

Research on the Integration and Development of Digital Economy and Real Economy

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Abstract. This article examines the fusion and advancement of the digital economy and the tangible economy by juxtaposing theoretical frameworks with practical applications. To begin with, this article aims to elucidate the concept and interplay between the virtual economy and the tangible economy, while examining the ramifications of the virtual economy on the tangible economy and vice versa. Furthermore, an analysis is conducted on various contributing factors such as technological advancements, economic conditions, policy frameworks, and societal interactions that influence the amalgamation and progress of the virtual and tangible economies. Additionally, the article delves into the pathways for integrated development between the virtual and tangible economies. These pathways encompass areas such as policy support and innovation initiatives, technological enhancements and industrial metamorphosis, talent cultivation and market requirements, infrastructure development and resource sharing, among others. Ultimately, policy recommendations are proposed in order to facilitate the harmonious development of the virtual economy and the tangible economy. These recommendations aim to offer theoretical guidelines and practical insights for the integrated development of China's virtual economy and tangible economy.

Keywords: Digital Economy; Real Economy; Integrated Development.

1. Introduction

As information technology continues to evolve at a rapid pace, the digital economy has emerged as a vibrant force driving global economic growth, increasingly blending with the traditional economy. This integration and development of the digital economy alongside the real economy not only infuses traditional industries with newfound vitality but also offers fresh momentum for economic expansion. In China, significant strides have been taken towards the integration and growth of the digital and real economies. However, concurrently, a variety of obstacles are being faced.

2. Understanding the Concept and Interplay of the Digital Economy and Real Economy

2.1. Definition and Characteristics of Digital Economy

The digital economy, being at the forefront of the technological revolution and industrial transformation, symbolizes a novel economic structure and industry model driven by data, underpinned by cutting-edge information technologies such as the internet, IoT, big data, cloud computing, and artificial intelligence. The digital economy exhibits the following characteristics: it relies heavily on technological innovation, continuously driving industrial transformation; it emphasizes the value exploration and utilization of data to enhance resource allocation efficiency; it promotes cross-border integration, dismantling conventional industry boundaries and fostering emerging formats; and it underscores personalized, tailored, and intelligent services to elevate the user experience [1].

2.2. Definition and Characteristics of the Real Economy

The real economy, as the cornerstone of the national economy, encompasses the creation of economic value through material production and the exchange of goods and services. The real economy exhibits the following characteristics: it primarily involves the production and circulation of tangible and physical products and services, such as agriculture, industry, and construction; its development relies



on essential production factors such as land, labor, capital, and technology, with its growth being closely tied to technological advancements and improvements in labor quality; the real economy is subject to market demand and supply, necessitating adherence to value laws and principles of competition; furthermore, the real economy displays distinct regional characteristics, with its development influenced by factors such as regional resource endowments, infrastructure, and policy environment.

2.3. The Relationship between Digital Economy and Real Economy

2.3.1. The Impact of the Digital Economy on the Real Economy

The influence of the digital economy on the real economy is significant and far-reaching. Firstly, the digital economy has profoundly revolutionized conventional industries. By harnessing advanced information technologies like the Internet, big data, and artificial intelligence, traditional sectors have achieved enhancements in production methods, business models, and operational processes. This has led to improved efficiency and product quality. For instance, the introduction of intelligent manufacturing, agriculture, and logistics has injected renewed vigor into established industries. Secondly, the digital economy has propelled the growth of emerging sectors. Through the innovative application of digital technologies, emerging industries like e-commerce, online education, fintech, and the sharing economy have swiftly emerged and secured prominent positions in the market. The digital economy presents vast possibilities for the growth of emerging sectors and enables the enhancement and upgrading of industrial frameworks [2].

2.3.2. The Support of the Real Economy for the Digital Economy

The real economy plays an equally crucial role in the digital economy as it provides a strong foundation for the establishment of digital infrastructure. For instance, the development of digital infrastructure like 5G networks, data centers, and IoT heavily depends on the backing of the real economy. The expansion needs of the real economy have spurred the advancement of digital infrastructure and established a conducive environment for the growth of the digital economy. The real economy has created a demand for innovation in digital technology. The challenges and demands in production, management, sales, and other areas of the real economy have stimulated innovation and advancement in digital technology. The innovation needs of the real economy serve as a continuous driving force for the sustainable progress of the digital economy.

3. Analysis of Factors Influencing the Integration and Development of Digital Economy and Real Economy

3.1. Technical Factors

Technical factors are pivotal in the integration and progression of the digital and real economies. technological advancement and innovation serve as crucial backing for the convergence and growth of these two sectors. for example, the widespread adoption of cutting-edge information technology like 5G communication, artificial intelligence, big data, cloud computing, etc., serves as a technological foundation for the deep integration of the digital economy and the real economy. Moreover, technological advancements have also given rise to various emerging industries, such as online commerce, financial technology, and the sharing economy, which further facilitate the integration of the digital economy and the real economy. Nevertheless, the rapid iteration and evolution of technology also bring challenges to this integration and development, such as technological security and privacy protection.

3.2. Economic Factors

Economic factors have a significant impact on the integration and expansion of the digital and real economies. The degree of economic advancement is a fundamental aspect that decides the degree to which these two economies can merge. A higher level of economic development provides a more

mature environment for the integration and development of both sectors. Furthermore, economic factors such as the market environment, consumer demand, and investment climate also have a significant impact on the integration and development of the digital economy and the real economy. Favorable market environments and robust consumer demand can incentivize the convergence and growth of these sectors, while a strengthened investment climate can promote deeper integration between the digital and real economies. Nonetheless, the intricacy of economic factors also poses challenges to this integration and development, including heightened market competition and the requirement for economic reorganization.[3]

3.3. Policy Factors

The government assumes a vital role in directing and propelling the convergence and growth of the digital and real economies. By devising pertinent policies and regulations, the government can foster the integration and development of these two sectors. For instance, the government can incentivize the integration and development of the digital economy and the real economy through measures like tax breaks, subsidies, and government procurement. Furthermore, the government can ensure the integration and development of these sectors by enacting laws and regulations related to data security and privacy protection. Nonetheless, the intricacy of policy factors also poses challenges to the convergence and growth of the digital and real economies, including inadequate policy execution and a mismatch between policy creation and market needs.

3.4. Social Factors

Social factors, encompassing cultural norms, social trust, and societal conditions, have a profound impact on the convergence and growth of the digital and real economies. Cultural and social factors can sculpt the values and behaviors associated with the integration and development of these two sectors. Social trust also plays a substantial role in influencing collaboration and willingness to participate in the convergence and development of the digital and real economies. Furthermore, societal conditions like market order and competitive environment can affect the integration and development of these sectors. Nonetheless, the complexity of social factors also creates numerous challenges for the integration and development of the digital economy and the real economy, including the necessity for a change in social beliefs and the development of social trust.

4. Exploring the Path of Integration and Development of Digital Economy and Real Economy

4.1. Policy Support and Innovation Drive

The government should create a supportive policy environment to facilitate the integration of innovation, by implementing a range of policies that promote the convergence and growth of the digital economy and the real economy. For instance, the government can enhance financial support for the integration of these sectors, including offering tax incentives, subsidies, and research and development funding, in order to reduce the costs of innovation for businesses and boost their enthusiasm for innovation. Moreover, the government can provide guidance to businesses to increase their investment in research and development, and enhance the technological capabilities of the digital economy and the real economy. Concurrently, the government should encourage collaborations among enterprises, universities, research institutions, and others, to collectively advance the integration and innovation of these sectors.

Simultaneously, businesses, as the primary catalysts of innovation, must fully exploit their inventive potential and capitalize on prospects for merging and advancing the digital economy and the real economy. Enterprises can bolster their competitive edge in these domains by harnessing technological breakthroughs, transformative managerial practices, and inventive business models. For instance, companies can escalate their allocations towards research and development, forge novel digital solutions, and augment productivity. Furthermore, enterprises can revolutionize their business

frameworks and extend their market penetration via partnerships with internet enterprises, financial establishments, and other entities.

4.2. Technological Upgrading and Industrial Transformation

Regarding technological enhancement, the widespread implementation of next-generation information technology lays a technological basis for the integration and growth of the digital and real economies. For instance, the deployment of cutting-edge technologies like 5G communication technology, AI, big data, and cloud computing offers technical backing for the convergence and development of the digital economy and the real economy. Companies should grasp the opportunities provided by these technologies, increase investments in technological research and development, elevate the application level, and drive industrial upgrading[4].

In terms of industrial transformation, the integration of the digital and real economies has generated many emerging sectors, including e-commerce, financial technology, and the sharing economy. The growth of these industries has fostered the integration of the digital and real economies. Companies should grasp the opportunities presented by these emerging industries, carry out industrial transformation, and achieve industrial upgrading. Moreover, companies should also focus on the digital transformation of traditional industries, and achieve the upgrading of traditional industries through technological, management, business model innovation, and other methods.

4.3. Talent Cultivation and Market Demand

In regards to talent development, enterprises, governments, and society need to collaborate in nurturing a cadre of inventive and pragmatic professionals, thereby providing a skilled workforce to bolster the integration and growth of the digital economy and the real economy. For instance, businesses can enhance their partnerships with universities, research institutions, and other entities to jointly undertake talent training initiatives aimed at elevating the caliber of professionals. Likewise, governments can augment financial support for talent development, establish scholarships and grants, and offer incentives to exceptional individuals. Society at large can elevate its commitment to talent cultivation and foster a conducive social environment for the growth of skilled individuals.

With regard to market demand, the integration and advancement of the digital economy and the real economy must be closely aligned with prevailing market needs to cater to diverse and personalized consumer preferences. For instance, companies can bolster their market research efforts to understand consumer demands and craft corresponding product and service strategies. Governments can strengthen market oversight of the convergence and growth of the digital economy and the real economy, safeguard consumer rights, and uphold market integrity. Society can enhance its role in shaping public opinion on the integration and development of these sectors, while fostering a social milieu that promotes market development.

4.4. Infrastructure Construction and Resource Sharing

In terms of infrastructure development, the government and enterprises should intensify their support for the integration and advancement of the digital economy and the real economy through increased financial and policy backing. For instance, the government can establish dedicated funds to foster technological research and facilitate industrial transformation for the integrated development of these sectors. Enterprises can collaborate more closely with governments, research institutions, and other stakeholders to collectively drive the construction of scientific and technological innovation infrastructure, thereby providing robust support for enterprise innovation.

Regarding resource sharing, the integration and growth of the digital economy and the real economy should leverage diverse resources and enhance resource utilization efficiency. For example, enterprises can strengthen their collaborations with governments, research institutions, and other enterprises to jointly undertake technological research and industrial transformation, facilitating resource sharing. The government can enhance the allocation of resources for the integration and

advancement of these sectors, thereby improving resource utilization efficiency. Society can exert stronger influence in shaping public opinion on the integration and development of the digital economy and the real economy, fostering a social environment that encourages resource sharing.

5. Policy Recommendations for the Integration and Development of the Digital Economy and the Real Economy

To promote the integration and growth of the digital economy and the traditional economy, it is essential to enhance the policy framework and strengthen high-level planning. The government needs to establish a series of targeted measures to facilitate the integration and advancement of the digital and traditional economies. Firstly, the government should create tax policies that foster the integration and growth of both sectors. This could involve offering tax incentives to digital economy businesses and tax reductions for traditional businesses undergoing digital transformation. Secondly, the government should implement fiscal policies that support the integration and growth of the digital economy and the traditional economy. This may include establishing dedicated funds to facilitate their convergence and growth, as well as providing financial subsidies to companies for technological research and industrial transformation. Moreover, the government should also develop industrial policies that encourage collaboration between digital economy companies and traditional enterprises, as well as supporting joint research and development efforts between them.

5.1. Improve Policy System and Strengthen Top-level Design

5.2. Optimize Industrial Layout and Promote Industrial Structure Adjustment

Optimizing industrial layout and promoting industrial structure adjustment are important ways to promote the integration and development of the digital economy and the real economy. The government should formulate targeted industrial policies based on the national development strategy and regional development characteristics, and guide the rational layout of industries. Encourage digital economy enterprises to cooperate with traditional enterprises, promote the digital transformation of traditional industries, and achieve industrial structure adjustment. The government should increase its support for emerging industries, such as artificial intelligence, big data, cloud computing, etc., to cultivate new economic growth points. In addition, the government should strengthen the transformation and upgrading of traditional industries, and guide their development towards high-end and intelligent directions.

5.3. Strengthen Technological Innovation and Enhance Core Competitiveness

Boosting technological innovation and enhancing core competitiveness is a crucial approach to drive the integration and growth of the digital and real economies. The government and businesses should collaborate to augment investments in technological research and development, and enhance the technological level of the integration and growth of the digital and real economies. The government should devise a series of policies, such as tax incentives, subsidies, R&D funding support, etc., to reduce the innovation costs of enterprises and enhance their innovation drive. Companies should seize the opportunities presented by the integration and growth of the digital and real economies, increase investments in technological research and development, and improve their competitiveness in the integration and growth of the digital and real economies. Moreover, the government and businesses should jointly reinforce the technological innovation infrastructure for the integration and growth of the digital and real economies, providing strong backing for technological innovation.

6. Conclusion

In conclusion, the integration and growth of the digital and real economies is a complex and protracted process that necessitates the combined efforts of the government, businesses, and all sectors of society. This article offers a series of policy suggestions from the perspectives of policy backing and

innovation drive, technological enhancement and industrial transformation, talent development and market demand, infrastructure building and resource sharing, to provide valuable guidance for the integrated development of the digital and real economies. In the future, with the advancement of technology and the growth of society, the integration of the digital and real economies will exhibit a more prosperous, stable, and sustainable development trend, injecting new vigor into China's economic and social development.

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