On the Clusters Marketing Model of High-tech Industry Clusters

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Abstract: The phenomenon and model of industrial clusters marketing is a cross-linking subject on the industry cluster theory and regional marketing. It can answer if the high-tech industry clusters marketing belong to a traditional industrial clusters phenomenon? This paper focuses on discussion about whether there is a cluster marketing model. First the concept of clusters marketing model was defined, then its related areas were determined, and finally a theoretical model of high-tech clusters marketing model was established. With this theoretical model, the author analyze the possibility that the clusters marketing model of traditional industries applies to high-tech clusters. Therefore, the main point is that the operating mechanism is the core of the clusters marketing model and three types of traditional clusters marketing mechanisms (function - interest, regulation and contract mechanism) can be completely used for the high-tech industry cluster. As a result, six modes of clusters marketing of high-tech industry were proposed.

Keywords: high-tech, industry clusters marketing, operating mechanism, marketing model

1 Introduction

Porter (Michael E. Porter) said that the industry clusters is "in a particular area under a particular area, there is a group of interconnected companies, suppliers, related industries and specialized institutions and associations."[1] In other words, industry clusters include not only the competition is very important to a series of related industries and other entities, but also often extend downstream to the customer, to the rivers to the use of relevant skills, technology or public inputs complementary products or company. Between these interrelated various aspects of cooperation and competition, make the industrial clusters competitive advantage.

Cluster marketing is defined as the industrial cluster in order to achieve its overall business objectives to meet the cluster external environment, the industrial cluster as a whole into the market to the overall image of the industrial cluster participate in market competition process. Industrial clusters through synergies in research markets, develop new markets, access to markets, market share, product development, building channels, dissemination of information, pricing, promotion, and so on cooperative interaction, the cluster marketing advantage has been made.[2]

Today China has a total of 53 state-level high-tech development zone, most of which has formed 1-2 more mature high-tech industry cluster, these industrial clusters in the future relies on the development of high-tech zones. These high-tech industrial clusters and Fujian tea clusters, Wenzhou shoes clusters, Shengzhou neckties clusters are different types of industrial clusters, which is often referred to as the traditional industrial clusters. Clusters marketing is one kind of marketing model which is considered suitable for traditional industrial clusters, such as Shengzhou neckties,to build the competitiveness of clusters, in recent years, was convicted by a number of scholars (Jianrong Zhu 2003,2005, Min Mu 2007) studied.[3] Guang guan Zheng, Xuemei Chen is also under the form of the difference between the cluster marketing organization, traditional industrial clusters marketing is divided into three kinds of the specific model, namely, "collective mark" pattern, "see the customer" mode and "Share Marketing channel "mode. These three models have been researched by scholars through detailed case study, concluded that "clusters marketing has a strong competitive advantage to small and medium enterprises to develop new markets and was an effective way of self-development. ".[4] But in terms of high-tech industrial clusters, whether the introduction of the traditional marketing model of industrial clusters is suitable? Which cluster marketing model is likely to be adopted in high-tech clusters? Is there a theoretical model as a basis to build these marketing models? Consideration of these questions and
answers will rich industrial cluster theory and provide marketing ideas and methods, will improve China's high-tech industry cluster's international competitiveness.

2 Research areas of the marketing mode

To date, to define the concept of marketing models, marketing theorists do not have a more generally accepted view. This paper intended to deal with the rigor and the convenience of discussion, the definition of the marketing model is in order to achieve an organization’s marketing goals, make a marketing operation mechanism under the guidance of the current marketing idea. The operation mechanism is stable and can be copied. The concept of marketing mode is a high degree of abstraction and generality. It is descriptions and definitions of the composition of the marketing system, the various components of the function, operation and controlling rules. It is knowledge about the marketing system features and operational discipline.

3 To build a theoretical model of high-tech industry cluster marketing mode

Figure 1 is a theoretical model of high-tech industry cluster marketing model, it helps to understand the construction of the cluster marketing model.

3.1 Design of the organizational structure of the cluster marketing

Cluster marketing is the spontaneous cooperation of enterprises within the cluster market behavior, to transform co-marketing awareness into concrete action of the cluster, the primary problem is to think about the micro-organizational structure of the cluster marketing. This problem is not solved, it is void and the lack of foundation of cluster marketing. The main participation of the industry clusters marketing include trade associations, chambers of commerce, academic groups, marketing intermediaries and the firms in clusters, The organizational structure of the cluster marketing has four form as bellow(see figure2) :

Figure 1: A theoretical model of high-tech industry cluster marketing model
Hierarchical structure

Hierarchy is based on the capabilities of the level of cluster marketing to build a marketing organization, as described in the text the cluster brand clusters model and leading enterprise traction model. In terms of brand clusters model, the top is regional brand, the middle layer is the corporate brand, the lower is the product brand. With regard to leading enterprise traction mode, the top is a leading enterprise and its marketing networks which to carry out market research, technology development in order to meet the core needs of industry clusters, the middle layer is to provide complete and packaging, logistics and other service enterprises, the lower is suppliers which supporting these enterprise.

Star-shaped structure

Star-shaped structure is characterized by only one center, and is a single layer. Star-shaped structure is a common organization that industry associations or technical Institute is as the center of the cluster marketing. It is a more loosely organized, relying on industry or technical associations activities with regular dissemination of ideas, diffusion technology, making the rule and exchanging information.

The linear chain structure

The linear chain structure is unique, each node represents a marketing function of the virtual organization, each virtual organization can have multiple entities to complete a single or a number of marketing function, but the virtual organizational structure is linear, that is, except the starting point and end point, each virtual unit occurs only with the other two links.

Network structure

The network structure is characterized by each node can be associated with multiple nodes, there is no center, the network structure is open. Marketing of traditional industry clusters "see the customer" model and "share marketing channel" model is used in this model, discussed below, high-tech industry clusters "channel network sharing model" can also be used.

Studies on marketing of traditional industry cluster have found that the above-mentioned hierarchical structure, star-shaped structure and network structure are commonly used, but did not use a linear chain structure. The hierarchical structure, star structure, and network structure can be directly introduced to the marketing of high-tech industrial clusters, in terms of the linear chain structure, because the high-tech industrial clusters use of information technology at a high level, accept new concepts faster.
than traditional, it may be used.

3.2 Cluster marketing functional arrangements
Design of cluster marketing organization must take into account how to arrange the marketing function in the cluster organization, but also involved in the cluster marketing operation mechanism, the relationship between these three, as shown in Figure 1. The organizations within the Clusters in order to allocate marketing resources reasonably, dominated by a common marketing philosophy, possibly to build the cluster marketing operating mechanism through repeated games, to reach a consensus, systems and contracts on sharing cluster marketing functional under the arrangement of the mechanism.

3.3 The operational mechanism of cluster marketing
The operational mechanism of cluster marketing is that under the guidance of the cluster marketing ideas the co-participants in the cluster marketing make the rules of cluster marketing operating, specific measures on distribution of benefits, incentives and constraints and the way in which to control over the activities of cluster marketing. Function - interest, regulation and contract are three basic operational mechanisms of cluster marketing.

(1) Function - interest mechanism
Function - interest mechanism in the cluster means to the commitment and benefit from the marketing function should be reflected between the rights (interests) and responsible for the management principles. There is no one can enjoy a free dinner in the clusters marketing co-operation. Function - interest mechanism is the foundation of clusters marketing organization to exist and develop. Whether the traditional industry clusters "collective mark" model, "see the customer" model or "share marketing channel" mode, have followed this principle. Function - interest mechanism also applies to high-tech industry cluster marketing.

(2) Regulation mechanism
Regulation mechanism refers to define the relationship between industrial clusters marketing organizations and operating regulation though a certain clusters culture, industry (technology) association and the company system and organizations relationship rules. Compared with the traditional industrial clusters, the existence of a variety of Technology Association provides more choices of rules.

(3) Contract mechanism
The contract mechanism reflects the market exchange relations. Marketing organization of clusters not only need cooperative, but also the exchange. In essence, the relationship between the cluster marketing organizations is a kind of economic relations, that economic relations will be reflected through the contract. Through contract to coordinate the interests of both, the contractual relationship is also the most common relationship of the cluster marketing organization, the contract mechanism is a powerful tool for efficient allocation of marketing resources. Compared with the traditional industrial clusters, high-tech industry cluster will be more involved in intellectual property transactions, but can not change the contract mechanism in the high-tech industry cluster marketing role.

Table 1: Traditional industries Clusters marketing model type and operating mechanisms

<table>
<thead>
<tr>
<th>Operating mechanism</th>
<th>Traditional industries Clusters marketing model type</th>
<th>Function - interest</th>
<th>Regulation</th>
<th>Contract</th>
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<td></td>
<td>&quot;collective mark&quot; model &quot;see the customer&quot; model &quot;Share Marketing channel&quot; model</td>
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<td></td>
<td>Chamber of Commerce dues-sharing sharing collective mark incentive sales according &quot;see the customer worker&quot; performance the distribution of channel power and the resulting benefits</td>
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<td>Industry, chambers of commerce system, common rules of behavior manufacturers, traders, trading companies and &quot;see the customer workers&quot; established the relationship rules the tacit understanding, mutual trust and cooperation of the channel members.</td>
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<td>based on sales of goods that are registered to the formation of orders after bargaining and the transactions contract between the members of</td>
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From the above analysis tells us these three kinds of traditional industries clusters marketing operation mechanism also applies to high-tech industry cluster.

3.4 The advantages of cluster marketing and evaluation
The advantages of cluster marketing are mainly the following:
(1) To enable the SMEs to a certain extent, overcome the disadvantages, integrated cluster strength to development market.
Industrial clusters of SMEs by their own human, material and financial resources constraints, the independent marketing activities carried out incompetent. A large number of enterprises in industrial cluster and inter-related institutions join forces to carry out marketing activities to help SMEs make up for their own deficiencies, using the collective power to achieve their marketing objectives.
(2) Contribute to the establishment of regional brands, which will help the development of enterprises within the cluster.
The regional brand is the inevitable result of the development of industrial clusters. It is a manifestation of the core competitiveness of industrial clusters. It represents the main product and image of the cluster. Regional brand with more than a single corporate brand image, more direct and co-operation of many enterprises is the result of hard work, is one of many brand essence of enrichment and refinement, more extensive, ongoing brand effect. Regional brand can increase the overall regional industry and enterprise competitiveness, enhance regional industry product brands, corporate brands, the cluster brand awareness and brand value.
(3) The cluster marketing can promote cooperation between enterprises.
On the one hand, due to the cluster marketing mechanism by which the market price information is transparency, corporate generally consider product differentiation strategy in order to avoid a direct price competition. On the other hand, corporate can more easily understand that other companies product information, to facilitate the coordination of product division among enterprises through the cluster marketing mechanisms, thus contributing to the cluster product diversity, enhance cluster attractive.
(4) Help to reduce the cost of operation
First of all, stronger linkages industrial enterprises understand each other better through cluster marketing mechanisms, reducing transaction costs. Secondly, through the cluster marketing, enterprises can enable to increase the share of trading volume to a certain extent by the same marketing channels to decrease unit marketing costs and create external economies of scale. Enterprises in the industrial cluster to achieve specialization and in the production and trading process in close cooperation can get the external economies of scope.
Cluster marketing advantages of assessment is necessary to establish a scientific evaluation system based on the above four aspects. Once high-tech industry clusters marketing operation based on the evaluation of the performance, problems can be promptly corrected.

4 Clusters marketing model of the high-tech industrial clusters

According to above theoretical model analysis, we can divided high-tech industrial clusters marketing mode into the following types based on the difference of the marketing mechanism:

4.1 The model of the cluster brand clusters
The cluster brand clusters are made up of three levels of brand echelon of cluster brand, corporate brands and product brands. The top of the cluster brand clusters is cluster brand, but also a collective brand representing one industry cluster all products landmark property. With a combination of industry cluster belong to, it becomes a regional brand, after registration of trademarks, as a collective mark. The following is the corporate brand, the cluster brand must rely on a number of strong corporate brand as
support. The corporate brand is again a large number of product brands as a cushion, so that formed cluster brand clusters. The model of the cluster brand clusters is to build the well-known brand at all levels as the center, focus on the cluster brand construction and maintenance as a public product.

4.2 Channel network sharing model
Channel network of enterprises is mainly responsible for their own products, but in its channel system, while the load capacity still remaining, we can for the other enterprises of cluster with their highly complementary products (such as functional complementary to different products, similar products of different grades, etc.) to provide distribution services. Thus besides to help other businesses make more search, focus and feedback market information and reduce the risk of channel, the greater advantage is to enhance the competitiveness of channel. Because the channels of the terminal is always hope that its suppliers can provide more variety of merchandise mix, reducing purchasing costs, to enhance the attractiveness of the retail. In addition to this method, the high-tech industries cluster because of good conditions for communications infrastructure, enterprise clusters can be carried out jointly by B2B and B2C.

4.3 Leading enterprise traction model
As the high-tech products with technology-intensive characteristics, its products have strong natural monopoly and thus the leading enterprises in industrial clusters have a strong bargaining power. SMEs of clusters can join the brand club or by paying a certain brand of usage, to use leading enterprises trademark. SMEs can also provide the necessary supporting products and services for the leading enterprises that enable them have enough room for growth and reduce the risk of entering the market, the leading enterprises also can lead to expansion of production capacity and further enhance the brand influence.

4.4 Exhibition promotion model
Exhibition promote marketing model is the most familiar and most easy to operate and most easy to results of the marketing model. China has 53 state-level high-tech development zones are created by the government-led, for high-tech zones in China's development and competitiveness of the cultivation, the government will play a key role. Utilizing the exhibition to promote the image of industrial clusters as a whole, whether attracting foreign investment or upgrading the influence of region industrial clusters, have played an irreplaceable role. For example, the Wuhan East Lake High-tech Zone of the "Light Fair" to 2007 has been successfully held four sessions and attracting investments total 11 billion yuan. 320 foreign-funded projects to take root in Wuhan, the introduction of the project is not only an extension of the optoelectronics industry chain, but also promote China's optoelectronics industry into the international industrial chain. [5]

4.5 Cooperative R&D model
Products of high-tech industry cluster is high value-added, whether it satisfies demand of the market needs market testing. High-tech product life cycle is short, with promotion risk, lead to product R&D fraught with risks, cooperative research and development of industrial clusters is inherent needs. The so-called cooperative R&D refers to the corporate put to use "exogenous" resources, complete advantages, cooperate innovation, rely on regional innovation networks which consist of business and government, financial institutions, research institutions and intermediary organizations, composed of enterprises technical innovation and product development, so as to effectively enhance SMEs technological innovation and reduce product development risk.

4.6 The marketing alliance model
The marketing alliance model is a single business marketing activities integrated into cluster marketing campaigns. As the brand sharing, product matching, market concentration, channel interdependence, regional combined promotion, information sharing, SMEs can obtain the cooperation of scale and reduce marketing costs, expand the market, it changes the gathering advantages of industrial clusters
into the overall advantages of market competition. The enterprises within industrial clusters are usually
by sharing resources to make a more stable alliance to conduct joint marketing activities. Such an
approach often used in clusters of traditional industries, such as Fujian tea industry clusters, Zhejiang
Wenzhou shoes industry clusters, it applies to high-tech industrial clusters too.

5 Conclusion

A theoretical model of clusters marketing model was established to compare the traditional and
high-tech clusters. With this theoretical model, the author analyze the possibility that the clusters
marketing model of traditional industries applies to high-tech clusters, the following are basic
viewpoints:
(1)The concept of marketing mode is a high degree of abstraction and generality. It is descriptions and
definitions of the composition of the marketing system, the various components of the function,
operation and controlling rules. It is understanding about the clusters marketing system features and
operational discipline. Its core is the clusters marketing operation mechanism, the operational
mechanism should be stable and can be copied.
(2) The operational mechanism of clusters marketing includes three basic mechanisms: function -
interest, regulation and contract mechanisms. Function – interest reflects the management principle of
the right - responsible; Regulation mechanisms reflects the cultural of cluster, industry codes of conduct,
cluster stakeholders requirements in handling mutual relations. Contract mechanism reflects the main
marketing relationship between the market exchange within the main clusters. The contractual
relationship is also the most common relationship of the clusters marketing organizations, the contract
mechanism is a powerful tool for efficient allocation of marketing resources. Through analysis found
that these three operational mechanism all has been applied to different types of clusters of traditional
industries.
(3) By comparative analysis traditional and high-tech industrial clusters operational mechanism of
clusters marketing, it is found that three types of traditional clusters marketing mechanisms can be
completely used for the high-tech industry cluster. As a result, six modes of clusters marketing of
high-tech industry were proposed.

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