

Peculiarities of law enforcement system functioning in the context of digitalization

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Abstract: The relevance of the topic under study in this article is due to the fact that for the purpose of balanced and sustainable development of society, the law enforcement system must also adapt to the conditions of digitalization. This should be done by maximizing the introduction of advanced digital technologies, including artificial intelligence, into the daily activities of law enforcement agencies. It is noted that the processes of digitalization have accelerated significantly in the context of the coronavirus pandemic, which has led to the introduction of a wide range of restrictions, in particular, quarantine, curfews, restrictions on business and public authorities in the provision of public services, the mechanisms for the implementation of which have emerged in the light of digital technologies. The authors analyzed the essence of the functioning of the law enforcement system in conditions of digitalization, such as: development of the family institution; aggravation of the problem of preventing and countering domestic violence in the conditions of martial law; rethinking the meaning of pretrial investigation and criminal intelligence (analysis) in the context of crime transformation. Peculiarities of digitization of modern anti-corruption tools, the fundamental importance of international partnership in the field of law enforcement in the conditions of digitalization are also considered.

Keywords: Combating corruption, Digital technologies, Digitalization, Digitization, Domestic violence, Law enforcement system.

1. Introduction

In the current conditions and in the light of the best international practices of human rights protection, the main tasks of the state should be to create effective means of protecting human rights and freedoms; systematize and improve legislation; strengthen the foundations of civil society and the legal system of the state; improve the practice of lawmaking, control over the implementation of the law; increase the level of legal culture, legal awareness of citizens and overcome legal nihilism [1]. At the same time, the world is experiencing a period of business globalization and the spread of new technologies [2], as well as fierce competition, significant financial risks, and a high level of uncertainty [3]. For the sake of balanced and sustainable development of society, not only business, but also the law enforcement system must adapt to such conditions, embodying the vector for maximum implementation of digital technologies, cloud computing and artificial intelligence in the daily activities of bodies and units. The complex nature of such transformations is the key to ensuring that law enforcement agencies' forces and means are in line with the growing threats of crime, whose manifestations at the level of

fraud, cyberattacks, and illegal access to personal data are constantly intertwined with new technological and digital achievements of mankind, distorting the bright aspiration of scientists around the world to build the most comfortable and secure world.

In Ukrainian scientific thought, certain fundamental provisions regarding the functioning of the national law enforcement system have been substantiated in a number of scientific studies by leading scholars. At the same time, digitalization in the current conditions of the rapid scientific and technological revolution is such a complex, comprehensive and dynamic process that previous scientific studies could not fully comprehend its impact on the law enforcement system.

2. Purpose and Objectives of the Study

The purpose of the article is to determine the peculiarities of the law enforcement system functioning in the context of digitalization. To achieve this goal, it is necessary to solve the following tasks: to comprehend the general features inherent in the processes of digitalization in the modern world, as well as in domestic and foreign legal and interdisciplinary research in the field of digitalization; based on the analysis of works by domestic and foreign scholars, to consider the main features of the functioning of the law enforcement system in the context of digitalization.

3. Results of the Study

Digitalization is an all-encompassing process that touches all areas. It is a dynamic process that is constantly evolving and changing over time. There is a constant need to process large, complex, and unstructured data sets, as well as to develop innovative tools for data collection, processing, integration, and visualization. A priority is the creation of effective methods and models for analyzing, storing, and exchanging operational data, which will ensure interaction between existing systems and standards of different EU member states [4].

The introductions of the anthropocentrism idea, the practical implementation of the rule of law principle in public administration prove the inexpediency of considering the law enforcement function of the country only from the standpoint of power, subordination and coercion [5]. The current state of law and order in the country is impossible without an effective system of various measures to combat crime, which is one of the most negative socially dangerous phenomena. The objective nature of the existence of "crime as a destructive phenomenon of the immanent development of mankind necessitates an adequate response of society and the State to its manifestations. Crime as a destructive phenomenon in society by its nature tends to expand and further spread to various spheres of social relations. At the same time, the spread of crime and its negative impact is countered by a system of appropriate measures that affect the legitimate activities of individuals, civil society institutions and the state as a whole [6]. The rapid development of information technology has intensified the issues of not only human digital progress, digitalization of public authorities and the provision of various services to citizens, but also has given rise to new forms of illegal activity. Accordingly, in the current conditions of information technology development, the existence and further development of cybercrime is a rather serious problem for law enforcement agencies [7]. In the context of understanding the phenomenon of digitalization, it is worth noting that during 2010-2020 the world witnessed an explosion of innovations in all spheres of life [8] in the context of globalization and modern conditions of international cooperation [9]. It is innovations that have become key in ensuring national security, business development, improving the procedure and conditions for providing social services to the population, as well as in security and defense issues. This issue has become especially acute after Russia's full-scale invasion of Ukraine [10; 11], as the ongoing war is the largest in Europe since World War II, when people really overestimated human life and freedom [12; 13]. Unfortunately, the Russian leadership today disregards any rights or freedoms, and international humanitarian law remains unrecognized for them.

Conducting research in the field of technological innovation, S. Vladov, Y. Shmelov and R. Yakovliev note that recurrent neural networks demonstrate their high efficiency in solving problems of

monitoring the probable class of errors in the operation of equipment of complex dynamic systems [14]; an important role is played by the neural network method of monitoring the operating status of technological developments [15]; powerful generators of optical and radio radiation are developing rapidly [16]. It is worth noting that digitalization processes have accelerated significantly in the context of the coronavirus pandemic and the introduction of a wide range of restrictions around the world, such as quarantine, curfews, restrictions on businesses and public authorities in the provision of public services, the mechanisms for implementing which have emerged in the light of digital technologies. Some domestic researchers are convinced that the pandemic has already affected all spheres of public life and may have become a catalyst for changing the direction of the global community. Experience shows that not only public authorities in the world, but also large and small businesses should move away from traditional business models and focus on introducing innovations that would ensure work under quarantine measures [17].

At the same time, digitalization in the context of public authorities is characterized by the formation of a special digital environment that determines the potential opportunities, directions, and boundaries of public services. In view of this, domestic researchers of this issue note that the rapid development of society and the impact of information technology have significantly changed the legal field and contributed to the creation of a legal framework for the digital environment. The favorability of this process is determined by effective strategic planning, active government involvement and the appropriate legal framework [18].

Digital infrastructure is also being actively formed in the digital environment. Some domestic researchers note that the complexity of social structures and relationships, which are increasingly based on modern digital technologies, continues to cause an exponential increase in data flows, and raises the issue of the effective functioning of a digital enterprise. The key goals of the digital infrastructure are to increase the speed of decision-making, the variability of processes depending on the needs and characteristics of the client, and to reduce the number of employees involved in the process [19]. In addition, the last decade can be characterized by the rapid integration of smart applications and the digitization of all aspects of our lives. Cheap, portable, and simple hardware and software components are present in almost every digital household product on the market today. Given the altruistic goals of improving quality of life, reducing manual labor, and providing more sustainable technology, these smart solutions have become an increasingly attractive target for cybercrime [20].

Given our analysis of the views of domestic and foreign researchers, we come to the conclusion that the phenomenon of digitalization is considered in the works of Ukrainian scholars in a fairly broad general social sense as a certain environment or set of information technologies. At the same time, it is worth noting that many foreign authors systematically and comprehensively consider specific issues related to digitalization in the law enforcement system at the level of individual technologies, analyzing these innovative technologies in detail both in terms of their technical features and legal, social, and cultural risks associated with their implementation.

B. Li, M. Zou and Y. Guo point out that with the increasing demand for transportation in Beijing, traffic management is becoming increasingly important and complex. Building an intelligent traffic management system with the help of information technology is an effective measure to improve the capacity of the traffic system and the level of service, and traffic law enforcement is one of the key links [21]. We are deeply convinced that such subject-oriented research is extremely necessary in Ukrainian legal doctrine, including for the digital adaptation of the law enforcement system to the security challenges of martial law. At the same time, in the context of digitalization, the very understanding of the law enforcement system as a set of legal means, methods and guarantees, including in the digital environment, as well as public authorities and civil society institutions performing law enforcement functions, focusing on the wide coverage of the digital environment in their daily activities, is undergoing profound transformations.

Understanding the peculiarities of the functioning of the law enforcement system in the conditions of digitalization, A. Kubaienko, I. Okhrimenko and O. Kryzhanovska [22] draw attention to the

relationship between digitalization processes and the level of effectiveness of law enforcement activities, with mandatory consideration of:

- a) *Society's expectations in the sphere of ensuring law and order and legality;*
- b) *National traditions and features, including those related to the construction of the law enforcement system;*
- c) *The positive experience of states in ensuring law and order and observing human rights and freedoms;*
- d) *The need to set real tasks before law enforcement agencies that correspond to their potential capabilities.*

In this context, it is important to pay attention to the development of the institution of the family in the context of digitalization and the aggravation of the problem of preventing and combating domestic violence in the conditions of martial law. Some scientists claim that, as in any society around the world, the family plays a key role in the development, functioning and well-being of the Ukrainian people. Scientists emphasize the need for innovative and cultural solutions, the creation of faculties of family life education, family research and family therapy at the university level, which will help prepare professional teachers of family life in Ukraine [23].

Analyzing other peculiarities of the functioning of the national law enforcement system in the context of digitalization, domestic researchers have found that the main types of modern technologies used in law enforcement are unmanned aerial vehicles, artificial intelligence, robotics, biotechnology, analytical and geographic information systems, explosion locators and chatbots. Effective mechanisms for using innovations in law enforcement will increase the effectiveness of combating crime and allow law enforcement officials to avoid conflicts related to the violation of citizens' rights and the protection of national security [24].

Considering the groups of peculiarities of the functioning of the domestic law enforcement system in the context of digitalization, it is impossible to ignore those directly related to the full-scale invasion of Ukraine by Russian troops. Thus, Russian aggression has a direct impact on the Ukrainian law enforcement system, as it is a direct threat to the security and integrity of the state. Based on a systematic analysis of theoretical information, scholars identify the main threats to the law enforcement system of Ukraine: direct, caused by Russian aggression, hybrid and internal. At the present stage, some reforms of the law enforcement system have been implemented: The National Police and anti-corruption bodies have been created, the Serious and Organized Crime Threat Assessment methodology has been introduced, and the PRAVO Police program has been implemented. The following issues need to be addressed: ineffective personnel policy and low level of trust in law enforcement, use of outdated methods of work in the law enforcement system. These issues can be addressed through the following measures: introduction of modern technologies, use of artificial intelligence and big data in law enforcement [25].

It should be noted that in 2022, the Government of Ukraine established an Interagency Working Group to coordinate the implementation of the Serious and Organized Crime Threat Assessment system in Ukraine. In our opinion, in order to properly implement the Serious and Organized Crime Threat Assessment methodology in law enforcement agencies in Ukraine, it is necessary to first of all bring information, analytical and technical support into line, since Serious and Organized Crime Threat Assessment is a product of systematic analysis of law enforcement information on criminal activities and groups that pose a threat to the EU. This will help decision makers prioritize organized crime threats.

It is also necessary to emphasize the peculiarities of using the State Automated System of Criminological Information and its further improvement in the work of law enforcement agencies in the field of combating crime. The State Automated System of Criminological Information should be coordinated with the Serious and Organized Crime Threat Assessment software in order to establish a unified approach to the feasibility of a comprehensive assessment of the results of crime counteraction measures. The State Automated Criminological Information System, updated to meet the needs of law enforcement agencies, should include strategic documents (plans, reports, decisions) on combating crime, as well as strategic documents on specific areas of such activities (existing strategic documents, for example, on combating human trafficking, cybercrime, terrorism, etc.). In other words, a proper

system of state programming for combating crime should be formed, covering a fairly wide range of activities not only of law enforcement agencies, but also of other criminal justice agencies.

As we can see, crime prevention activities should be based on relevant legislative acts, because, on the one hand, this will ensure the legality of the actions of state bodies and officials, and on the other hand, it will protect against abuse of law, violation of human rights and freedoms. Thus, speaking of strategic management, we should first of all talk about a set of interrelated management decisions, including those of law enforcement agencies.

Under martial law, the problem of cybercrime has also become more acute, which also implies certain peculiarities of the functioning of the domestic law enforcement system in the context of digitalization, especially at the level of rethinking the importance of pre-trial investigation and criminal intelligence (analysis) in the context of crime transformation. B. Jerome argues that in the context of digitization of offenses committed via the Internet, the question of the most appropriate means of preventing and suppressing crime is again being raised. The emergence of mass offenses, such as cybercrime, has greatly changed the role of investigation. It seems that the holistic approach of criminal intelligence is better suited to combat new forms of crime. Investigation becomes a precise tool, which is assigned functions that become more specific [26].

Today, strategic management in the area of combating crime involves joint activities of the Armed Forces of Ukraine, the Defence Intelligence of Ukraine, the Security Service of Ukraine, and all structural units of the Ministry of Internal Affairs of Ukraine (including the National Police of Ukraine). Such activities are aimed at achieving a single strategic goal through the implementation of an appropriate strategy, methods and forms of activity of the defense forces. In the context of countering Russian aggression, such activities should be based on mutual assistance and be complementary.

Thus, in general terms, strategic management in the field of combating crime is a set of management decisions (at different levels, agencies) and strategies in the field of combating crime.

Nowadays, intelligence-led policing is one of the world's most successful forms of combating crime and protecting human rights and freedoms. Such activities of police officers are carried out on the basis of criminal data analysis, their subsequent collection, dissemination and application.

The main steps of implementing the Intelligence-Led Policing methodology into police activity should be: improving the qualifications of law enforcement officers (in particular, their managers) regarding the use of analytical products in the decision-making and planning process; establishment of close interaction (cooperation) of national law enforcement agencies with international experts, foreign law enforcement agencies; establishment of a national system of coordination by law enforcement, controlling and other state bodies, agencies, enterprises, institutions; alignment of national analytical databases; creation of a mechanism of accountability of law enforcement agencies during the implementation of Intelligence-Led Policing regarding compliance with the principles of protection of human and citizen rights.

As for certain peculiarities of the functioning of the national law enforcement system in the context of digitalization, it is worth paying attention to the digitalization of modern anti-corruption tools. O. Reznik et. al [27] point out that corruption is one of the global problems of the modern world, and therefore, the fight against it in any country should be given considerable attention and effective measures should be developed to counteract this negative phenomenon. One of the effective tools for preventing corruption is the electronic declaration of income of civil servants and local government officials.

A. Yamen, A. Coskun, H. Mersni [28] conducted a study based on a dataset covering 133 countries. The results indicate a negative and significant relationship between tax evasion and the digitalization of companies and the population, which suggests that digitalization helps reduce tax evasion. The results may be useful for policymakers in identifying digitalization as an effective tool to deter financial crime. Investing in technology can help increase tax revenues and allow governments to allocate resources more efficiently.

A. Addo [29] emphasizes that digitalization can reduce corruption. Drawing on the theory of opportunity in criminology, which suggests that opportunities, rather than motives or systemic factors, give rise to crime, the researcher explores how digitalization can reduce opportunities for petty corruption. The researcher draws on a case study of 30 years of work to digitize Ghana's customs administration based on field research, including 91 in-depth interviews with current and former customs officers, importers, customs agents, banks, regulators, and other stakeholders. The conclusions show that information technologies allow controlling corruption over time, reducing opportunities for corruption through socio-technical reconfiguration of working practices and organizational measures.

Another feature of the functioning of the national law enforcement system in the context of digitalization, the essence of which we will consider separately, is the fundamental importance of international partnership in law enforcement in such conditions, especially within the European Union. After all, Ukraine has been a member of the European Union's Eastern Partnership program since 2009 [30]. This feature is due to the fact that the international community is making great efforts to reform the procedure for obtaining transnational electronic evidence. The new EU rules on the provision and storage of transnational electronic evidence cover the categories of subscriber data, access to transactions and content. Some researchers note that the SIRIUS and TREIO projects are important tools to support EU law enforcement agencies in matters related to transnational electronic evidence [31].

4. Conclusions

Summarizing the above, it can be concluded that combating crime is a set of legal, organizational, criminological and other measures aimed at preventing socially negative phenomena, neutralizing them and restoring violated rights, freedoms and legitimate interests of citizens, society and the state as a whole. One of the most important methods is strategic management in the field of combating crime, which involves a set of management decisions and strategies at the general and individual levels. This enables law enforcement agencies to promptly counteract criminal activity. The introduction of Intelligence-Led Policing, Serious and Organized Crime Threat Assessment methodologies and the use of the State Automated Criminal Information System are important for effective crime prevention in Ukraine. New comprehensive measures are needed to combat crime, including operational analysis and application of new technologies and techniques, which should be taken into account at the legislative level.

Digitalization processes have accelerated significantly in the context of the coronavirus pandemic and the introduction of a wide range of restrictions around the world, such as quarantine, curfews, and restrictions on businesses and public authorities in the provision of public services, the mechanisms for implementing which have emerged in the light of digital technologies. The phenomenon of digitalization is considered in the works of Ukrainian scholars in a fairly broad general social sense as a certain environment or set of information technologies. At the same time, it is worth noting that many foreign authors systematically and comprehensively consider specific issues related to digitalization in the law enforcement system at the level of individual technologies, analyzing these innovative technologies in detail both in terms of their technical features and legal, social, and cultural risks associated with their implementation.

The peculiarities of the functioning of the law enforcement system in the conditions of digitalization include: the importance of taking into account the development of the family institution in the context of digitalization; aggravation of the problem of preventing and countering domestic violence in the conditions of martial law; rethinking the meaning of pre-trial investigation and criminal intelligence (analysis) in the context of crime transformation; such separate features as digitalization of modern anti-corruption tools are considered; the fundamental importance of international partnership in the field of law enforcement in the context of digitalization, especially within the European Union.

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