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Intellectual rights of manufacturers of personal protective equipment in the context of national security threats: Between protection of intellectual property rights and the need for open innovation

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Abstract

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The purpose of this study was to examine the mechanisms for regulating and protecting intellectual property rights in the context of the production of personal protective equipment in the context of a threat to national security. To this end, the study analysed Ukrainian legislation and international regulations governing intellectual property rights, particularly those of manufacturers of personal protective equipment. Thus, in the context of a threat to national security, the intellectual property rights of Ukrainian manufacturers of personal protective equipment were found to be crucial due to the military conflict and the need to protect both the population and the armed forces. The state must guarantee access to vital technologies while respecting the rights of producers, which makes the issue of intellectual property particularly relevant considering the growing demand for the latest developments in the personal protective equipment sector. Cooperation with international partners in the field of technology and intellectual property protection can help develop national production of personal protective

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equipment and reduce dependence on imported supplies. Government agencies should focus on developing policies that promote the protection of intellectual property rights and provide mechanisms to support manufacturers in critical situations. Raising awareness of producers about their rights and opportunities to protect intellectual property is a crucial step in strengthening their market position. It is essential to strike a balance between the protection of intellectual property rights and the needs of society in the context of a threat to national security. Governments should consider temporary relaxation of rights in times of crisis to ensure overall security

Keywords: public interest; patent law; external situations; licensing; COVID-19; military conflict

Introduction

In the face of growing threats to national security, such as military conflicts or pandemics, personal protective equipment (PPE) is becoming critically important. However, intellectual property rights protection can inhibit the rapid production and distribution of such PPE, which can negatively affect the national security. Intellectual property rights protect innovation and stimulate the development of innovative technologies. However, during crises, such as military threats, there may be a need for open innovation, when patents are temporarily “opened” to provide access to vital technologies. Research on this topic helps to strike a balance between the rights of producers and the needs of the state for rapid access to technology. The country’s military-industrial complex requires constant development and implementation of innovative technologies, specifically in the field of protection of military and civilians. The study of intellectual property rights in relation to PPE will help to regulate licensing, joint development, and access to critical technologies in the interests of the state. In times of global threats, international cooperation in the production and exchange of innovations is essential. Intellectual property rights issues can hinder or facilitate such cooperation. It is vital to explore how countries can interact within the framework of international intellectual property treaties in the face of threats. In cases of emergencies, governments

may require the opening of innovations for the public good, which requires legislative solutions. The study of the topic offers insight into how states can effectively attract innovation while maintaining a balance between business interests and security. Thus, the relevance of the topic is determined by the need to find the best solutions to protect the rights of PPE manufacturers and simultaneously ensure national security through access to critical technologies.

According to P.C. Neves *et al.* (2021), intellectual property (IP) rights play a key role in stimulating innovation and research. PPE manufacturers develop advanced technologies that must be protected through patenting and other IP mechanisms. However, according to F.M. Abbott and J.H. Reichman (2020), in emergency situations, such as pandemics or military conflicts, IP protection can become a barrier to the rapid production and distribution of PPE. For example, according to V.A. Vdovichenko and T. Zosimenko (2021), during the COVID-19 pandemic, the issue of unrestricted access to technologies for the development of vaccines and medicines was raised at the international level. Open innovations facilitate rapid access to the latest technologies, but at the same time can undermine the economic interests of patent holders.

According to V.O. Kopanchuk (2020), the availability of personal protective equipment on

national markets is important not only for the safety and health of the population. To have access to such means, it is imperative to ensure the implementation of the fundamental principles of flexibility of intellectual property rights, while maintaining the freedom to choose the production technology of personal protective equipment by other manufacturers, flexibility in pricing goods in comparison with consumer preferences for their safety, stability of supply markets, and, finally, it is necessary to ensure public access to such goods guaranteed by the state.

K. Zaman (2022) investigated how Germany and Switzerland are shaping approaches to the temporary weakening of IP rights in emergency situations. Furthermore, at the international level, for instance, within the framework of the World Trade Organisation (WTO), mechanisms are being considered that enable countries to access patented technologies during crisis situations. This creates the basis for a balance between IP protection and the needs of society. According to N. Yurkiv and V. Shemaev (2023), in the context of threats to national security, such as war or terrorism, the development of the military-industrial complex requires innovation and rapid production of protective equipment. This includes the need for access to advanced technologies, sometimes even through the relaxation of patent protection or through compulsory licensing mechanisms. Governments may consider mechanisms to accelerate access to technology, allowing for a more effective response to threats.

This study was conducted to strike a balance between the intellectual property rights of producers and the public demand for access to innovation, especially in the context of national security threats. The objectives of this study were to analyse how the protection of intellectual property rights of PPE manufacturers affects their ability to produce and supply products during national crises; determine how legislative mechanisms can

facilitate or restrict open innovation in critical situations (pandemics or military conflicts); and review international practices in the relationship between intellectual property rights and the need for rapid access to PPE.

Materials and Methods

The study employed the following methods of scientific cognition. The method of formal legal analysis was used to review the regulations governing the protection of intellectual property under martial law in Ukraine. Thus, within the framework of this study, the following regulations governing the intellectual property rights in Ukraine were examined: the Law of Ukraine "On Protection of Rights to Inventions and Utility Models" (1993), the Law of Ukraine "On State Regulation of Activities in the Field of Technology Transfer" (2006), the Law of Ukraine "On Copyright and Related Rights" (2022). The study also investigated the relevant legislation of other countries, including the United States of America (The Defence Production Act, 1950), Israel (Emergency Regulations Ordinance, 1948), Germany (Patent Act, 1980), the EU (Directive of the European Parliament No. 2004/48/EC, 2004), and international agreements (Agreement on Patent Cooperation, 1970; Agreement on Trade Aspects..., 1994). The specific features of the state standards were studied separately: DSTU: 50744:2009 (2009), 8782:2018 (2018).

The problematisation method helped to form a holistic vision of the problem of intellectual property rights protection in wartime. The comparative method was employed to analyse the legislation and practice of intellectual property rights protection in different countries, including those that have also faced military conflicts. This helped to understand the advantages and disadvantages of various approaches and to identify effective mechanisms for protecting the intellectual property rights of manufacturers of personal

protective equipment. The systematic approach helped to consider the protection of intellectual property rights in wartime as an element of national and economic security. Using the case study method, the study examined concrete cases of infringement of intellectual property rights to PPE, including counterfeiting of well-known brands.

Results

The intellectual property rights of manufacturers of personal protective equipment in the context of a threat to national security are critical in the context of modern challenges such as military conflicts and pandemics. The urgent need for the development of the military-industrial complex requires a novel approach to the protection and use of intellectual property (IP) in this area. This issue is related to how to balance the interests of manufacturers investing in innovation with government priorities for security and protection of the population. Manufacturers of personal protective equipment create innovative technologies that can be commercially viable and patentable. IP rights protect the interests of these companies by enabling them to monetise innovations and promote the development of new products. In the context of national security, the state should look for ways to stimulate the development of PPE while protecting the rights of developers. To meet the needs of the army, PPE manufacturers should work closely with government agencies to develop innovative technologies and equipment. In times of national crises, there is an urgent need for effective and rapid innovation in this area, which requires easier access to advanced technologies and international cooperation.

To understand the current situation with manufacturers of personal protective equipment and intellectual property rights, it is necessary to analyse the mechanisms for their protection. The creation of knowledge through research and development and its subsequent transformation

into innovations often requires extensive initial investment. However, if the obtained results are not protected by law, knowledge can always be used free of charge. The illegal use of unpatented intellectual property in the production of personal protective equipment has become particularly prominent during the COVID-19 pandemic, when demand for PPE has increased dramatically. Cases of counterfeiting of well-known brands, such as 3M respirators and Honeywell medical masks, have been reported (Joskow, 2022). Manufacturers illegally copied respirator or face shield designs developed by large companies, even if they were not patented. For instance, elements of the design of masks were copied and the products were passed off as original, misleading consumers. This can limit investment, especially for small and medium-sized companies. It is through the recognition and protection of intellectual property rights that governments around the world have decided to guide and regulate technology transfer. In the modern society, the key instruments of such guidance and regulation are patents for innovative technical solutions and industrial designs, copyrights of authors and related rights of performers. These instruments can increase the market value of final services and products and motivate private sector investment. In this regard, patents play a special role.

In the international context, specifically within the World Trade Organisation (WTO), there is discussion of the possibility of temporarily weakening patent protection in crisis situations (Narlikar, 2021). The COVID-19 pandemic is one example of when the international community has faced the need for global technology sharing to produce medical products and equipment. Analogous principles can be applied in the context of national security and the military-industrial complex (Lamping *et al.*, 2023). Some countries, such as Germany, already have legislative mechanisms for compulsory licensing of patents

in case of a national crisis. Article 13 of the German Patent Act (1980) allows for compulsory licensing of patents if it is necessary to protect the public interest, especially in times of public emergency that threaten the health of the nation. This may apply, for instance, to medicines, medical technologies, or personal protective equipment. It enables the state to use patented technologies to produce protective equipment and other necessary goods without the patent holder's consent, paying compensation. This approach can be applied in military conflicts when it is necessary to rapidly expand the production of PPE to protect military personnel and civilians.

The production of personal protective equipment is not conventionally considered part of the military-industrial complex (Zhuravlov *et al.*, 2020). However, masks, including those made of composite fabric material, helmets, and other elements of military uniforms, are part of the personal protective equipment of military personnel, law enforcement officers, firefighters, rescuers, medical workers, and industrial facility personnel.

High requirements to the protective properties and performance characteristics of this special fabric necessitate the use of advanced high-tech equipment, materials, and special processing methods. One of the signs that the fabric is special is the innovative nature of its production. Investments are made in the fair design and testing of new developments, as well as in the legal protection of the intellectual property rights of the creators and producers of special fabrics. The protection of these intellectual rights stimulates the further development of speciality textiles and fabrics.

In Ukraine, the protection of intellectual property rights is governed by the Law of Ukraine "On Protection of Rights to Inventions and Utility Models" (1993), which defines the procedure for protecting inventions that can be used in the production of PPE. In case of a threat to

national security, special licensing mechanisms may be applied, including compulsory licensing. The Law of Ukraine "On Copyright and Related Rights" (2022) protects copyrights to design and innovative solutions, but they can be restricted if necessary to protect national security.

Functionality is not the only principal factor that determines the properties; the geometric characteristics of the product also greatly affect the comfort and activity of the members of the military unit who use it. In the technological solution to the problem, the manufacturer of personal protective equipment must accommodate the special needs of the product user when providing the required level of protection. Such products must often meet the strict requirements of regulatory documents governing the manufacturing process. Approved by Resolution of the Cabinet of Ministers No. 771 (2021), the Technical Regulation defines mandatory requirements for PPE, including its design, manufacture, and safety. The regulation establishes categories of protection and requires mandatory certification of PPE. The key provisions of this regulation cover aspects such as PPE protection categories (first, second, and third), design and manufacturing requirements (PPE must be ergonomic and fit the size and physiological characteristics of the users), testing and inspection (PPE must undergo mandatory tests before being placed on the market to confirm their compliance with safety standards and protection against certain risks), labeling (each product must be labelled with a mark of conformity with the technical standards), and certification of PPE. The Technical Regulation on PPE ensures standardisation and quality control of products, which is mandatory to protect the health and safety of users.

The military-industrial complex operates in special conditions that require compliance with certain rules, which complicates the task of creating personal protective equipment. For

instance, DSTU: 8782:2018 (2018) sets out requirements for bulletproof vests, including their bulletproof performance, resistance to mechanical impact, weight, and ergonomics, while DSTU: 50744:2009 (2009) sets out the general requirements for body armour, including its level of protection, strength, and durability of materials.

That is why, when developing a product, it is important to clearly understand the goals to be achieved. Thus, the principal goal of developing such products as PPE for individual specialised and personal use by military personnel is to ensure the safety and reliability of officers and soldiers while performing their duties in various military environments. To meet this challenge and make relevant technological decisions, the manufacturer must develop high-quality, ergonomic, and easy-to-use products.

The intellectual property rights of personal protective equipment manufacturers in Ukraine are becoming a key issue in the context of the national security threat due to the war and the need to protect the population and the military. Amid the growing need for the latest developments in the field of PPE, the issue of intellectual property is becoming particularly relevant, as the state must ensure access to critical technologies while respecting the rights of manufacturers.

Protecting the intellectual property rights of PPE manufacturers in the context of a threat to national security requires a comprehensive approach that accommodates the needs of both manufacturers and the state. The primary means of such protection may include patent protection, licensing, and special legal regimes (Livingston *et al.*, 2020). Some countries (the United States, Israel, and the European Union) are implementing legal regimes that facilitate access to national security innovations. The EU has adapted its regulatory framework, especially during the COVID-19 pandemic, which has influenced the current situation (Wolff & Ladi, 2020). It has

also been effective in introducing temporary relaxations that allow for the rapid certification of new security products. Some of these changes are still in place today for defence purposes. The United States, through The Defence Production Act (1950), has mechanisms that allow the federal government to quickly redirect resources to the production of necessary protective equipment. Government support for innovation in this area through grants, fast-track licensing, and simplified procedures for companies developing and producing PPE is significant. In the face of constant threats, Israel encourages innovation in the field of PPE. The government provides special grants for start-ups developing new protective materials or technologies that can be used for military or civilian purposes (Raska & Bitzinger, 2023). Israel also simplifies procedures for certification of these products.

The key problem with protecting the rights of PPE manufacturers in the face of a national security threat is the mismatch between the legal framework and reality. The intellectual property legislation is outdated and does not cover adequate copyright protection for PPE innovations. This allows for copying of products and technologies without sanctions, which reduces the incentive for innovation in this area (Rondinone *et al.*, 2021). The absence of updated regulations on digital rights protection also limits the ability of rights holders to assert their rights in the online environment, which is especially significant in the context of the active use of digital technologies for the sale and distribution of PPE. The current Technical Regulation on Personal Protective Equipment (Resolution of the Cabinet of Ministers No. 771, 2019), approved by the Cabinet of Ministers, mandates complex certification requirements that often delay the launch of new products. Under martial law, this complicates the rapid introduction of critical PPE needed by both the army and civilians. Although the

government has simplified certain procedures, this does not always cover all aspects of certification, especially for small and medium-sized businesses. Despite the urgent need for PPE, manufacturers often face a lack of government financial support programmes. Deficiencies in government policy impede Ukrainian manufacturers' ability to adopt modern technologies and standards, which could increase their competitiveness in the global market

The European Union Intellectual Property Office (EUIPO) has conducted an analytical study on the number of infringements of intellectual property rights in the European Union (EUIPO, 2023) (Fig. 1). The results of this study revealed that intellectual property infringement substantially affects the manufacturing sector, reducing innovation potential, profitability, reputation, and opportunities for expansion into international markets.

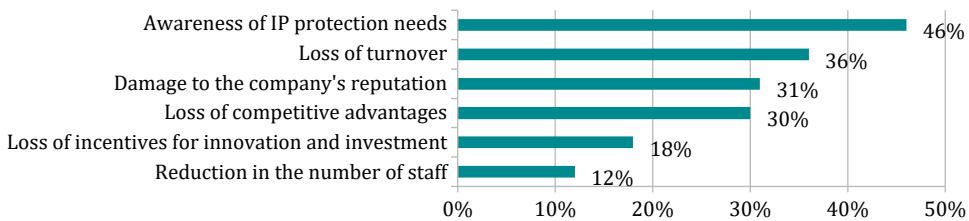


Figure 1. Impact of IP infringements on businesses

Source: EUIPO (2023)

To address such problems, it is necessary to create clear regulations governing the production of PPE, as well as to introduce mechanisms to protect the rights of producers (Mehrotra *et al.*, 2020). The state can provide subsidies or soft loans for small and medium-sized PPE manufacturers, which will enable them to modernise production. To this end, Israel has introduced simplified certification procedures for manufacturers of protective equipment, such as body armour and helmets, in the face of growing military threats. Local manufacturers received the opportunity to produce and supply PPE for the army and civilians faster. The reduction in bureaucratic procedures has increased the availability of such equipment at the national level. In case of a threat to national security or during military conflicts, the Israeli government activates the Emergency Regulations (Leaving the Country) Ordinance (1948), which enables the government to issue temporary regulations aimed at expediting certification, particularly for defence products.

Even in wartime, manufacturers must continue to register their inventions, innovative technologies, or materials for PPE production through the Ukrainian Intellectual Property Institute (Ukrpatent) (Martyuk, 2023). This has provided an opportunity to protect the rights to use the technologies in Ukraine and abroad, as these technologies may be used for commercial purposes after the war. Ukrainian companies that have developed new materials or components for bulletproof vests or helmets register patents for their intellectual property to avoid unauthorised use of these developments by competitors.

Ukrainian producers can protect their innovations not only in Ukraine but also abroad using the Patent Cooperation Agreement (1970). This enables them to file a single patent application in several countries, which is vital in the context of the expanding international PPE market. In wartime, Ukrainian companies that produce high-tech protective equipment use international patent systems to enforce their rights in countries where

their products can be exported or where their technologies can be copied (Upadhyay, 2024).

Ukrainian companies can cooperate with international organisations that help protect IP rights in times of war. For instance, the World Intellectual Property Organisation (WIPO) provides technical support and advice on IP rights protection during conflicts and crises (Walsh *et al.*, 2021). In wartime, companies can seek advice from WIPO on how to protect their patents or trademarks in an international context.

The rights of manufacturers to innovate, develop, and design PPE are regulated by patent law and international treaties. The key provisions of the Agreement on Trade Aspects of Intellectual Property Rights (TRIPS) (1994) include the definition of intellectual property: patents, copyrights, trademarks, industrial designs, geographical indications of the origin of goods and others; minimum requirements for protection: member countries must establish a certain minimum level of protection for all types of intellectual property; fair protection: the agreement requires that the legislation of each member country guarantees effective mechanisms for the protection and enforcement of intellectual property rights; balance and TRIPS seeks to balance the interests of rights holders and society, which is particularly relevant for industries such as pharmaceuticals, biotechnology, and security technologies. In the context of personal protective equipment, especially in the context of national security, TRIPS may pose challenges to the balance between the protection of intellectual property rights and the need for public access to such equipment.

The balance between the intellectual property rights of personal protective equipment manufacturers and the national interest in the context of war in Ukraine is complex, as it is vital to protect the rights of developers on the one hand, and to ensure the rapid and affordable production of critical equipment to protect the

military and civilians on the other. In extraordinary circumstances, such as war, Ukraine can use a compulsory licensing mechanism. This allows the government or businesses to manufacture or use patented technologies without the consent of the patent holder, but with fair compensation. This mechanism is in line with international law, specifically TRIPS (1994) and EU legislation. According to Directive of the European Parliament and of the Council No. 2004/48/EC (2004), countries may adapt their IP laws to ensure that national security is given priority. For example, in case of military conflicts or pandemics, the registration of patents for technologies used to manufacture PPE may be accelerated. PPE manufacturers can work with government authorities to obtain licences to use certain patentable technologies to ensure national security (Mills, 2023). However, it is crucial to involve manufacturers in discussions of viable solutions to find compromises that satisfy both national interests and commercial rights.

Thus, in wartime, the state must strike a balance between protecting the rights of producers and ensuring rapid access to the latest technologies to protect national interests. It is necessary to strengthen legislative mechanisms for compulsory licensing in emergency situations, which will enable the rapid adoption of advanced PPE developments. The state should support the innovation sector by offering incentives to PPE companies to ensure the sustainable development of the national security infrastructure. Thus, the issue of protecting the intellectual property rights of PPE manufacturers in the context of a threat to national security requires a comprehensive approach that will ensure the protection of intellectual property rights and at the same time contribute to the national security of Ukraine.

Discussion

The protection of patents, copyrights, and trade secrets allows companies to benefit from their

proprietary technologies. However, in conditions of national security, the state may apply special regimes that temporarily restrict the rights of producers to expedite the introduction of the latest developments. G.D. Sharma *et al.* (2022) emphasised the significance of finding flexible solutions to protect innovation while ensuring the availability of the latest technologies for the state in crises. According to the present study, finding solutions to protect innovation and the availability of the latest technologies in wartime is strategically significant for ensuring security, supporting economic development, and humanitarian aid. The activities of the Israeli government demonstrate the need for continuous investment in the latest security technologies, such as air defence systems (e.g., Iron Dome). The government supports start-ups developing innovative defence solutions, providing them with quick access to the market.

According to D. Settembre-Blundo *et al.* (2021), open innovation facilitates faster technology and knowledge sharing, especially in the military-industrial sector, where speed of development and implementation is critical. For Ukraine, which is facing a military threat, it is essential to strike a balance between stimulating the production of innovative PPE and ensuring its availability to the military and civilian population. Open innovation can contribute to the development of the military-industrial complex, allowing Ukraine to quickly adapt to emerging challenges.

Having studied this topic, A. Gilad *et al.* (2021) found that the practice of state interference in patent law often violates the interests of companies but is justified from the standpoint of national security. Ukraine, on the other hand, has been found not to directly interfere with the intellectual property rights of PPE manufacturers, as there are no direct mechanisms for interfering with the intellectual property rights of PPE manufacturers in Ukraine. However, it is possible to use open

innovation tools and limited patents in emergency situations. A. Gilad *et al.* (2021), E. Auriol *et al.* (2022) noted that during military conflicts or threats, the state is entitled to demand access to technologies and means of protection without following standard intellectual property rights protection. This is crucial when the lives and safety of citizens are at stake. Thus, some countries, such as the United States, Israel, and the United Kingdom, are developing special legal regimes for national security innovations, which allows for faster implementation of developments. Investments in research and development in this area help to avoid conflicts between the interests of the state and rights holders.

The emergence of threats to national security, according to H. Bauchner *et al.* (2020), leads to an increase in demand for emergency PPE. After the outbreak of hostilities in Ukraine in 2022, there was a sharp increase in demand for bulletproof vests, helmets, medical kits, and gas masks among both the military and civilians. In the context of the ongoing war in Syria, demand for protective clothing, medical supplies, and gas masks increased considerably due to the use of chemical weapons and threats to civilians. During the US military operations in Iraq, the demand for armoured protective equipment and medical supplies increased due to the elevated risk of terrorist attacks and clashes. However, according to U.J. Munasinghe and M.N. Halgamuge (2023), the demand for disposable PPE can lead to a decrease in the quality of product performance, putting enormous pressure on the industry. As a result, manufacturers, including new entrants, and the PPE supply chain may face challenges and become exposed to substandard PPE, including counterfeit or mislabelled products. Substandard products and products that do not meet product performance requirements may reduce protection levels, properties, or service life for a variety of technical reasons. It is essential to control the

quality of PPE to ensure effectiveness throughout the entire period of use.

The intellectual property rights of PPE manufacturers should be protected, but with due regard to security needs. According to J. Cohen and Y. van der Meulen Rodgers (2020), threats to national security can affect the position of PPE manufacturers in several ways. On the one hand, companies that produce this type of product may become targets of special support. Thus, it is challenging for the private sector to allocate resources for the development and effective use of personal protective equipment, considering its limited use by ordinary consumers. In most cases, small and medium-sized enterprises, including those in basic industries, continue to be the manufacturers of such equipment. On the other hand, protectionist measures introduced in response to threats to national security may negatively affect the equipment manufacturers. This happens, for example, when personal protective equipment needed for national defence, law enforcement, and disaster response is produced by foreign manufacturers who find more efficient use of production capacity in civilian markets. The protective effects provided to foreign producers substantially distort the incentives for private domestic companies to invest in the creation of their production of personal protective equipment, which can be a potentially dangerous factor for national and global security. The current study found that national security threats affect PPE manufacturers in Ukraine through changes in demand, regulations, financing, worker safety, and the need for innovation. Manufacturers must adapt to these challenges to stay competitive and operate effectively in an uncertain environment.

Thus, in the context of a threat to national security, it is crucial to strike a balance between protecting the intellectual property rights of personal protective equipment manufacturers and the need for open innovation. In situations

of crises and threats to national security, manufacturers should be prepared to adapt their technologies and processes. Open innovation can stimulate the development of innovative technologies in the production of PPE. Collaboration between manufacturers, research institutions, and the state can ensure the exchange of knowledge and resources, which facilitates rapid response to threats. The state should play an active role in creating a favourable environment for innovation. This includes not only the protection of IP rights, but also the promotion of unrestricted access to technologies that may be critical in the context of a national security threat.

Conclusions

Protecting the intellectual property rights of personal protective equipment manufacturers in the context of a national security threat is becoming a complex subject due to the need to balance the defence-related interests of the state with the rights of private companies to their innovations. In the field of personal protective equipment production, there is a need to strike a balance between the protection of intellectual property rights and the need for open innovation. The former provides manufacturers with exclusive rights to their designs, while the latter facilitates the rapid exchange of knowledge and technology, which is critical in the context of national security.

A comprehensive strategy that factors in the requirements of both manufacturers and governments is needed to protect the intellectual property rights of PPE manufacturers in the face of national security threats. The United States, Israel, and the European Union have demonstrated how effective it is to implement a legislative framework that facilitates access to national security innovations. An effective step is to introduce a short-term exemption that allows for quick certification of new protection methods. The rights of PPE manufacturers are also positively

influenced when innovation is encouraged by grants, accelerated licensing and simplified procedures for companies that design and manufacture PPE. Start-ups working to develop new protective materials or technologies that can be used for military or civilian purposes should always receive special grants.

Ukrainian production is working hard to create new materials and methods of protection that may require the protection of intellectual property rights. The purpose of government initiatives that promote innovation is to create high-quality personal protective equipment (PPE) for both military and civilian protection. Ukrainian producers can protect their innovations not only in Ukraine but also abroad, using international legislation that allows manufacturers of high-tech PPE to use international patent systems to protect their rights in countries where their products may be exported or where production technologies may be copied.

The principal problem with protecting the rights of PPE manufacturers in the context of

national security threats is that intellectual property legislation is outdated and does not adequately cover copyright protection for PPE innovations. The current legislation mainly imposes complex certification requirements that often delay the entry of new products to the market. In the context of martial law, this hinders the rapid introduction of critical PPE.

One of the key areas for further research is to examine the legal aspects of compulsory licensing in emergency situations. It is necessary to analyse how states can use patents and other IP rights to meet the needs of the army without violating international legal provisions and agreements. Research could include a comparison of national and international practices of compulsory licensing during military conflicts.

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None.

Conflict of Interest

None.

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Інтелектуальні права виробників засобів індивідуального захисту в умовах загрози національній безпеці: між захистом прав інтелектуальної власності та потребою в відкритих інноваціях

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Анотація

Метою дослідження було вивчення механізмів регулювання та захисту інтелектуальних прав в контексті виробництва засобів індивідуального захисту в умовах загрози національній безпеці. Для цього було проаналізоване українське законодавство та міжнародні нормативно-правові акти, що регулюють права інтелектуальної власності, зокрема виробників засобів індивідуального захисту. Так, було встановлено, що в умовах загрози національній безпеці права інтелектуальної власності українських виробників засобів індивідуального захисту стають вирішальними у зв'язку з військовим конфліктом та необхідністю захисту як населення, так і збройних сил. Держава має гарантувати доступ до життєво важливих технологій, дотримуючись прав виробників, що робить питання інтелектуальної власності особливо актуальним з огляду на зростаючий попит на новітні досягнення в секторі засобів індивідуального захисту. Співпраця з міжнародними партнерами у сфері технологій і захисту інтелектуальної власності може сприяти розвитку національного виробництва засобів індивідуального захисту та зниженню залежності від імпорتنих постачань. Державні органи повинні зосередитися на розробці політик, які сприятимуть захисту інтелектуальних прав, і забезпечити механізми підтримки виробників у критичних ситуаціях. Підвищення рівня обізнаності виробників щодо їхніх прав і можливостей захисту інтелектуальної власності є важливим кроком у зміцненні їх позицій на ринку. Важливо знайти баланс між захистом інтелектуальних прав і потребами суспільства в умовах загрози національній безпеці. Уряди повинні розглядати можливість тимчасового послаблення прав у кризових ситуаціях для забезпечення загальної безпеки

Ключові слова: есупільний інтерес; патентне право; екстерні ситуації; ліцензування; COVID-19; військовий конфлікт