

Recovery of the Industrial Economy after Covid-19

Zhiyu Feng^{1,a,*}

¹Shenyang Ligong University, 6 Nanping Middle Road, Hunnan District, Shenyang City, Liaoning Province, 110158, China

a. 1413694881@qq.com

*corresponding author

Abstract: The COVID-19 outbreak has had a huge impact on the global economy, especially on the industrial economy. A large number of companies face the risk of stagnant production and declining revenues, as well as the risks of employee turnover and closure. In this context, the recovery of the industrial economy is crucial to the global economic recovery. This paper explores the measures to restore the industrial economy from three aspects: government, enterprises, and individuals, including fiscal and economic stimulus measures, supporting enterprises and employees, promoting national and international trade, strengthening scientific and technological innovation and digital transformation, and strengthening environmental protection and sustainable development. Through these measures, we can realize the recovery and growth of industrial production, promote the recovery of the global economy, and lay the foundation for sustainable development in the future.

Keywords: COVID-19, industrial economy, fiscal stimulus, scientific and technological innovation, digital transformation

1. Introduction

In 2019, the new crown epidemic broke out, followed by isolation and closure that lasted for several years. During this period, industrial production has been severely affected, and all industrial production sectors have suffered very serious impacts. Affected by the new crown, a series of problems such as supply chain disruptions, a sharp drop in consumer demand, and companies being forced to shut down due to labor shortages have made industrial development difficult. With the improvement of the world's epidemic situation and the opening up of China's epidemic policy, the world economy is gradually improving, and the two main issues before people are solving the employment problem and increasing people's income. Based on this background, this article analyzes how to restore the industrial economy after the new crown epidemic from the two aspects of the government and enterprises. It is hoped that this article will provide a certain degree of help to the recovery of the industrial economy after the new crown epidemic.

2. The Role of the Government in the Industrial Economic Recovery

In a market economy, the government plays the role of "visible hand", that is, to adjust the economy in a planned way through macro-control [1]. The government can make restorative adjustments to the industrial economy in the following ways:

2.1. Providing Fiscal and Economic Stimulus

In the second half of the new crown epidemic, major countries around the world are designing a new round of stimulus plans [2]. Taking China as an example, the government can proceed from two aspects: "supply side" and "demand side":

On the demand side, we will focus on stimulating consumption, promoting investment, stabilizing exports, and smoothing the economic cycle. In order to boost consumption, further expand automobile consumption, implement preferential policies such as phased halving of purchase tax for passenger cars with a displacement of 2.0 liters and below, continuation of purchase tax exemption for new energy vehicles, and launch city pilot projects for comprehensive electrification of public vehicles wait. In terms of expanding effective investment, accelerate the construction of major projects to form a physical workload, effectively and orderly promote the implementation of major engineering projects related to the "14th Five-Year Plan" of the manufacturing industry, make good use of various policy tools, support enterprises' investment in equipment renewal and transformation, and guide The government investment fund increased its capital contribution, etc. In order to stabilize the export of industrial products, implement policies and measures to stabilize foreign trade, strengthen service guarantees for foreign trade enterprises, accelerate the promotion of the transportation of new energy vehicles and power batteries through China-Europe trains, and increase support for new foreign trade formats such as cross-border e-commerce and overseas warehouses.

On the supply side, efforts will be made to promote the supplementary chain and strengthen the chain, and accelerate the cultivation of new kinetic energy. The first is to improve the resilience and security level of the industrial and supply chains. Guide enterprises to respond to the impact of the epidemic to achieve stable production and reach production, strengthen key raw materials, key software, core basic components, component supply guarantees and collaborative reserves, and further expand supply channels. The second is to continue to develop new kinetic energy. Vigorously cultivate advanced manufacturing clusters, promote the deep integration of new-generation information technology and manufacturing, vigorously develop new industries, new formats, and new models, and accelerate the development of the digital economy, etc [3].

2.2. Strengthen Scientific and Technological Innovation and Digital Transformation

The world is entering a period of economic development dominated by the information industry. During economic recovery, the government must seize the opportunity of technological reform in a timely manner and accelerate the transformation and development of industrial digitization, networking, and intelligence [4].

Many governments around the world are recovering their economies through industrial digital transformation [5], in order to guide the recovery of the real economy, the United States has successively issued the "Intelligent Manufacturing Revitalization Plan" and "Advanced Manufacturing U.S. Leadership Strategy", proposing to rely on innovative technologies such as new-generation information technology to accelerate the development of technology-intensive advanced manufacturing industries, and to ensure that advanced manufacturing is an important role for the United States. The status of the engine of economic strength and the pillar of national security; Singapore draws a blueprint for digitalization, focusing on improving the country's digital innovation capabilities in the service industry [6]. In order to ensure that citizens benefit from digital transformation, the Singapore government released the "Digital Capabilities Blueprint" to further improve the digital skills of its people, and set up a technology center of excellence to cultivate talents in fields such as data analysis, artificial intelligence and cyber security.

Among them, taking the United States as an example, although the outbreak of the new crown

epidemic has brought heavy damage to the US economy, it has brought new opportunities to the digital economy. The epidemic has further forced American companies and traditional industries to accelerate digital transformation. New formats such as telecommuting, online education, telemedicine, and contactless delivery are emerging, and the U.S. digital economy is advancing instead of retreating. For example, before the outbreak of the new crown epidemic, American retailers had accelerated the deployment of e-commerce, but the new crown epidemic has promoted the further digital transformation of the retail industry. Online transactions of credit cards, online banking, and fast payment software have increased significantly. Simulating the on-site shopping experience is also getting better and better. Data show that in 2021, the output of the US digital economy in the field of "e-commerce" will be close to 942 billion US dollars. Among them, business-to-business (B2B) business output is about 643 billion U.S. dollars, business-to-customer (B2C) business output is about 299 billion U.S. dollars; non-defense digital service output is about 420 million U.S. dollars.

2.3. Promoting Infrastructure Construction

Since the outbreak of the new crown pneumonia epidemic, investment in infrastructure construction has been regarded as an important measure to hedge the downward pressure on the economy, build a foundation for technological innovation and industrial upgrading, and build a modern economic system, which plays an important role in supporting the high-quality development of the national and local economies [7]. After the epidemic, infrastructure will play a key role in economic development.

At present, upgrading traditional infrastructure with high-tech and transforming it into "new infrastructure" is an important measure for the government's infrastructure work after the epidemic. "New infrastructure" is the abbreviation of "new infrastructure construction". Specifically, it defines 5G, artificial intelligence, industrial Internet, and Internet of Things as "new infrastructure construction" [8]. The scope of new infrastructure mainly includes three aspects: information infrastructure, converged infrastructure, and innovation infrastructure.

The first is the information infrastructure, which mainly refers to the infrastructure generated based on the evolution of the new generation of information technology, such as communication network infrastructure represented by 5G, Internet of Things, Industrial Internet, and Satellite Internet, artificial intelligence, cloud computing, blockchain, etc. New technology infrastructure represented by such as, computing power infrastructure represented by data center and intelligent computing center, etc. The second is converged infrastructure, which mainly refers to the in-depth application of Internet, big data, artificial intelligence and other technologies to support the transformation and upgrading of traditional infrastructure, and then form a converged infrastructure, such as intelligent transportation infrastructure, smart energy infrastructure, etc. The last is innovation infrastructure, which mainly refers to infrastructure with public welfare attributes that support scientific research, technology development, and product development, such as major scientific and technological infrastructure, science and education infrastructure, and industrial technology innovation infrastructure. These three aspects mainly include seven major areas: 5G, artificial intelligence, industrial Internet, big data center, new energy vehicle charging pile, UHV, intercity high-speed railway and intercity rail transit, etc.

3. The Role of Enterprises in the Industrial Economic Recovery

Enterprises are the cells of the national economy, which can create a large amount of economic value through the investment of material capital, and have a significant role in promoting social and economic development. After the new crown epidemic, industrial enterprises urgently need to

develop better.

3.1. Create Job Opportunities

2021 Year 12 In March, the United Nations Industrial Development Organization released the article "Industrial Development Report 2022-The Future of Industrialization in the Post-epidemic Era". The article emphasized that "industrial capacity is crucial to economic resilience. Supplies essential goods and provides essential services around the world." [9] After the opening of the new crown pneumonia epidemic, on the one hand, labor-intensive industries in the service industry are needed to absorb a large number of labor force and hedge the employment pressure brought by the epidemic; on the other hand, these industries can satisfy people's yearning for a better life and fully It is the right time to develop these labor-intensive industries that protect people's livelihood.

3.2. Promoting Technological Innovation

United Nations Industrial Development Organization in 2020 In July 2018, it stated that "industry, innovation and infrastructure are closely linked, because industry is an important source of innovation and provides technological solutions for environmentally sound development." [10] Take papermaking as an example. Papermaking is a capital-intensive industry that is very sensitive to product costs. While trying to reduce fixed costs, most papermaking enterprises attach great importance to cost control in the whole process of supply, design, production and sales. In terms of tapping the potential of reducing production costs, information technologies such as artificial intelligence, automation, and mobile Internet have shown many prospects for future development. At the same time, the development of new products is the only way for the paper industry to get out of the predicament. In the post-epidemic era, the reduction in demand for paper and the intensification of corporate competition will further stimulate the enthusiasm for new product development in the paper industry and usher in a new era of paper industry development. In terms of household paper, diapers and protective clothing have become the standard configuration for medical staff during the epidemic. In the post-epidemic era, the application of antibacterial and antiviral technology to household paper materials has broad market prospects. In terms of packaging paper, paper integrated with sensor technology has intelligent packaging properties.

Can increase the added value of packaging. For example, sensing materials are embedded in food packaging paper such as yogurt and cooked food, which can display the hygienic safety of food and give timely warning to spoiled products; currency anti-counterfeiting printing technology applied to packaging cardboard can improve packaging anti-counterfeiting requirements, the key is production cost and Operation embedded.

4. Conclusion

At present, the new crown has come to an end temporarily. Both the government and enterprises have received a certain degree of impact under the impact of the new crown. Among them, the impact on enterprises is directly related to the development of industrial economy. Some industrial enterprises have fallen into a predicament due to their inability to operate normally, while others have gained opportunities because of this. But generally speaking, most enterprises and government units have been greatly affected during the epidemic.

Although the epidemic has brought great uncertainty to the government and industrial companies, it has also prompted companies to continue to innovate and government policies to continue to adjust. During this process, the related manufacturing technology of some industrial enterprises has been developed to a certain extent; the government's ability to predict the economic form and macro-control has also been improved to a certain extent.

So far, the epidemic has passed, but its impact will continue and exist for a long time. Therefore, industrial enterprises should continue to pioneer and innovate, accelerate digital transformation and upgrading, and improve their ability to resist risks. At the same time, the government should also introduce a series of favorable policies to help the development and progress of industrial enterprises.

References

- [1] Huang Yan. *Market Economy and Macro-control*[J]. *Guangxi Social Sciences*, 1995(3):21-23.
- [2] Qian Lihua, Fang Qi, Political Commissar Lu. *Research on the Synergy of Green Economy and Digital Economy in Stimulus Policies*[J]. *Southwest Finance*, 2020(12):3-13.
- [3] He Jun. *17 Policies "Increasing Salary and Accumulating Strength" for the Stability and Restoration of the Industrial Economy* [J]. *Today's Manufacturing and Upgrading*, 2022(12): 8-9.
- [4] Jiang Yuquan. *Accelerate the development of digital economy and reshape new economic advantages*[J]. *Communication World*, 2022(15):18-20.
- [5] Jiang Hongde. *Famous experts look at the digital transformation of manufacturing industry* [J]. *China Information Technology*, 2017(9): 19-19.
- [6] Hui Jiajing, Dong Lili. *Specific Measures and Enlightenments for Improving Digital Literacy of Singaporeans—Based on the Interpretation and Thinking of "Digital Readiness Blueprint"* [J]. *World Education Information*, 2020,33(8):36-41.
- [7] Liu Yan, Feng Ke. *Analysis on Investment and Financing of New Infrastructure Projects* [J]. *Project Management Technology*, 2020,18(8):5-8.
- [8] Jia Kang. *Grasping the Opportunity of the New Infrastructure: Present and Future*[J]. *Qunyan*, 2020(9):13-16.
- [9] United Nations Industrial Development Organization. *2022 Industrial Development Report - The Future of Industrialization in the Post-epidemic Era* [Z]. 2021-11.
- [10] United Nations Industrial Development Organization. *The United Nations family emphasizes the importance of sustainable industry, innovation and infrastructure to support better reconstruction in the post-epidemic era* [Z]. 2020-07.