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Multidimensional Impacts of New Quality Productive Forces on the Platform Economy and a Review of Research Progress

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Abstract. In the digital environment, new quality productivity and platform economy have gradually become the two important forces to promote the high-quality development of the economy. New quality productivity is a new type of productivity empowered by innovation technology and new production factors, which has a deep impact on the underlying logic of economic operation. Platform economy takes the Internet platform and data as the core production factor to establish a connection with digital ecological environment, it has strong ability to integrate resources and create value. The two often promote and develop together, new quality productivity injects new vitality into the development of platform economy. Platform economy has become an important practice scenario of new quality productivity. Deep exploration of the relationship between the two is of great significance to grasp the new direction of economic development and promote the transformation and development of industry. Therefore, it should attach great importance to the development of platform economy in the future and deeply connect it with the constantly improving and changing new quality productivity. It can rely on the digital economy foundation to develop it, lay a solid foundation for the high-quality development of China`s economy and provide power for the development of China.

Keywords: Platform economy, new quality productivity, digital economy, high-quality development of economy

1. Introduction

Technology innovation is the primary driving force of development of productivity. The history of constantly innovative technology development of productivity, development of productivity is the key road of technology innovation. With the economy of China transferred from a high-speed growth stage to a high-quality development stage, current development level of productivity cannot meet people's needs of a better life. creation and sharing data mode, reduce transaction cost, breaking the contradiction between supply and demand markets for high-quality urban development factors, limited space for economic activities and the balance of fairness and efficiency [1]. Meanwhile, facing the new round of technological revolution and industrial transformation, fierce competition among countries, the historic intersection of transformation of mode of economic development, accurately grasp the connotation and characteristics of new quality productivity, clarify the relationship between new quality productivity, traditional productivity, production

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relations and high-quality development, accelerate the formation of new quality productivity, seize the opportunity and win the initiative in development [2]. In the past Chinese economic practice, rapid development based on low-cost labor, large foreign investment and exports have promoted the rapid development of Chinese economy in a short period of time. Accelerating the development of digital economy is the key point for China to grasp the new round of technological and industrial revolutions. At the same time, China is currently confronted with huge challenges such as Lewis trap and aging trap, leading to decline of demographic dividend. From the dialectical relationship between productivity and production relations, with the transformation of mode of economic development, green economy as a new model, in terms of technology corresponds to the traditional open material flow model of, is a closed-loop material flow model [3]. To achieve sustainable development, it is necessary to reconstitute a new institutional framework and take the natural ecological environment as a new production factor into the operation of social market economy through new management [4]. Therefore, the new quality productivity is a profound transformation and transcendence of traditional economic growth model. The new quality productivity is not only an important theoretical issue, but also an important practical issue which relates to the high-quality development of Chinese economy. It requires us to do systematic learning and discussion based on the existing theories and experience gained from practice, deepen the study of temporal evolution, spatial distribution and economic effects, clarify the role and operating mechanism of new quality productivity in promoting high-quality development of Chinese economy, and at the same time, healthy and sustainable development.

2. Definition and constituent elements of new quality productivity

New quality productivity is born out of new generation information technology. It is artificial intelligence, big data, cloud computing, blockchain, etc. It integrates advanced technology such as biotechnology and new energy into production tools, production process, digitization, etc. Data as new production factors are integrated into traditional production factors, which greatly improves the allocation efficiency of production factors. On the other hand, new quality productivity promotes production organization to be networked, collaborative and flexible, stimulate innovation vitality, drive deep adjustment of industrial structure and high quality economic development, and is an innovative, disruptive and high growth form of productivity.

Development Situation of Platform Economy Based on the above analysis, platform economy can be understood as building a bridge between bilateral or multilateral market players based on the Internet platform. Data appears in the whole process of platform economy, starting from collecting and analyzing user behavior data, matching supply and demand accurately and optimizing platform operation strategies. By utilizing network effects and scale effects, the platform attracts a large number of users and merchants to settle on the platform, reducing transaction costs and improving market efficiency. Its openness, innovation and synergy have generated rich business models such as sharing economy, live streaming e-commerce, gig economy, etc., reshaping the industrial structure and promoting the innovative development of economic models. A series of economic activities conducted by the platform are impossible without the support of the platform, which realizes the coordinated unity of people and people, people and things and things and things under dispersed conditions. At present, the types of platforms are rich and the fields are wide. Under the new development concept, it not only injects new vitality into the traditional economy, but also has strong value in building new quality productivity [5].

The most prominent feature of bilateral market-oriented platform economy is its bilateral marketability, which is also called bilateral networking. It refers to two groups of participants

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trading on the platform. Compared with traditional one-sided market, these two have formed different market edges in the transaction. These two are closely connected to the platform but independent of each other. The returns of the two market edges are related. Cross network externalities are another important characteristic that makes platform economy different from traditional economy [6]. The asymmetric price structure of platform economy is the extension of bilateral marketability and cross network characteristics of platform economy, and the inevitable result of the effect of two kinds of characteristics [7].

3. Impact of new quality productivity on platform economy

3.1. Technological innovation based on new quality productivity

According to the new quality productivity of platform economy operation enhancement and rationalization of resource allocation, the platform applies the analysis result of big data and the artificial intelligence algorithm to get the deep understanding of the information of supply and demand in the market. The formation process of productivity development from platform economy to new quality productivity is an orderly flow of data production factors, fair competition market order providing innovative ecology and strong government regulatory external environment [8]. As shown in the example of e-commerce platform, it can get the accurate information of consumers' preference, purchase times, the geographical area distribution and other data, and then reasonably match the product of merchant, and realize the accurate promotion of products, reduce the accumulation of inventory and waste of goods, and improve the allocation efficiency of social resources in all links of supply chain.

Use Blockchain technology to reduce the transaction cost and build the reliable environment of trade in platform economy. Decentralized distributed ledger can make the transaction information unmodifiable, reduce the risk of trust, minimize the third party intermediary, and reduce the transaction cost. Smart contract can execute the terms of transaction automatically, improve the efficiency of transaction, reduce the man's manual execution and cause dispute, and advance the innovation form of platform economy The new form of productivity and business have brought new platform model like shared mobility, online office and remote health.

3.2. Upgrade of platform economy industry

Expanding the boundary of platform economy with artificial intelligence and IoT technology, the birth of smart platform, connection of various smart home devices, remote control and scene combination, and expand the service field of platform economy from platform to home scene; The industrial Internet platform uses big data and industrial software to break through the information island in the enterprise and upstream and downstream of the industrial chain, realize the intelligent upgrading of manufacturing, and extend the platform economy to industrial production; The extension of platform economy scale Enhancing user stickiness platform takes new quality productivity to improve service experience. Based on the establishment of user profile and behavior analysis, the content platform pushes the article and video that meet user interests accurately, improves the user browsing time and activity; Online education platform provides personalized learning plan for students, enhance learning effect, enhance the dependence of users on the platform, attract more users to join and expand user base Assisting internationalization and expansion of cross-border e-commerce platform, use big data to analyze the global market demand, optimize the cross-border logistics delivery by logistics technology, achieve multilingual communication by

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intelligent customer service, reduce international trade barrier, help domestic merchant explore overseas market, attract global consumers, promote the cross-border expansion of platform economy, achieve global scale expansion, strengthen the competitive advantage of platform economy, enhance the technical strength of platform, new quality productivity to strengthen the competitive advantage of platform, and promote platform's continuous technological innovation. E-commerce platform constantly improve the search algorithm and recommendation system to help user shopping more convenient and accurate; Social platform use artificial intelligence to optimize the content review and interactive function, improve user experience and platform security. Only by technological leadership can the platform win in the competition and attract more users and merchant to settle in. Platform ecosystem advantage platform takes new quality productivity to build open ecosystem, attract third party developer and service provider to move in. Similar to the mobile application store platform, it can attract a large number of application and enrich the service scene of user; The industrial Internet platform cooperates with upstream and downstream enterprise and scientific research institution to create collaborative innovation, form multi-dimensional competitive advantages in technology, resources, market, and then consolidate the boss position of platform in the same industry.

4. Challenges and countermeasures on promoting the development of platform economy with new quality productivity

4.1. Main challenges

Under the new quality productivity of data security and privacy protection, the volume of platform data has surged, and the risks of data leakage and abuse have increased. Hacker attacks, unauthorized platform operations by internal personnel, and other threats to user privacy and corporate trade secrets impact the platform's image and user trust.

Technological innovation investment and talent shortage platforms need to invest large sums of money in developing new algorithms, hardware facilities, and other advanced technologies to keep up with new quality productivity technological innovation, but some platforms lack financial strength. At the same time, there is a shortage of composite talents who master advanced technologies, which affects the innovation and application of platform technology. Regulatory policies lag behind: The rapid development of new forms and models of platform economy driven by new quality productivity innovation makes it difficult for current laws, regulations, and regulatory policies to adapt in a timely manner. There are regulatory policy blanks in recognizing the rights and responsibilities of the sharing economy and protecting the labor rights of the gig economy, which easily cause market chaos.

4.2. Application countermeasure

As an important part of the current development of economy and society, the platform economy should better master the quality and characteristics of the new quality productivity, handle the relationship between the past and future of the platform economy, and promote the high-quality development of the platform economy and platform enterprises with the goal of pursuing progressiveness so as not to be abandoned by the new stage of human development to be shaped by the new quality productivity [9].

Improving data security governance system platform and establishing a complete data security management system, using encryption technology, access control, data anonymization and other

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methods to ensure data security. Strengthening user privacy protection education, clarifying data collection and usage rules, and obtaining user authorization. Regulatory authorities will strengthen data security supervision and law enforcement, severely punish violators, increase investment in technological innovation and talent cultivation, and expand financing channels for platforms. The government will provide policy support such as innovation subsidies and tax preferences, and encourage platforms to increase investment in technology research and development. Universities, research institutions, and platform enterprises collaborate to conduct customized talent training projects and strengthen the connection between industry, academia, and research. At the same time, talent attraction policies will be introduced to attract high-end technical talents from abroad. Optimizing regulatory policies and coordinating governance. Regulatory departments should strengthen their research on new trends in the platform economy, timely revise and improve laws and regulations, and clarify regulatory rules for new business formats. Establishing a collaborative governance mechanism among multiple parties such as government, platforms, industry associations, and consumers, leveraging the supervisory role of all parties, and creating a harmonious and orderly development environment for the platform economy [10].

5. Conclusion

As a new engine of economic development, new quality productivity promotes the platform economy in all respects. The new quality productivity has achieved remarkable achievements in enhancing the efficiency of operation, driving business innovation, promoting scale expansion and enhancing the competitive power. Confronting with the challenges of data security, technological innovation and regulatory adaptation, improving data security governance, enhancing innovation investment and cultivating talents and optimizing regulatory policies can effectively solve the above problems. It is believed that the new quality productivity and platform economy will integrate more deeply in the future. The two will continue to explore new spaces for economic development, and provide strong support for building a modern economic system and promoting high-quality economic development, and have become an important engine driving the global economic transformation.

First of all, it should improve the quality and efficiency of innovation factor supply and optimize the supply structure of various factors, especially talents and technology. It must adhere to the policy of cultivating internally and introducing externally and reform the higher education system. It should strengthen the training and introduction of high skilled and innovative talents. It should enhance the high degree of integration between talents and industrial development. On the other hand, it should deepen the market-oriented reform of factors, ensure the flow of factor innovation in the market and ensure the effective allocation of factors technology and data in the industrial chain and between industries and regions. At the same time, build a complete industrial chain, strengthen cluster effects and achieve vertical integration and horizontal expansion within the industrial chain. Finally, it should strengthen policy guarantees and incentive mechanisms, improve intellectual property protection and tax incentives, encourage enterprises to invest more in R&D and participate in the construction of international standards and enhance the core competitiveness of China’s industrial chain.

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