Analysis on the Theory of Industrial Cluster

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Abstract: Theories of regional economic development: theories of gradient progress, growth poles and regional production complexes all have different interpretations and measures of regional development. New type of regional development theory: Industrial cluster theory, in addition to emphasizing the importance of regional division of labor, it further emphasizes the role of the integration of various resources in the region, especially the role of technological progress and technological innovation.

1. Introduction

1.1 Concept

Industrial clusters, sometimes referred to as clusters, are used to define a phenomenon in which a large number of closely-connected enterprises and related supporting institutions in a particular field (usually based on a leading industry) gather spatially and form a strong and sustainable competitive advantage. (Porter 1998).

1.2 Main Content

From an economic point of view, the core of industrial clusters is the high concentration of industries within a certain spatial range, which is conducive to reducing the institutional costs of enterprises (including production costs, exchange costs), and improving economies of scale and scope. Improve the market competitiveness of industries and enterprises. From a sociological point of view, industrial agglomeration reduces transaction costs, individuals who live together in a knowledge and cultural background, trust each other, and the closer connection between producers and consumers builds bridges for economic activities. From a technological point of view, clusters promote technology spillovers and other industries that allow advanced technologies to flow from high-tech industries to other industries, promote technological progress, and achieve product innovation (Wang Jici and Tong Xin, 2001). Industrial clusters have strong competitiveness on the world economic map, and their competitive advantages come from product production costs, product differentiation, regional marketing and market competitive advantages (Wei Shouhua, 2002).

2. Brief Comments on Other Theories

2.1 Gradient Transition Theory

The spatial shift of productivity first allows qualified high-gradient regions to introduce and master advanced production technologies, and then gradually shift to regions with second and third-level gradients. Some scholars divide my country's eastern, central, and western regions into three gradients. Just imagine that with the development of the economy, the gap between the development levels of the central and western regions and the eastern region can be gradually narrowed. However, due to innate disadvantages such as factor endowments, the problem of unbalanced economic development still needs to be resolved.

2.2 Growth Pole Development Theory

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Just as during the reform and opening up, we “allow some people to get rich first” and “get rich first”. Economic development does not happen overnight. Instead, some growth poles or points of growth appear, which are then transmitted and diffused to the outside world, which affects the entire economic space. Have different effects.

2.3 Theory of Regional Production Complex

The various components of the regional production complex can be divided into core types (leading specialized departments), main types (lay out according to core types), supplementary types (lay out according to main types), service types (provide raw materials, spare parts, etc.), etc. .

The fundamental driving force for the development of a regional production complex is that it can bring greater economic effects of agglomeration than a single location of enterprises. It is not a simple regional agglomeration of enterprises, but a complementary production and economically closely related enterprises in the region. The orderly combination of layout has produced obvious economic effects

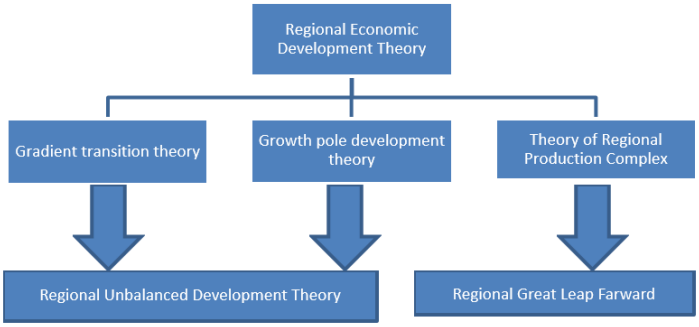

Fig.1 Relation Chart

3. Theoretical Comparison

3.1 Similarities

Emphasizes the economic effect of agglomeration. The agglomeration effect refers to the impact that the location of enterprises or economic activities is close to each other on economic benefits. The concentration of enterprises in a particular area will produce agglomeration economic benefits. This agglomeration benefit is an important reason and motivation for the existence and development of a city. A large number of companies are concentrated in a city. First of all, it is a concentration of many companies of the same industry or of similar nature. This concentration increases the number of companies in a city or region, and the scale of production also expands accordingly; what follows is the total amount of production. The increase in labor, the strengthening of division of labor, and the development of auxiliary industries have not only created a large-scale external economy, but also increased the labor productivity of enterprises and lowered the cost of products. With the development of cities, companies belonging to different industries and different natures will continue to concentrate. This concentration will produce greater economic benefits than the previous type of concentration.

Emphasizes the division of labor between regions. Regional division of labor is a form of economic ties between regions. Due to differences in economic development conditions and foundations between regions, in order to meet their various needs in production and life and improve economic efficiency when resources and elements cannot flow completely and freely, each region is In economic exchanges, it is inevitable to select and develop advantageous industries in accordance with the principle of comparative interest. As a result, there is a division of labor between regions.

The significance of regional division of labor is to enable each region to give full play to its advantages in resources, elements, location, etc., to conduct specialized production; rationally use resources, promote the improvement and innovation of production technology, and improve product

quality and management; it is conducive to improving Regional economic benefits and overall benefits of national economic development.

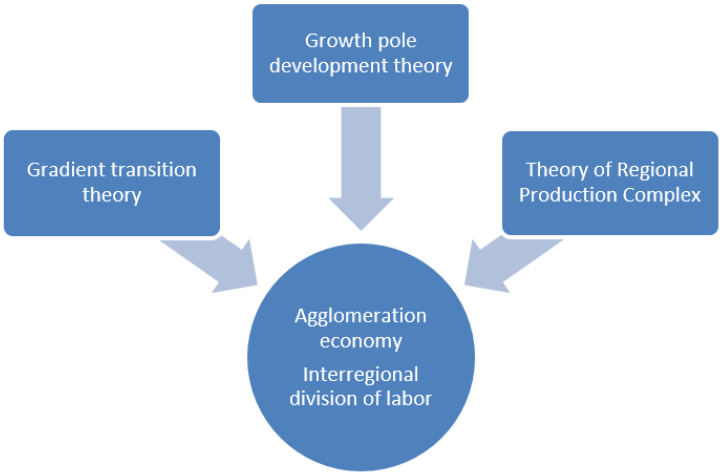

Fig.2 Figures with the Same Points

3.2 Differences

First, the gradient transition theory and the growth pole theory are unbalanced regional development theories. High-tech and advanced knowledge first flow into cities with factor endowments (such as my country's coastal cities, etc.), and then spread to other relatively backward cities through various channels. (For example, cities in central and western my country), from a static perspective, there is a big gap in the degree of development and the speed of development in different regions.

Industrial agglomeration points to a new form of measurement, that is, on the basis of the above, in each unique small area, carry out the integration of various resources, and pursue a regional development path that suits the characteristics of regional development. For example, “China's Women's Shoes Capital”-Chengdu's shoe industry cluster has developed into a large-scale women's shoe industry base, and Taizhou Plastic Industry Cluster-makes Taizhou one of the three major plastic production bases in my country. Therefore, super first-tier cities have talent advantages and are suitable for the development of high-tech industries. Cities with abundant tourism resources and insufficient labor are suitable for the development of tourism.

Second, the gradient transition theory emphasizes innovation in high-location areas, and then spreads outward; the growth pole theory only focuses on the presentation of economic aggregates, ignoring one of the endogenous forces of regional development-innovation; the theory of regional production complexes The focus is on large-scale government investment, which is characterized by planning and large volume, and innovation has not been mentioned.

The theory of industrial clusters highlights technological progress and technological innovation. Industrial clusters contribute to the formation of a good scientific research atmosphere, especially for industries with high requirements for innovation. Technology spillovers and “learning by doing” have increased the development speed of the industry, benefiting all industries and leading companies and latecomers in the industry. enterprise.

Third, industrial clusters also emphasize the synergistic effect of resource integration in regional development elements. In a general sense, we invest in labor, capital and other elements, relying on natural conditions to carry out specialized production and engage in economic activities. The industrial cluster fully recognizes the important role of entrepreneurs in resource integration. “One slap is not a hit”. The effective progress of market economic activities requires the coordinated development of government mechanisms and industry associations, so that the region has a strong “learning ability”. Learning area.

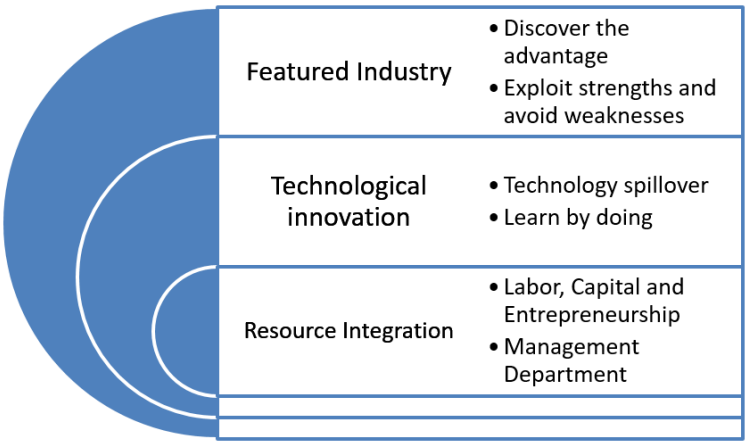

Fig.3 Industrial Agglomeration Advantage Map

4. Practice Certification At Home and Abroad

4.1 Practical Experience At Home and Abroad

The “Silicon Valley” of the United States-a model for the development of modern industrial economy. After years of development, California has now formed four major industrial cluster economic zones, namely the Southern California Economic Zone with aviation manufacturing, entertainment and electronic communications as the main industries; the San Francisco Bay Economic Zone with software, multimedia and Internet services as the main industries; The Central Basin Economic Zone with high-yield agriculture as its main industry; and the Sacramento Economic Zone with high-tech manufacturing and computer services as its main industries.

These four industrial cluster economic zones have distinct characteristics, self-contained systems, and strong industrial competitiveness. The development of industrial clusters has made important contributions to the economic development of California. First, it promotes economic growth. For example, the software industry in California is the leader of the software industry in the United States and even the world, and it is also a major industry with the fastest growth and the highest employee income in California; It is to promote employment; the third is to improve international competitiveness. California cluster industries have formed a good international reputation, such as Silicon Valley in the software industry and Hollywood in the entertainment industry.

The Pearl River Delta has formed three distinctive industrial division systems. On the east bank of the Pearl River, with Shenzhen, Dongguan, Huizhou and Guangzhou as the main body, a well-known electronic information industry corridor has formed in the country; on the west bank of the Pearl River, with Foshan, Zhongshan, Zhuhai, and Guangzhou as the main body, an electrical machinery industry cluster has been formed. In Guangzhou, several hundred billion-level industrial clusters such as automobile manufacturing, petrochemicals, electronic products, major equipment, trade fairs, cultural tourism, finance and insurance have also formed. In addition to the industrial clusters represented by strategic emerging industries on the east and west banks of the Pearl River, the “professional towns” with their own characteristics account for a quarter of more than 400 established towns in the province, and they dominate the country with the “cluster” effect. market. In Zhongshan, Guzhen has two to three thousand lighting enterprises, and the sales volume of civilian lighting accounts for more than 60% of the country. It is one of the world's four major lighting professional markets; in Dongguan, Humen's clothing industry cluster is well-known at home and abroad; in Foshan, Ronggui's small appliances Production has developed and has now become a well-known electrical machinery production base in the country and so on. Of these specialized towns characterized by industrial clusters, there are hundreds of towns with an economic scale of 2 to 3 billion yuan, and there are more than 10 billion towns with a larger economic scale.

4.2 Enlightenment

There are big differences between regions in my country, and the industrial cluster strategy has strong applicability. (1) Coastal cities such as the Yangtze River Delta and the Pearl River Delta will further develop local enterprise networks and give play to their advantages and the effect of industrial agglomeration. (2) Some domestic economic and technological development zones and high-tech development zones rely on large companies to form supporting industrial chains to stimulate local economic development. (3) In areas where township and village enterprises gather, learn from the development models of townships in southern Jiangsu, Jiangsu and Zhejiang, and develop characteristic industries. (4) For example, in knowledge-intensive areas such as Zhongguancun, Beijing, through the establishment of educational enterprises, knowledge and industry can be closely linked to obtain benefits. (5) With the development of the Internet, the state-owned enterprise cluster areas are undergoing industrial transformation and upgrading.

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