

Positive Effects of Covid-19--Digital economy

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ABSTRACT

Under sudden outbreak epidemic, the economies of countries around the world have received a severe blow. But there are good potential developments, most notably in the digital economy. In the face of various lockdown policies, the epidemic has undoubtedly promoted the rapid development of the online digital economy and laid the foundation for the beginning of the fourth industrial revolution.

Keywords: *digital economy, e-commerce, Covid-19, positive effect, Amazon.*

1.INTRODUCTION

Covid-19 was founded at the end of 2019, then it expanded rapidly around the world, and brought a painful blow to the economy of all countries. After the outbreak, from cars to smartphones, from shopping to travel, from aviation services, financial services to technical services, the international production of countless goods and services around the world was forced to slow down or even suspend. Many industries around the world have pressed the "pause button", unable to supply, and lack of demand, making some companies "hit their lives". After the outbreak began, the OECD predicted in the report that affected by this, the global GDP growth rate may drop to 2.4% in 2020, compared to the previous expected value of 2.9%. The economic shutdown caused by precautionary measures will shrink the global economy by 5.2% in 2020.

However, except for the bad effects of Covid-19, there are also good effects. The biggest and most important positive effect is the development of the digital economy. The online data of the global supply chain seems to be accelerated. Overlapping the development of science and technology, the global economy is on the path of upward maintenance, and resource allocation will be more efficient. From a global perspective, the digital economy is becoming a strong driving force for economic recovery after the epidemic. Under the epidemic, the digital economy has shown tenacious resilience and is widely used in services such as telemedicine, online education, and cross-border e-commerce. Issues such as economic digitization, digital payment and digital currency, and new consumption

trends have also attracted much attention. New consumption represented by online retail Contrary to the trend of growth in the context of overall sluggish consumption growth. Therefore, at present, the development of the digital economy has become an important measure for countries to promote economic recovery after the epidemic, and it has also become a new starting point for world economic growth.

2.THE DIGITAL ECONOMY

2.1. The Digital Economy

“Since the 21st century, As 5G, big data, cloud computing and other new-generation information technologies mature and industry Globalization, the digital economy has already had a profound impact on the global production sector” [1].That is to use digital knowledge and information as the key production requirements With modern information network as an important carrier, and information and communication technology effective use of a series of economic activities as an important driving force for efficiency improvement and economic structure optimization. The digital economy is usually divided into digital industrialization and There are two types of industrial digitalization, both of which are the core of the development of the digital economy. Digital industrialization is the information and communication industry. It is the leading industry of the digital economy. Digital economy development provides technology, products, services and solutions, etc[2]. The number of industries Characterization is the main front of the development of the digital economy, providing a wide range of Wide space. Industrial digitization refers to the

application of digital technology in traditional industries. Production volume and efficiency have increased, and its new output constitutes an important part of the digital economy. Now most countries are in the wave of the fourth industrial revolution. Based on the digital revolution, technology has begun to penetrate the development of society, economy and people. The emerging technologies also include robotics, artificial intelligence, nanotechnology, quantum computing, biotechnology, the Internet of things, 3D printing, unmanned driving, etc. The survey shows that global companies have realized that if they want to remain competitive in the Chinese market, after experiencing the epidemic, the digital economy will become the protagonist in more consumer fields and must accelerate the application of digital technology.

2.2 Advantage of digital economy

In general, the benefits of the digital economy include these points. Greater information, saves time, reduced costs, lower barriers to entry, creates significant data which can give new insights, enables people to work from home.

First of all, because of digitalization, people can still work and study online as the epidemic has lasted for so long. If it were not for the rapid development of the digitization and digital economy, the consequences of the epidemic would certainly have been more serious.

In the next place, relying on the huge Internet, digital data with emphasis on data storage and transportation. The more the economy develops, the lowers the cost of resource acquisition gets, and the data that can be shared over time and long-distance transportation can effectively improve the efficiency of resource allocation. What's more, the fragmented information of buyers and sellers usually floods the entire market. Due to the lack of effective communication channels, accurate demand information cannot be completely conveyed to the seller's hands, causing the information on the demand side and the supply side to be inconsistent. Symmetry, and information asymmetry may cause market failure, leading to market allocation and decreased efficiency of resources. However, the typical platform model in the digital economy can effectively integrate the jumbled information on both sides of the supply side and the demand side, and then share the information on the platform to promote the solution of information asymmetry and achieve effective matching between supply and demand [3]. For example, Freshippo is a typical app of fresh electricity business in the new retail industry, it is also a representative of the development of the digital economy. This app cooperates with internal and external resources and applies digital technology to both ends of supply and demand at the same time, builds digital business systems as well. The traditional circulation process of agricultural products includes

many links from farmers to distributors of different sizes, then to retailers and finally to consumers. As the purchase price increases layer by layer, it is easy to cause farmers to "sell at a low price" and consumers to "buy at a high price". Freshippo solved the above price problem and matching problem better. For supply side, farmers do not need through other distributors, they can directly provide the fresh products to Freshippo, and then Freshippo can in a short period of time by fast shipping the products directly to consumers, supply chain reduced prices problem is resolved, farmers don't have to "sell at low price", the consumer also got more high quality and low price products [1].

During the epidemic, through the fresh e-commerce platform, residents can place orders online and pick up goods offline anytime and anywhere. It is vital for solving the crisis of limited food and rice at home, but also for the government to stabilize the people and epidemic prevention work to provide help, so that Freshippo played a great role in facilitating the people and benefiting the government. The reduction of supply chain entities – and the resulting complexity – exponentially shortens the time required to get information and improves responsiveness. Reduced process steps and enhanced computer controls decrease the likelihood of errors, thus improving quality. Savings will be realized in the procurement of raw materials, labor, energy, transportation, inventory management, and waste disposal. Most significantly, customer service will take precedence since demand fluctuations will be simpler to handle, components will be supplied quicker owing to the batch size of one, and development time for new products will be minimized. [4]. Cloud computing, mobile devices, social networking, e-commerce platforms, and mobile apps are examples of technology platforms. In aggregate, sustainable digital technology currently accounts for a greater share of GDP than it did a decade ago and has made a significant contribution to global economic growth in recent years. New technologies decrease prices, increase market access, lower entry barriers, enable the creation of new goods and services that were previously unattainable, and open up new markets and possibilities for new companies. [5]

3. THE PROMOTE OF COVID-19 FOR DIGITAL ECONOMY

As the blockade becomes the new normal, businesses and consumers are becoming more “digital”, offering and purchasing more goods and services online, and the share of e-commerce in global retail trade has increased from 14% in 2019 to approximately 17% in 2020. The lockdown has led to the majority of individuals communicating, interacting, and carrying out their work duties from home through the internet and internet-based services. Internet service use has increased from 40% to 100%, relative to pre-lockdown levels. Zoom's video

conferencing service has experienced a tenfold rise in use, while Akamai's content delivery service has seen a 30% increase in content consumption [6]. Internet traffic in some countries increased by up to 60% shortly after the outbreak (OECD,2020a), underscoring the digital acceleration that the pandemic sparked [7].

As a result of the pandemic, internet entertainment has grown in popularity. Many people who are isolated at home are attempting to pass the time, ease tension, and redirect their attention away from work by engaging in online entertainment. Many individuals, including the elderly, were taught to use the Internet, mobile phones, and other applications over for more than two months at home, allowing them to engage in online shopping and leisure. New mode of education and teaching aided by epidemic.[1]

During the epidemic, educational institutions across the country have suspended school training, disrupting the normal teaching schedule and learning pace, in order to ensure that "old teachers can teach and students can go to school". The emergence of online teaching has solved the problem of difficult teaching in schools and students. During the period of "school suspension", teachers and students around the Tencent classroom, Tencent conference, online education as a means to improve teaching efficiency, break through the time and space restrictions between "teaching" and "learning", help change the way of education, pay more attention to the students themselves.COVID-19 has normalized online digital working and learning methods, created new ways of employment, and accelerated the adoption of new digital infrastructures in the real world. The new digital infrastructure opens up new experiences and possibilities for digital work and learning.

Online economy will continue to penetrate into all areas of social economy and promote the comprehensive digital transformation of life style, production mode and governance method, which will change the whole era and bring about earth-shaking changes in life. Promote infrastructure construction, speed up the development of the network economy, and inject new impetus into China's economy. Promote the digital transformation of traditional industries, promote the construction of hardware facilities such as computers, screens, sensors and simulation systems, develop personalized web pages, APPS and related software to build realistic 3D simulation shopping experience platforms and rapid customer response systems, strengthen the network marketing model and improve the efficiency of resource allocation. The epidemic has also boosted the demand for online consumption and the "homebody economy". After the attack, China adopted policies such as tax reduction and loan interest rate reduction for cross-border e-commerce enterprises, so as to keep cross-border e-commerce enterprises from being severely weakened. Later, with the aggravation of the epidemic abroad and

the resumption of work and production in China, the cross-border e-commerce industry turned upside down.

By 2021, in the post-EPIDEMIC era, cross-border e-commerce will still be a mainstay of foreign trade. The post-epidemic era refers to an era in which the epidemic may recur, with ups and downs. The epidemic situation has promoted the transformation of China's sales model. In May 2020, the top ten of total transaction volume of live video on TikTok china version platform included many celebrities, stars and official ACCOUNTS of CCTV news. Under the influence of the epidemic, a new sales model -- "live-streaming e-commerce" has widely appeared in the field of vision, for new things, people in the home isolated during the boring coincidence to show extra curiosity. The overall prosperity of online sales boosted by the epidemic has led to the sudden rise of mainstream media live streaming goods, promoting another take-off of China's online economy[8].

4. EXAMPLE OF DIGITAL ECONOMY--AMAZON

There has been an explosion in the digital economy due to the globalization process. Electronic business (e-Business) and electronic commerce (e-Commerce) are emerging as electronic alternatives to the conventional method of conducting business or trading.

Online shops such as Amazon.com and eBay are part of the e-commerce sector, which also includes information service providers like Google and Yahoo, as well as online versions of conventional brick-and-mortar storefronts. With six internet servers, 32 million clients in 150 countries, and 900,000 affiliate programs connected to Amazon or containing Amazon content, Amazon dominated the online service market in 2004. [9]

Amazon.com must keep coming up with innovative ways to satisfy customers' needs in order to stay competitive; therefore, the company developed their own cutting-edge software technology, their major competitive advantage, which allowed them to implement an efficient customer relationship management system. The customer identification feature also aids consumers in their purchasing choice, and furthermore helps encourage both up- and cross-buying, increasing the total profitability of the business.[9]

In fact, Amazon.com's IT infrastructure plays a vital role in helping the company manage its relationships with customers. Through the company's various functions of user recognition and of keeping track of consumer habits, Amazon.com only managed to increase sales by giving individuals exactly what they need when they are in the store and making use of an easy-to-use website, which granted access to individuals who had limited or no computer knowledge to order goods online. [9]

The process of worldwide business has been completely altered by electronic e-commerce, which has also had the effect of improving logistical efficiency while also simplifying the process of acquiring, selling, and promoting products. In a similar manner, e-commerce benefited millions of customers via lower pricing, more competition, order and delivery speed, and drastically reduced delivery times.

5. DISADVANTAGE OF DIGITAL ECONOMY AND SUGGESTION

There are two main disadvantages of the digital economy. Firstly, the digital economy is becoming a necessary part of the economy worldwide. Nevertheless, when it comes to digital adoption, there are big variations across companies. Before the pandemic, e-commerce (mostly business-to-business transactions) made up 19% of companies' turnover in the OECD (with disparities between big and small firms), with B2B transactions making up the bulk of them (9 percent). Yet big data usage has been rising over time, but it is extremely varied among industries and nations. Around 10% of all companies in Europe utilize big data, as opposed to 25% of all information and communication technology businesses [7].

In the event that uneven diffusion of digital technology is not addressed, this could lead to important implications for companies' productivity. If the pandemic keeps increasing in intensity, the spread of digital technology will greatly widen the productivity gap between digital adopters and digital laggards. A crucial element in this split is the difference in abilities amongst employees that may hold back more than one company from fully using the digital technology's full potential. Company development and innovation may be stifled by increasing market concentration, thereby inhibiting employment growth and digital dissemination (OECD, 2020g) [7].

Secondly, it is trust. Given the increased dependence on digital tools in the aftermath of COVID-19, more attention is required to maintaining confidence in the digital environment, particularly in terms of digital security, but also in terms of privacy. Protection of personal information and consumers. As the epidemic spread, the number of coronavirus-related frauds and phishing operations increased, as bad actors took advantage of the widespread shift to online activity. Nations recognize that the way these technologies are utilized may jeopardize human-centered values, as well as privacy, security, and consumer protection. Although the majority of OECD nations have developed whole-of-government digital security policies, these strategies often lack an independent budget, assessment tools, and metrics, and are not linked with the country's overall digital strategy [7].

To address these two issues, for the laggards the national government should, first and foremost, promote and support the development of third-party digital service platforms and expedite the industrialization of data resources. Utilize the digital professional capabilities of third-party platforms to the fullest extent possible, reduce the barrier to digital application, and assist conventional industry players in integrating into the digital economy's growth trend via the use of third-party platforms. Additionally, it should boost investment in new infrastructure, digital education, and skill development. Then, with respect to privacy security, rules and regulations governing data privacy protection should be strengthened, and data application limits may be established via the establishment of privacy data classification standards. Comprehensive legal standards, regulatory requirements, processing methods, technological tools, and other variables; develop appropriate data privacy standards; enhance credit monitoring; and increase technical support for data privacy protection. Continuous legislative, institutional, and technical advancements will enable the digital economy to be used more completely, resulting in better outcomes.

6. CONCLUSION

Everything is a double-edged sword. The epidemic has not only brought negative effects, but also some positive effects. Firstly, Environmental pollution reduction on a global, regional, and national scale.

Primarily, pollution of the air, sound, and water will be minimized. Several studies have been conducted, and they show that pollution levels have significantly decreased in all three of these areas." [1]. Secondly, if the government is successful in managing the COVID-19 instead of developing a pandemic situation, it can lead to a stable political order in society [10]. Moreover, bring people together, and engage in a high level of social cohesion or social conscience to face the difficult situation, everyone helps each other and the society becomes more harmonious, [10]. Finally, this paper focuses on the development of digital economy

REFERENCES

- [1] Zhou Lu, Zhang Fan, and Wang Jingwen. "A Probe into the Path of Digital Economy Helping China's Economic Recovery and Development under the New Crown Epidemic." *Expo Economy*. 15(2021):24-27. doi:CNKI:SUN:SZJJ.0.2021-15-008 .
- [2] Xiao Xu, and Qi Yudong. "The Value Dimensions and Theoretical Logic of Industrial Digital Transformation." *Reform* .08(2019):61-70. doi:CNKI:SUN:REFO.0.2019-08-005.

- [3] Han Jing, Sun Yawen, and Chen Xi. "Analysis of the path of China's digital economy development in the post-epidemic era." *Economic and social system comparison* .05(2020):16-24. Doi:
- [4] Gravier, Michael & Roethlein, Christopher & Visich, John. (2018). *The Competitive Advantages of the Digital Economy Require a Digital Mentality*, *European Business Review*.
- [5] Competitive advantage of the sustainable digital economy Oksana Nurova, Tatiana Freze E3S Web Conf. 250 06004 (2021) DOI: 10.1051/e3sconf/202125006004
- [6] Branscombe, M. (2020). *The network impact of the global COVID-19 pandemic*. April 14, Retrieved June 6, 2020, from *The New Stack* <https://thenewstack.io/the-network-impact-of-the-global-covid-19-pandemic/>.
- [7] OECD (2020), *Digital Transformation in the Age of COVID-19: Building Resilience and Bridging Divides*, *Digital Economy Outlook 2020 Supplement*, OECD, Paris, www.oecd.org/digital/digital-economy-outlook-covid.pdf.
- [8] Zhu Ge, and Wang Xiulan. "The Impact of the Epidemic on the Online and Offline Economy." *Cooperative Economy and Technology* .16(2021):9-11. doi:10.13665/j.cnki.hzjyjkj.2021.16.003.
- [9] Donici, Andreea & Maha, Andreea & Ignat, Ion & MAHA, Liviu-George. (2012). *E-Commerce across United States of America: Amazon.com*. *Economy Transdisciplinarity Cognition*. 15. 252-258.
- [10] Karunathilake, K. *Positive and negative impacts of COVID-19, an analysis with special reference to challenges on the supply chain in South Asian countries*. *J. Soc. Econ. Dev.* (2020). <https://doi.org/10.1007/s40847-020-00107-z>