LEGISLATIVE BASES OF INNOVATIVE DEVELOPMENT AND THE USE OF AI

Nairi SARGSYAN
Ph.D. in Law, Doctorate applicant in Economics at NAS RA

Key words: legislation, high-tech, science, technology, competitiveness, finance, budget, production

Introduction

It is important to note that currently the field of high technologies in Armenia is developing organically. It has neither a clearly formulated program, nor a concept, nor a unified law regulating the sector or any decision made by the Government. The only exception, perhaps, is information technology, which is a part of high technology, which has been declared a priority sector since 2000 and only in 2007 the concept of the sector was developed. Meanwhile, there are important high-tech sub-branches in the republic, such as biotechnologies, nanotechnologies, nuclear physics, robotics, telecommunications, etc. In general, the development of high technologies is due to the development of science, scientific and scientific and technical activities. Therefore, the development of high technologies is regulated by several important laws at once, which are also related to the country's intellectual property, its protection, copyright, etc.

Methodology and literature review

Methods used in this study are those commonly present in economic analysis: gathering statistic and other data on high tech and AI, comparative analysis, critical evaluation of existing legislation, generalizations based on current trends and others. Today the fourth industrial revolution leaves no doubt but to carefully utilize the competitive advantages of the nations with the extensive use of the achievements of science and advanced technologies [Schwab, 2015, 2-5]. Although the number of studies related to these issues become more each months, however, the analysis of legislative grounds and regulations are scarce worldwide [Yaroshenko, 2022; Wojtczak, 2022; Reed, 2018]. Currently, the legal framework in the field of high technologies in the Republic of Armenia is regulated by the following laws: the RA Law on Scientific and Scientific-Technical Activities, the RA Law on the RA National Academy of Sciences, on Public Notice on the Internet, the RA Law on Patents, the RA Law on Brand Names, the RA Law on Product and Service on marks, place names of origin of products, the RA Law on Legal Protection of Topologies of Integrated Microcircuits, the RA Law on Copyright and Related Rights [www.parliament.am] and other related laws, as well as the annual RA Law on the State Budget [www.parliament.am], which outlines financial resources for the development of the field and priorities. The development of high technologies in Armenia is also regulated by the RA Civil Code. In particular, scientific research and experimental-constructive and technological works are regulated by articles 767-776 of

the mentioned law. In this regard, the contracts for the performance of scientific research works and experimental-constructive and technological works, the execution of works, the confidentiality of information that is the subject of the contract, the rights of the parties to the results of the works, the responsibilities of the client and the executor, the consequences of the impossibility of achieving the results of scientific-research, experimental-constructive and technological works, the contract legal provisions related to the liability of the perpetrator for the violation. Copyright and intellectual property issues are also regulated by the same law.

Analysis

Since the development of high technologies is closely related to copyright, intellectual property and patents for their use, the RA Law "On Patents" is important in the regulation of the field, which regulates the creation, legal protection and property and personal non-property relations related to use. In the case of high technologies, particularly semiconductor technologies, a compulsory license can only be provided by the state for non-commercial use, as well as by judicial or administrative authorities to correct anti-competitive actions. This is one of the hot topics discussed in various forums both locally and internationally [Floridi, 2017; Filipova, 2022].

The transition from the previous system of intellectual property protection to the conditions of the market economy was accompanied by significant changes in the management principles and legislative framework in this area [Dremlyuga, 2015, 122-125]. After the declaration of independence, in order to ensure the legal protection of industrial property, in 1992 RA Patent Department was established in 1993. "RA Law on Patents" has been in force since August, which regulates property and personal non-property relations related to the creation, legal protection and use of inventions, useful devices and industrial designs. In our country, although the 2006 The RA Law "On Copyright and Other Related Rights" adopted by the RA NA on June 15 [Parliament of RA, 2024], but there is no Patent Law that should regulate, for example, the principles of the transfer of industrial property represented by USSR copyright certificates to their authors to personal property. During the years of independence, the government never announced which inventions it claimed. Such uncertainty is dangerous because it creates the temptation to revise the results of changes in the legal status of copyright certificates. It can be safely assumed that during the mentioned years, the main part of copyrights with commercial value has already passed into private ownership [Bederna & Szadeczky, 2020, 43]. As a result, the state, having lost a major part of its intellectual property, suffered irreplaceable losses.

A potential threat is the presence of tens of thousands of existing protective documents labeled "for official use" that have never been published in the open press for both domestic and foreign patent owners. Certificates of authorship with such an inscription can be transformed into patents within 20 years from the moment of filing the corresponding

application. The possibility of sudden appearance of patents based on author's certificates with the inscription "for service use" affects the rights of third parties who have not had a legal opportunity to familiarize themselves with the patents. The situation has become more complicated over the years, as many legal entities in whose names they were issued no longer exist or have changed to another legal entity in the form of non-state ownership. The fate of secret copyright certificates and secret patents of the USSR is equally uncertain. For comparison, it is worth noting that, for example, in the USA, such do not exist at all. The question about them can be solved within the framework of the Patent Law, which should contain a chapter on confidential applications and compensation of the applicant for their confidentiality. According to that law, an ordinary patent may be granted to an author based on a secret application after the secrecy regime loses its meaning due to the dissemination of the relevant innovation in other countries or for other reasons. Such laws already exist in a number of CIS countries, including Russia, although in them, taking into account the developments of recent years, the need for changes is also felt, and during the review of these acts, it is advisable to solve not only the problems of secret but also service inventions. In particular, the main provisions on service inventions can be included in the Patent Law.

As a fundamental document for the regulation of the field, the RA Law "On Scientific and Scientific and Technical Activities" states that science, as an exceptionally important factor in the development of the economy, ensuring the security of the country, education, culture and social progress, is under the patronage of the state. At the same time, the basic principle of the implementation of the state policy in the scientific and scientific and technical sphere is defined as "increasing the public credit of science, ensuring the well-being of scientific and scientific and technical personnel, their social, economic and legal protection". Meanwhile, in 2024, the salary of workers in the field of science, which feeds high technologies with the amount, provided by the state budget, it is significantly lower than even the cost of the minimum subsistence basket. Knowledge is still not in demand in the public administration system, including due to low salaries and the lack of necessary systems to encourage talented scientists. Another article of the same law (Article 19), which regulates the salary and retirement of a scientific worker, is not being implemented in reality, and states that the salary and pension of a scientific worker should contribute to the process of increasing the credit of scientific work and the renewal of scientific personnel, provide sufficient material conditions. to carry out independent and effective creative activity. As long as the salary of a scientific worker remains at an insufficient level, the question of a scientist's pension cannot be solved naturally [Bryson et al., 2017, 273–291]. In the field of high technologies, the role of state administration, particularly targeted state support, is becoming increasingly important. In this regard, there is also significant work to be done to implement such problems of state management of science, such as, for example, coordination of the work of the scientific and

high-tech spheres supporting the creation of mutually beneficial relations between science and production, promoting the introduction of new technologies; as well as coordinating the development of interstate scientific and technical programs and organizing scientific cooperation with international organizations in the field of science and technology. The role of the intellectual property agency is very important in the implementation of professional capabilities in the field of high technologies. The national intellectual property protection system in the Republic of Armenia was formed by the creation of the Patent Department under the RA Government (Decision No. 54 of the RA Government of January 26, 1992) and the National Copyright Agency (Decision No. 645 of the RA Government of December 27, 1993). Later, these two by the merger of bodies, the Intellectual Property Agency of the Republic of Armenia was created (Decision No. 197 of March 6, 2002 of the Government of the Republic of Armenia), which has the status of a separate unit operating within the Ministry of Economy of the Republic of Armenia. At the same time, the provisions of Article 23, which are of vital importance for the development of high technologies, remain unimplemented, according to which "Starting from 2002, the state allocates funds in the amount of not less than three percent of the annual expenditure part of the state budget for the financing of scientific and scientific and technical activities." These funds are directed to training and upgrading the qualifications of high-quality scientific personnel, as well as strengthening the material and technical base of scientific organizations, developing new technologies and purchasing equipment" [RA Law on Science, 2000]. It is obvious that since the adoption of the law, both the base funding and the targeted-programmatic and contractual (thematic) funding never met the requirements of the law, which is why it was modified and revised in December of the following year. In particular, the requirement of financing "no less than three percent of the annual expenditure part of the state budget" was removed. However, it is noteworthy that currently even the new, amended provision is not being implemented that "every year, the state allocates in the expenditure part of the RA state budget not less than the amount that increases proportionally to the increase in the revenue part of the budget compared to the previous year". It is obvious that even in the years with double-digit economic growth no such proportion of money was allocated from the state budget.

The development of high technologies, AI and their export are regulated by laws and Government decisions, but to give these processes a systematic and purposeful nature, a clearly formulated concept, plan and strategy are necessary. At present, in the absence of the latter, the state's attitude towards the sector, which is shown in the Government's activity plan, acquires an important importance. In the program approved by the RA National Assembly, several principles can be singled out at once, which should predetermine the development of high technologies and their components in Armenia. "The third priority is the development of education and science and facing the challenges of the 21st

century in that direction. In the 21st century, having a low level of education means having a low standard of living. This priority implies:

• building a society based on intellectual capacity and knowledge, where the main driver is ideas and discoveries, and the ability to implement them in everyday life. First of all, this implies the strengthening of research activities in universities, which should be transformed into serious scientific centers;

• significant improvement in the quality of education and increase in the level of access to education (including higher education) for disadvantaged groups of the population. Expanding the areas of application of modern information technologies and means in the educational system, improving the quality of these services and ensuring accessibility;

• reconstruction of the system of science and education and the creation of such structures that will provide an opportunity to consolidate the scientific and intellectual potential of all Armenians;

• development and widespread use of interactive e-education: using an AI and a computer is a necessity for citizens, especially young people, and computer networks will be accessible.

The same document also states that "... the government will ensure the formation of a manageable system of qualitative transformation of economic growth and effective structural shifts, supporting sectors and companies that use high technologies, resource-saving and oriented towards the knowledge-intensive economy" and "... the government is the guarantee of long-term sustainable development of the economy." consider increasing the country's competitiveness. For this purpose, one of the main directions of the government's economic policy in 2024-2026 will be the expansion of production capacities at the expense of the use of modern technologies and the promotion of exports, supporting the establishment of Armenian companies that meet global standards. Special importance is given in the government's plan to the development of high technologies especially in the disaster zone. "The city of Gyumri, preserving its traditional cultural profile, will turn into a center with modern knowledge and innovative infrastructures, where high-tech enterprises, large educational institutions and research centers will be represented. First of all, the government will introduce modern management models and systems for applying innovative results by ensuring the use of modern, competitive technologies, as well as the continuous development of human capital". In addition, the Program states that "... bearing in mind the role of information technology development not only as a separate sector, but also as a factor in the overall progress of Armenia's economy, increasing productivity and increasing competitiveness in the global economy, the government will take continuous steps aimed at both the information technology sector to rapid development and positioning in the international market, as well as to the introduction of products and services of that sector in other branches of the economy and establishment of information society. In this regard, the widespread presence of infrastructures of information and tele-

communication technologies corresponding to the best international standards is important [Rama-Montaldo, 1970, 111].

Conclusion

All this testifies to the state's attitude towards high technologies. At the same time, we believe it is necessary to develop and develop a concept of the development of the sector, which will allow more effective use of the existing human, financial and other resources and thereby contribute to increasing the competitiveness of the country's economy.

References

1. Andras, J. (2021). Who is liable for the crimes committed by AI? LGP NEWS. Retrieved December 3, 2022, www.lansky.at/en/newsroom-en/news-media/info-magazine-lgp-news-
2. Bederna, Z., & Szadeczky, T. (2020). Cyber espionage through botnets. *Security Journal*, 33(1), 43–62. https://doi.org/10.1057/s41284-019-00194-6
3. Bertolini, A. (2020). Artificial intelligence and civil liability: Legal affairs. *policy department for citizens' rights constitutional affairs directorate for internal policies*. European Parliament.
4. Bryson, J. J., Diamantis, M. E., & Grant, T. D. (2017). Of, for, and by the people: The legal lacuna of synthetic individuals. *Artificial Intelligence and Law*, 25(3), 273–291.
5. Danilov, Y. (2021). Some thoughts on the legal personality of artificial intelligence. *Issues of Student Science*, 10, 62.
6. Dremlyuga, R. I., & Dremlyuga, O. A. (2019). Artificial intelligence as a subject of law: Pros and cons. *Legal Policy and Legal Life*, 2, 120–125.
7. Filipova, I. A. (2022). *Legal regulation of artificial intelligence: Textbook* (2nd ed.). updated and supplemented. Nizhny Novgorod State University.
8. Floridi, L. (2017). Robots, jobs, taxes, and responsibilities. *Philosophy & Technology*, 30(1), 1–4. https://doi.org/10.1007/s13347-017-0257-3
9. Rama-Montaldo, M. (1970). International legal personality and implied powers of international organisations. *British Yearbook of International Law*, 44, 111.
10. Reed, C. (2018). How should we regulate artificial intelligence? philosophical transactions of the royal society A: Mathematical. *Philosophical Transactions of the Royal Society A:* 376
11. Schwab, K. (2015). The fourth industrial revolution. *What It Means and How to Respond*. WEForum. Retrieved December 3, 2022, from https://www.weforum.org/agenda/2016/01/the-fourth-industrial-revolution-what-it-means-and-how-to-respond/.
12. Wojtczak, S. (2022). Endowing artificial intelligence with legal subjectivity. *AI & SOCIETY*, 37(1), 205–213. https://doi.org/10.1007/s00146-021-01147-7

Nairi SARGSYAN

Legislative bases of innovative development and the use of AI

Key words: legislation, high-tech, science, technology, competitiveness, finance, budget, production

The development of high technologies and their export are regulated by laws and Government decisions, but to give these processes a systematic and purposeful nature, a clearly formulated concept, plan and strategy are necessary. At present, in the absence of the latter, the state's attitude towards the sector, which is shown in the Government's activity plan, acquires an important importance. In the program approved by the RA National Assembly, in particular, several principles can be singled out at once, which should predetermine the development of high technologies and their components in Armenia. It is important to present the draft of the law to the discussion of the general public in order to avoid reflecting mainly departmental interests in the document.