Grasp the Opportunity of Restructuring Global Industrial Chains and Achieve High-quality Development in the Post Epidemic

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Abstract. As the epidemic ebbs away and the world transitions to a post-epidemic period, the global economy has shifted its attention to how to advance and how to progress. Exploring ways to take advantage of this chance and attain superior progress, this research will systematically analyze the utilization, prospects, and difficulties of this strategy. Internet technology is a critical means of creating a more advanced open economy in the modern age. It is indispensable in agriculture, industry, and service industries, and to satisfy the needs of the present stage of expansion and reach its goals. Superior development through a comprehensive integration into the international labor system, countries should construct autonomous, manageable, secure, and productive industrial and supply networks based on the concept of sustainability. We should amalgamate production and consumption, form novel benefits in engaging in international collaboration and rivalry., develop high-tech industries, and combine "bringing in" and "going out" to form a closer and stable global economic cycle system.

Keywords: Post epidemic; Industrial chain; technology; internet; sustainable development.

1. Introduction

T Global attention has been drawn to the post-epidemic development of developing countries, due to the COVID-19 epidemic's effects on industrial productivity, unemployment, GDP, etc. have all significantly decreased. Although the epidemic has brought significant challenges to the industrial chain, overall, the objective trend of highly integrated interests and interdependence among countries has not changed. The long-term trend of economic globalization, with its division of labor and cooperation between countries for mutual benefit and a win-win situation, has been a historical one; China should take heed. take advantage of the chance and initiative of global industrial chain restructuring by uniting development, security, and production to form independent, regulated, secure, and productive industrial and supply networks, integrating production and consumption, and creating fresh benefits from engaging in international collaboration and rivalry. COVID-19 pandemic, the international community was isolated and the space for physical communication was limited, greatly accelerating the digital transformation that had already begun [1]. The application of Internet technology in agriculture (precision agriculture, etc. This article illustrates how industrial development (Internet of Things technology) can be utilized to facilitate developing countries in restructuring global industrial chains and achieving superior development.), and in the service industry (represented by the tourism industry) (taking Dunhuang as an example), the establishment of a network platform, the use of cloud computing and the sale of related derivatives.

2. Literature Review

The development of Internet technology can improve crop yields and encourage young people to create in the agricultural field. Internet technology is very important in the development of intelligent systems and precision agriculture applications. The emergence of agricultural technology can improve the sustainability of agricultural farming and discover more effective farming methods. Intelligent agriculture has broad prospects, and the use of technology in agriculture can overcome most of the problems related to the utilization of machine learning and cloud storage in modern

agriculture has enabled solutions to the majority of issues. With the help of advanced technology and positive government policies, this industry has the ability to change the world. The Internet is reshaping the agricultural sector. The application of the Internet of Things will be expanded, continuously improved, and bring tangible benefits in all industries. The Internet of Things technology has seen immense success in various areas, such as intelligent transportation and logistics, healthcare, smart cities, and social services, due to its utilization of advanced computing, big data analysis, and intelligent sensing. This technology has also been found to significantly enhance product efficiency and reduce production costs. After the COVID-19 pandemic, technology and interactive communication methods have become increasingly important, and one of the industries most affected by the embargo is tourism. It is necessary to use the Internet for research and development in this field.The sharing economy, as Jakub Franczuk et al. have suggested, will remain a reality and become more and more significant.

3. Application of the Internet in agriculture in the post epidemic

3.1. Technology

Utilizing IT, satellite, GIS, and remote sensing, precision agriculture is a novel technology that augments all the agricultural sector's functions and services. Figure 1 provides information on precision agriculture [2]. The application of Agricultural Internet of Things technology to a variety of areas, such as agricultural environmental monitoring, greenhouse production control, water-saving irrigation, meteorological monitoring, product safety traceability, and intelligent diagnosis and management of equipment, is widespread [3].

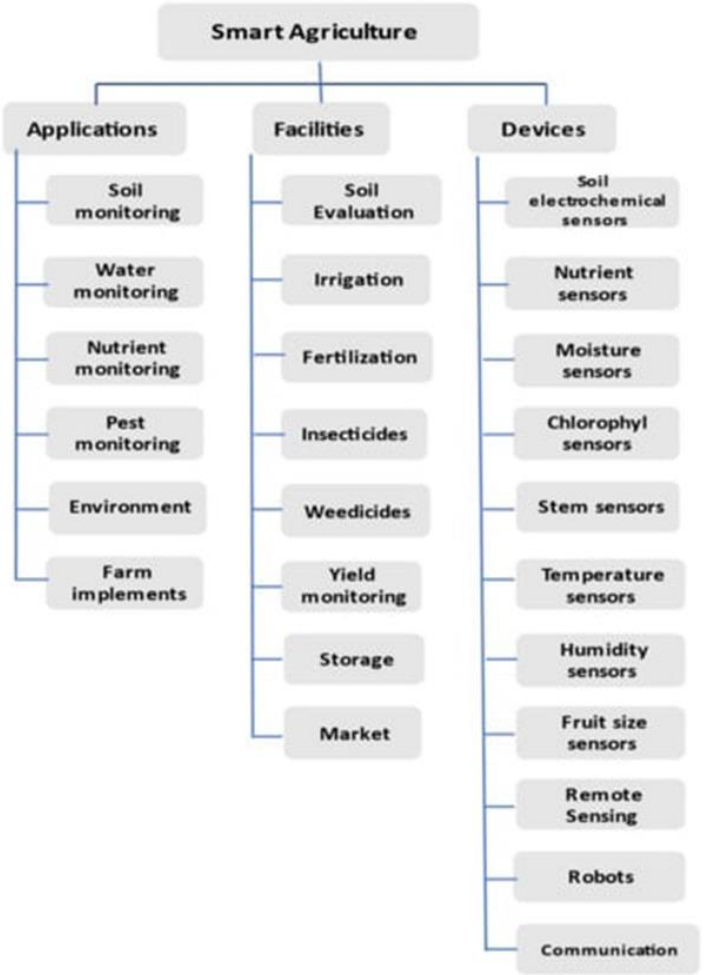


Figure 1. Precision agriculture

3.2. Application

Precision agriculture is based on collecting data that affect agricultural production, such as environmental conditions, soil, land orientation, terrain, and so on. A prediction model is formed by combining this data with powerful technology, as illustrated in Figure 2 [4]. These models can predict the threat of pests and diseases and determine the ideal amount of irrigation and fertilization. A considerable decrease in the quantity of water and chemical products [5] can result in considerable cost savings. new technologies: e-commerce platforms provide services in a direct supply manner, and consumers can collect them at their own points in contactless communities; Large supermarkets are deeply engaged in online sales services for fresh products; Traditional farmers' market operators establish a platform for exchanging food purchases with users in surrounding communities. Orders are the basis for operators to dispense goods, and riders' complete delivery services.". The emergence of new services such as "e-commerce platform+base direct supply" and "contactless" home accessories not only provides strong support and guarantee for reducing personnel turnover, effectively curbing the epidemic, and meeting the daily needs of citizens, but also speeds up the iterative advancement of agricultural product supply models. Creating secondary supply platforms for communities, new retail, and agricultural product distribution enterprises, and furthering the agricultural product supply chain, is a possibility. Production and sales, however, are no longer available on the market. This will further encourage new retail enterprises to seek or invest in more stable and high-quality supply bases [6].

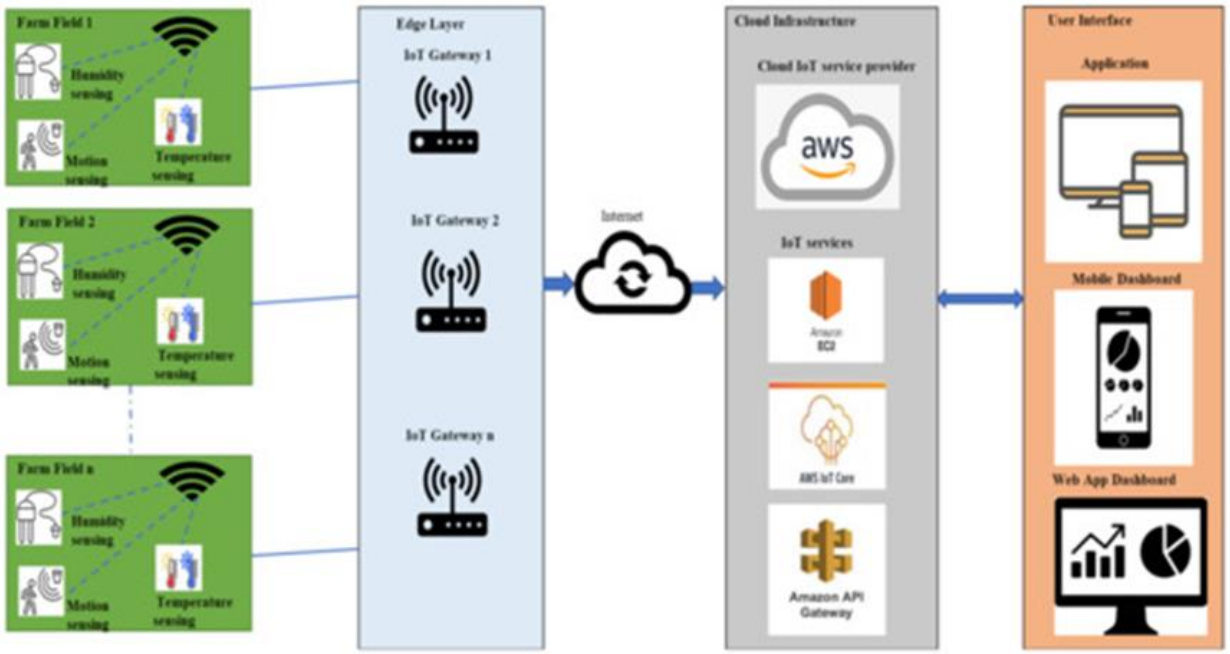


Figure 2. Smart-agriculture application

3.3. Prospect

The post-epidemic era has seen a dramatic rise in the use of agricultural digitization, which has had a far-reaching impact on the supply chain and agriculture. Now, it is possible to precisely map the production, processing, transportation, and retail of food, as well as the shelf life available to customers, thereby helping to reduce food waste. This has resulted in reduced transaction costs, improved communication, and has the potential to revolutionize the agricultural and food industries [5].

3.4. Challenge

Communication between academia and interdisciplinary groups must overcome the gap between agriculture and information science. Ag riculture's future is anticipated to be linked to more

sophisticated Internet technologies, such as AI and big data services. These systems will coalesce into one entity, commencing with sowing and concluding with production forecasting, where agricultural machinery and management will commence. Few key technologies and methods focus on achieving sustainable future agriculture [7].

4. The application of the Internet in Industry in the Post Epidemic

4.1. Technology

By the close of the 20th century, the notion of the Internet of Things had gained traction and has been steadily gaining traction. In 2011, Chen et al. first used the keyword "IIoT". Ten years later, the number of publications with the IIoT keyword has increased rapidly. There were 1248 documents in 2020, compared to 1134 in 2021(as of October 2021). This indicates that IIoT themes are receiving increasing attention nowadays (Figure 3) [8].

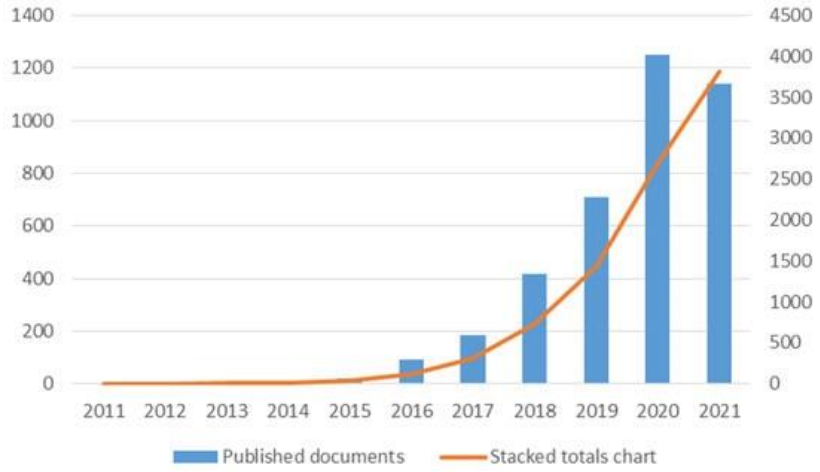


Figure 3. The application growth trend of the Internet of Things in Scopus bibliometric analysis

4.2. Application

Reduce market lag through Internet of Things technology, better promote supply and demand balance, and reduce costs. IoT technology can make production more intelligent and facilitate information exchange.

4.3. Challenge

The technology adoption lifecycle [8]and the construction of management platforms, as well as the overall security [9], remain issues that need to be addressed.

5. Application of the Internet in the Service Industry in the Post Epidemic

5.1. Present Situation

The China Tourism Research Institute's estimates suggest that the COVID-19 outbreak will cause a 56% and 15.5% rise in domestic tourists in the first quarter and the entire year of 2020, respectively, with a year-on-year decrease of 932 million. The service industry, a major contributor to the GDP of many countries (Figure 4) is expected to see a year-on-year decrease of 1.18 trillion yuan due to a combination of a 69% and 20.6% rise in domestic tourism revenue. It is anticipated that by 2020, the number of tourists across the nation will have dropped to 5.074 billion, and the national tourism revenue will decrease to 4.55 trillion yuan. People's travel has been restricted, and the service industry market has lost a lot. Dunhuang has provided us with a perfect answer sheet on how to reduce the impact of the epidemic.

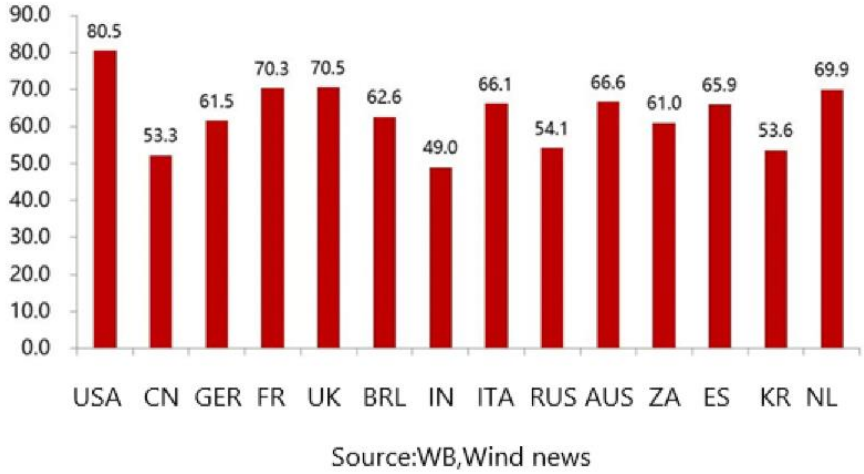


Figure 4. Proportion of service industry to GDP in various countries

5.2. Technology

Laser scanning, photo reconstruction technology, combined with game engine PCG and PBR technology (one focus on program content, another focus rendering of physics [10].

5.3. Application

During the epidemic period, the online "Traveling to Dunhuang" applet was developed to browse Dunhuang online; The "Digital Dunhuang" resource database of 30 cave high-definition images shared globally has currently received over 10 million clicks.

At the same time, the Dunhuang Research Institute has launched an intelligent virtual experience project called "Looking at Cultural Relics in the Cave Outside", as well as digital media brands such as "DH Seasons" words in DH" 1 Thing, 1Life, 1 Person, 1 Cave". In 2020, its entire media platform had 235 million visitors, with visitors covering 120 countries (regions).

The "IP development+cultural tourism" model opens up new ideas for the cultural tourism industry. Digitizing Dunhuang through the Internet has not only furthered the market and furthered the spread and advancement of its culture, but also imparted to the world Chinese sagacity and solutions for the growth of the service industry in the post-apocalyptic period.

5.4. Propect

Digital Dunhuang is full of attraction, effectively displaying the cultural heritage of rich periods in AD220-Yuan dynasty and Middle Ages and Modern Times. It can customers to experience the charm and beauty of Dunhuang cultural heritage in close proximity [11] and will be enriched and enriched in the future.

5.5. Challenge

Thinking solidification: difficult to adapt to digital scenes; Due to the popularization of technology, the cultural dissemination of museums presents the characteristics of fragmentation, thinness, and gamification [12].

6. Conclusion

In agriculture, precision agriculture has greatly improved the efficiency of agricultural planting, extended the industrial chain, and made products more accurately delivered to the market; In industry, the cost of industrial manufactured goods has been greatly reduced through the Internet of Things, and further innovation and development of industry have been promoted; In the service industry, digitization has broadened the way of income, expanded the market, and disseminated culture. This

article demonstrates that Internet technology is a way to seize the opportunities for restructuring global industrial chains and achieve high-quality development in the post epidemic era, which is conducive to readers' further understanding of the importance of the Internet and adding new innovative ideas. This article only describes the application of the Internet in the agricultural industry service industry. Although Internet related technologies have played a significant role, they have further improved in terms of security and technology.

References

[1] Wang F F, Du J. Digital Presentation and Communication of Cultural Heritage in the Post-Pandemic Era. 2021, 8(M/1): 187-192, 6.

[2] Mohamed Torky, Aboul Ella Hassanein. Integrating blockchain and the internet of things in precision agriculture: Analysis, opportunities, and challenges. Digital Applications in Archaeology and Cultural Heritage, 2022, 24, March 2022: e00217 of Technology.

[3] Nameless. Introduction to the Application of Internet of Things Technology in Agriculture. Google scholar, 2020.

[4] Rajasekhar Chaganti, Vijayakumar Varadarajan, Venkata Subbarao Gorantla, Thippa Reddy Gadekallu, Vinayakumar Ravi. Blockchain-based Cloud-Enabled Security Monitoring Using Internet of Things in Smart Agriculture. Privacy and Cybersecurity in the Artificial Intelligence Age, 2022.

[5] Mohd Javaid, Abid Haleem, Ravi Pratap Singh, Rajiv Suman. Enhancing smart farming through the applications of Agriculture 4.0 technologies. International Journal of Intelligent Networks, 2022, 3: 150-164

[6] Lou Huoming. Challenges and countermeasures of COVID-19 to agricultural industry management. CRNEWS.NET.

[7] Muthumanickam Dhanaraju, Poongodi Chenniappan, Kumaraperumal Ramalingam, Sellaperumal Pazhanivelan, Ragunath Kaliaperumal. Smart Farming: Internet of Things (IoT)-Based Sustainable Agriculture. Digital Innovations in Agriculture, 2022.

[8] Krzysztof Wójcicki, Marta Biegańska, Beata Paliwoda, Justyna Górna. Internet of Things in Industry: Research Profiling, Application, Challenges and Opportunities—A Review, New Trends on Internet-of-Things (IoT), 2022.

[9] Jamal Bzai, Furqan Alam , Arwa Dhafer, Miroslav Bojović, Saleh M Altowaijri, Imran Khan Niazi, Rashid Mehmood. Machine Learning-Enabled Internet of Things (IoT): Data, Applications, and Industry Perspective .Software Engineering for Internet of Things: Architectures, Technologies, and Applications, 2022.

[10] Li Chenqi, Chen Faming. Digital technology illuminates ancient caves in Dunhuang. China Economic Daily, 2022.

[11] Xiao Hu. Usability Evaluation of E-Dunhuang Cultural Heritage Digital Library. Data and Information Management, 2018, 2(2): 57-69

[12] Miao Yuwen. Research on Cultural Communication of Dunhuang Research Institute in the Digital Era -- Based on Scene Theory, MEDIAFORUM, 2021.