

International Experience and Inspiration of Developing Producer Services to Promote Integration of Two Industries

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Keywords: Producer Services, Manufacturing Industry, Integration of Two Industries, International Experience, Inspiration.

Abstract: The development of producer services is of great significance to promote the upgrading of industrial structure, improve the quality of national economic operation, expand employment and drive the rapid development of national economy. On the premise of combing the history of integrated development of the manufacturing industry and producer services in developed countries, this paper analyzes the successful experience of the United States, the European Union and Japan as a reference, and puts forward some suggestions for the development of producer services in China.

1. Introduction

The level of development of service industry, especially producer services, is an important symbol to measure the degree of modernization of a country's economy. From the practice of developed countries, the integration of producer services and the manufacturing industry is the main driver to promote the upgrading of industrial structure, while producer services are the sector with the most core competitiveness, industrial control power and innovation vitality in modern economy[1]. It can play the role of "adhesive", acting as a new driver in the development of the national economy. From a global perspective, the proportion of producer services in the national economy of developed countries has exceeded 50% in recent years. Among them, producer services in the United States account for 70 percent of the national economy, while producer services account for 55.6 percent in the European Union and 57 percent in Japan, indicating that producer services have become a pillar industry of national economy. Developed countries and regions promote the joint development of the manufacturing industry and producer services by means of market regulation and government guidance to varying degrees, which is of certain reference significance for China.

2. The History of Integrated Development of the Manufacturing Industry and Producer Services in Developed Countries

In the first stage, the relationship between producer services and the manufacturing industry was in its infancy. Since the 1970s, the industrial structure of developed countries has entered a phase of restructuring, and the activities of enterprises have been concentrated on production and operation, while service activities have been gradually socialized, specialized and outsourced, resulting in the formation of various types of producer services. During this period, producer services were loosely organized, and the service targets and service functions were relatively single, and they basically provided a single service for a single enterprise, with pronounced closest ties of relationship. With the growing demand for intermediate services in the manufacturing industry, a number of independent companies have emerged in the production services sector, and the service functions have been gradually diversified.

The second stage is the interaction between producer services and the manufacturing industry. In this period, producer services have developed steadily, and large integrated producer service enterprises have emerged, and the industrial organizations tend to develop into clusters. Producer

services have greatly improved the efficiency of the manufacturing industry and gradually become the source of core competitiveness of the manufacturing industry. At the same time, producer services began to interact with the manufacturing industry, and the cooperation between them has been gradually stabilized and the group-to-individual and group-to-group interaction patterns have emerged. The manufacturing industry cluster and the producer services cluster promote each other, and there is a resulting two-way interaction.

The third stage is the integration of producer services and the manufacturing industry. In this period, producer services have a dominant and leading position in the national economy, and a large number of producer services clusters have arisen, forming a benign internal resource sharing mechanism. Moreover, the producer service function group on the manufacturing industry chain has been formed to provide integrated services for the manufacturing industry. During this period, industrial clusters have been continuously upgraded and developed. Along with the continuous optimization of the cluster structure, the integration model of government, industry, university and research, which is government-led, academically supported, dominated by core industries and well-equipped with infrastructure, has been developed. There is also a parallel industrial cluster of the manufacturing industry clusters and producer services clusters with "horizontal clustering and vertical chain integration". At the same time, the manufacturing industry and producer services present a state of intermingling and jointly promote the transformation and upgrading of economic structure[2].

3. Development Experience of Integration of the Manufacturing Industry and Producer Services in Developed Countries and Regions

3.1. Experience in the Integration of Producer Services and the Manufacturing Industry in the US

The experience of the integrated development of producer services and the manufacturing industry in the United States can be summarized as the following two aspects:

First of all, strong innovation is an essential booster for the development of the integration of the two industries. Since the 1990s, the financial, consulting, legal and other producer services in the United States have experienced a wave of technological innovation and transformation with the R&D and application of information technology as the main content. It not only helped the United States recover from the economic crisis in 1987, but also contributed to the economic and technological prosperity of the United States throughout the 1990s. The famous Information Highway Program has greatly promoted the penetration of information technology into traditional industries, and led to the upgrading of industrial structure, so that the U.S. economic structure has completed the leap to a knowledge-based economy[3].

Second, the United States deregulated the industry and reduced government intervention, thus providing a favorable environment for the development of the integration of the two industries. the United States adopted a series of deregulation measures, such as liberalizing the financial industry, transitioning from separate operations to mixed operations, and allowing the establishment of interstate bank branches. In order to promote the development of R&D services, the United States has introduced patent protection policies, expanded the scope of patent rights, and increased the amount of compensation for infringement, so as to escort R&D services from the perspective of the intellectual property system. In order to promote the development of modern logistics industry, the U.S. government has formulated a series of regulations to gradually deregulate the transportation markets of highways, railroads, airlines, maritime and logistics, and encourage mass transportation, thus promoting the establishment of a diversified transportation system. And through the introduction of market competition, transportation rates have dropped and service levels have improved.

3.2. Experience in the Integration of Producer Services and the Manufacturing Industry in European Countries

European countries have developed a high level of producer services, and there are many world-class companies in the fields of banking and insurance, professional services, logistics and transportation, and industrial design, etc., which are inseparable from their incentive policies.

First of all, they were supported by fiscal policies. Europe attaches importance to financial support in the fields of science and technology, education and distribution. As for the support for the science and technology services sector, in 1984, the European Union launched the EU Framework Programme, one of the largest official and comprehensive programs for research and development in the world. It has ensured the smooth implementation of EU research projects and significantly improved the overall level of EU science and technology[4]. The EU countries also subsidize science and technology innovation through national science and technology programs, such as the Netherlands' Technology Development Program . As for the support for logistics services, France, Germany and Belgium usually set up seed funds to support the development of high-tech enterprises. The German national government has coordinated the planning of logistics, while the local government has made investments to support it. The model of "government-run and private-assisted" and "enterprise autonomy" has promoted the expansion of the logistics industry in Germany. As for the support for financial services, the German government of Hesse-Darmstadt has invested in the expansion of Frankfurt Airport in order to support the development of the Frankfurt financial center and to ensure easy access for financial professionals.

Second, they provided talent support for the development of producer services. As for the support for the development of design services, Germany and Finland attach great importance to talent training and education. Germany adopted the "Green Card Project" in 2001, aiming to attract global IT talents. Finland has been promoting the internationalization of design education since the 1990s, and university and vocational education have complemented each other to form a design education system with distinct levels. In addition to world-renowned design universities such as University of Art & Design Helsinki, and University of Lapland, there are also several higher institutions specialized in design.

Third, they provided financing support for the development of producer services. The German government provides financing policies for SMEs engaged in professional services. Firstly, it provides credit assistance. The government has set up the "European Recovery Plan Special Assets Fund", and newly established SMEs can obtain their own financial assistance in the form of bank loans. Interest will be exempted for the first two years and the market interest rate will be calculated after five years. Secondly, it provides loan guarantee. To encourage innovation and development in SMEs, banks provide investment guarantee funds. To promote SME exports, the government provides short-term and medium- to long-term preferential export credits and credit guarantees.

3.3. Experience in the Integration of Producer Services and the Manufacturing Industry in Japan

Japan has given full play to the government's economic management function, combining market regulation with government guidance. As a result, producer services such as logistics services, technology services and information services have been developed rapidly. At the same time, the degree of correlation and interaction between producer services and the manufacturing industry has been increasing, and producer services have played an important role in economic development.

First of all, the first-class innovation level is the foundation for Japan to realize the integrated development of the two industries. Japan seized the opportunity of the new round of technological revolution and global industrial restructuring. Japan promulgated the Basic Law of Science and Technology , proposing to vigorously develop the science and technology service industry. In order to adapt to the transformation and upgrading needs of the manufacturing industry in the new era, Japan adopted a series of specific measures to strengthen the investment in scientific research, improve the system of science and technology innovation, and deeply reform the research and development system, human resources training methods, and the research mechanism integrating

industry, government and university. Thus, it can escort the improvement of independent innovation capability and enhance the promotion role of science and technology service industry in the development of the manufacturing industry.

Second, through the government-business cooperation model, it uses industry organizations to provide intermediary support for the development of the integration of the two industries. Japan's industry organizations have been developed early, not only to provide services to support the development of producer services enterprises, but also to serve as a bridge between enterprises and the government. The intermediary effect has improved the quality of human resources and the living environment of producer services companies, and provided an intermediary to achieve a better interaction between the manufacturing industry and producer services[5]. For example, after making clear the development strategy of establishing the country with IT, Japan enacted the Personal Information Protection Act and promulgated a new industrial standard classification, thus clarifying the positioning of information service industry so as to better plan and fully develop information service resources. Since private enterprises and research institutions have been the leading force of information technology in Japan, on the one hand, the Japanese government has been promoting IT innovation and industrialization through government procurement, R&D funding and government-industry-academia research platforms, in order to guide the business sector to follow the government's predetermined target path of informationization and to accelerate the promotion and industrialization of IT innovation and R&D results. On the other hand, the Japanese government has also made use of the tradition of government-business cooperation. Through semi-governmental organizations such as the Japan Information Processing Development Association, the Information Service Industry Association, the Electronic Information Technology Industry Association, and the Association for the Promotion of Information Processing, it can bridge the relationship between government and enterprises, and thus provide technical consultation and intermediary services for industrialization of research results.

Third, the integration of the two industries is achieved through a new model of using services to enhance the competitiveness of their products. Japan is focusing on improving the level of information technology in the manufacturing industry. It is developing the manufacturing industry by researching information technology and expanding the scope of application of information technology in process technology, intermediate products and final products of the manufacturing industry. Moreover, it improves the information technology, automation, intelligence and refinement of the processing and production process to shorten the time of design and trial production process, and reduce the error in design so as to reduce the manufacturing cost. In addition, by developing embedded software for automobiles and cell phones, it has increased the range of products, their technological content and added value, enabling a large number of products with high quality and relatively low prices to be launched in the market. In combination with the informationization of the logistics supply chain, it has widely used e-commerce platforms, informationized marketing systems and public Internet to carry out advertising, product sales and service outsourcing, to promote the deepened, diversified and personalized development of the industry, thus improving the international competitiveness of enterprises and products, and promoting the advanced manufacturing industry that meets the trend and requirements of informationization and knowledge economy. In turn, the development of the manufacturing industry further supports the development of information service industry in Japan.

4. Inspirations to China

This paper organizes the experiences of the above developed countries and regions in promoting the development of producer services. It gives the following insights to promote the integration of the manufacturing industry and producer services in China.

Firstly, we should increase tax reductions and exemptions and financial support. The adoption of various preferential tax policies such as low tax rate and tax exemptions is an important experience in the early development of producer services and even the period of its rapid development. In particular, we should increase tax exemptions for science and technology research and development,

information technology, education, consulting and other service industries, increase financial investment and subsidies, and increase investment in major national projects to improve the capacity for independent innovation. Secondly, we should increase the support for finance, logistics, supply chain management, brand marketing, cultural creativity and other emerging service industries.

Secondly, we should strengthen the construction of the modern service personnel system. Through the reform of higher education system, we should innovate the training mode of combining industry, university and research, accelerate vocational education and training, and actively cultivate all kinds of producer services talents. In particular, we should focus on establishing incentive measures to attract overseas talents and attract Chinese students studying abroad to return to China to start their own business.

Thirdly, we should strengthen financial policy support. Producer services are dominated by small and medium-sized enterprises, and thus their financing difficulties are widespread. In view of this, we should broaden the financing channels. In particular, we should encourage state-owned commercial banks to innovate financial products, accelerate the development of private financial institutions, and relax the access to the capital market of the SMEs board and the Growth Enterprise Market, so as to create favorable financing conditions for the development of producer services enterprises.

Fourthly, we should continue to improve the policy system. We should establish the industrial planning system of producer services, organizational management system, intellectual property service system, and industry associations' supervision service system, so as to develop the strengths of the policy mix.

Acknowledgement

This article is in the Wuhan City Circle Manufacturing Industrial Development Research Center project "Research on the Deep and Integrated Development of Wuhan Manufacturing and Service Industry" No.WZ2018Y06

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