

12. Bondarenko, M. S. Human capital as an economic and legal category / M. S. Bondarenko // Theoretical and applied prospects of legal support for economic development: materials of the international scientific and practical round table, Minsk, October 21, 2021: at 2 p.m. / Belorussian state unt; ed.: N. L. Bondarenko (ed. ed.) [and others]. - Minsk: BSU, 2021. - Ch. 1. - S. 16-20.

13. Business. Dictionary. English-Russian : Originally published by Oxford university press : Over 4000 concepts. Ed.: D. E. N. Osadcha I. M. - M. : INFRA-M : Vse mir, 1998. 752 p. (in Russian).

14. Sokolov, A. (2020). Human Capital and Economic Growth: Experience of Belarus. *Journal of Economics and Development Studies*, 8(2), 123-134.)]

15. Kuznetsov, B. (2019). Human Capital and Social Equity: Analysis of Belarus. *Social Sciences Review*, 34(3), 456-467.)

16. Popov, V. (2018). Human Capital Development in the Context of Globalization: The Case of Belarus. *World Economy Journal*, 15(3), 45-58.)

17. Petrov, A. (2017). Human Capital in Belarus: History and Reality. *Journal of Belarusian Studies*, 9(2), 234-249.

HIGH TECHNOLOGIES AND PECULIARITIES OF THEIR LEGAL REGULATION IN THE PEOPLE'S REPUBLIC OF CHINA

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The article assesses the importance of high technologies for the economic development of the country. At the same time, the author draws attention to the dangers that may be associated with the spread of some high technologies. In this regard, the author of the article substantiates the need for legislative regulation of the process of introduction and development of high technologies. This will help to protect the interests of society and the state.

Keywords: high technology, artificial intelligence, intellectual property rights, data privacy, cybersecurity, ethical considerations.

High technology refers to advanced technology that is often characterized by its complexity, innovation, and high level of research and development.[1] It includes a wide range of technologies, such as artificial intelligence, biotechnology, robotics and big data.[2] High technology plays a crucial role in today's economic and social development. In recent years, China has made significant investments in high-tech industries, such as artificial intelligence, big data, cloud computing, and 5G networks, which have helped to transform the country's economy and create new opportunities for growth.[3] According to the World Economic Forum, China's economy has experienced the fastest sustained expansion by a major economy in history.[4]

One of the key benefits of high technologies for China has been increased productivity and efficiency. For example, the use of big data analytics has helped Chinese companies to better understand their customers and improve their operations, leading to increased productivity and profitability.[5] Similarly, the development of 5G networks has enabled faster and more reliable communication, which has helped to improve supply chain management and logistics.[6]

High technologies have also helped to create new industries and business models in China. For example, the rise of e-commerce platforms, such as Alibaba and JD.com, has transformed the retail industry and created new opportunities for entrepreneurs and small businesses. The development of autonomous vehicles and drones has also created new opportunities in transportation and logistics.[3]

In addition, high technologies have helped to attract foreign investment and promote international trade. According to a report by Fitch Ratings, high-tech foreign direct investment (FDI) in China has been increasing as the economy shifts towards one driven by innovation and technology. [7]

However, along with these advancements come significant dangers and challenges that must be paid attention, especially in these aspects of intellectual property, data privacy, cybersecurity, and ethical considerations:

1. Intellectual Property: As technological innovation accelerates, the risk of unauthorized use, reproduction, or theft of intellectual property increases. This includes copyright infringement, patent violations, and trade secret misappropriation. These actions not only harm the original creators and innovators but also hinder further progress and undermine the incentive for continued innovation.[8]

2. Data Privacy: The proliferation of high-tech solutions and digital platforms has led to the massive collection, storage, and analysis of personal data. This poses significant risks to individuals' privacy. Data breaches, unauthorized access, and misuse of personal information can result in identity theft, financial fraud, and reputational damage. Maintaining robust data privacy laws and regulations and promoting responsible data handling practices are crucial to protect individuals' privacy rights.[9]

3. Cybersecurity: High-tech development has also given rise to an increase in cyber threats and attacks. Cybercriminals exploit vulnerabilities in digital systems, networks, and devices to gain unauthorized access, steal sensitive data, disrupt services, and cause significant economic and societal harm. [10]

4. Ethical Considerations: As high-tech development progresses, ethical considerations become increasingly important. Technologies such as artificial intelligence, autonomous vehicles, and facial recognition raise ethical dilemmas regarding privacy, bias, accountability, and human autonomy. [8]

Therefore, it has become increasingly important to regulate the use of high technologies to ensure that they are used in a responsible and ethical manner. The Chinese government has been working on developing a regulatory framework that can keep up with the rapid pace of high-tech development. In 2021, China amended the Law of the People's Republic of China on Scientific and Technological Progress, which emphasizes breaking through bottlenecks in key technologies, strengthening the protection of intellectual property rights and technological security management.[11] In 2022, the Chinese government also issued a new regulatory document that outlines its regulatory plans for technology companies. The document reveals that the government will cover areas of antitrust, data and algorithm security, and fintech regulation. [12]

In addition to comprehensive regulatory documents, China has also enacted a series of targeted regulations in the areas of intellectual property rights, data privacy and security, and ethics and morality.

1. Intellectual property right: The Patent Law of the People's Republic of China, which was amended in 2020, contains more detailed provisions on patent application, enforcement and protection, which enable it to protect the rights and interests of patent holders more effectively, to promote scientific and technological progress and innovation, and to harmonize with the international intellectual property system.[13]

2. Data privacy and security: The Personal Information Protection Law (PIPL) and the Data Security Law are two new Chinese laws that came into force in 2021. The PIPL is targeted at personal information protection and addressing the problems with personal data leakage.[14] It provides more specificity about the data localization, data export, and data protection requirements and sets specific rules for processing sensitive personal information and the disclosed personal information. It imposes obligations for important platform service providers. The Data Security Law regulates cross-border data transfers. It categorizes data based on its importance and imposes stricter requirements for exporting sensitive data. It also establishes a data security review mechanism and safeguards critical information infrastructure. [15]

3. Ethics and morality: Ethical Norms for New Generation Artificial Intelligence (Ethical Norms) was released in 2021. And it aims to integrate ethics and morality into the entire life cycle of artificial intelligence (AI) , and provide ethical guidelines for natural persons, legal persons, and other relevant organizations engaged in AI-related activities. [16]

As can be seen from the above series of laws and regulations issued by China, the peculiarities of China's legal regulation of high technologies are shaped by its unique political, economic, and social environment.

One of the particularities of China's high-tech legal regulation is its emphasis on independent innovation. The Law of the People's Republic of China on Scientific and Technological Progress, the regulatory plans for technology companies in 2022 and a series of other regulatory documents all focus on breaking through key technological bottlenecks and promoting scientific and technological progress and innovation. On the one hand, to promote innovation, the Chinese government has also implemented policies such as tax incentives, funding for R&D, and support for start-ups, which has led to the development of a thriving technology industry in China. [12] On the other hand, in order to reduce its dependence on foreign technology and become a global leader in independent innovation. The Chinese government has identified technologies of strategic economic importance, such as semiconductors and electric vehicles, as key development areas and has implemented policies to promote their development. Beijing is pushing to increase self-sufficiency in economically strategic technologies such as semiconductors and electric vehicles, as well as revising its List of Prohibited and Restricted Technologies for Export. The list includes

technologies that are considered sensitive or strategic, as well as those that can be used for military purposes. By restricting the export of these technologies, China aims to protect national security and prevent other countries from acquiring key technologies.[12]

Another peculiarity of China's legal regulation of high technologies is its focus on data security and algorithmic security. The regulatory plans for technology companies in 2022, the Data Security Law and the Cybersecurity Law are all designed to address the issue. One notable development is the creation of specialized regulatory bodies and frameworks to oversee data security and algorithmic governance. These agencies are responsible for monitoring and enforcing compliance with laws and regulations. They work with technology companies to ensure that data and algorithms are adequately protected while fostering innovation and economic growth. In addition, the Data Security Law and the Cybersecurity Law further strengthen the legal framework by establishing comprehensive guidelines for protecting data and securing critical information infrastructure. These laws obligate technology companies to adopt risk assessment measures, implement data classification systems, and establish data protection mechanisms to guard against data breaches and cyber threats. [17] These regulations also address algorithmic security. Tech companies must now disclose information about their algorithms, including design principles and data used for training. This transparency allows regulators to assess whether algorithms are fair and impartial, thereby preventing potential discrimination or unethical behavior. By promoting transparency and accountability of algorithms, China aims to foster public trust and confidence in the use of high technology.

In conclusion, high-tech laws and regulations are a very important issue in today's world, especially in China, which has become a major player in the global technology industry. High technologies have brought many benefits to China's economic development, including increasing productivity, creating new industries and attracting foreign investment. However, they also pose challenges and risks in areas such as intellectual property rights, data privacy, cybersecurity and ethical considerations. To address these challenges, China has developed a comprehensive regulatory framework and enacted targeted regulations. We can see from this that China's high-tech regulation emphasizes independent innovation, focuses on data and algorithm security and protection of intellectual property rights.

Going forward, it is recommended that the Chinese government continue to monitor and adapt its regulatory framework to address emerging challenges and risks, and to strike a better balance between innovation and the protection of individual, societal and national interests. In addition, collaboration and cooperation with international stakeholders is encouraged to establish global standards and best practices in high-tech regulation

Overall, by maintaining a strong and adaptable legal framework that promotes innovation, protects intellectual property rights, ensures data privacy and security, and addresses ethical concerns, China can continue to capitalize on the benefits of high tech while mitigating the potential risks and safeguarding the interests of Chinese citizens and the country as a whole.

References:

1. High_tech, Wikipedia https://en.wikipedia.org/wiki/High_tech
2. Technology and innovation report, United Nations conference on trade and development, 2021, p.4 // https://unctad.org/system/files/official-document/tir2020_en.pdf
3. Giulia Interesse. 5 Key Industries to Watch in China in 2023 // <https://www.china-briefing.com/news/5-key-chinese-industries-to-watch-in-2023/>
4. Emma Charlton. 6 things to know about China's historic rise, World Economic Forum, 2019 // <https://www.weforum.org/agenda/2019/10/china-economy-anniversary/>
5. Zak Dychtwald. China's New Innovation Advantage, Harvard Business Review, 2021 // <https://hbr.org/2021/05/chinas-new-innovation-advantage>
6. Science and technology in China, Wikipedia // https://en.wikipedia.org/wiki/Science_and_technology_in_China
7. China's High-Tech Foreign Direct Investment, 2021 // <https://www.fitchratings.com/research/corporate-finance/china-high-tech-foreign-direct-investment-09-03-2021>
8. Marina Da Bormida. The Big Data World: Benefits, Threats and Ethical Challenges, 2021 // <https://www.emerald.com/insight/content/doi/10.1108/S2398-601820210000008007/full/html>

9. Wanbil W. Lee. An Ethical Approach to Data Privacy Protection, ISACA, 2016 // <https://www.isaca.org/resources/isaca-journal/issues/2016/volume-6/an-ethical-approach-to-data-privacy-protection>
10. Global Risks Report 2022, World Economic Forum // <https://www.weforum.org/reports/global-risks-report-2022/in-full/chapter-3-digital-dependencies-and-cyber-vulnerabilities>
11. The Law of the People's Republic of China on Scientific and Technological Progress, 2021 // https://www.gov.cn/xinwen/2021-12/25/content_5664471.htm
12. Zoey Zhang. China's Regulatory Plans for Technology Companies and the Platform Economy in 2022 // <https://www.china-briefing.com/news/new-government-document-indicates-chinas-regulatory-plans-for-technology-companies-platform-economy-in-2022/>
13. The Patent Law of the People's Republic of China, 2020 // https://english.www.gov.cn/archive/laws_regulations/2014/08/23/content_281474983043612.htm
14. China Briefing Team. The PRC Personal Information Protection Law (Final): A Full Translation, 2021 // <https://www.china-briefing.com/news/the-prc-personal-information-protection-law-final-a-full-translation/>
15. Ryan D. Junck. China's New Data Security and Personal Information Protection Laws: What They Mean for Multinational Companies, 2021 // <https://www.skadden.com/Insights/Publications/2021/11/Chinas-New-Data-Security-and-Personal-Information-Protection-Laws>
16. Ethical Norms for New Generation Artificial Intelligence, 2021 // https://www.most.gov.cn/kjbgz/202109/t20210926_177063.html
17. Jenny (Jia) Sheng, Chunbin Xu, Esther Tao. China Adopts New Data Security Law, 2021 // <https://www.pillsburylaw.com/en/news-and-insights/china-adopts-new-data-security-law.html>.