

IMPACTS FROM THE FOURTH INDUSTRIAL REVOLUTION TO INDUSTRIAL ECONOMIC RESTRUCTURING IN PRESENT VIETNAM

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Abstract

The fourth industrial revolution based on digital technology and integrating smart technologies is fundamentally changing the world's production. Under the strong impact of the fourth industrial revolution, economic restructuring is an indispensable requirement of all countries. In particular, industrial economic restructuring is considered a basic necessity, playing a very important role in mobilizing, exploiting, and using resources for economic growth. On the basis of qualitative and quantitative research methods, the author focuses on clarifying the concept and characteristics of the fourth industrial revolution and its impacts on the restructuring of Vietnam's industrial economy over the past time. From there, the research paper draws out the advantages and limitations of the model. The research also suggests some solutions to accelerate the restructuring of Vietnam's industrial economy in the current period.

Keywords: *industry, restructuring, industrial economy.*

1. Introduction

The issue of renovating the growth model and restructuring the economy was officially proposed by the Communist Party of Vietnam from the 11th National Congress, in which industrial-economic restructuring is a major policy to promote economic restructuring. It helps improve the quality of growth, increases labor productivity and competitiveness of the industry in the global value chain. Over the two terms of the XI and XII Congresses, the process of restructuring the economy in general and the restructuring of the industrial economy, in particular, have achieved many important results, contributing to economic development with a high growth rate. Especially the economy has strongly changed from broad-based development to in-depth and sustainable development. “The processing and manufacturing industry develops rapidly. Supporting industries have developed, contributing to improving the localization rate and added value of products” [9]. However, restructuring the industrial economy has not yet made fundamental changes in the growth model, productivity, quality, and efficiency. The competitiveness of the economy is not high. “The industry is still mainly processing and assembling. The added

value is not high. Supporting industries develop slowly. The localization rate is low. The effectiveness of participation in the global value chain is still limited” [10].

In the new and volatile context, the economy is affected by many factors, especially the impact of the fourth industrial revolution and the global Covid-19 pandemic. The guidelines and policies of the government must take into account the opportunities and challenges to implementing a proactive plan for restructuring the industrial economy. Congress XIII emphasized the need to make good use of the opportunities offered by the new context: “Science, technology, innovation and the fourth industrial revolution is unfolding very quickly. They have far-reaching and multi-dimensional impacts on a global scale. Science, technology, and innovation are increasingly becoming decisive factors for competitiveness among countries. Digital technology will promote the development of the digital economy and digital society. It will change state management methods, production and business models, consumption and cultural and social life” [8]. In particular, it is necessary to take advantage of the achievements of the fourth industrial revolution to apply the latest breakthrough technologies in industries. It helps create rapid and sustainable development.

The article approaches the process of economic restructuring industry under the impact of the industrial revolution the fourth time from the perspective of political economy. From clarifying the concept and characteristics of the fourth industrial revolution and the concept of restructuring the industrial economy, the research paper would point out the impact of the fourth industrial revolution on the process of restructuring the industrial economy. The article analyzes all elements of the productive forces to point out the specific impacts of the fourth industrial revolution on the economy. It proposes some orientations, goals, and policy solutions to accelerate the process of restructuring Vietnam's industrial economy in the coming time.

2. Method

2.1. Research Method

To study the impact of the fourth industrial revolution on the process of restructuring the industrial economy in Vietnam, the author uses a combination of research methods. The article emphasizes the scientific abstraction method that is a specific research method for political economy. In addition, it combines quantitative and qualitative research, methods of analysis, synthesis, statistics, comparison, and description.

2.2. Data collection method

This study uses secondary data collected from reports of related tumor studies including scientific works published in specialized journals, articles on economic restructuring published in newspapers and official websites, and legal documents

of state management agencies such as the General Statistics Office, Ministry of Industry and Trade, Ministry of Planning and Investment, and Institute for Industrial Policy and Strategy.

2.3. Data analysis method

Method of synthesizing and analyzing data:

On the basis of collected documents, the author synthesizes and explores issues related to restructure the industrial economy. Thereby, the author standardizes conceptual data and generalizes it into scientific arguments. The research focuses on the reality of restructuring the industrial economy under the impact of the fourth industrial revolution.

Statistical and comparative methods:

The author uses statistical data from many different sources along with the author's calculations to analyze, evaluate, and compare the actual situation of the process of restructuring the industrial economy in recent times. Thereby, the author proposes solutions to promote the process of restructuring the industrial economy in our country in the coming time. The data is divided in a detailed manner through the stages, ensuring the series comparison. It is illustrated by diagrams and tables. The article uses time-series and point-in-time data for vertical and cross-sectional comparisons across sectors and industries.

3. Results

3.1. Concept and characteristics of the fourth industrial revolution

The concept of “Industrial Revolution 4.0” was coined by Klaus Schwab, Founder and Executive Chairman of the World Economic Forum. "The Fourth Industrial Revolution is blossoming from the third revolution. It connects all technologies altogether, blurring the boundaries among physics, digital and biology” (Economic World Forum (WEF) 46th in Switzerland). Thus, the focus of the fourth industrial revolution is on inventions. It also creates the combination of the three "great trends" of physics, digitalization, and biology, which changes qualitatively the development of productive forces.

The essence of the fourth industrial revolution is based on digital technology and integrated all smart technologies, optimizing production processes. The technologies having the greatest impact are 3D printing, biotechnology, new material technology, automation technology, and robotics. The characteristics of the industrial revolution can be generalized as follows:

First, the combination of technology, physical, and biological digital alters production methods of the world.

In the field of physical technology, key technologies have been established such as self-driving cars, 3D printing, advanced robotics, and new materials. Digital technology is a combination of physical and digital applications to create the Internet of Things, sensors,

and solutions that connect the real world to the virtual one. Nanotechnology and new materials allow the creation of new material structures with wide application. Artificial intelligence and cybernetics have made great progress, allowing people to remotely control everything. It is unlimited in space and time. It also helps interact faster and more accurately. The fourth industrial revolution will open a new era of choosing business investment options, optimizing the use of resources, and promoting labor productivity and efficiency. It helps create a breakthrough in the speed of development and the scope of the impact that "fundamentally transforms the social production and management system in both breadth and depth" [3].

Second, the scale and pace of development unprecedented in human history.

The speed of development in the fourth industrial revolution has never occurred before. If the previous industrial revolutions took place in arithmetic progression, the growth rate of the fourth industrial revolution took place exponentially. From the birth of ideas of technology and innovation, actualizing these ideas takes a shorter time. The pace at which disruptive technologies are invented today is so fast. It is disrupting the structure of almost every industry in every country. The breadth and depth of these changes create transformations in the entire production, management, and governance systems.

Third, the fourth industrial economy creates a manufacturing process that is smart and flexible. It integrates technology that is environmentally friendly.

The fourth industrial revolution focuses on smart manufacturing processes to create smart products in a smart factory. If the steam engine ushered in the mechanical industry, the smart factory is the key factor in opening the era of the "smart industry". In the smart industrial environment, smart factories are connected with smart services such as smart logistics, smart grid, and smart transportation to form a smart production chain. The smart factory model will be automated fully, which replaces the old mode of production. Jobs related to direct production are replaced by intelligent robots. Therefore, only designers, engineers, information technology experts, logistics, and marketing staff work in the offices. Thanks to connectivity on the Internet, there are many jobs that people can work from home.

The characteristic of industrial production in the fourth industrial revolution is that products are produced in a flexible environment. The manufacturer is located in the consumer market so the products can adjust quickly to the changes of demand in the market. The highly developed automation technology allows the application of "self-optimization", "self-configuration", and "self-testing and monitoring" methods. It helps the products adapt to the market when there are changes in production requirements. The needs of customers are stored and processed by big data technology. Customer demand data is connected to production by

cloud computing and virtual reality systems, so production can react quickly to changing demand.

The core of the fourth industrial revolution is the integrated use of new technologies on the basis of Internet connectivity. These are environmentally-friendly technologies that save energy and fuel (for example, smart grids allow maximum loss of electricity in loading electricity) and minimize emissions. The fourth industrial revolution is also a green industrial revolution, associated with flexible energy and transport integration. Green, environmental-friendly, high-yield products and services will be the key products of the fourth industrial revolution era.

3.2. Concept of industrial economic restructuring

In terms of terminology, "restructuring" means adjusting the strategic orientation, vision or changing the entire structure of the system such as re-adjusting the resource framework, operating mechanism, re-adjusting models of a specific field in order to suit the requirements and circumstances at that time. The objective of economic restructuring can be viewed from the following three angles:

First, from the perspective of resource allocation, economic restructuring is a change in institutions, mechanisms, and tools for allocating, managing, and using national resources, especially investment capital, shaping the country's economy to be more rational and efficient.

Second, from the perspective of the State's role in the economy, economic restructuring is understood as reducing the State's control towards investors and owners of enterprises. The State enhances orienting and managing macroeconomics.

Third, from the perspective of growth drivers, economic restructuring is the transformation of the growth model. It changes the driving force of growth from mainly based on increasing the size of inputs to mainly relying on growing efficiency and labor productivity. It ensures the benefits that are distributed more rationally and equitably among regions and classes of the population.

Restructuring the industrial economy is a deliberate activity by rearranging basic elements of the productive forces to form a modern, efficient and sustainable new industrial economic structure.

Restructuring the industrial economy is a component of the overall restructuring of the national economy, consistent with developing the economic societal strategy of the country. It is the process of renovating the old, outdated, and unsuitable industrial economic structure in order to build a new and appropriate industrial economic structure. The objective of industrial economic restructuring is to promote economic restructuring, improve growth

quality, and increase labor productivity and industry competitiveness in the global value chain.

The process of restructuring the industrial economy must focus on improving the state management capacity, organizing the apparatus rationally through mechanisms and policies, clearly defining the roles and functions of the state and the market. These functions should be oriented in the direction of minimizing barriers, administrative interventions, creating incentives, shifting, and allocating resources according to market signals.

3.3. The impact of the fourth industrial revolution to restructure economic industry in Vietnam

The impact of the fourth industrial revolution on the process of restructuring the industrial economy in Vietnam is demonstrated by rearranging the layout and basic elements of the force production.

This impact is objective. It takes place in many directions, both positive and negative. The results of the impact can be recognized immediately. The achievements of the fourth industrial revolution are foundational to accelerate the process of restructuring the industrial economy. When the modern industrial economy develops, it will be a condition to receive the achievements of the fourth industrial revolution more conveniently and effectively.

Specifically, the impact of the fourth industrial revolution on the process of restructuring the industrial economy over the past time is shown in the following contents:

** Impact on labor in the industry:*

The fourth industrial revolution is considered as the highlight of the digital era. It has a strong impact on many industries in the economy. It influences directly Vietnam, a country with an abundant and stable labor supply with more than 55,8 million workers, workers in the construction industry are about 16.5 million people (30.2% of the total workforce) [5]. Those impacts are shown clearly through job requirements, strategies, orientations, and plans in the development of the labor market.

The fourth industrial revolution affects the quantity and quality of jobs through the replacement of living labor with machines, robots, artificial intelligence, and the application of information technology in many industries. At the same time, its impact changes the nature of the job that some jobs are disappeared, and there are more new jobs joining the market. It is essential to recognize the risk of replacement workers in textile, leather, and footwear. This industry is in danger of losing jobs the most under the influence of technological breakthroughs. This percentage will turn into a large absolute number because this sector is the industry creating jobs for many workers (about 2.3 million people, of which about 78% are female workers). According to the forecast of the International Labor Organization (2019), in the next 10 years, Vietnam will face the replacement of labor

because of digital technology applications. It leads to a change in the production model, business culture, and organizational model. Up to 70% of jobs are at high risk (with a probability of being replaced over 70%), 18% have a medium risk (with a probability of being replaced from 30-70%) and 12% are low risk (with a probability of being replaced less than 30%). This requires businesses to handle and adapt to this change.

Table 1. Industries with a high rate of job displacement in Vietnam

Branch	Rate of substitution
Agriculture, forestry, and fisheries	83.3%
Manufacturing and processing industry	74.4%
Wholesale and retail	84.1%
Textile industry	83%
Electronics	75%

Source: Forecast of the International Labor Organization (2019)

The fourth industrial revolution has an impact on the quality of human resources because labor skills are needed in the new technological era not only requires technical skills (specialized knowledge and skill in technical expertise to perform specific jobs) but also needs soft working skills such as creative thinking ability, teamwork skill, and skill in using computers, the internet, foreign language ability, teamwork skills, safety skills, labor discipline compliance, problem-solving skills, time management skills, and concentration skills.

** Impact on investment capital for industrial production*

Under the impact of the fourth industrial revolution, investment capital has shifted in both quantity and field of investment. As reported by the GSO, the total capital of foreign investment increased continuously. Between 2016 and 2020, it reached 92.76 billion dollars, up 64.64% compared to the period of 5 years from 2011 to 2015 (59.96 billion USD).

Table 2. Number of project capital and FDI in Vietnam during the period 2011 - 2020

Year	Total registered FDI capital (Billion USD)	Realized FDI capital (Billion USD)	Number of newly registered projects
2011	15.60	11	1186
2012	16.35	10.46	1287

Year	Total registered FDI capital (Billion USD)	Realized FDI capital (Billion USD)	Number of newly registered projects
2013	22.35	11.5	1530
2014	21.92	12.5	1843
2015	22.70	14.5	2013
2016	26.90	15.8	2613
2017	30.80	17.5	2741
2018	26.30	19.1	3147
2019	38.95	20.38	3883
2020	28.53	19.98	2523

Source: Author's compilation from Foreign Investment Department

In the field of investment: In the period from 2011 to 2020, foreign investors have invested in 19 industry sectors. The processing and manufacturing industry has always been the field of attracting more attention from foreign investors with the total newly registered capital that is always fluctuated in the range of USD 13 - 24 billion. It accounts for a high percentage of the total registered investment capital (40 - 70%). In 2020, the processing and manufacturing industry is the field that attracts the most FDI with 800 new projects, 680 projects with adjusted investment capital, and 1268 times of capital contribution and share purchase with a total capital of 13,601 billion USD. It accounts for 47.67% of total investment capital. The production and distribution of electricity, gas, and steam ranked second with US\$5.1426 billion, accounting for 18.03% of total investment [7].

In the era of the fourth industrial revolution, the trend of moving FDI capital also takes place flexibly, requiring Vietnam to have a specific strategy to ensure the sustainability of the new generation of high-value FDI. Vietnam should ensure a high growth rate, achieving the goal of significantly raising the level of technology and transferring technology through FDI enterprises. At the same time, it is necessary to be sensitive to overcome the tendency that relies heavily on foreign investment, destroys the environment, and exhausts the national resources of FDI projects.

** Impact of engineering technology on industrial production*

The fourth industrial revolution will contribute to the shift of national industrial production from a low -productivity economy to a high-productivity economy (with more opportunities for innovations and added value). higher increase). Specifically, low-tech

industries (textiles, footwear, etc) are still dominant in Vietnam and other developing countries. However, in the context of the fourth industrial revolution, this will be one of the great challenges, as labor is gradually replaced by robots and smart factories. Therefore, an important factor in the coming time is to gradually focus on improving technology and improving labor quality. Medium industries (intermediate goods: iron and steel, cement, rubber, packaging, and non-metallic mineral industries) need to focus on improving labor quality and improving production technology. export. For the high-tech industry: should focus on investment in the development of science and technology, innovation and application of technology advance; strong shift to high-tech industries; select and focus on exporting products with high added value, Vietnam has advantages; rapidly reduce the export of raw resources and minerals.

At the production level, important applications from the fourth industrial revolution include quality control, traceability, predictive maintenance, sorting, and unloading. chemistry, IIoT, Big Data, and AI.

** Impact on industry structure*

The fourth industrial revolution will create great changes in the structure of industries as well as the contribution of each industry in the growth of the entire economy in the coming time. In the current industrial production structure, the industries that account for a large proportion are the food processing industries (always accounting for the highest proportion, although tended to decrease slightly at over 17%), followed by manufacturing electronics, computers, and telecommunications equipment (over 12%). In addition, there are other industries such as textiles (8.12%), transportation equipment (4.85%), computers and electronics (3.54%), etc. Low-tech industries continue to account for a high proportion, accounting for about 65% of the total processed and manufactured products in Vietnam, while this figure of the world is only 18% [6]. These are labor-intensive industries or produce low-value-added end products, leading to slow growth in value-added in Vietnam's industrial production. This is one of the major obstacles to industrial development as Vietnam needs to gradually shift to high-tech industries, producing high value-added products, to accelerate growth.

General assessment: under the strong impact of the fourth industrial revolution, in recent times, the process of restructuring our country's industrial economy has reoriented in the right direction. Accordingly, the industrial structure has had a positive shift, towards gradually reducing the proportion of the mining industry, rapidly increasing the proportion of the processing and manufacturing industry in line with the goal of sustainable development. Specifically, the proportion of the processing and manufacturing industry in GDP increased continuously at a relatively high rate.

Table 3. The proportion of processing and manufacturing industry in GDP in the period of 2015 - 2020

Year	2015	2016	2017	2018	2019	2020
%/GDP	13.69	14.27	15.28	16.00	16.48	16.58

Source: Compiled by the author from the General Statistics Office

Meanwhile, the share of the mining industry has decreased from 8.1% in 2016 to 6.0% in 2020 [2]. A number of large-scale, competitive industries and strong positions in the market have been formed. Some domestic industrial enterprises already have good competitiveness such as VinGroup and Truong Hai (in the field of manufacturing and assembling cars), Vinamilk, TH True Milk (in the field of producing and processing milk and food), Hoa Sen Group, Hoa Phat Group, Pomina Steel Company (in the field of iron, steel, and metal).

Supporting industries have gradually developed, contributing to raising the localization rate and added value. The proportion of processed exports in total export value has increased from 65% in 2016 to 85% in 2020. The proportion of exports of high-tech products in the total product value has increased from 44,3% in 2016 to 49,8% in 2020. The global competitiveness of the Vietnamese industry has increased from the 58th position in 2015 to the 42nd position in 2019 according to the ranking of the United Nations Industrial Development Organization (UNIDO).

However, industrial development has not yet met the requirements of industrialization and modernization. It just mainly develops on short-term goals, lacking sustainability. A highly competitive domestic industry has not yet been created. A spearhead industry has not played a leading role. Industrial production is still mainly processing and assembling, with low added value. The development of supporting industries is still slow. Raw materials and components for domestic production are still heavily dependent on outsiders, not paying enough attention to the value chain and domestic supply. The rate of localization of industrial products is still low, which is highly dependent on foreign-invested enterprises. The agricultural, forestry, and fishery processing industry is still underdeveloped, especially in the stages of preservation and deep processing.

4. Discussion and Conclusion

4.1. Some industrial development orientations in the fourth industrial revolution

The Industrial Development Strategy to 2025, with a vision to 2035, has identified strategic directions for Vietnam's industrial development: " Effectively mobilize all resources from domestic and external economic sectors to develop and restructure the industry towards modernity; Focus the training of industrial human resources on the qualities

of skillfulness, disciplined, and creative capability; Prioritize the development and transfer of technology to industries and fields with competitive advantages and advanced technologies in the fields of agricultural, forestry, fishery processing, electronics, telecommunications, new and renewable energy, mechanical engineering and pharmaceutical chemistry; Reasonably adjust the distribution of industrial space so as to promote the strength of linkages between industries, regions, and localities to foster deep engagement in the global value chain ” [4]. In line with the strategic vision to 2035, Vietnam's industrial development will fundamentally incorporate the growth of industries where advanced technology, internationally qualified products (in compliance with international standards), extensive involvement in the global value chain, commercial and efficient use of energy, and equitable competition in globalization are facilitated.

This strategy also sets many specific goals such as The growth rate of industrial value-added in the period of 2021-2025 will reach 7.0-7.5%/year and the period 2026 - 2035 will reach 7.5- 8.0%/year. The growth rate of industrial production value in the period 2021-2025 will reach 11.0-12.5%/year and the period 2026-2035 will reach 10.5-11.0%/year. The 2025 outlook aims at a restructured sectoral economic composition where the construction and industry sectors account for 40-41% in 2035. The proportion of exported industrial goods/total export turnover by 2025 will reach 85-88%, after 2025 it will reach over 90%. In addition, the Government has also set a target that the value of high-tech industrial products and high-tech applied products will reach about 45% of GDP by 2025, and over 50% after 2025. Industrial ICOR index for the period 2011-2025 will reach 3.5-4.0% rate; in the period 2026 - 2035 reaching 3.0-3.5%... [4].

Resolution No. 23-NQ/TW on orientations of formulating national industrial development policies to 2030, with a vision to 2045, has defined the goal of Vietnam's industrial development by 2030: The share of industry in GDP exceeds 40%; The proportion of the processing and manufacturing industry in GDP is about 30%, of which the manufacturing industry is over 20%. The value proportion of high-tech industrial products in the processing and manufacturing industries achieves 45% at minimum. The growth rate of industrial added value reaches an average of 8,5 %/year, with the processing and manufacturing industry averaging over 10%/year. The growth rate of industrial labor productivity reaches an average of 7,5 %/year. The Industrial Competitiveness Performance Index (CIP) ranks among the top three in ASEAN countries. The employment rate in the industrial and service sectors exceeds 70% [1]. Establish a number of industrial clusters, large-scale, multinational domestic industrial enterprises with international competitiveness.

4.2. Some solutions to focus on implementation

Renovate the industry development plans and improve the business environment

Initiate a comprehensive review of all legal documents related to the planning, structuring, and policies for restructuring the industrial economy. Rule out documents that directly interfere with product development, such as product industry planning. Currently, the draft Law on Planning is being submitted to the National Assembly with the main subject being to eliminate product sector planning due to the excessive formation of sectoral plans that lack feasibility and violate regulations of the World Trade Organization.

The spatial arrangement of the territory in the planning work needs to be seriously and drastically considered, where it is necessary to close the polluting facilities and relocate the industrial facilities to the periphery, separating them from densely populated areas. Build environmental criteria for industrial facilities. These environmental standards must be on par with those of the World Health Organization (WHO).

Completing the State management mechanism in order to overcome and limit policy overlap, ensure stable, consistent, and simple policies on administrative procedures to encourage product development. Continue to reform customs procedures to create favorable conditions and reduce costs for businesses carrying out import and export procedures. At the same time, create equality between economic sectors, and specifically focus on enhancing the role of the private sector through effective enforcement of property rights protection and equality in the economy. access to resources.

Choosing an industrial development model suitable to Vietnam's strategic orientation and advantages

Model selection is very important as it creates a framework and ideology for the accompanying industrial development policy. In the era of globalization, industrial structure models need to aim at building international competitiveness in line 04 requirements: (i) understanding regional and global trends; (ii) analyzing competitors' competitiveness; (iii) locating the current position; (iv) designing concrete and practical solutions to improve competitiveness. Accordingly, priority should be given to developing industries that can create diversity in industrial production. At the same time, aim towards a production model in the global competition in an integrated form, in line with its dynamic competitive advantages (the processing and manufacturing industry is highly-skilled, capable of absorbing high technology from the FDI sector).

Continue to implement guidelines and issue appropriate policies to build and develop industries in the direction of modernity, increase the content of science and technology and the proportion of domestic value in products, focus on the industries that have foundational, comparative advantages and strategic significance for rapid and sustainable development, enhancing the independence and self-reliance of the economy, be able to participate deeply and effectively. into the global production and distribution network. Review and select worthy products, with a large scale in terms of both output and quality, typical and

representative, in line with international practices, in line with the Party's guidelines and governmental interests. In particular, pay attention to high-tech industrial products.

Investing in the development of foundational industries, spearhead industries, new technologies, high technologies, and supporting industries

Develop fundamental industries such as energy, mechanical engineering, metallurgy, chemicals, fertilizers, and materials. Prioritize the development of spearhead industries, new technologies, high-tech industries, and supporting industries such as information and telecommunications; electronic; artificial intelligence; manufacturing robots; car; automobile industry supporting industry; biotechnology; biomedical electronics; software production; digital products; clean energy and renewable energy. Strongly concentrate on developing the processing and manufacturing industry associated with smart technology; focus on developing the green industry.

Strengthening linkages between regions and economic zones to bring into play their advantages to speed up the process of restructuring the industrial economy.

Pilot cluster models in priority industries. Promote the progress of large industrial projects with spillover effects; at the same time, drastically handle slow-moving and inefficient projects. To develop large-scale industrial production in coastal economic zones, with emphasis on heavy industry production, deep processing, and the formation of value chains.

Strengthen linkages between the foreign-invested sector (especially multinational corporations) and domestic enterprises in the supply chain development of industries. Arouse internal resources, strongly encouraging the development of domestic private enterprises, especially in the fields of manufacturing and processing industry, high technology, information technology industry; form domestic and international supply chains and value chains, quality assurance, and regulations on traceability. Develop a number of key enterprises in the fields of telecommunications and information technology so as to achieve the leading role in technology infrastructure, create a foundation for the development of the digital economy and digital society in the current era of the fourth industrial revolution.

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