

The Innovation & Choice of Strategic Emerging Industrial Cultivation Mode in Yangzhou City

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ABSTRACT: Cultivating and developing strategic emerging industries has its own special mode, so the development of strategic emerging industry depends on not only the technology innovation, but also the cultivation mode and mechanism innovation more importantly. This paper compared several foster strategic emerging industry patterns, discussed the development innovative ideas and strategic choice about how to develop emerging industries in Yangzhou city, and proposed its strategic emerging industries cultivation mechanism.

KEYWORD: Emerging industry; Cluster; Alliance; Innovation

1 GENERAL INSTRUCTIONS

Development of strategic emerging industries has become a major national strategy in China's new normal economic. Strategic emerging industry is a strategic and future directional industry. So to create its effective industries cultivating model is considered as a deep-level study that need to be solved urgently at present. In order to achieve sustained and rapid development of Chinese economy and society, local government must rely on scientific and technological innovation to cultivate strategic emerging industries, and use it as an important way to accelerate transformation of the mode of economic growth.

Because it is just a short time that strategic emerging industries were proposed so there's not much research results. However, we can see from the research results, the development of strategic emerging industry is closely related to union activities. In addition, industrial clusters and strategic alliances are becoming an effective carrier of regional economic development and organizational management paradigms [1]. Domestic and international experience also confirmed that industrial cluster is an effective organizational mode for fostering the development of strategic emerging industries. So, this is an important way for Yangzhou to foster its strategic emerging industries [2]. Therefore, if Yangzhou want to realize the leap-forward development of strategic emerging industries, it must take the dual embed combination strategy between clusters and strategic alliances to

form innovation network and industrial alliance in cluster, and to help the relevant enterprises and research institutes to build strategic alliances.

Strategic emerging industries is based on major technology breakthrough and market demands, and it plays an important leading role for economic and social development. Strategic emerging industries have the feature of intensive knowledge and technology, less material resources consumption, potential growth and good comprehensive benefits [3]. As the focal point of Yangzhou city industrial development direction, strategic emerging industries have always been a hot issue of concern. Cultivating and developing strategic emerging industries has its own special mode, so the development of strategic emerging industry depends on not only the technology innovation, but also the cultivation mode and mechanism innovation more importantly.

2 DEVELOPMENT OVERVIEW OF YANGZHOU STRATEGIC EMERGING INDUSTRIES

Yangzhou attaches great importance to the development of strategic emerging industries, and it has become an important driven force in economic growth of Yangzhou. Strategic emerging industry development speed is very high, and there are a number of fast-growing companies in Yangzhou. Especially in these industries such as LED solar, smart grid, CNC machine tools, e-books and so on. Independent innovation capability and other related

fields already have a solid industrial foundation. The aggregate economic volume and enterprises scale in emerging industry have jumped to a new platform, industrial cluster is gradually formed, industrial chain is increasingly clear, industrial structure is gradually optimized, and technological innovation is more and more deepening. It is at an important period of rapid development.

Strategic emerging industrial chain is continuously perfect, showing a trend of cluster development. Yangzhou follow the "industry cluster, correlation matching, overall coordination, resource sharing" principles, initially formed the prototype of the strategic emerging industry cluster in solar PV and smart grid industries, its concentration continues to be increased.

Science and technology innovation of strategic emerging industry is gradually developed and major breakthroughs were made in many areas. Yangzhou built a batch of new industry public research and development platforms, including Semiconductor research institute of Chinese academy of sciences of Yangzhou branch, Yangzhou-Nanjing university photoelectric institute, Yangzhou-Nanjing university chemical industry research institute, Yangzhou-Xi'an Jiaotong university science park, Xi'an Jiaotong university smart grid technology and equipment research institute etc. They established Jiangsu Province semiconductor lighting technology innovation and strategic alliances, jointly efforts to innovative R&D and application of LED industrial technology transformation.

3 COMPARISON OF FOSTER STRATEGIC EMERGING INDUSTRY PATTERN AND THE STRATEGIC CHOICE OF YANGZHOU

3.1 *The development essential features of strategic emerging industries*

According to the rules of industrial development, its development must depend on industrial value chain, industrial growth rule and industrial organization. From the point of view of nature, strategic emerging industries are the depth integration of the emerging science and technology. Therefore, we must pay attention to the development of strategic emerging industries, focusing on innovation driven to support sustainable development of strategic emerging industries. From the point of innovation characteristics, the development of strategic emerging industry innovation is fundamental and disruptive innovation, especially in the initial stages of the development of strategic emerging industries is disruptive innovation. In other words, the innovation of the strategic emerging industries is not only a technological innovation, but also the system innovation of cultivating and developing strategic emerging industries.

3.2 *Abroad Basic Fostering mode of strategic emerging industries*

There are three cultivating modes of strategic emerging industries: market spontaneous formation mode, the government-led development mode, coupling mode of market and government.

Firstly, Marketization mode was represented by the United States, in this mode, the enterprise is the main innovation body, the government's policy play a guiding role and try to foster the marketing service organizations.

Secondly, government-led development mode was represented by Japan. In Japan, the government's macro economic policy played a huge role, the government planning and development route finally formed the government-led development mode of strategic emerging industries.

Thirdly, coupling mode of market and government was represented by South Korea. This mode combines the strengths of the two previous ones, and overcome their shortcomings. It can form high industry quality and ability to resist fluctuation, strengthen the industrial development of forward-looking and strategic commitment, and reduce the social cost of development of new industries.

3.3 *The experience references for Yangzhou to cultivate and innovate strategic emerging industry mode*

First, the development of strategic emerging industries has not only technical issues, as well as business mode issues. So the development of strategic emerging industries must adhere to business mode innovation as a powerful driving force. Only combining the technology innovation and business model, it can be industrialized successfully.

Second, as a new normal economics, the development of strategic emerging industry can not follow the traditional industrial development mode. Mode upgrading is the key for Yangzhou to develop strategic emerging industry, which can promote industrial upgrading and innovation capabilities continually improving. Furthermore, the endogenous development mechanism of strategic emerging industries in Yangzhou can be established.

Third, to develop strategic emerging industries must take institutional and mechanic innovation as an important support. Strategic emerging industry in Yangzhou still faces many constraints, including the drawbacks of the existing economic system and policy and the challenges of new technology. Therefore, we must actively explore the new mode of industrial development in Yangzhou.

4 THE CHOICE OF STRATEGIC EMERGING INDUSTRIAL DEVELOPMENT MODE IN YANGZHOU

Industrial development is a dynamic process, and its development mode should also be constantly changed. The development of the industry is always accompanied by technology innovation and evolution. Technology life cycle can be roughly divided into initial, growth, maturity and decline four stages. That is to say, the development of strategic emerging industry should adopt different modes at different periods, and the development of strategic emerging industries can be divided into germination stage, growth stage and maturation stages. At different stages, the function of market regulation mechanism and government support should be adopted at different stage levels.

Therefore, in different period of the development of strategic emerging industries, we should take different mode. Firstly, when industrial technology life cycle is at germination stage, government support is the key, the market mechanism is complementary. Secondly, when industrial technology life cycle is at growth stage, the market mechanism is the key, government support is complementary. But, when industrial technology life cycle is at mature stage, industrial alliance development mode dominated by large enterprises should be adopted.

5 DEVELOPMENT IDEAS AND FOSTER STRATEGIC EMERGING INDUSTRIES MECHANISM

5.1 The general idea

The general idea: to develop innovative economy as a strategic starting point, to build a modern industrial system as the goal, to optimize and upgrade the industrial structure as the main line, to be large-scale, high-end, aggregation, and international as the orientation, and to speed up the development of emerging industries and enhance industrial scale in order to form emerging industrial growth poles; Foster and improve strategic emerging industry innovation chain, enhance independent innovation capability, to capture key technologies and to cultivate their own intellectual property rights; adhere to market-dominant position of the enterprise, increase policy support efforts, in accordance with the laws of market economy. To guide the quality resources concentrate on emerging industries, form strategic emerging industry cluster in Yangzhou; Through coupling development between innovation alliance and cluster, gradually develop emerging industrial innovation cluster, further promote strategic emerging industries to grow into a leading pillar industry in Yangzhou. The specific ideas of development as shown in figure 1.

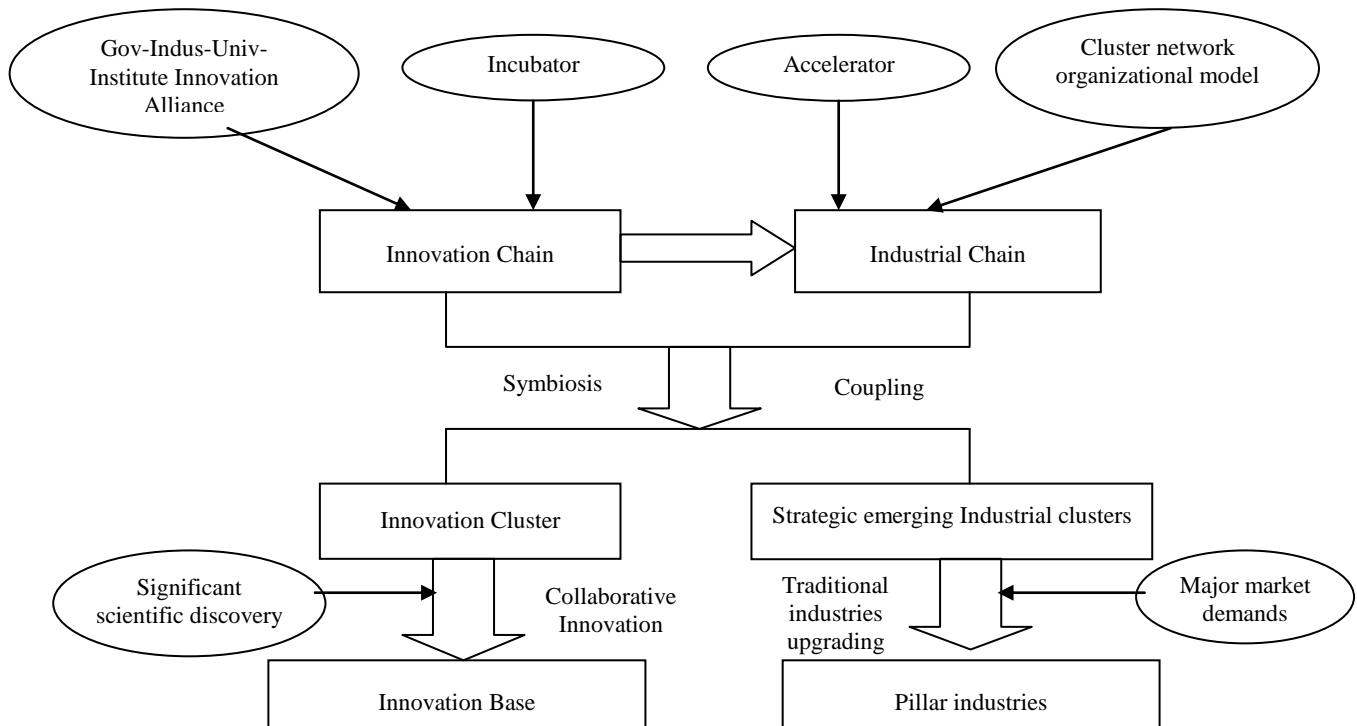


Figure 1. Develop mode of strategic emerging industries of Yangzhou

5.2 The cultivation mechanism of strategic emerging industries of Yangzhou

From the perspective of the process of industrialization of emerging technologies, emerging

technology industrialization is a systematic process of innovation through application research, product design, technology penetration, and large-scale standardized production system. It has a variety of

interaction and collaboration between multi-stakeholder, innovation, industrial resources based on the basic research and original innovation. The biggest problem of Yangzhou strategic emerging industries are interrelated fragmented of innovation chain and industrial chain. Strategic emerging industries of Yangzhou must focus on organic integration of innovation chain and industrial chain, and build a dual coupling mechanism. According to the requirements of the emerging technology industrialization and strategic positioning of strategic emerging industries, the cultivation mechanism of strategic emerging industry development of Yangzhou was designed four parts, including innovation chain integration mechanism, industrial chain integration mechanism, coupling mechanism between innovation chain and industrial chain, and social system supporting mechanism.

(1) Innovation chain integration mechanism

In order to meet the market demand, running around the core of one or more subject, with innovation as the link, connects each complementary node, constructing industrial technology innovation alliance, set up new "government-industry-university-institute" cooperation mechanism, improve efficiency of strategic emerging technology innovation system, and span the barriers from technology to products. Through innovation chain integration mechanism, strengthen the top-level design of strategic emerging industry innovation system, integrate innovation resources, and form combined force of innovation.

(2) Industrial chain integration mechanism

Through the industrial chain integration strategy, Improve the integration innovation capability and resources integration ability of large enterprises, Establish a perfect integration mechanism of innovation resources, try the best to gather innovation resources, Promote interactive learning and interaction between the different segments of the industry chain, Strengthen cooperation within the region and between regions, construct the network organizational mode of strategic emerging industries in Yangzhou, open up the strategic industrial value chain to achieve effective integration of industry resources.

(3) Double chain coupling mechanism of innovation chain-industrial chain

To develop and implement global innovation resource allocation and strategic emerging industry chain integration strategy in Yangzhou, and fully exploit the high industrial relevance of strategic emerging industries, promote the development of the strategic emerging industries from the extension of the industrial chain and the aspects related downstream industries, attract more enterprises to provide supporting services for emerging industries,

form a regional strategic emerging industry clusters. Promote the coupling development between innovation chain and industry cluster in order to form innovation cluster. As a new organization mode, innovation cluster is a complex network structure constituted by several innovation chains and individual innovation nodes. From the essence, this is not a simple social network between entrepreneurs or individuals, is also not the simply technology network between research institutions, and is not the pure business relationship between enterprises within a industry, but a cross organizational relationship network which has the functions such as knowledge transition, dynamic cycle and innovation diffusion in the whole process of strategic technology research, emerging technologies industrialization, and emerging industries networking.

(4) Social system supporting mechanism

First, build the investment and financing system of emerging industries which must be suitable to the new technology requirements and characteristics, to meet the financing needs of a wide range of innovative companies. Second, gathering a large number of innovative elements and resources, training and introducing innovative entrepreneurial team, to provide a solid scientific research and talent guarantee for the development of strategic emerging industries. Third, combined with the construction of innovative pilot city, organize and implement major application demonstration project of strategic emerging industries market cultivation with the thinking of promoting development with application. Fourth, strengthen financial and tax support and deepen the reform in some key areas. Fifth, improve the management mechanism, focusing on international cooperation.

ACKNOWLEDGEMENT

This paper is a part of research results about project supported by the National Natural Science Foundation of China (Grant No. 71103155).

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