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ARTIFICIAL INTELLIGENCE IN THE LEGISLATION OF THE REPUBLIC OF KAZAKHSTAN ON TRADEMARKS: PROBLEMS AND POSSIBILITIES OF LEGAL REGULATION

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Abstract. *The article discusses the legal concepts of trademark and artificial intelligence used in the creation and maintenance of means of individualization.*

The impact of the proliferation of artificial intelligence technologies can be observed in many areas of law, including trademark law. The rapid development of artificial intelligence technologies has necessitated a reassessment of some of the basic practices and concepts of trademark law.

The first aspect of these developments is the use of artificial intelligence in trademark applications, registrations and other related procedures. Patent offices around the world are utilizing these technologies to improve transactional efficiency and accuracy and productivity. Examples of the use of artificial intelligence in trademark applications and registration processes include performing comparative similarity assessments, scanning databases to detect previously dated similar trademarks for trademark clearance purposes, and automating certain office procedures.

Similarly, artificial intelligence algorithms are used to detect and monitor trademark infringement and unauthorized use, especially on online platforms.

An attempt has been made to clarify the place of domain name, hashtag, and smiley face in the domestic system of intellectual property rights, as well as to assess the prospects of application of artificial intelligence in this area in accordance with Kazakhstan's experience and international practices.

It is extremely important for trademark owners to closely monitor the opportunities that this increasingly widespread technology can offer when determining their commercial strategies and taking preventive measures to prevent situations that may lead to infringement.

Keywords: *means of individualization, trademark, emoticon, hashtag, artificial intelligence.*

ҚАЗАҚСТАН РЕСПУБЛИКАСЫНЫҢ ТАУАР БЕЛГІЛЕРІ ТУРАЛЫ ЗАҢНАМАСЫНДАҒЫ ЖАСАНДЫ ИНТЕЛЛЕКТ: ҚҰҚЫҚТЫҚ РЕТТЕУДІҢ МӘСЕЛЕЛЕРІ МЕН МҮМКІНДІКТЕРІ

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Аннотация. *Мақалада тауар таңбасының құқықтық концепциялары және жекешелендіру құралдарын жасау және қолдау кезінде қолданылатын жасанды интеллект қарастырылады.*

Жасанды интеллект технологияларының таралуының әсерін құқықтың көптеген салаларында, соның ішінде тауар таңбалары туралы заңда көруге болады. Жасанды интеллект технологияларының қарқынды дамуы тауар таңбалары құқығының кейбір негізгі тәжірибелері мен тұжырымдамаларын қайта бағалау қажеттілігіне әкелді.

Бұл әзірлемелердің бірінші аспектісі тауар таңбасына өтінімдерде, тіркеулерде және басқа да байланысты процедураларда жасанды интеллектті пайдалану болып табылады. Дүние жүзіндегі патенттік кеңселер осы технологияларды транзакциялардың тиімділігі мен дәлдігі мен өнімділігін арттыру үшін пайдаланады. Тауар таңбаларына өтінімдер мен тіркеу процестерінде жасанды интеллектті пайдалану мысалдарына салыстырмалы ұқсастықты бағалауды орындау, тауар таңбаларын ресімдеу мақсатында бұрын белгіленген ұқсас тауар белгілерін анықтау үшін дерекқорларды сканерлеу және кейбір кеңсе процедураларын автоматтандыру жатады.

Сол сияқты, жасанды интеллект алгоритмдері әсіресе онлайн платформаларда сауда белгісінің бұзылуын және рұқсатсыз пайдалануды анықтау және бақылау үшін қолданылады.

Зияткерлік меншік құқығының отандық жүйесінде домендік атаулардың, хэштегтердің және смайликтердің орнын нақтылауға, сондай-ақ қазақстандық тәжірибе мен халықаралық тәжірибеге сәйкес осы салада жасанды интеллектті пайдалану перспективаларын бағалауға әрекет жасалды. .

Сауда таңбасының иелері өздерінің коммерциялық стратегияларын анықтаған кезде және құқық бұзушылыққа әкелетін жағдайларды болдырмау үшін белсенді шаралар қабылдаған кезде кең таралған осы технология ұсына алатын мүмкіндіктерді мұқият бақылауы қажет.

Түйінді сөздер: *даралау құралдары, сауда белгісі, смайлик, хэштег, жасанды интеллект.*

ИСКУССТВЕННЫЙ ИНТЕЛЛЕКТ В ЗАКОНОДАТЕЛЬСТВЕ РЕСПУБЛИКИ КАЗАХСТАН О ТОВАРНЫХ ЗНАКАХ: ПРОБЛЕМЫ И ВОЗМОЖНОСТИ ПРАВОВОГО РЕГУЛИРОВАНИЯ

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Аннотация. *В статье рассматриваются юридические понятия товарный знак и искусственный интелект, используемые при создании и обслуживании средств индивидуализации.*

Влияние распространения технологий искусственного интеллекта можно наблюдать во многих областях права, включая право товарных знаков. Быстрое развитие технологий искусственного интеллекта привело к необходимости переоценки некоторых основных практик и концепций права товарных знаков.

Первым аспектом этих разработок является использование искусственного интеллекта в заявках на товарные знаки, регистрации и других связанных процедурах. Патентные ведомства по всему миру используют эти технологии для повышения эффективности и точности транзакций и производительности. Примерами использования искусственного интеллекта в заявках на товарные знаки и процессах регистрации являются выполнение сравнительных оценок сходства, сканирование базы данных для обнаружения ранее датированных схожих товарных знаков для целей оформления товарных знаков и автоматизация некоторых процедур ведомства.

Аналогичным образом алгоритмы искусственного интеллекта используются для обнаружения и мониторинга нарушений прав на товарные знаки и несанкционированного использования, особенно на онлайн-платформах.

Сделана попытка уточнить место доменного имени, хештега, смайлика в отечественной системе прав интеллектуальной собственности, а также оценить перспективы применения искусственного интеллекта в данной области в соответствии с казахстанским опытом и международными практиками.

Владельцам товарных знаков крайне важно внимательно отслеживать возможности, которые может предложить эта все более распространенная технология, при определении своих коммерческих стратегий и принятии превентивных мер для предотвращения ситуаций, которые могут привести к нарушению прав.

Ключевые слова: *средства индивидуализации, товарный знак, смайлик, хештег, искусственный интеллект.*

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Introduction

Trademarks serve as a cornerstone of intellectual property law, functioning as dynamic tools for individualization in an increasingly digital and interconnected global economy. These signs—whether words, logos, combinations of numbers and letters, three-dimensional shapes, or sound signals—identify goods or services, distinguish them from competitors, and foster consumer trust, recognition, and loyalty. In commercial activities, trademarks play a pivotal role by creating a unique identity for businesses, enabling them to stand out in crowded markets and build long-term relationships with consumers. Beyond their practical utility, trademarks often become valuable intangible assets, contributing significantly to a company's market position and financial valuation [1].

The rapid evolution of digital technologies has expanded the scope of trademarks, introducing new forms of individualization such as domain names, hashtags, and emoticons. These elements, born from the digital environment, challenge conventional notions of trademark law and require a reassessment of legal frameworks to accommodate their unique characteristics. At the same time, the advent of artificial intelligence (AI) has introduced a transformative force into this domain. AI technologies, powered by advanced algorithms and neural networks, are increasingly integrated into trademark registration, enforcement, and management processes, offering unprecedented efficiency and accuracy. However, they also raise complex legal, ethical, and practical questions that demand careful consideration [2].

This article explores how AI is reshaping trademark law, with a particular focus on its application in registration processes, the protection of non-traditional marks, and the broader implications for intellectual property rights. Drawing on Kazakhstan's experience and international practices from jurisdictions such as the European Union and the United States, it seeks to address the challenges and opportunities presented by this technological shift. By analyzing these developments, the study aims to contribute to the ongoing discourse on how legal systems can adapt to the intersection of AI and trademark law in the digital age.

The Kazpatent Examination Rules establish that domain name address can be registered as a trademark. Kazpatent applies the same

principles to domain names as to other word marks. Special attention is given to whether a domain name is clear or misleading. The use of hashtags in social media, websites and advertising is increasing. Companies use hashtags to promote products and services.

This trend raises the issue of protecting hashtags as part of individualization rights. The recognition of hashtags as trademarks is not just a theoretical matter. European and American patent offices have already registered many hashtags as trademarks [1].

Materials and methods

This study employs a comparative legal analysis to examine the integration of artificial intelligence in trademark regulation, drawing on legislation, case law, and practices from Kazakhstan, the European Union, and the United States. The research is grounded in a theoretical review of scholarly literature, including works by Martin-Bariteau (2017), Cybakov et al. (2017), and Gogitidze (2017), as well as analytical materials from patent offices and international organizations such as the World Intellectual Property Organization (WIPO). Additionally, the study incorporates an examination of international agreements, such as the Vienna Classification, and national guidelines, including the Kazpatent Examination Rules. To provide practical insights, the research is supplemented by case studies of AI applications in trademark registration and enforcement, highlighting real-world examples of how these technologies are being implemented globally.

Results

The integration of artificial intelligence into trademark law is yielding significant advancements across multiple dimensions. One of the most notable areas of impact is the use of AI in trademark registration processes. Patent offices worldwide are increasingly adopting AI technologies to enhance the efficiency and accuracy of transactional procedures. For example, AI algorithms are employed to perform comparative similarity assessments, analyzing new trademark applications against existing registrations to identify potential conflicts. These systems can also scan extensive databases to detect previously registered or similar trademarks for clearance purposes, ensuring that new marks meet the criteria for distinctiveness and registrability [1]. Furthermore, AI automates routine administrative tasks, such as document processing and classification, reducing the workload on human examiners and expediting the registration process.

Another critical application of AI lies in the detection and monitoring of trademark infringement. The proliferation of online platforms, including e-commerce websites and social media, has made it increasingly challenging for rights holders to track unauthorized use of their trademarks. AI-driven solutions address this issue by leveraging machine learning algorithms to identify instances of infringement in real time. For instance, these systems can analyze vast amounts of digital content to detect counterfeit products, unauthorized brand usage, or misleading advertisements, enabling rights holders to take swift action to protect their intellectual property (Kirkpatrick, 2019). This capability is particularly valuable in the context of global markets, where the volume of online transactions continues to grow exponentially.

The rise of non-traditional marks—such as domain names, hashtags, and emoticons—presents additional challenges and opportunities for trademark law. Domain names, while distinct from trademarks in their legal nature, can acquire trademark protection when they achieve secondary meaning among consumers. Registration of a domain name grants its owner exclusive rights to use it as an identifier in digital networks, akin to a leasehold right in real property [2]. In Kazakhstan, the Kazpatent Examination Rules treat domain names similarly to word marks, evaluating their clarity and potential to mislead consumers. This approach aligns with international practices, where domain name administrators have implemented procedures to protect trademark rights holders, illustrating the interplay between these two legal regimes [2].

Hashtags, widely used in social media and advertising, represent another frontier in trademark law. While hashtags are often descriptive or functional, serving as tools to categorize content or facilitate online conversations, they can acquire distinctiveness when associated with a specific brand. For example, the hashtag #JUSTDOIT, linked to Nike's iconic slogan, benefits from the parent mark's established reputation, making it easier to demonstrate its trademark eligibility [1]. However, the widespread use of hashtags on social media complicates efforts to establish exclusivity, as their broad adoption can dilute their distinctiveness. Moreover, the use of a trademark in a hashtag can lead to infringement if it misleads consumers. A notable example

is the hypothetical scenario of a social media post stating "Buy sneakers: [link] #Adidas," where the link redirects to a website selling non-Adidas products, constituting deceptive trademark infringement [1].

Emoticons and stickers, increasingly prevalent in digital communication, also raise questions about their eligibility for trademark protection. The Unicode 9.0 standard recognizes a diverse array of symbols, including 80 characters and 256 variations, which are used daily across the internet [1]. Certain emoticons or character sets could potentially acquire distinctiveness tied to specific providers, such as proprietary emojis developed by social media platforms. However, their functional role in conveying emotions or ideas limits their recognition as trademarks, particularly among broad consumer audiences. For instance, a generic "open-mouth smile" emoji is unlikely to serve as a trademark for entertainment services due to its widespread use and lack of source-specific association [3]. This inherent functionality poses a significant hurdle to their registration as trademarks, requiring a nuanced legal approach.

Finally, AI is revolutionizing the management of intellectual property, particularly in the context of trademark searches and classification. The Vienna Classification, introduced in 1973 by the International Classification of Figurative Elements of Trademarks, provides a framework for categorizing figurative marks, but its manual application is labor-intensive and requires highly skilled examiners [4]. AI-driven image recognition systems, such as those deployed by WIPO, automate this process by analyzing visual elements and identifying potential conflicts with existing marks. These technologies not only improve the efficiency of trademark and industrial design applications but also assist applicants in conducting preliminary searches to assess the protectability of their designs [4]. In Kazakhstan, the growing volume of trademark applications underscores the importance of such AI solutions in meeting the rising demand for intellectual property services.

Discussion

The integration of AI into trademark law reflects broader technological trends, particularly the rapid development of neural networks and machine learning. These technologies enable machines to process vast datasets, recognize patterns, and perform complex tasks, from image analysis to real-time infringement detection [5]. This shift has profound implications for trademark regulation, necessitating a reevaluation of legal concepts and practices.

Non-traditional marks, such as domain names, hashtags, and emoticons, require legal systems to balance functionality with distinctiveness, as mandated by trademark legislation. In Kazakhstan, the Law of the Republic of Kazakhstan "On Trademarks, Service Marks, and Appellations of Origin" No. 456-I of July 26, 1999 (hereinafter, the Trademark Law), specifically Article 6, stipulates that a trademark must possess distinctiveness to be registrable, excluding signs that are descriptive or functional unless they have acquired secondary meaning through use [1]. Domain names, while governed by distinct internet regulations, intersect with trademark law when they function as identifiers of commercial origin. Article 7 of the Trademark Law permits the registration of word marks, including domain names, provided they meet distinctiveness criteria and do not cause consumer confusion[2].

For non-traditional marks, legal systems must strike a balance between functionality and distinctiveness. Domain names, governed by a distinct legal framework, intersect with trademark law when they acquire secondary meaning among consumers. This duality is evident in international practices, where domain name disputes are often resolved through mechanisms like the Uniform Domain-Name Dispute-Resolution Policy (UDRP), which protects trademark rights holders from cybersquatting [5]. In Kazakhstan, the Kazpatent Examination Rules adopt a similar approach, treating domain names as word marks and assessing their potential to confuse consumers. This alignment with global standards highlights the need for harmonized legal frameworks to address the challenges of digital identifiers.

Hashtags and emoticons present additional complexities. While hashtags can serve as powerful marketing tools, their descriptive or functional nature complicates their recognition as trademarks. International practices in the European Union and the United States demonstrate that registration is possible when hashtags achieve distinctiveness, as seen with

[2] *Закон Республики Казахстан от 26 июля 1999 года № 456-I «О товарных знаках, знаках обслуживания, географических указаниях и наименованиях мест происхождения товаров» // URL: https://adilet.zan.kz/rus/docs/Z990000456_(дата обращения: 01.10.2024).*

marks like #JUSTDOIT or #MCDONALDS [1]. However, their widespread use on social media platforms poses a significant challenge, as it can dilute their association with a single source. Similarly, emoticons face hurdles due to their functional role in digital communication. While proprietary emojis developed by companies like Apple or Facebook may acquire distinctiveness, generic symbols like the "winking face" (;)) lack the specificity required for trademark protection [1]. These examples underscore the need for clear legal criteria to determine the eligibility of non-traditional marks for protection.

The automation of trademark processes through AI offers clear benefits but also raises ethical and legal questions. One of the most pressing issues is the ownership of AI-generated trademarks. As AI systems become capable of independently creating intellectual property objects, determining the rights holder becomes increasingly complex. Potential candidates include the creator of the AI program, the owner of the AI instance, or the owner of the equipment on which the AI operates (Kirkpatrick, 2019). Given the absence of human creative input, such works may be better suited to a related rights framework, similar to the rights granted to database creators [2]. This approach would recognize the technological contribution of AI while preserving the traditional emphasis on human creativity in intellectual property law.

Moreover, the use of AI in e-commerce highlights the need for collaboration among stakeholders-rights holders, online platforms, and regulators—to ensure effective trademark protection. AI-driven monitoring systems can detect infringement on a scale that was previously unimaginable, but their success depends on the availability of comprehensive databases, specialized algorithms, and cooperation with rights holders (Kirkpatrick, 2019). In Kazakhstan, the increasing volume of trademark applications reflects the growing importance of intellectual property in the national economy, underscoring the need for AI solutions to manage this demand efficiently. The National Institute of Intellectual Property of the Republic of Kazakhstan, as an entity exercising state monopoly functions, provides the following services:

Acceptance and examination of applications for the state registration of trademarks;

Conducting examinations of international trademark applications and preparing documentation for the international registration of trademarks;

Maintenance of the State Register of Trademarks of the Republic of Kazakhstan;

Acceptance and review of requests for amendments to the State Register of Trademarks of the Republic of Kazakhstan;

Acceptance and review of petitions for the extension of the term of exclusive rights to a trademark;

Acceptance and review of applications for the state registration of contracts concerning the disposal of exclusive rights to a trademark;

Publication of the official electronic bulletin "Industrial Property," which includes information on trademarks registered in the Republic of Kazakhstan.

The ethical implications of AI in trademark law also warrant consideration. For example, the use of AI to monitor online content raises questions about privacy and freedom of expression. While trademark protection is essential, legal frameworks must ensure that these rights do not unduly restrict legitimate uses of digital content, such as parody or commentary [1]. Balancing these competing interests requires a nuanced approach that integrates technological innovation with robust legal safeguards.

Conclusion

We propose the following specific legal mechanisms to regulate trademarks and artificial intelligence (AI) through amendments and additions to the existing legislation of the Republic of Kazakhstan:

Amendment to the Civil Code of the Republic of Kazakhstan (General Part) It is proposed to supplement Article 125 of the Civil Code of the Republic of Kazakhstan (General Part), dated December 27, 1994, No. 268-XIII, with a new paragraph: "4. Intellectual property objects, including trademarks created using artificial intelligence (AI) systems, shall be protected under related rights. The rightsholder of such objects shall be the person owning the AI system or the person initiating the creation of the object, unless otherwise stipulated by contract or law. The procedure for registration and protection of AI-generated intellectual property objects shall be established by the Government of the Republic of Kazakhstan." The development of AI enables systems to autonomously create trademarks, a phenomenon not addressed by current legislation, which associates rights with human creative activity. The absence of regulation creates uncertainty in determining rightsholders, potentially complicating the functions of the Republican

State Enterprise "National Institute of Intellectual Property" (RSE NIIP) in trademark examination and registration. Introducing related rights, analogous to those for databases under EU Directive 96/9/EC, will provide a legal foundation for protecting AI-generated trademarks, aligning with international standards and supporting RSE NIIP's registry functions.

Amendment to the Law of the Republic of Kazakhstan "On Trademarks, Service Marks, and Appellations of Origin" It is proposed to supplement Article 6 of the Law of the Republic of Kazakhstan "On Trademarks, Service Marks, and Appellations of Origin," dated July 26, 1999, No. 456-I, with a new paragraph: "6. Trademarks created using AI systems may be registered provided they meet the requirements of distinctiveness and lack of functional character. The National Institute of Intellectual Property shall develop methodological guidelines for the examination of AI-generated trademarks within six months from the effective date of this amendment." The current Article 6 does not account for the specificity of AI-generated trademarks, which may complicate their registration amid the rise of automated design systems. This amendment will ensure a uniform approach to examining such trademarks, supporting RSE NIIP's functions in receiving and examining applications. It also aligns with the practices of the European Union Intellectual Property Office (EUIPO), which addresses the registration of technologically created marks, and complies with Article 15 of the TRIPS Agreement, requiring the protection of distinctive signs.

Addition to the Law of the Republic of Kazakhstan "On Trademarks, Service Marks, and Appellations of Origin" It is proposed to introduce a new Article 18-3 to the Law of the Republic of Kazakhstan "On Trademarks, Service Marks, and Appellations of Origin," dated July 26, 1999, No. 456-I, as follows: "Article 18-3. Automated Monitoring of Trademark Rights Infringements:

The National Institute of Intellectual Property is authorized to use AI systems to monitor trademark rights infringements in the digital environment, including online platforms and social media.

Operators of online platforms operating in the Republic of Kazakhstan shall cooperate with the National Institute of Intellectual Property, providing access to data for monitoring trademark rights infringements.

The procedure for using AI to monitor infringements shall be established by the Ministry of Justice of the Republic of Kazakhstan within one year from the effective date of this article." The increasing prevalence of trademark rights infringements in the digital environment, particularly on online platforms, necessitates the adoption of automated monitoring systems. The current law does not regulate the use of AI for these purposes, limiting the effectiveness of rights protection. Introducing Article 18-3 will enhance RSE NIIP's functions in protecting registered trademarks, aligning with international practices such as the EU Copyright Directive (2019/790), which mandates platforms to monitor infringements. This will also improve the efficiency of publishing trademark information in the "Industrial Property" bulletin.

Amendment to the Law of the Republic of Kazakhstan "On Informatization" It is proposed to supplement Article 7 of the Law of the Republic of Kazakhstan "On Informatization," dated November 24, 2015, No. 418-V, with a new paragraph: "3. The use of AI systems for the creation, monitoring, or protection of trademarks in the digital environment shall comply with requirements for personal data protection and confidentiality. The Ministry of Digital Development, Innovations, and Aerospace Industry, in collaboration with the Ministry of Justice, shall develop ethical and technical standards for the application of AI in the field of intellectual property within one year from the effective date of this amendment." The use of AI for monitoring trademark infringements, as part of RSE NIIP's functions, involves processing large datasets, raising privacy concerns. The current Article 7 regulates data protection but does not address the specificity of AI in intellectual property. This amendment aligns with the EU General Data Protection Regulation (GDPR), balancing trademark protection with citizens' rights, and supports RSE NIIP's functions in examination and monitoring.

Addition to the Code of the Republic of Kazakhstan on Administrative Offenses It is proposed to supplement Article 158 of the Code of the Republic of Kazakhstan on Administrative Offenses, dated July 5, 2014, No. 235-V, with a new paragraph: "4. Unauthorized use of trademarks created using AI systems or violation of their registration procedure shall entail a fine of 30 monthly calculation indices for individuals, 70 monthly calculation indices for officials, and 200 monthly calculation indices for legal entities."

The absence of specific sanctions for violations involving AI-generated trademarks creates gaps in enforcement. This addition will ensure uniformity in protecting such trademarks, supporting RSE NIIP's functions in maintaining the registry and reviewing infringement claims. It also aligns with Article 61 of the TRIPS Agreement, which mandates measures against intellectual property rights violations.

Amendment to the Law of the Republic of Kazakhstan "On Trademarks, Service Marks, and Appellations of Origin" It is proposed to supplement Article 10 of the Law of the Republic of Kazakhstan "On Trademarks, Service Marks, and Appellations of Origin," dated July 26, 1999, No. 456-I, with a new paragraph: "3. Applications for the registration of trademarks created using AI systems shall undergo examination to assess their uniqueness and absence of confusing similarity with previously registered marks. The National Institute of Intellectual Property may request additional information on the creation process to confirm compliance with the requirements of this Law." The examination of AI-generated trademarks requires a tailored approach due to their potential similarity to existing marks, driven by algorithmic processes. The current Article 10 governs the general examination procedure but does not address AI-specific issues. This amendment will strengthen RSE NIIP's functions in examining applications, minimizing risks of registration disputes, and aligns with Article 4 of the Paris Convention, which mandates protection against unfair competition[3].

The proposed amendments to the Civil Code, the Law on Trademarks, the Law on Informatization, and the Code on Administrative Offenses establish a comprehensive legal framework for regulating trademarks in the context of AI application. These changes provide legal clarity for AI-generated trademarks, enhance automated monitoring of infringements, and protect rights in the digital environment, supporting RSE NIIP's functions in examination, registration, and publication. The proposals align with international standards, including the Paris Convention, TRIPS, and EU best practices, fostering the development of Kazakhstan's digital economy and intellectual property protection. Implementation will require coordination among the Ministry of Justice, RSE NIIP, and other stakeholders to develop secondary legislation and raise rightsholders' awareness.

The integration of artificial intelligence into trademark law presents a dual-edged sword, offering significant opportunities while posing complex challenges. On the one hand, AI enhances the efficiency of registration and enforcement processes, providing tools to manage the increasing complexity of intellectual property in the digital age. By automating similarity assessments, infringement detection, and image classification, AI reduces the burden on human examiners and enables rights holders to protect their trademarks more effectively. In Kazakhstan, where the demand for intellectual property services is growing, these technologies are particularly valuable for streamlining routine processes and improving transactional accuracy.

On the other hand, the rise of AI and non-traditional marks raises critical questions about legal regulation. Domain names, hashtags, and emoticons challenge traditional notions of distinctiveness and functionality, requiring legal systems to establish clear criteria for their protection. International practices, such as those in the EU and US, offer valuable lessons, demonstrating that registration is possible when these marks achieve secondary meaning among consumers. However, their widespread use in digital environments complicates efforts to maintain exclusivity, necessitating a careful balance between trademark rights and freedom of expression.

The ownership of AI-generated trademarks represents another unresolved issue. As AI systems become capable of creating intellectual property objects independently, legal frameworks must determine the appropriate rights holder. A related rights approach, analogous to database rights, may provide a viable solution, recognizing the technological contribution of AI while preserving the emphasis on human creativity in traditional trademark law [6]. This framework could be adapted in Kazakhstan and other jurisdictions to address the unique challenges posed by AI-generated works.

Looking forward, the successful integration of AI into trademark law requires collaboration among patent offices, rights holders, and technology developers. In Kazakhstan, the continued development of AI systems will play a pivotal role in simplifying intellectual

[3] *Закон Республики Казахстан от 26 июля 1999 года № 456-I «О товарных знаках, знаках обслуживания, географических указаниях и наименованиях мест происхождения товаров» // URL: https://adilet.zan.kz/rus/docs/Z990000456_(дата обращения: 01.10.2024).*

property management and strengthening enforcement mechanisms. To achieve this, regulators should invest in training programs for examiners, adopt international best practices, and foster partnerships with technology providers. At the same time, legal frameworks must remain flexible, adapting to technological advancements while ensuring that trademark protection aligns with broader societal values, such as innovation, competition, and consumer welfare.

In conclusion, this study underscores the transformative potential of AI in trademark law, highlighting the need for adaptive legal systems to address emerging issues in the digital age. By balancing technological innovation with robust protection mechanisms, policymakers can harness the benefits of AI while mitigating its challenges, ensuring that trademark law remains a vital tool for individualization and economic growth in the 21st century.

Authors' contributions

Kalmyrza G.M. collected materials on artificial intelligence and trademark, which formed the basis of the study of the designated topic. Participated in drafting the introduction, methods, results and discussion. Contributed to writing the abstract and keywords.

Dzhumabaeva K.A. determined the direction of the work, participated in the discussion, ensured the correction of this work, and designed the literature, transliteration and information about the authors.

Sarina S.A. contributed to writing the introduction, results, discussion, conclusion and to the development of the concept of this work.

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