DOI: https://doi.org/10.34069/AI/2022.60.12.13

How to Cite:

Tiuria, Y., Pochtovyi, M., Medytskyi, I., Mykytyn, Y., & Kryvenko, O. (2022). Features of legal support of artificial intelligence in the Asia and Pacific region. *Amazonia Investiga*, *11*(60), 129-134. https://doi.org/10.34069/AI/2022.60.12.13

Features of legal support of artificial intelligence in the Asia and Pacific region

Особливості правового забезпечення функціонування штучного інтелекту в Азіатсько-Тихоокеанському регіоні

Received: December 1, 2022 Accepted: December 29, 2022

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Abstract

The aim of the article is to highlight the problems of the functioning of AI in the Asia and Pacific region. Research results. Attention is drawn to the influence of the population's attitude to the development of AI technologies. The elements that are decisive in the development of artificial intelligence in the countries of the region, in particular the infrastructure platform, are examined. Geographical boundaries of the APR are highlighted, which allows concreteness during its conduct. Practical meaning. Determinants that influence the development of artificial intelligence and cause-and-effect relationships arising as a result of such evolution are considered, as AI penetrates the vast majority of spheres of life in society. Value/originality. The need for establishment and consolidation of legal doctrine within the framework of artificial intelligence regulation in the APR countries is proven.

Анотація

Метою статті є висвітлення проблематики функціонування штучного інтелекту в Азіатсько-Тихоокеанському регіоні. Результати дослідження. Звернено увагу на вплив ставлення населення до розвитку технологій штучного інтелекту. Досліджено елементи, які є визначальними у розвитку штучного інтелекту в країнах регіону, зокрема інфраструктурна платформа. В рамках дослідження висвітлено географічні межі регіону, що дозволяє зробити конкретизацію під час його проведення. Практичне значення. Розглянуто детермінанти, які впливають на розвиток штучного інтелекту та причинно-наслідкові зв'язки, що виникають в результаті такого розвитку, адже штучний інтелект проникає в переважну більшість сфер життєдіяльності суспільства. Цінність/оригінальність. Доведена необхідність у створенні та закріпленні правової доктрини у рамках регулювання штучного інтелекту в країнах АТР.

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Keywords: artificial intelligence systems, current legislation, countries of the Asia and Pacific region, infrastructure platform, issues of artificial intelligence development.

Ключові слова: системи штучного інтелекту, чинне законодавство, країни Азіатсько-Тихоокеанського регіону, інфраструктурна платформа, проблематика розвитку штучного інтелекту.

Introduction

The rapid expansion of artificial intelligence has a substantial influence on the economy and society in general (Pavlyuk et al., 2021, p. 231). The Asia and Pacific region (APR) should be considered an ambassador for the development of artificial intelligence technologies. This is evidenced by the leading technologies of China, Japan, South Korea, etc. At the same time, there are certain problems in the AI creation in the territory of this region, which is due to the insufficient development of certain areas of the above countries or the denial of the introduction of "smart robots". The risks, including the gradual displacement of people from the labor market should also be considered, because many functions can be performed by an automated system.

This causes the need to highlight the existing problems and search for ways to solve these complex issues. Proper assessment of negative factors for the development of artificial intelligence technologies determines timely prevention of challenges in its proper development. At the same time, the APR countries were one of the first to understand that AI should be associated with fundamental changes in the usual rhythm of society, because it is the achievement of the third computer era. Any educated person has information about the fact that artificial intelligence technologies were developed precisely in the APR countries.

Consequently, the aim of the article is to highlight the problems of the functioning of artificial intelligence in the Asia and Pacific region.

Literature Review

The creation and application of artificial intelligence is an urgent issue for the international community. Some of the leading foreign countries have already legally recognized a computer program as the author of a work. In particular, in Japan, back in 2016, at a meeting of the state commission on intellectual law, a decision was made to start the development of regulatory documents regarding copyright protection for creative products created by artificial intelligence. At the same time, Australian law provides that a work produced by the computer cannot be protected by copyright because it was not created by a human being. The US Copyright Office emphasized in one of its decisions that it registers an original author's work only if it was created by a person, because copyright protects only the fruits of intellectual labor, the basis of which are the creative abilities of the human mind (Tokarieva & Savliva, 2021, p. 149).

Recently, the European Parliament adopted Resolution 2015/2103(INL) "Civil Law Norms on Robotics" (European Union, 2017). It proposes to establish the legal basis for the use of artificial intelligence and the introduction of a Pan-European registration system for "smart" machines. The resolution emphasizes the imperfection of modern legal regulation of artificial intelligence, in particular in the field of contractual relations and compensation for damages. It has been determined that the legal rules on responsibility for the quality and safety of goods are applied to damage caused by AI, according to which the manufacturer is responsible for any malfunctions, and the user of the product – for the behavior that caused the damage. The European Union plans to support the development of a horizontal, technology-neutral approach to intellectual property rights in industries where robotics technologies can potentially be implemented. The resolution was the first real step towards the legislative establishment of standards for the development and use of artificial intelligence. Although it is of a recommendatory nature, its provisions provide an opportunity to form a vision of the basis of those norms that will regulate the outlined activity in the future.

East Asia, which includes 17 countries, is the leading region for the 2022 index, with 3 countries (Singapore (2), Japan (9) and the Republic of Korea (6)) in the top 10 and the region accounting for one quarter of the top 20. Singapore is the leader in the overall index. The country is strong due to groundbreaking and determined approach to digital governance united with a business-friendly legislative environment. Singapore is an example of how this connection can set up productive public-

private partnerships to support innovation (Trim & Rahim, 2022).

China's score (17) was boosted by its technology sector, but the country scored relatively low in data and infrastructure, but in some parameters was reduced due to its poorer performance in the measure of household Internet access. These data indicate digital division in the country that causes fears about AI readiness, both in terms of obtaining representative data on the population and providing accessible digital public services.

The Pacific region's average score of 43.04 is below the global average for this year's index. However, this is largely due to the diversity of countries in the region, which contributes to the large difference in scores, with two highly developed countries and then a gap of 26 points between New Zealand, which is ranked 2nd in the region, and Fiji, which is ranked 3rd (Trim & Rahim, 2022).

Maintaining leadership in the region and globally, Australia (8) has witnessed a number of developments in AI readiness. The country is making progress toward key goals of its 2021 AI Action Plan: it started the National Center for Artificial Intelligence in late 2021, and since autumn 2022 the country's first group of AI graduates has begun practicing. Individual Australian states are advancing as well; for example, New South Wales has developed its AI strategy to 2020 and recently introduced a mandatory AI framework guarantees that all institutions are obliged to apply to estimate risks when creating or acquiring AI tools (Trim & Rahim, 2022).

New Zealand (28) does not lag behind in this regard. In September 2022, the country released its first digital strategy for Aotearoa. Even though this strategy concerns matters beyond AI, it lays the groundwork for the further AI progression. The new digital strategy, which is divided into the main themes of trust, engagement and expansion, is also an example of New Zealand's focus on taking a crucial, moral and collaborative approach to new technology policy.

Methodology

The methodological basis of the dissertation research is an integral (complex) approach to the disclosure of the legal nature, acquisition, implementation and protection of the subjective right to creativity. In order to obtain reliable scientific results, a system of general scientific and special methods of cognition was used in the dissertation work, in particular: system-structural, logical-semantic, analytical, formalological, method of abstraction and generalization. The research methodology is based on the general scientific dialectical method. With its help, the problems of legal regulation of the subjective right to creativity, its legal nature, and the implementation mechanism were considered. Analytical, formal-legal, formal-logical and logical-semantic methods were used to clarify the legal nature of the subjective right to creativity and its essential features, which formed the ontological basis of the study. Systemic-structural and historical methods made it possible to classify the stages of the development of the legal regulation of the possibility of a person realizing the subjective right to creativity. The formal-logical method as a basic method of scientific research in the field of law was used during the analysis of the current intellectual property legislation and the development of proposals for its improvement. The methods of induction and deduction made it possible to single out common and distinctive features inherent in the realization and exercise of the subjective right to creativity. The hermeneutic method made it possible to clarify the essence of the concepts used in intellectual property legislation, to identify their shortcomings, and to propose one's own vision of normative consolidation. The method of abstraction and generalization contributed to the formulation of definitions of legal norms and categories, the formal-legal method - to the development of individual legislative proposals.

Results and Discussion

Nowadays, the Asia and Pacific region is an important participant in world geopolitical processes and international relations; however, there is still no uniform definition of the territory. The region includes countries and areas located on the western coast of the Pacific Ocean – the lands of Asia, as well as on the eastern coast – the States of North and South America. A number of researchers, in particular Myloserdna and Krasnopolska (2020, p. 132), propose to understand the definition of Pacific Asia as a political-geographic and geo-economic concept that includes the region in the western part of the Pacific basin from the Pacific part of Russia in the north to New Zealand in the south (also includes Japan, China, Papua New Guinea). Pacific Asia is the equivalent of Asia and the Pacific strictly within its strictly geographical scope (Serebrennikova et al., 2021).

The American researcher Ellen Frost (2008) in the work "Asia's New Regionalism" examines the concept of APR in the context of the system of concentric circles. The inner circle is formed by the Association of Southeast Asian Nations Primary Five (hereinafter – ASEAN) – Indonesia, Malaysia, the Philippines, Singapore, Thailand; Second round - ASEAN 10 (in addition to those listed: Brunei, Cambodia, Laos, Myanmar and Vietnam); the third circle is "ASEAN + 3" (China, South Korea, Japan). By the outer ATP circle, Frost understands the consultative system of the East Asian Summit, the purpose of which is to prepare the ground for the creation of the East Asian Community as part of ASEAN + 3, as well as Australia, India and New Zealand". It should be noted that defining the territory and borders of the APR poses certain difficulties for the scholars. Some experts speak of Asia and Pacific as a region consisting of ASEAN countries, Oceania (about 20) and South Asian countries. Others include only Asian countries bordering the Pacific Ocean. The oceanic approach assumes that the APR includes the countries located on the coast and islands of the Pacific Ocean: North, Central and Pacific South America (in the latter case, the States located on the shores of the Pacific Ocean), the southern part of the Pacific Ocean, ASEAN or the Far East and part of ASEAN (ASEAN Secretariat, 2020).

Today, as part of the regulation of artificial intelligence in the APR countries, there is a need to create and consolidate a legal doctrine. In our opinion, special attention should be paid to the functioning of AI in Japan, China and South Korea as the leading countries in the field of using artificial intelligence systems.

In the ATP countries, the infrastructure platform is seen as a determining factor, which is also being developed within the framework of legal doctrine. Strong infrastructure foundation that provides secure, circulated and assesible connection is a basic condition for enabling organizations and individuals to benefit from digital platforms. Even when the public realizes the importance of artificial intelligence and accepts the changes it can bring, this does not necessarily mean free access, use and development of artificial intelligence systems. Rural and remote areas of the APR region, where unstable connections prevent the population from participating in the digital economy, are especially sensitive to this factor (UN-ESCAP, 2016). According to global sociological studies, almost half of the global populace still does not take advantage of the Internet, with Asia and Africa at the bottom (International Telecommunication Union, 2019). About 417 million people cannot use basic Internet services in the Asia-Pacific region. Meanwhile, only 16% of the region use digital instruments, with half citing value as the main barrier (Hoppe, May & Lin, 2018). This sometimes makes full-scale implementation of artificial intelligence systems impossible in the territory of the APR countries.

Globalization and digitization resulted in increased connectivity that has quickly expanded the amount of data transferred. However, some APR states have specific instruments limiting or restricting the data flow. Designed to secure data by limiting it within the country, data localization measures can take many forms; they may be clearly conditioned by legislation (for example, as part of cybersecurity regulation) or derived from mix of programs, making it costly, difficult, or impossible. In some cases, such barriers are aimed at protecting consumers' personal information by restricting unauthorized transfer of data.

Otherwise, authorities apply them to ascertain that foreign organizations cannot access or compromise sensitive or strategic data. Whatever the pretext, such instruments may adversely affect the establisment and development of artificial intelligence. AI requires large number of data to perform its functions adequately, and data movement limits may affect its ability to use this importante source. The main problem for the authorities across the region is to create instruments ensuring balance between private and safety and to secure data movement to maintain economy veable in the digital era.

A major concern for both citizens and governments is how well employers and empoyees are equipped with the abilities to utilize and make use of AI systems. Hovewer, the scale of AI development across spheres and businesses can be problematic to track from an institutional and organizational perspective. In many APR countries, technological progress is occurring more swiftly than legislators can identify attitudes to its full and effective use. For companies, this translates into difficulty adapting employees, processes, and business models to the radically changed dynamics of competition (Loucks et al., 2019). For authorities, it may be challenge to develop legal instruments balancing the necessity to maintain AI (artificial intelligence development – able-bodied labour) with the need to protect population from detrimental unforeseen results (protecting the rights and interests of workers)

(Manyika and Sneader, 2018). This indicates the need for a modern, more adaptable and joint approach to policy-making.

Development of innovations based on data such as artificial intelligence in a secure, ethic and consistent manner is essential to ensure consumer confidence and to «support» the trajectory of AI development. Artificial intelligence is a complex, multi-level phenomenon, covering different kind of networks and can be helpful in a number of areas. For example, the AI applied in educational establishments differs from the AI used in treatment institutions. Because of this range of shemes it can be hard to understand AI and where the relevant systems will be developed. Polls indicate that despite of AI awareness, consumers do not always realize how it works, which results in the lack of confidence in it (Asia Pacific, 2021). Another contributing factor is the trend towards business growth, which is the rebranding of existing products and services to attract capital and customers. From data analytics to predictive modelling, data mining systems have long been applied to handle large amounts of information – nowadays a lot of them are called "artificial intelligence". This confuses common AI comprehension and heightens both awaiting and inappropriate allegations. Providing explanations and elaborating guidelines can help in solving a number of problematic issues, and promote a more meaningful and structural attitude to implementing AI for life improvement.

The AI policy in the territory of the Asia and Pacific region, which is discussed within this study, is embryonic and diverse. At the national level, there are few strategies for AI adoption and readiness for its implementation. Where there is an artificial intelligence policy, these are industry agenda to modernize strategic sectors with AI or prepare the manpower for an AI-intensified surrounding. The approaches are diverse because countries' attitudes towards artificial intelligence differ significantly based on 2 different but connected aspects: various priorities that have been identified and the varying assets mobilized to address AI development. For example, China and Singapore have multiple instruments created to improve AI preparedness and govern its introduction; in turn, Malaysia and South Korea take measures for artificial intelligence as part of broader plans for digital transformation.

Meanwhile, Indonesia and Thailand have initiated programs promoting the incorporation of artificial intelligence systems in strategic branches, fixating on public-and-private sector collabaration to stimulate introduction. Finally, Australia does not have a formal AI policy, but there are a number of formal reccomendations to help customers to avoid failures caused by AI.

According to recent research, consumers in Asia and Pacific do not always comprehendhow artificial intelligence operates, but they realize the need for them. This leads to the emergence of distrust in artificial intelligence technologies, provided the awareness of the positive aspect of the impact on everyday life (Shumilo et al., 2021).

Conclusion

Nowadays, there is a need to create and consolidate a legal doctrine as part of the regulation of artificial intelligence in the APR countries. In the APR countries, one of the determining factors is considered to be the infrastructure platform, which is also being developed within the framework of legal doctrine. Globalization and digitization resulted in increased connection, quickly enhance the amount of data transfers between equipments, framework and systems. Consequently, the possibility to transmiss data across borders is very important for the data-driven technologies that individuals, enterprises and authorities apply in everyday life, including artificial intelligence. However, some APR States have regulatory instruments limiting or restricting the data flow. It should be emphasized that law-making and research activities are carried out by the legislators of the above-mentioned APR states, as well as by the scientific community, that is, certain steps are being taken to create reliable and effective legal regulators for the use of artificial intelligence.

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