Research on the Development of Cyberspace Security Industry Chain in the Future

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Abstract: At present, cyberspace security has become an important cornerstone of national security. Since the Tenth National Congress of the Communist Party of China, China has made remarkable achievements in promoting the development of digital space and digital security. Based on the future development trend of cyberspace security, improve the comprehensive security guarantee ability of cyberspace from the aspects of controllable strengthening of industrial chain and the development and growth of security industry, and vigorously promote the safe and high-quality development of digital economy. Through the research and judgment of the development status of digital economy and the security situation at home and abroad, this paper combs and prospects the effectiveness and future trend of China's cyberspace security development.

1. Introduction

Network security involves national political security, economic security, national defense security, cultural security, social public security and public security. Cyberspace Security and information security industry coexist. The development of information security industry is the economic basis of cyberspace security. Facing the difficulties of imperfect development system of China's information security industry, lagging core and key technologies, unbalanced regional development and insufficient international industrial cooperation, we must strengthen the support for the development of information security industry, optimize the layout of industrial development, strengthen the construction of talents in information security industry and promote the international cooperation of information security industry.

2. Overview of Cyberspace Security

Network security involves political security, economic security, national defense security, cultural security, social public security and people's security. This is the premise for China to comprehensively deepen reform(As shown in Figure 1). The Third Plenary Session of the 18th CPC Central Committee proposed to establish a national security committee, accelerate the improvement of the Internet leadership and management system, and ensure the national network and information security. This is a new strategic idea of China's overall plan for reform, development and stability, a new top-level design of the national security system, a new idea and wisdom to promote national security based on the situation and reasonable management, and a new measure to promote the modernization of the national governance system and governance capacity*(Li Yan,2021)*. The severity of the world cyberspace security Competition and a series of cyberspace security incidents in recent years are enough to sound the alarm. It is urgent to strengthen the construction of cyberspace security.
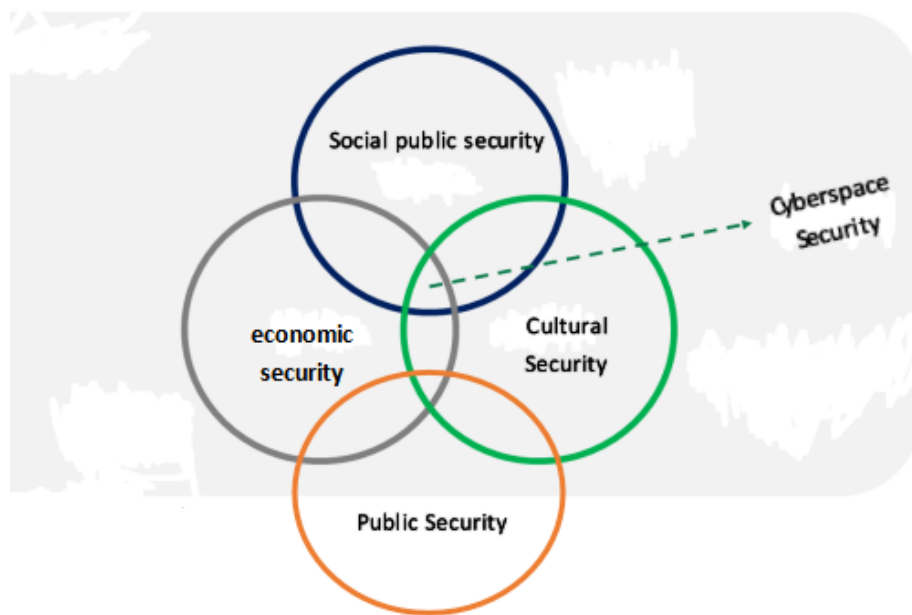
Figure 1 Cyberspace Security System.

However, cyberspace security is not a purely technological innovation issue, but a complex of industrial development, system design, public interest protection and national security. We should rely on the development of information security industry, cultivate and shape more national brands of network information technology and products with independent intellectual property rights, and form a strong voice and control over network security. Therefore, cyberspace security and information security industry go hand in hand. The development of information security industry is the economic foundation of cyberspace security. The development of information security industry is the common goal of realizing network power and improving national modern governance ability. It is a key economic field for China to comprehensively deepen reform and adjust industrial structure. It is an important way to speed up the mode of economic development.

3. Information Security Industry is the Economic Foundation of Cyberspace Security

Information security industry mainly refers to the industry engaged in the research and development of information security technology, product production and operation and the provision of relevant services, involving relevant security standards, technological innovation, product manufacturing, software development and information security services. Information security industry has the characteristics of knowledge intensive, technology intensive, great development potential, low resource consumption, less pollution and strong industrial driving. It is a strategic core industry to ensure national information security and undertakes the strategic task of providing information security products and services for national information infrastructure and information system security. In recent years, with the rapid development and wide application of information technology, cyberspace security plays an important role in national security and national development. It involves national political security, economic security, national defense security, cultural security, social and public security and people's security. This is the premise for China to comprehensively deepen reform. The fierce competition of international network security and the lack of information security technology in China make China's network security face severe challenges.

The inaugural meeting of the central leading group on network security and informatization stressed that China should build itself into a network power from a network power. This process is not only a transformation process of understanding the importance of cyberspace security, but also a process of the development and growth of national security information industry. The undeniable

fact is that the realization of cyberspace security must rely on the improvement of independent innovation ability and the full supply and application of technologies and products with independent intellectual property rights. In this process, the improvement of independent innovation ability is combined with the development of enterprise innovation, modern information technology industry or security information industry and emerging information service industry. From another perspective, the development of security information industry is also an indispensable factor to promote the development of advanced information technology and high-end network talents that cyberspace security depends on. This is because cyberspace security is supported by a series of factors such as key core technology, perfect infrastructure and talent allocation. The supply and satisfaction of these factors can not be completed by a certain part or enterprise, but need to be created by improving the industrial chain with clear division of labor. Therefore, cyberspace security is closely related to the development of information security industry. The latter is the economic guarantee basis of the former and the source of the supply of factors such as technology, products and talents. As shown in Figure 2:
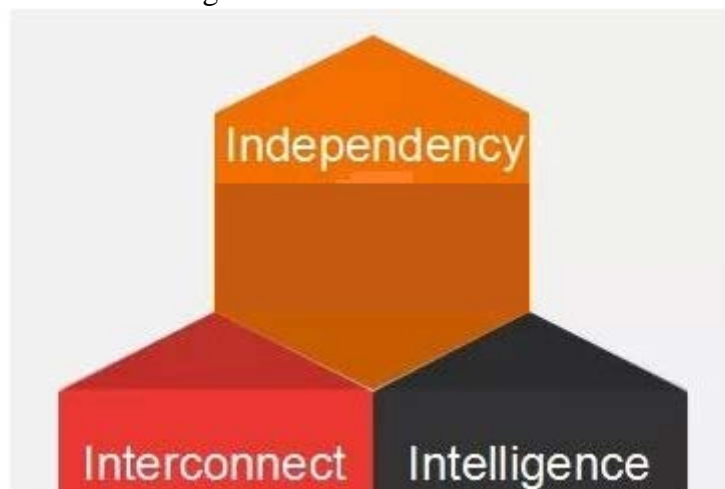

Figure 2 Development of Cyberspace Security and information security industry.

4. Strategic Thinking on the Development of China's Information Security Industry Based on Cyberspace Security

The development level and sustainability of information security industry are related to the construction of cyberspace security and the realization of network strength in China. China's society at all levels is increasingly aware of network security, which has risen to an important strategic position of national security and national development. Based on this premise, the development of information security industry is not only important and urgent, but also facing great opportunities. In the future, clarifying the development status, changing the development mode, improving the industrial development system, optimizing the industrial division of labor and strengthening industrial docking are all urgent problems to be solved in the development of information security industry, which should be promoted from the aspects of industrial support, industrial layout optimization, industrial talent team construction, industrial international cooperation and so on.

4.1. Increasing support for the development of information security industry

Information security industry is closely related to cyberspace security. Cyberspace Security is directly related to national cyberspace security, the formulation and implementation of national cyberspace strategy, and the overall national security. In the current fierce industrial and market competition, we must strengthen relevant policy support, improve the policy support system of information security industry, and promote the scientific development of information security industry. First, strengthen the legal guarantee of information security industry policy support. Special laws and regulations on the entire information security industry, including national and

local laws and regulations, shall be issued, but these laws and regulations shall not conflict with the constitution and other laws, nor with the laws of their superiors. In the form of laws and regulations, clarify and standardize the institutional rules of investment and financing, intellectual property rights and market development of the information security industry, further clarify the responsibilities and rights of the information security industry and its related industries and related parties, promote the standardization of the development of the information security industry, and enhance the enthusiasm of enterprises to participate in the development of the information security industry.

4.2. Optimizing the development layout of information security industry

Scientific and reasonable industrial layout can promote the optimal allocation of resources, improve the efficiency of resource utilization and improve the quality of industrial development. To accelerate the development of China's information security industry, we must adjust the industrial layout, make the layout and regional combination of information security industry more scientific, and make the flow and allocation of relevant resources and production factors more scientific, so as to promote the development of information security industry.

First, adjust the regional layout according to the overall development of the current information security industry. Industrial layout is the spatial distribution trend of enterprise organization and production factors. Industrial layout is both static and dynamic. Adjusting the layout of information security industry is to realize the transformation of dynamic layout while adjusting the static layout.

Secondly, based on the development of information security industry within the region, adjust the industrial layout. Relying on the Regional Information Industry Park and software industry park, actively develop information security related technologies and products. We should not only develop hardware products for information security, but also develop relevant software products. At present, the ability of China's information security products to resist network threats has been greatly improved, and the market development potential has been further tapped. The government and its institutions, telecommunications, banking, energy and military defense are still the key areas concerned by the information security industry, while transportation, education, securities and other fields are gradually becoming new markets.

4.3. Building a high-level talent team in information security industry

Information security industry is a high-tech industry. What plays a decisive role in its development is not the material resources required by traditional industries, nor the large number of ordinary labor force required by traditional industries, but human capital, that is, the knowledge, technology and intellectual resources gathered in this industry*(Huang Yixin,2021)*. It can be said that human capital is the main source of international competitiveness of information security industry. To accelerate the development of China's information security industry, we must accelerate the gathering of relevant innovative talents, improve the innovation ability and innovation potential of the information security industry, and develop core technologies with independent intellectual property rights. On the one hand, from the perspective of the overall national environment or the overall regional environment, we should create a good policy environment, investment environment, innovation environment and humanistic environment for the information security industry, and create a good external environment for gathering technological innovation talents. On the other hand, for the information security industry, we should create a scientific talent learning environment, talent growth environment, talent incentive environment and talent innovation environment, so that innovative talents at the technical level can enter, retain and achieve results.

4.4. Strengthening international cooperation in the development of information security industry

At present, western developed countries, especially the United States, are far ahead of China in information security industry. To further develop China's information security industry, we must learn from the development experience of foreign information security industry, take the initiative

to break the monopoly of western developed countries, especially the United States, on information security technology, actively participate in international division of labor and cooperation, and actively guide information security enterprises, especially large enterprises, to go abroad and participate in international competition. On the one hand, we should formulate a strategic plan for the information security industry to go global, determine the key areas, key products and key regions to participate in international competition, promote the orderly going global of information security enterprises, and participate in international competition in a step-by-step and planned manner. On the other hand, we should take sound laws and regulations as the support and strong policy support as the backing to provide a good policy and regulatory basis for large information security enterprises to go global.

5. Conclusion

The development of digital economy has also ushered in a new stage of rapid development. In the future, China will seize the opportunity to strengthen the layout of network security, constantly improve the legal and policy system of network security, improve the innovation and supply capacity of network security, promote the high-quality development of network security industry, comprehensively improve the comprehensive strength of network security, and build a good cyberspace security ecosystem.

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