaneous and endogenous" clusters are rooted in the areas strongly, while the "imbedding type" clusters usually are lack of embeddedness at the early stage when the specialized town clusters

enter the benign development orbit, government's function should be weaken slowly, thus enable "imbedding type" cluster's internal structure and the industrial network to carry out the natural optimization and reconstruction through the market mechanism, so as to transit from "man foster" to "nature up growth", and promote a cluster's transition from enterprise cluster to an industry cluster. It is not enough only to depend on FDI and governments' investment to Promote development of the clusters and the SMEs in the long run. There are many other important aspects. For example, to boost privately owned enterprises, give them equal treatment as FDI, accelerate value-added tax reform, promote work sharing, support domestic small and medium-sized companies in areas such as loans, guidance on technology and management know-how, employee training and form the related network with big enterprises as the core. Bringing the related small enterprises into the whole development framework through encouraging the big enterprises to work with small enterprises group in close or loose form, and offering technology, information, fund and network on the market. Forming long term and steady business strategy alliance is also useful (e.g., Japanese automobile industry takes contract with external SMEs and makes an enterprise strategy union net.)

Governments can usually take the following measures to help and guide the formation of industry cluster system.

3.1 To formulate government policies that can guide and encourage industry clusters

Clusters policy is mainly composed of industrial policy (including small and medium-sized enterprises policy) and science and technology (S&T) policy. Its goal is to stimulate and strengthen the connection among different parts of the network, such as companies (including the specialized supplier), the organizations of knowledge production (the university, research institutions, etc.) and linking organizations (the brokers, consultants). SMEs should also increase the added value of action. The differences between traditional industrial policy and clusters policy lie in goal group turn into extensive "value chain" from horizontal department at present. The support mechanism will change from direct financial support to the indirect promotion. There are three models about this, namely regional development model, SMEs net model and industry- research linkage model(Zhu yingming,2003).

3.1.1 Reinforce planning. Developing industry clusters needs developing leading characteristic industries. The governments should concentrate on the development of industry clusters that have innovation resource advantage or regional advantage, make good use of the specialized fields including technology, human and system environment as well as the basic conditions to form regional brand and regional competition.

3.1.2 Under the overall plan of constructing industry cluster, attract particularly projects which possess industry leading advantage, industry linkage effect and coordinating effect. Try to decrease the crowdedness effect caused by the blind entrance of low level enterprises and the over competition between theses enterprises and the existing firms in the course of formation of industry clusters. During the process of choosing the suitable industry for FDI, governments should take area resource, culture, market, geography, etc into account, fully utilize local peculiar specialty such as technology, human resources, institutional environment and other basic conditions and form regional brand and regional competitiveness.

3.1.3 With the help of favorable policies, guide the investment on public goods or quasi public goods which are important for the development of industry clusters, especially the construction of infrastructure which is integral to industry development. Reinforce the soft environment through communication within the area, information service and information network.

3.1.4 Formulate systematic policies to promote the cooperation of production，learning and research. Encourage the scientific and technical staff of universities as well as scientific and technical institutes to take part in the technology innovation activities.

3．2 To create an inter-dependent industry system

Create an inter-dependent industry system, extend the regional industry chain, and establish an industry network system of division of labor. Selecting and supporting the leading enterprise is the key to cultivate industry clusters. According to the rule of forming industry clusters, an industry cluster is formed on the basis of development and fission of a leading enterprise by means of innovation and imitation. The leading enterprise plays a significant role that can cause clustering effect in the course of formation of an industry cluster. Therefore, after the industry has been determined, it is critical to select the leading enterprise from the related industry. It is the key to cultivate comparative advantage to fully make use of the role of a leading enterprise in an industry cluster.

3．3 To improve the attractiveness, economic performance and development of a region

The sophistication with which companies compete in a particular location, however, is strongly influenced by the quality of the local business environment. Some aspects of the business environment, such as the legal system, for example, or corporate tax rates, affect all industries. In advanced economies, however, the more decisive aspects of the business environment are often clusters specific; these constitute some of the most important microeconomic foundations for competition. Clusters affect competition in three broad ways: first, by increasing the productivity of companies based in the area; second, by driving the direction and pace of innovation, which underpins future productivity growth; and third, by stimulating the formation of new businesses, which expands and strengthens the clusters itself. A cluster allows each member to benefit as if it had greater scale or as if it had joined with others formally-without requiring it to sacrifice its flexibility. So every cluster in our country should pay attention to the soft environment construction, build a fair, transparent, steady system environment, and encourage the establishment of a large number of intermediaries, in order to form the streamlined supply roller chain of the design, production, supply, sale and after-sale service. Attract first-time investments by developing a competitive climate based on essential infrastructure, taxation, and rules and practices that ensure equal treatment for foreign capital. Attract FDI by setting up a one-stop office that can provide essential services to existing foreign firms and newcomers. A good reputation among existing foreign firms is the best publicity for attracting additional FDI. Industrial clusters in turn become an important pulling factor for FDI.

3．4 To intensify industry-research collaboration, and gradually realize the modernization and up-grade of clusters

Dongguan and Suzhou are export-oriented industry clusters, the investment of MNC is to utilize China’s labor force status in the tides of the world IT industry to a great extent, to shift the roller chain of the industry and to hit the midstream and downstream parts whose added value is not high. So it is very important to foster the innovation ability of the small and medium-sized enterprises in clusters, deepen processing trade dynamics progressively, make enterprise clusters into modern industrial clusters, and realize their conversion and upgrading.

3．5 To perfect the service system

The industry clusters do not develop separately. There must be a perfect service system, which mainly includes:

3.5.1Various kinds of consultancy and intermediary service agencies, such as market investigation agencies, technology consultant agencies, scientific results exchange center, intellectual property right

service center, product display center, law firms and accounting agencies.

3.5.2 Innovation center. To serve as the business incubator for the high-tech enterprises which are at seed stage or start-up stage.

3.5.3 Education and training system to ensure human resources supply.

3．6 To cultivate regional innovation culture

The innovation culture has helped the Silicon Valley achieve greater success. It is also crucial in developing countries.The most important thing in innovation spirit is to encourage and tolerate failure, and then to encourage to accept new things and realize self value, and thirdly to stimulate every person's innovation and pioneering spirit from high-rank management to ordinary staff members.

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