

Research on Regional Economic Innovation Capability Based on Industrial Clusters

Li Jing

Xi'an Siyuan University, Xi'an, Shaanxi, China, 710038

Keywords: industrial cluster; regional brand; innovation ability

Abstract: Based on the previous studies, this paper comprehensively analyzes the connotation and extension of the three concepts of industrial clusters, regional brands and regional economy, and then reveals the co-evolutionary relationship and the associated development mechanism between industrial clusters and regional brands. Finally, this paper conducts the dialectical analysis of the influence of industrial clusters in promoting and hindering regional economic growth.

1. Introduction

With the acceleration of the process of economic globalization and trade liberalization, the competitive environment of enterprises has undergone profound changes. The competition between enterprises is no longer a competition between individual enterprises and individual enterprises, but some industrial clusters with comparative advantages. In the context of this competition, economic geography has also emerged as a "new regionalism" and began to pay attention to the micro-mechanism of regional economic development. As a carrier of regional economic development, industrial clusters have begun to emerge and flourish throughout the country. In recent years, domestic scholars have conducted a very thorough research on industrial clusters, elaborated the cluster effect of industrial clusters from different angles, and revealed the internal mechanism of industrial clusters to promote regional economic growth. Some scholars also put forward the concept of regional industrial cluster brand from the perspective of marketing, which has become the theoretical frontier and practical hotspot of the industrial cluster research field[1].

2. The Meaning of Regional Economy

Regional economy refers to the production complex produced by the interaction of internal factors and external conditions of economic development within a certain region. It is a regional development entity that has a certain area as a range and is closely integrated with economic factors and their distribution. The regional economy reflects the objective laws of the economic development in different regions as well as the interrelationship between connotation and extension. The economic development of each region is constrained by factors such as natural conditions, socio-economic conditions, and technical and economic policies. The regional economy is a comprehensive geographic concept of economic development. It reflects the status quo and problems of regional resource development and utilization, especially the degree of rational use of mineral resources, land resources, human resources, and biological resources. The scientific and economic benefits of the layout of regional productivity [2].

At present, domestic research on regional economy is mainly based on geographical clusters of urban clusters and industrial clusters, such as the Pearl River Delta, the Yangtze River Delta, the Bohai Rim region, the old industrial base in Northeast China, and the Central Plains Economic Zone, which is currently being demonstrated. Wait. In areas where these industries are highly concentrated, the production costs of corporate products are low, and the research and development speed of new products and new technologies are fast, which makes the development of these regions have a strong competitive advantage. This experience is being learned and used by different regions to promote the development of urban agglomerations in different regions.

3. Relationship between Industrial Clusters and Regional Brands

From the above analysis of the connotation and extension of the three concepts of industrial clusters, regional brands, and regional economies, and previous research on related aspects, we can see that these three are not isolated but interact and interact. The first is the industrial clusters and regional brands, there is a certain associated relationship between the two, indicating that there is a close relationship between the industrial clusters and regional brands.

3.1 The promotion of industrial clusters to regional brand construction.

It can be said that it is the development of industrial clusters that has promoted the formation and development of regional brands. The development of industrial clusters depends not only on the internal product brands, corporate brands, and industrial brands of the clusters, but also on regional brands that represent the overall image of a region. Only when the industrial clusters develop to a certain stage will they produce regional brands. Regional brands are the advanced forms of industrial clusters.

First, the development of industrial clusters has promoted the improvement of infrastructure and the formation of a common geographic market, which has led to a significant reduction in the overall cost of enterprises within the cluster area and an increase in marginal returns. These advantages will promote the brand building of enterprises. Second, the close connections and exchanges among enterprises in the industrial cluster promoted the flow of technology and enabled the company's new technologies and knowledge to spread rapidly among enterprises. This kind of benign diffusion of technology will help companies improve their competitiveness and promote the development and growth of regional brands. In addition, due to the large number of companies in the cluster that share the same or similar industries, the competition among the enterprises has increased. As a result, the overall innovation capability and competitiveness of the enterprises in the cluster have been improved, laying the foundation for the establishment of regional brand advantages. Finally, the good innovation environment and innovative resources within the industrial clusters can continuously input fresh blood to the enterprises within the cluster, thus promoting the regional brand name to remain competitive [3]. The formula for the innovative development model of industrial clusters is as follows.

$$Z = \begin{pmatrix} Z_0 \\ Z_1 \\ \vdots \\ Z_m \end{pmatrix} = \begin{bmatrix} z_{01} & z_{02} & \cdots & z_{0n} \\ z_{11} & z_{12} & \cdots & z_{1n} \\ \cdots & \cdots & \cdots & \cdots \\ z_{m1} & z_{m2} & \cdots & z_{mn} \end{bmatrix}, (1 \leq i \leq m, 1 \leq j \leq n) \quad (1)$$

3.2 The influence of regional brands on the development of industrial clusters.

The regional brands represent the advantages of product prices, product quality, and corporate reputation within the cluster, and also represent some of the good social services that can be provided by the cluster's region. As a result, the company's products expand sales in the region. It is very important to improve product competitiveness. Once regional brands are formed, regional brands based on industrial clusters have the function of gathering resources, funds, and talents, and a large number of funds, abundant labor, advanced technology, and timely market information will also flow into the region. It has created powerful conditions for the expansion of industrial clusters and technological upgrading. In addition, the increase in the reputation, popularity and customer loyalty of regional brands will further increase the regional influence of the industries within the cluster, and will encourage more companies to cluster within the cluster and promote the development of related industries within the cluster. Good regional brands also bring good corporate image, which is conducive to attracting high-level talents and accumulating talent resources for the long-term development of the region [4].

From the above analysis, it can be seen that there is a co-evolutionary relationship between industrial clusters and regional brands, and the development process of industrial clusters is actually

the development process of regional brands. To some extent, the level of industrial cluster development represents the degree of regional brand building and development.

4. Influence of Industrial Clusters on Regional Economic Development

Comprehensively researching the impact of industrial clusters on regional economic development, relevant scholars started from four perspectives: researching external scale economy and external scope economy from the perspective of pure economics; researching how clusters reduce transaction costs from the perspective of sociology; From the point of view of the study, how does the industrial cluster promote the innovation and diffusion of knowledge and technology; from the perspective of the industrial organization theory, it analyzes the enterprises in the cluster to realize the survival and development in the engagement relationship. The development of industrial clusters scores as shown below.

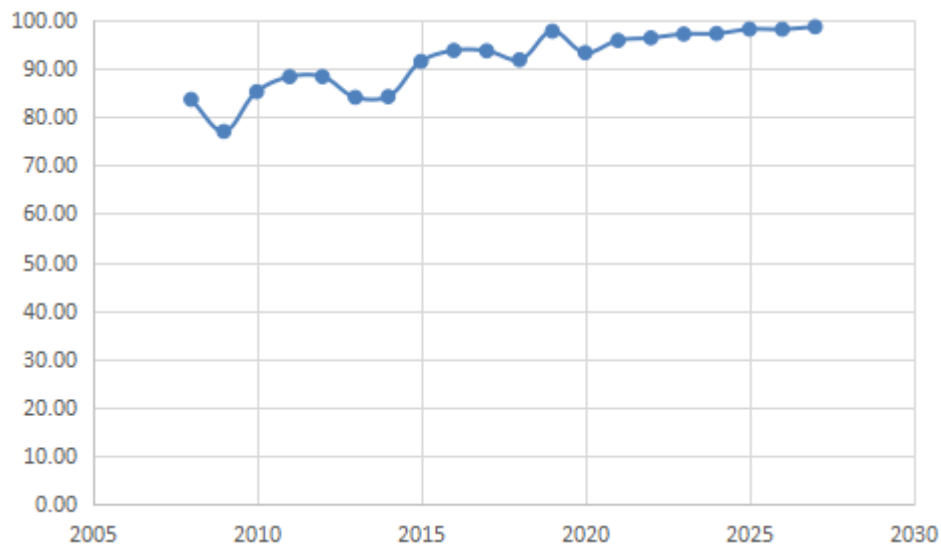


Fig.1 Development of industrial clusters scores

The role of industrial clusters in the promotion of regional economic development and the enhancement of competitiveness are undoubted, but industrial clusters have also leaked many problems during the development process. For example, industries achieve high concentration, but regional specialization is very low; "empty clusters" and the existence of negative effects of agglomeration; industrial homogenization lead to excessive competition; or industrial cluster development to a certain extent may also hinder enterprise innovation in clusters. Behavioral factors. Glasmeier (1991), through empirical research on the Swiss watch industry cluster, proves that rigid group thinking hinders cluster innovation. Beaudry's research shows that the cluster's impact on business growth and innovation is uncertain. Harrison et al. argue that there is no evidence that clustered companies adopt new technologies more quickly than their spatially dispersed peers.

In summary, the healthy development of industrial clusters can not only improve the productivity and innovation ability of enterprises from a microscopic perspective, but also can optimize the allocation of resources, reduce the transaction costs of enterprises, establish regional innovation systems, and enhance industrial competitiveness. From this perspective, the role of industrial clusters in regional economic development is still very obvious. Therefore, after the financial crisis, those regions with the potential for industrial cluster development should take the initiative to undertake a new round of industrial transfer, and then accelerate and enhance the speed of economic development.

5. Summary

The article first comprehensively analyzed the concepts of industrial clusters, regional brands, and regional economies. Based on a deep understanding of the connotation and extension of these

three concepts, it is believed that the relationship between industrial clusters and regional brands is a co-evolutionary relationship, further revealing the industry. Cluster and regional brand development mechanism. Finally, the article analyzes the influence of industrial clusters on the development of regional economy from the positive and negative aspects. It points out that industrial clusters can not only promote the growth of regional economy, but also hinder the growth of regional economy.

References

- [1] Malgorzata Runiewicz-Wardyn. The Role of Knowledge Absorption and Innovation Capability in the Technological Change and Economic Growth of EU Regions[J]. *International Journal of Management and Economics*,2013,39(1).
- [2] Juho-Petteri Huhtala, Antti Sihvonen, Johanna Frösén, Matti Jaakkola, Henrikki Tikkanen. Market orientation, innovation capability and business performance[J]. *Baltic Journal of Management*,2014,9(2).
- [3] Sara Tejinder. Role of innovation in growth of countries[J]. *Perspectives of Innovations, Economics and Business*,2010,4(1-2010).
- [4] Carol Hsu, Jae-Nam Lee, Detmar W. Straub. Institutional Influences on Information Systems Security Innovations[J]. *Information Systems Research*,2012,23(3-Part-2).