



Study on Promotion Strategy of Innovation Ability in Hubei Province Science and Technology Service Industry

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ABSTRACT

The regional innovation capacity and growth potential has been determined by the development of science and technology service industry to some extent, while the industry can not develop without innovation. Innovation capacity determines its scale and service capability, which is essential for the industry's survival and development. In order to overcome the development bottlenecks in Hubei province, building a set of promotion strategy for the science and technology service industry's innovation capacity is very necessary.

1. Introduction

Along with the continuous development and progress of science and technology, and the status of knowledge and high technology content of science and technology service industry more important in the national economy, from human to manufacture and sale of products as the core of the product economy into an era to provide knowledge service as the core technology of service economy era. The development of science and technology service industry is inseparable from innovation, innovation is an important source and inexhaustible motive force for the survival and development of science and technology service institutions. With the science and technology service industry play an important role in the economic construction in stark contrast, the academic research on science and technology innovation in the service industry has just started, the existing research mainly focus on the discussion on the concept and classification of innovation, research on Evaluation of innovation ability of science and technology service industry is basically in the blank.

A set of scientific and reasonable design, convenient for the statistical evaluation index system of China in different areas of science and technology services innovation ability to make accurate judgments, convenient area between science and technology service industry innovation ability through comparative analysis, data analysis results found to enhance the technological innovation capability of service industry is the bottleneck; at the same time, can also provide a theoretical basis for the targeted for the government to make policy. In this situation, based on the concept of technology service industry characteristics and the factors of innovation ability on the basis of research and analysis, combined with the related theory of economics and statistical knowledge, construct the strategy to enhance the technological innovation capability of the service industry, and taking Hubei Province as an example to make an empirical study.

2. Connotation Characteristics and Classification of Science and Technology Service Industry

2.1 Connotation Definition of Science and Technology Service Industry

With the continuous integration and development of technology and economy, compared with decades ago, the connotation and function of service industry have changed greatly. Scholars at home and abroad

have done a lot of research on this field, and put forward a series of concepts such as science and technology service industry, knowledge intensive service industry, high-tech service industry and modern service industry.

Overall, the broad concept of modern service industry, covering the knowledge intensive service industry, high-tech service industry and modern service industry; second is the knowledge intensive service industry, covering all of the services of high technology services and technology services,

including education, health care and other services; and the concept of science and technology service industry high technology service industry is similar, the services provided are similar, only slightly different category of science and technology services in micro wide high technology service industry.

2.2 Characteristics of Science and Technology Service Industry

Science and technology service industry around the whole process of industrialization of scientific and technological achievements to provide a wide range of services, with characteristics different from the general service industry. Science and technology service, on the one hand shows the service of the activity, its labor object is not in physical form performance; on the other hand shows that it and technology related. Knowledge intelligence density. Science and technology service industry is a typical knowledge service industry, its first capital is human capital, and the first element is knowledge element. High external efficiency. Science and technology service industry is a typical external higher industry, each of which creates 1 units of revenue, usually for the service object to bring more than 5 units of revenue increase (or transaction costs and operating costs). The science and technology service organization is a system of scientific and technological innovation system. One of the main innovation technology services is also composed of official production, learning and research, the bond between gold and other types of innovation or network node; it not only provides technical services, also provides a series of supporting services to promote the progress of science and technology.

Service of science and technology can effectively promote technological progress, promote economic development, its main functions include: the information service through traditional media, network, expert consultation, information dissemination and exchange and other means

for the enterprise to provide market, technology, personnel training, investment and financing of the information, provide the basis for scientific decision-making of enterprises. Technology development and promotion: organization and integration of various resources to help enterprises develop new technologies and products, and carry out a variety of new technology promotion activities, promote the transfer and diffusion of new practical technologies to enterprises. Technical transaction services: technical trading market as the carrier, providing technical advice, patent agency, contract registration, contract recognition and intellectual property services in the process of technology trading. The business incubator service: through the sharing of facilities to provide office space, R&D and production for small and medium-sized enterprises, and provide a full range of help in information consulting, legal policy, technical diagnosis, intellectual property, financing, marketing and other aspects of human resources, reduce the small and medium-sized enterprise undertaking risk and cost, promote the small and medium-sized enterprise development. The science and technology financial services for all sectors of society to provide government science and technology fund, risk investment and financing business services. The innovation of training services through holding short-term training, lectures, seminars and workshops and other channels, to provide technical, financial, marketing, human resources and intellectual property protection, international trade and other aspects of the training services for enterprises, improve the innovation ability of enterprises.

2.3 Classification of Science and Technology Service Industry

Due to the wide range of business of science and technology service industry, many scholars have different classification of science and technology service industry from different angles.

According to the service content of different science and technology services can be divided into scientific and technological information, technology trade, science and technology facilities, technology finance and business incubator subsystem, each system is running independently and mutual cooperation, mutual influence.

From the point of view of the service function for the intermediary service of science and technology (such as productivity center, technology evaluation center, business service center, information center, intellectual property center, patent and all kinds of information consultation, technology market, technology property trading institutions, such as the talent market) and information service and software industry (telecommunication network business, the information technology services, software and system integration services, value-added services and digital services etc.).

According to the different nature of the service is divided into: mutual technology services (such as associations, research council, etc.) and public science and technology service institutions (such as ideas, science and Technology Museum and small and medium-sized enterprises, such as science and technology service organizations, etc.). According to the relevant data of Hubei Provincial Bureau of statistics, Hubei province science and technology service industry is divided into research and development, technology transfer and promotion, dissemination of intellectual property application and protection of resources, science and technology services, government departments entrusted by the public service of science and technology, emerging technology and other professional services in seven categories.

3. The Definition of Innovation Ability of Science and Technology Service Industry

The academic evaluation on the innovation of service industry there are two main research directions: a definition of innovation ability is relatively broad, each process will be covered in the operation of enterprises such as the production, management and marketing, the main research methods for theoretical discussion and assessment on specific service innovation ability of enterprises when there is poor operability or costly data acquisition; another research direction is the evaluation method of technological innovation simply ported to the service industry, the pertinence is not strong but strong operability. In fact, there is a very close relationship between technological innovation and service innovation, which are not in two directions. On the one hand, the importance of services in product trading is becoming increasingly prominent, while the field of technological innovation is also widening, technological innovation began to customer-oriented development. On the other hand, service innovation is inseparable from the support of technological innovation. Technological innovation provides a means to achieve service innovation. The deepening of technological innovation,

and constantly update the concept of services, service content and methods, organizational forms and service processes. Technological innovation promotes service innovation, service innovation drives technological innovation, and service innovation becomes a new market innovation source.

The boundaries between service innovation and manufacturing innovation are becoming blurred, manufacturing has become more like service, and services have become more like manufacturing. By spending on research and development activities of the United Nations and the OECD patent records can be seen, the service industry has become more and more research and technology intensive, specialized services, some technical knowledge intensive in research intensive and technology innovation can also be regarded as high-tech manufacturing company. The professional services company especially based on technology service enterprises, R&D institutions they have structure technology development and manufacturing enterprises are similar, it is necessary to research and development capabilities into the evaluation index system of the innovation ability.

The innovation of theory reference of existing services, and the combination of science and technology service industry with science and technology service, knowledge intelligence and efficiency characteristics of high externality, this paper argues that the innovation ability of science and technology services to science and technology service enterprises to produce new ideas, and apply it to their service innovation, to increase economic and social benefits a kind of comprehensive ability. In order to be operational and targeted on balance, this paper will measure science and technology service industry from four aspects of input capability, innovation output capacity, resource research and development ability and employee innovation ability innovation ability.

4. Suggestions on Improving the Innovation Ability of Science and Technology Service Industry in Hubei

4.1 Suggestions for the Government

Government agencies as policy makers of the technology services industry innovation activities smoothly plays a vital role, government agencies mainly plays a leading, planning, support and other

aspects of the role in encouraging innovation in science and technology service industry. To continue to mention the innovation ability of Hubei science and technology service industry, we must attach great importance to the important role played by government agencies. Comprehensive evaluation combined with the above service innovation ability in Hubei province science and technology industry, this paper argues that the government should create innovative atmosphere, increase from the public information platform construction and development efforts, focus on fostering new high-end technology services and increase the enterprise R&D investment support and adopt corresponding measures in many aspects to promote the innovation ability of science and technology service industry promotion.

In recent years, the Chinese government has vigorously promote independent innovation, spend a huge amount of manpower, material and financial resources for the construction of innovative city, but on the understanding of the concept of social innovation is generally not deep, a considerable proportion of the enterprises and individuals are considered only in the manufacturing industry to save in innovation in the service industry there is no innovation. In order to enhance the innovation ability of science and technology services, we need to update the old ideas and old ideas, universal recognition and innovation in the service of the important role, and fully aware of the development of the service industry of science and technology innovation. With the "42 dial Jack leveraging effect" innovation ability of science and technology services to improve the service object of development, has a long-term positive external effect, the government should the city development strategy of high technology service industry innovation ability, give full attention.

Secondly, the government should pay special attention to the positive guiding role of public opinion propaganda in promoting the innovation ability of science and technology service industry, and create a social atmosphere of respecting innovation and encouraging innovation. The development of the industry is inseparable from the social environment, a good social innovation environment can stimulate innovation in the technology services industry, and provide favorable conditions. The government can through television, radio, Internet, newspapers and other mass media and various seminars, exhibition and exchange form,

to enhance people's awareness of innovation; at the same time also can establish the "Hubei Innovation Forum", invite domestic and foreign innovation experts innovation knowledge dissemination and guidance, create a "All flowers bloom together., contention of a hundred schools of thought" and "and makes the best possible use of" strong innovation culture atmosphere in the Hubei province.

Finally, the government needs the ideological refinement will support innovation, encourage innovation with practical operational policy and regulations, appoint a special department responsible for the assessment of policy implementation effect, the policy can be truly implemented. Hubei province there are a large number of small and medium-sized science and technology service agencies, this part of the agency due to lack of funds and talent, relying on their own strength is difficult to innovate. Public information service platform can solve the problem of communication between science and technology services, information communication mechanism between the government and the information exchange mechanism, and customers, to effectively integrate the research and development of information resources, to create favorable conditions for the innovation of small and medium-sized technology services; research and development of public platform can provide services to scientific research equipment, research and development technology support, provide a reliable guarantee for the innovation.

Because of the high cost of public information platform and public R & D platform, few private enterprises are willing to get involved. Considering the two platform to assume the public function of the government must, with strong positive externalities, the government of Hubei province should be based on their own for the main building, relying on many colleges and universities in Southern China area the development of science and technology and talent advantages, increase public information platform and public platform construction research and development efforts. At the same time, joint industry associations and scientific and technological services should be involved in the use of various resources to strengthen the construction of two types of platforms, and promote the improvement of innovation capacity of Hubei science and technology services.

For an industry, with a strong ability to innovate is often a small number of enterprises, most companies do not have the ability to innovate and even innovative. In Hubei province science and technology service industry, most of the technology services can only provide the knowledge content is low, low value-added information services, lack of R & D and innovation service platform, the service function is single, the service level is not high, the fierce market competition, low profit rate. This part of the survival of enterprises have difficulties, let alone grow and develop.

In order to improve this part of science and technology service organization's innovation ability and enhance the innovation capacity of the whole industry, the government can focus on cultivating a number of strong innovation ability of new high-end technology services fan effect, the lack of incentives to optimize the allocation of innovation resources, increase investment in innovation, through innovation to improve service, enhance market competitiveness. Through the demonstration effect of these high-end technology service agencies to promote the overall upgrading of Hubei science and technology services innovation capacity.

4.2 Suggestions for Science and Technology Service Enterprises

The improvement of the overall innovation ability of science and technology service industry depends on the improvement of the innovation ability of a single scientific and technological service organization. In order to enhance the service industry of Hubei province science and technology innovation ability, the operators must take corresponding measures from the aspects of system reform, the construction of high-quality innovative talents, strengthen exchanges and cooperation with industry R&D investment and strengthening at home and abroad, to form the innovation mechanism suitable for the actual development of Hubei, continuously improve their service innovation ability. The current development of Hubei Province, most of the technology service is not mature enough, the single service function, service level is not high, innovation ability, from high-end services there is a certain gap, which also caused the fierce competition in the industry. If we want to prevent this competition from becoming a vicious competition, we must improve the innovation ability of science and technology service institutions, while institutional innovation is the driving force to improve the innovation ability of science and technology

service institutions.

On the one hand, science and technology service institutions to change their views, and actively improve their independence, reduce their dependence on government departments, industry associations, etc.. For non independent science and technology service agencies, its business and operating funds are allocated by the higher authorities, there is no survival of the fittest, the lack of innovation power, service levels and service efficiency is often poor. To improve the innovation capacity of this part of the science and technology service agencies, we must improve the independence of their operations, market mechanisms to replace the administrative mechanism to stimulate innovation. On the other hand, science and technology service institutions should actively explore in the enterprise, establish the innovation mechanism of the project, in cooperation with external personnel, and other aspects of the innovation of normalization, benefits, explore a repeatable way to innovation, through the efforts of their own, and constantly improve their own innovation ability further improve the market competitiveness.

The innovation of science and technology service industry is a pioneering and professional work, requiring Hubei provincial science and technology service agencies have a number of high-quality innovative personnel. In recent years, the Hubei provincial government has always attached great importance to the introduction and training of high-end talent, introduced a series of relevant policies and regulations to attract talent and retain talent. But need to pay attention to is that the government's efforts can only play a part of the role, more important is the enterprise innovation talents attention and training.

For Hubei province science and technology service industry, a large number of employees with low academic qualifications, do not have the sense of innovation and innovation. In order to solve this problem, on the one hand, science and technology service institutions should continue to improve and optimize the culture system of their own talent, focus on the introduction and cultivation of high-end innovative talents, such as the signing of the agreement, can take joint training and University way; on the other hand, science and technology service institutions should actively explore the incentive

mechanism of talents, the introduction the high-end talent to retain and make full use of the innovation potential; can take employment incentives, based on combining personnel decision-making power and organization of the security development direction of personal goals and mechanism of innovation talents of science and technology planning is basically the same price incentive to take talent, technology service innovation talent outstanding professional achievements and contributions to the material and spiritual incentive, such as hired, and with the government in recognition of security housing, living allowances and other family members Incentive measures.

5. Conclusions

The overall innovation ability of Hubei province science and technology service industry is stronger, but in the industry level and human resources level are not satisfactory. In order to improve the service industry in Hubei province science and technology innovation ability, and further enhance their own innovative strength, Hubei province local science and technology services, in addition to find gaps in the market competition and methods; should strengthen exchanges and cooperation with domestic and foreign advanced technology services, the innovation of foreign advanced experience and model introduction. You can take the experience of seminars, field trips, both science and technology service organizations jointly run enterprises to absorb foreign outstanding scientific and technological services especially the successful experience of Beijing and Shanghai advanced technology services in terms of innovation. In addition, Hubei province also has the richly endowed by nature geographical advantages, can strengthen international cooperation especially Shenzhen Hong Kong cooperation to enhance the innovation ability of science and technology services, optimize the innovation mode of their own. The enterprise can send personnel to visit, investigate and invite domestic and foreign experts to give lectures in Hubei Province, to participate in international forums and organized an international seminar, face-to-face communication etc. with experts, gradually understand and learn the advanced ideas of domestic and foreign outstanding innovation and technology services, to improve their innovation ability.

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