

The Construction of the Innovation Ecosystem Based on the Unified National Market and the Strategies for Enhancing New-quality Productivity

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ABSTRACT

This paper focuses on the intrinsic connection between the unified big market, innovation ecology and new quality productivity, analyses the opportunities brought by the unified big market for the construction of innovation ecology, and describes how it promotes the flow of innovation factors and stimulates the innovation cooperation of multiple subjects. It also analyses the mechanism of innovation ecology and new productivity, and puts forward the strategy of enhancing new productivity by relying on the unified big market from the aspects of market system improvement, cultivation of innovation subjects, and circulation of innovation factors, with the aim of providing theoretical references for the promotion of high-quality development of the economy.

KEYWORDS

unified big market; innovation ecology; new quality productivity; innovation factors

1 Introduction

In the current era of high - quality economic development, new - quality productivity has emerged as an essential driving force behind industrial upgrading and robust economic growth. New - quality productivity represents an advanced productivity paradigm where innovation takes the lead. It departs from the traditional economic growth trajectory and productivity development route, characterized by high - tech, high - efficiency, and high - quality attributes, all of which are in strict accordance with the new development concept. A well - developed innovation ecosystem is the cornerstone for fostering and advancing new - quality productivity. The innovation ecosystem comprises a rich variety of innovation players. These include vibrant enterprises that are at the forefront of business innovation, research - centric universities and research institutions dedicated to exploring the frontiers of knowledge, along with a comprehensive innovation support system. This support system encompasses financial services that fuel innovation initiatives, policy frameworks that offer protection and incentives, and talent cultivation mechanisms that nurture the next generation of innovators. All these innovation players collaborate and pool resources within a conducive ecological environment. As a result, they continuously generate new technologies, novel products, and innovative business models, thus injecting unceasing momentum into the development of new - quality productivity. The establishment of a unified national market, being a pivotal initiative in constructing a new development pattern, is of immense strategic importance. Crafting a national unified market that is highly efficient, standardized, firmly adheres to the principle of fair competition, and is fully open can effectively promote the free flow of factor resources across a wider expanse. This not only maximizes the efficiency of resource allocation but also minimizes the frictional costs during market transactions. Moreover, it creates a fairer, more orderly, and more rational environment for free - market competition, which is highly beneficial for the growth and progress of enterprises. For instance, in the realm of technology factors, within a unified market environment, advanced AI algorithms developed in the eastern coastal areas can be swiftly transferred to relevant enterprises in the central and western regions. This transfer helps these enterprises optimize their production processes and drive product innovation. Such free movement of factors provides vast space and a solid foundation for optimizing the innovation ecosystem. It enables the rational distribution of innovation resources on a broader scale and stimulates the enthusiasm and creativity of all types of innovation entities. Conducting in - depth research on building the innovation ecosystem based on the unified market and formulating strategies to enhance new - quality productivity is of profound theoretical and practical significance. This research is crucial for fully realizing the economic advantages of the unified market, invigorating innovation vitality, and propelling high - quality economic development.

2 Opportunities brought by the unified big market for the construction of innovation ecology

2.1 Promote the free flow of innovation factors

The construction of the national unified big market promotes the free transfer of talent, capital, technology, data and other innovation factors across regions, realises the efficient allocation and high degree of agglomeration of all kinds of factors, and gives play to the advantages of the mega-market. In the past, due to regional policy differences and market

blockades, it was difficult to achieve optimal allocation of innovation factors, which limited the development of innovation activities. Under the unified market environment, talents can flow to regions and enterprises with more innovative vitality and development potential according to their own development needs and innovation opportunities; capital can quickly gather in areas with high innovation returns, providing sufficient financial support for innovation projects; and technology and data can be efficiently shared and applied among different entities, accelerating the transformation and diffusion of scientific and technological achievements.

2.2 Incentivise the cooperation of multiple innovation subjects

The unified big market has broadened the market boundary and attracted more innovation subjects to participate in market competition and cooperation. Enterprises, colleges and universities, scientific research institutions, etc. can more easily find partners in the unified market to achieve resource sharing and complementary advantages. Large enterprises, with capital and market advantages, combine with the cutting-edge research results of universities and research institutions to accelerate the commercialisation of technological innovations; SMEs can rely on the innovation ecology of the unified market, collaborate with upstream and downstream enterprises to innovate, and focus on technological breakthroughs in niche areas, forming a good situation of integrated innovation among large, medium and small enterprises. This kind of innovation cooperation among multiple subjects not only enriches the source of innovation resources, but also generates more innovation results through the collision of different thinking and technologies.

2.3 Optimising the layout of innovation infrastructure

The construction of the unified big market has promoted the integrated planning and rational layout of innovation infrastructure. Innovation infrastructure is the hardware support of the innovation ecology, including laboratories, scientific research instruments and equipment, and scientific and technological information platforms. Under the framework of the unified big market, duplication of innovation infrastructure construction in various regions can be avoided and efficient use of resources can be achieved. Through the establishment of a national unified innovation infrastructure sharing platform, the utilisation rate of scientific research instruments and equipment can be improved, and the R&D costs of innovative entities can be reduced; at the same time, the interconnection and interoperability of inter-regional innovation infrastructures can be strengthened to promote the sharing and collaborative utilisation of innovation resources on a wider scale, and to enhance the overall innovation capacity.

3 Mechanism of innovation ecology on new quality productivity

3.1 Stimulate innovation vigour and give rise to new technologies and industries

The interaction of diversified innovation subjects and rich innovation resources in the innovation ecology has formed a good innovation atmosphere and stimulated innovation vitality. In order to take the advantage in the market competition, enterprises constantly increase R&D investment and carry out technological innovation; researchers from universities and research institutions, in cooperation with enterprises, are able to get in touch with the actual production demand, and better transform scientific research results into productivity. This innovative vigour has led to the continuous emergence of new technologies and promoted the formation and development of new industries, providing technical support and industrial carriers for the enhancement of new quality productivity. Taking the artificial intelligence industry as an example, driven by the innovation ecosystem, scientific research institutions have made breakthroughs in basic research areas such as algorithms and machine learning, and enterprises have applied these technologies to areas such as smart security, smart home, and smart medical care, giving rise to a series of new industries. Baidu, Alibaba and other enterprises have continuously optimised AI algorithms and developed intelligent products with independent intellectual property rights through cooperation with universities, which has promoted the rapid development of the AI industry and raised the level of new quality productivity.

3.2 Promote the agglomeration of innovation factors and enhance the efficiency of resource allocation

The innovation ecology can attract all kinds of innovation factors to the advantageous regions and innovation main body agglomeration, forming the scale effect of innovation factors. At the same time, through the role of the market mechanism, innovation factors can achieve optimal allocation among different subjects and industries, and improve the efficiency of resource utilisation. The agglomeration and efficient allocation of innovation factors enable innovation activities to obtain sufficient resource support, improve the probability of innovation success, and then promote the development of new quality productivity. For example, Shenzhen, as an innovation highland in China, has attracted a

large number of innovation factors such as talents, capital and technology with its good innovation ecology. Huawei, Tencent and other enterprises have attracted the world's top scientific and technological talents and a large amount of venture capital by virtue of their own innovative strength and market influence. These innovation elements have achieved efficient allocation within the enterprises, promoting their technological innovation and industrial upgrading in areas such as 5G communications and the Internet, and enhancing the level of new quality productivity in Shenzhen.

3.3 Improve the innovation service system and reduce innovation costs and risks

The innovation ecology contains a perfect innovation service system, such as science and technology finance, intellectual property protection, technology transfer intermediaries and other service organisations. These service organisations can provide all-round service support for innovation subjects and reduce costs and risks in the innovation process. Science and technology financial institutions provide financial support for innovation projects, easing the financial pressure on innovation subjects; intellectual property protection institutions provide legal protection for innovation achievements, stimulating the innovation enthusiasm of innovation subjects; technology transfer intermediaries promote the transfer and transformation of scientific and technological achievements, and improve the efficiency of the use of innovation resources. The improvement of the innovation service system provides a good guarantee for the development of new quality productivity. Taking Zhongguancun as an example, Zhongguancun has a large number of science and technology financial institutions, such as venture capital firms and science and technology banks, which provide diversified financing channels for innovative and entrepreneurial enterprises. At the same time, Zhongguancun is also home to a large number of technology transfer intermediaries, such as Sinotech, which promote the transfer and transformation of scientific and technological achievements among universities, research institutes and enterprises, reduce the costs and risks of innovation, and promote the development of new-quality productivity.

4 Strategies to enhance new quality productivity based on the unified big market

4.1 Improve the unified market system and create a favourable environment for innovation

The unified market system is the cornerstone of innovation. To build a unified market access system, we need to eliminate unreasonable preconditions and hidden barriers. Currently, some industries have complex entry thresholds, and set limits on enterprise size and ownership, resulting in innovative small enterprises being blocked. For example, in the field of emerging biopharmaceutical R & D, some places require enterprises to have large-scale production sites, ignoring their core R & D capabilities, making it difficult for many start-ups focusing on innovative drug research and development to enter the field. Access standards should be unified, based on the level of technological innovation, R & D team strength as the basis for measurement, to break the monopoly of the industry and local protection, so that all types of innovation subjects compete on an equal footing, stimulate the vitality of market innovation.

The fair competition review system is the guarantee of innovation order. In reality, some market players seek short-term benefits and use unfair competition to hinder innovation. Large enterprises often take advantage of their dominant market position to suppress innovative small and medium-sized enterprises with predatory pricing and malicious lawsuits, and restrict the promotion of new technologies. Relevant departments should set up professional review bodies to regularly review market competition behaviour, severely punish unfair competition, safeguard the rights and interests of innovators, and create a fair market environment.

The social credit system injects integrity into the innovation ecology. Credit files of innovation subjects are established to record the honest performance of enterprises, universities and research institutions. For honest innovation subjects, they will be tilted in project declaration, financial support and tax incentives, such as giving priority to recommending compliant enterprises to participate in major national research projects. For dishonest subjects, public exposure and joint disciplinary action will be taken to restrict their participation in government project bidding and obtaining financial support, so as to create an atmosphere of honesty and innovation.

4.2 Cultivate and grow the main body of innovation and enhance innovation capacity

Enterprises, colleges and universities, and research institutions are the main force of innovation. Encourage enterprises to increase R&D investment, the government can be guided by tax breaks and financial subsidies. For example, tax incentives are given to enterprises that reach the standard ratio of R&D investment to reduce the cost of innovation. Enterprises should build their own innovation platforms, like Huawei, which continues to launch cutting-edge technologies and products thanks to its high R&D investment and global R&D centres.

Universities and research institutes are responsible for basic and cutting-edge research. The state needs to increase funding for research and provide stable support for forward-looking projects. Strengthen cooperation between industry,

academia and research institutes, set up docking platforms, and promote the transformation of achievements. For example, Tsinghua University cooperates with enterprises to overcome AI technical problems, with universities producing results and enterprises providing application scenarios and funding.

Science and technology-based small and medium-sized enterprises (SMEs) are the driving force of innovation and need to be vigorously cultivated. The government should provide policy support, simplify administrative approvals, and give rental subsidies. Set up special funds, provide low-interest loans or equity investment to alleviate financing problems, and set up a platform for technical consulting and talent training to stimulate their innovation vitality.

4.3 Smooth the circulation channels of innovation factors and improve the efficiency of factor allocation

Transport and communication infrastructure is the basis for the circulation of innovation factors. On transport, promote the construction of high-speed rail and high-speed, shorten the time and space distance of cities, and facilitate the flow of talents and materials, such as the Yangtze River Delta high-speed rail network to help Shanghai financial talents serve enterprises in Jiangsu and Zhejiang. On communications, accelerate 5G coverage to guarantee the circulation of technology and data and promote remote research collaboration.

Establishing a unified national factor market is key. Improve the pricing and trading rules for talent, capital, technology, and data, and solve the problems of price distortion and unregulated transactions. For example, the talent market should establish a scientific pricing model, set salaries according to skills and market demand, and promote the reasonable flow of talents; the technology and data market should clarify property rights and transaction processes, protect rights and interests, and promote the optimal allocation of factors.

Build a sharing platform for innovation factors and integrate resources and information. A platform for sharing scientific research instruments has been set up so that researchers can make cross-regional appointments for use and avoid repeated purchases. Build a technology trading platform to realise rapid docking of technology supply and demand and improve the efficiency of factor utilisation.

4.4 Strengthen regional innovation cooperation and achieve synergistic development

Regional innovation cooperation can integrate resources and enhance the overall innovation capacity. Regional cooperation mechanisms are established to break down administrative barriers and promote resource sharing. For example, Beijing, Tianjin and Hebei have collaborated to formulate development plans and coordinate industrial layout through joint innovation meetings.

Encourage cooperation between developed and less developed regions. Developed regions transfer labour-intensive and technology-intensive industries, export mature technologies and drive the development of less developed regions.

Strengthen synergy within city clusters. In the Guangdong-Hong Kong-Macao Greater Bay Area, for example, Hong Kong is strong in finance and basic research, Shenzhen is prominent in science and technology innovation, and Guangzhou is a leader in commerce and logistics. Through joint innovation centres and industrial demonstration zones, the Greater Bay Area integrates its strengths to create a globally competitive innovative city cluster and enhance regional innovation capacity and new quality productivity.

5 Conclusion

In the context of economic development in the new era, constructing a national unified large market is of utmost significance. It not only creates extensive space but also lays a solid foundation for building an innovation ecology. The elevation of the construction level of the national unified large market can, to a certain degree, break down regional innovation barriers, mitigate the misallocation of innovation resources in the market, boost the flow of innovation factors, and offer a rich material and information base for innovation activities. The optimization of the innovation ecology can contribute to enhancing the new quality of productivity. A vibrant and collaborative innovation ecology can promote the in - depth integration of industry, academia, and research, stimulate the enthusiasm and creativity of innovation entities, and drive the emergence of new technologies, new industries, and new business models, injecting impetus into the development of the new - quality productivity. Thus, it is essential to fully leverage the advantages of the unified market, improve the unified market system, remove institutional and mechanical barriers to fair competition, and create a fair and transparent institutional environment. We need to cultivate and develop innovation entities, provide targeted support to small and medium-sized science and technology enterprises as well as industry leaders to stimulate innovation vitality, unblock the circulation of innovation factors, and facilitate the free and efficient flow of elements like talent, capital, and technology. Additionally, we should strengthen regional innovation cooperation, realize complementary advantages, and generate an innovation synergy to promote the high - quality development of China's economy. In the future, facing the

ever - changing domestic and international economic situations, it is necessary to further intensify research on the relationships among the unified large market, the innovation ecology, and the new - quality productive forces, and continuously explore new paths and methods for innovation - led development, so as to form a close and beneficial interactive cycle and open up new prospects for the high - quality development of China's economy.

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