

The Development of Digital Economy in The Post-Pandemic Context

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Abstract. This research summarizes and analyzes the current development status, path trends, and challenges faced by the digital economy in the context of post-pandemic situations. Taking the Yangtze River Delta urban agglomeration and e-commerce platform enterprises such as JD.com as typical cases, this paper demonstrates the positive guiding relationship between the digital economy and economic recovery, clarifies the key role that the digital economy plays in accelerating global economic development, and discovers the challenges it faces in the process of moving forward through the accelerated development trend of the digital economy in the post-pandemic era. By summarizing a series of challenges faced by the digital economy, such as incomplete infrastructure and insufficient policy incentives, providing strategies to optimize policy guidance and support technological innovation, implementing the policy of building a reliable data governance system, encouraging it to overcome the bottleneck period of weak technological innovation ability or market user saturation, while enhancing corporate social responsibility, data information security awareness, etc., to unleash the strong potential of the digital economy, Leading the world economic recovery and assisting.

Keywords: Post-pandemic; Digital Economy; Economic Recovery; Practice and Effectiveness.

1. Introduction

At present, the world is in the process of social and economic changes triggered by the COVID-19 epidemic. Since the end of 2019, this public health crisis has had an unprecedented impact on the global economy, and the Chinese economy is also facing significant pressure and challenges that cannot be ignored. Due to the lockdown measures related to epidemic control, economic and physical industry activities have been restricted and come to a standstill. The overall economic trend has shown a downward trend, and various industries have fallen into huge difficulties. During this period, the digital economy emerged from the predicament with its unique advantages such as innovation, contactless, and remote access, and gradually became a key engine that led the global economy out of its slump and towards recovery in the post-pandemic era, after the most severe period of the initial pandemic. The Chinese government vigorously promotes the digital transformation and development of industries: developing the digital economy is a strategic choice to seize the new opportunities of technological revolution and industrial transformation. From the 12th Five-Year Plan to the 14th Five-Year Plan, gradually strengthen and deepen policies for the development of the digital economy. In the 14th Five-Year Plan, it is explicitly proposed to vigorously develop the digital economy and vigorously promote the digital transformation of industries. Under this policy guidance, many enterprises have actively responded and accelerated the process of digital transformation. Digital formats such as online education, remote work, and digital healthcare have rapidly emerged during the pandemic, effectively alleviating the pressure on social operations and promoting the transformation and upgrading of traditional industries, creating new economic growth points. However, even under various conditions, the development of the digital economy is not smooth sailing. It also faces a series of practical challenges such as insufficient infrastructure supply, lack of guidance for industrial digitization, and poor data security governance.

Many published papers have confirmed the positive benefits of the digital economy during the pandemic, and the viewpoint strongly demonstrates that the digital economy is also an indispensable part of future economic development. With the support of existing papers and literature, to clarify the

role of the digital economy in the actual development of the economy, this article will comprehensively analyze the current situation, development trends, and specific impacts of the digital economy on global economic recovery in the context of the post-pandemic situation. Starting from the direction that not only helps policymakers' issue targeted policies but also facilitates further development of enterprises, to address various uncertain factors that may arise in the future and achieve high-quality economic growth, this lays a theoretical foundation for fully leveraging the advantages of the digital economy in the global economic recovery process and achieving sustained and stable economic growth.

2. Overview of the Digital Economy

2.1. The Definition of the Digital Economy

Referring to the "G20 Digital Economy Development and Cooperation Initiative" in 2016, the digital economy refers to a series of economic activities that use digital knowledge and information as key production factors, modern information networks as important carriers, and the effective use of information and communication technology as an important driving force for efficiency improvement and economic structure optimization [1]. Si Lijuan mentioned that the connotation of the digital economy includes two major parts: firstly, various economic activities produced through digital technology, which constitute the core category of the digital economy; The second is to utilize the digital investment to transform and expand the boundaries of traditional economic activities, so that all economic outputs formed are also part of the digital economy [2].

2.2. The Development Status and Trends of the Digital Economy

The five characteristics of the current development status of China's digital economy are: firstly, significant growth in total volume and economic contribution. In recent years, the total volume of China's digital economy has maintained a high-speed growth trend, far exceeding the growth rate of GDP during the same period, becoming a key driving force for China's economic stability and growth; Secondly, the policy support system has been continuously strengthened. Since the 18th National Congress of the Communist Party of China, the Chinese government has attached great importance to the strategic position of the digital economy and has continuously introduced relevant policy plans to promote its development; The third is the acceleration of infrastructure construction, with new infrastructure construction represented by 5G networks receiving unprecedented attention and development, accelerating the pace of digital transformation in traditional manufacturing. At the same time, the country actively promotes new infrastructure such as 5G networks, data centers, and cloud computing, providing strong basic guarantees for the digital economy; The fourth is a significant improvement in innovation capabilities. With the expansion of the digital economy, technological innovation capabilities have also been enhanced, especially in areas such as cloud computing and communication technology, where significant progress has been made; Finally, there is industrial penetration. The digital economy has increased its penetration into many industries, presenting a reverse penetration model and giving rise to numerous new businesses and models [3]. Therefore, the digital economy has not only changed people's consumption concepts and habits, and nurtured new consumption patterns, but also promoted global industrial integration and upgrading. For example, the traditional content industry achieves product innovation, business integration, and industrial restructuring through digital technology, forming a digital content industry that spans multiple fields and widely penetrates the manufacturing industry. With the continuous innovation and application of digital technology, a new production model that breaks the traditional scale economy production - the "Winter model" has emerged, which is also why the development trend of the digital economy has become a research focus in the current academic community [4].

3. The Impact of the Global Economic Situation on the Development of the Digital Economy in the Post-pandemic era

3.1. The Impact of the COVID-19 Epidemic on Global Economic Activities

Since the end of 2019, COVID-19 has had an unprecedented impact on the global economy. Firstly, supply chain disruptions and difficulties in manufacturing recovery have led to major product supply countries being affected by the pandemic, resulting in production stoppages and disruptions in the global industrial chain, affecting subsequent production and sales; Secondly, exacerbating policy differences and economic uncertainty, countries have taken varying measures in response to the epidemic, which has increased global economic uncertainty and led to severe fluctuations in financial markets; Thirdly, secondary risks and the fragility of emerging economies, such as Africa and Latin America, although not yet the main regions affected by the pandemic, have become more vulnerable due to their high dependence on China's exports and the risk of lower commodity prices; Fourthly, the characteristic of staggered development of the epidemic has led to different time rhythms in economic slowdown and recovery in different countries[5].

3.2. The Advantages of the Digital Economy have Emerged During the Epidemic Period

The significant advantages of the digital economy under the impact of the pandemic are mainly reflected in its noncompetitive reduction of production costs, network convenience, and improved resource allocation efficiency. The zero marginal cost feature of information technology enables online services to be provided on a large scale, such as online education, which is not limited by the traditional teaching space that requires classrooms, blackboards, and desks to carry out teaching. At the same time, the digital economy helps enterprises expand their production scale and business scope by reducing fixed costs, enhancing economies of scale, and expanding economies of scope. The digital economy has effectively alleviated the pressure of rising prices of consumer goods during the epidemic, and the rapidly spreading information has enriched the range of choices for consumers [5].

3.3. The Transformation of Industry-driven Models in the Post-pandemic Era and the Importance of Digital Transformation in Economic Recovery

In the post-epidemic era, the COVID-19 epidemic has been rising and falling from time to time and may break out on a small scale at any time. In this era, visits and meetings cannot be independent online and offline, and the face-to-face marketing mode has stagnated. Zoom, Tencent conferences, etc., which can realize remote connection, have become common support tools. Students' online and offline combined hybrid classes have become normal. When the regional epidemic is repeated, the mixed office of home office and clock-in has become normal. It is not only the hit physical industry that seeks transformation in the big Internet but also the pharmaceutical industry that has received support and attention as early as the epidemic era. It is also actively integrating with the times and developing online models when the digital economy is improving [6]. One typical example is the electronic process of drug ordering and docking, and pharmaceutical companies with industry qualifications generally adopt a mini-program electronic reporting model when accepting nucleic acid appointments, making it more convenient to send test results to those who have completed nucleic acid testing. More and more enterprises and individuals are discovering that digital transformation in the era is worth investing in long-term technology and enough budget to meet the needs of more business scenarios. Therefore, digital transformation plays a crucial role in the economic revival of multiple industries, as it reforms production methods, lifestyles, and governance models in a comprehensive and driven manner.

From IQVIA's data statistics, the author can learn the digital economy has reshaped the operational models of enterprises, government governance systems, and the way residents live [7]. On the enterprise side, modern digital technologies such as artificial intelligence are used to digitize traditional production and business processes, achieve intelligent production and precision marketing, improve resource utilization efficiency, and significantly improve product quality, innovation

capabilities, and economic benefits. On the government side, through digital transformation, the pace of modernization of the government's governance system and governance capacity has been accelerated, optimizing policy formulation and implementation. Finally, in the field of residential life, the development of the digital economy has greatly changed people's consumption habits. For example, the rapid development of new payment and online-offline integration formats has expanded employment channels, lowered employment thresholds, and especially popularized digital services in education, healthcare, and other fields, improving the quality of life and social welfare level of residents [8].

4. Practical Cases and Achievements of the Digital Economy

With the above foundation and understanding, it can be known that an important carrier of the digital economy is the construction of platform structures. In the post-epidemic era, platforms such as Amazon, Taobao, and JD are not in the early days of the Internet. As long as sales in the Yi region can set off a wave. At that time, the underlying technologies of platforms of the same nature were similar, and what could further distinguish their development paths was the user stickiness they maintained after filtering users and classifying them based on their attributes. Unlike traditional sales of goods and services, the operation platform leaves users with more of a scale effect. JD's platform operation characteristics have also undergone a transformation from self-built logistics to multi-platform online and finally found a way out in the multilateral network structure formed by the five dimensions of supplier, consumer, other enterprises, technology, and logistics in the technology and retail market policy supervision [9]. In the article point in "Economic Development, Cooperative Networks, and Digital Governance Strategies of Local Governments in Urban Agglomeration: A Case Study Based on Configuration Classification" by Suo Liming, Kan Yanqiu, and Chen Bin, it is mentioned that in the existing objective conditions of local governments in urban agglomerations, the level of economic development is an important basis for the selection of governance methods and innovation of governance mechanisms. The level of economic development affects the strength of regional factor integration and technological innovation. Therefore, digital governance in urbanization mainly uses digital technology as a governance and public service tool. The direction of urban innovation, driven by data-driven mechanisms and characterized by diversified collaboration, is specifically reflected in platforms such as smart cities and urban brains, shared networks for data interconnection, and institutional rules that adapt to digital cities. It is a digital transformation strategy for cities that conforms to the background of the post-epidemic era [10]. That can explain the good economic and platform digital governance development of local governments can stimulate the local economy and fiscal revenue. This momentum injected into multiple industries in the region through government governance strategies is reflected in the multi-level promotion of digital economic cooperation, which in turn plays a consolidating role in enterprises undergoing digital transformation. Taking the Yangtze River Delta urban agglomeration as an example, the government tends to adopt a central strategy in terms of policies: a construction and diffusion-oriented path guided by regional hub construction, attracting the participation, learning, and imitation of other cities through platform construction, experience sharing, etc. It has strengthened the integration of government services among cities in the Yangtze River Delta with the support of national policies, such as the "inter-provincial communication" and other service reforms, achieving comprehensive coverage of medical insurance cross-regional settlement, and promoting the convenience of public services. At the same time, in "Economic Development, Cooperative Networks, and Digital Governance Strategies of Local Governments in Urban Agglomeration: A Case Study Based on Configuration Classification", it can also be found that cities with higher economic levels in urban agglomerations have stronger motivation to adopt urban digital governance, which makes it easier to achieve results and form their advantages [10].

5. The Challenges and Countermeasures Faced by the Digital Economy

5.1. Challenge

Although the digital economy has shown an accelerated development trend in the post-pandemic era, Li Chengyou pointed out that it has also encountered a series of challenges in the process of promotion. Firstly, at the infrastructure level, the planning and investment layout of new infrastructure construction is not yet perfect, lacking clear direction and continuous investment, which limits the role of new infrastructure in driving macroeconomic growth. Secondly, enterprises face practical difficulties in industrial digital transformation, including a lack of their own capabilities and public service supply. In addition, with limited funds, the transformation process will be hindered. On this basis, the regulatory system lags behind the development pace of new formats, and insufficient policy incentives also hinder the development of digital industrialization in new formats. At the same time, it is also necessary to pay attention to the shortcomings in the construction of the data security governance system, as well as the further strengthening and improvement of data protection capabilities and event handling systems [11].

5.2. Countermeasure

To achieve sustainable and healthy development of the digital economy and achieve future targets, it is necessary to address the challenges that have already been raised. The government and corporate decision-makers can help enterprises successfully achieve digital transformation by strengthening overall planning, optimizing policy guidance, supporting technological innovation, improving regulatory models, and building a reliable data governance system. They can encourage them to overcome the bottleneck period of weak technological innovation capabilities or market user saturation while enhancing corporate social responsibility, data information security awareness, etc., to achieve the goal of the flourishing development of the digital economy [11].

6. Conclusion

Even in the end, the impact that cannot be ignored still comes from the sudden outbreak of the pandemic, which has brought huge and painful blows to the global economy with rapid momentum. Countless businesses have been disrupted during the economic lockdown, losing the "foundation of standing" of their industries or shops. The development of the digital economy has brought a glimmer of vitality to the physical industry and injected new vitality into economic recovery. This paper refers to most of the existing data to discuss the advantages and disadvantages of the COVID-19 epidemic from its short-term impact and long-term impact on the economy. Although the scope of the derivation of examples is accurate, reasonable, and reliable through the use of relevant data and case content analysis, due to the focus on the characteristics of the post-epidemic era, the macro analysis of the digital transformation of multiple industries may have limitations in understanding the breadth and depth of the industry. Looking ahead to the future, in the post-pandemic era and after the complete end of the pandemic, the development potential of the digital economy is still immeasurable. Increasing attention to it and providing more support and assistance is the key to taking the lead in this era, and mastering the overall direction is very important. In the future, big data and the Internet will be mutual tools: market development will provide data for research and report production enterprises, research and report the production content of enterprises, and achieve the balance between the supply and demand of industry real economy and information. At the same time, the essence of the digital industry is convenience and efficiency, and services that cannot and will not be completely detached from reality. Pursuing vitality is not the answer that industry digital transformation seeks. The true goal of enterprise digital transformation is fair efficiency, matching technology with corresponding positions, combining reasonable growth and distribution, and a thriving and steadily advancing income system for the industry and market. This article provides a review of existing literature to more clearly demonstrate the importance of developing the digital

economy. In summary, this study aims to provide a theoretical basis and practical guidance for policymakers to promote high-quality economic development and social well-being, and to enhance China's voice and competitiveness in the global digital economy competition.

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