

ISSN: 2733-2713; E-ISSN: 2733-2721

DOI: 10.36962/SWD

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SOCIOWORLD

SOCIAL RESEARCH & BEHAVIORAL SCIENCES

REFEREED & REVIEWED JOURNAL

VOLUME 06 ISSUE 04 (01) 2021

<https://scia.website/index.php/swd>



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ESTONIA, TALLINN 2021



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VOLUME 06 ISSUE 04 (1) 2021

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MTÜ Rahvusvaheline Teadus-, Haridus- ja Koolituskeskus.

Management Board Member: Seyfulla Isayev.

©**Editorial office:** Narva mnt 5, 10117 Tallinn, Estonia.

©**Typography:** NGO International Center for Research, Education & Training. R/C 80550594

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Websites: <https://scia.website/index.php/swd>; <https://scia.website/>

ISSN: 2733-2713; E-ISSN: 2733-2721; DOI: 10.36962/SWD

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Accepted for publication in this edition 23.09.2021

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MANAGEMENT OF UAV BORDER SURVEILLANCE AS TECHNOLOGICAL AND SOCIAL CONSEQUENCE OF ANTI-PANDEMIC PROGRAMS

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ABSTRACT

Tackling the complex problem of illegal migration and the external security of the European Union's borders is an ongoing challenge. On the one hand, there are security and anti-social aspects, and on the other hand, there are also health and safety aspects, which are currently gaining in intensity and importance in pandemics. The professional community is therefore looking for effective tools and procedures to manage these risks and challenges. The aim of the article is to identify the research space for solving the topic in the agenda of the European Union and to identify initial knowledge from the own pre-research of the use of UAV (Unmanned Aerial Vehicle) border surveillance within anti-pandemic programs as a technological and social consequence of pandemic, as pre-research notes of authors.

Keywords: management, unmanned aerial vehicle, safety and security, pandemics.

INTRODUCTION

Formulation of the problem. The agenda of securing the external borders of the European Union, resp. The Schengen area is, by its importance, a top topic for the protection of critical infrastructure and other protected interests. Cooperation between countries that share a common state border is an ideal condition for international cooperation and mutually beneficial participation of member and non-member countries of the European Union.

But life brings both positive and negative experiences in this area. The priority is to prevent illegal migration (trafficking in human beings), eliminate organized crime and trafficking in goods. Each country has the human, material and technical resources, operational procedures, and technologies to carry out its tasks for the protection of state borders. In the ongoing period of the COVID 19 pandemic, the quality of border surveillance of illegal migration, which may be accompanied by infectious diseases, is highly topical. It is becoming a constant challenge. Border surveillance management uses tools for physical and object border protection, technologies located along the state border, but finally, "flying technologies such as aircraft sensors", the so-called UAV / UAS (Unmanned Aerial Vehicle / Unmanned Aerial Systems). To identify operational problems and effectively use these modern systems in the field, it is necessary to perform experiments that allow to eliminate technical shortcomings and limitations. The knowledge can be used to optimize the procedures of their use and integration into a comprehensive technological system for protection and information security of the state border. The Slovak Republic shares a common state border with Ukraine. For this reason, this agenda is very important to us. The agenda thus also becomes part of anti-pandemic programs and measures.



Analysis of recent research and publications. Research teams have profiled and stabilized the investigation of critical infrastructure issues and finding solutions based on the analysis of the external security environment of the critical infrastructure element, the analysis of the internal security environment of the critical infrastructure element, risk identification and assessment and addressing the resilience of the critical infrastructure element.

The emergence of a coherent concept of critical infrastructure and its protection within the EU was set up in 2004 by the European Council, which asked the European Commission to prepare an overall strategy known as "Critical Infrastructure Protection in the Fight against Terrorism". The document that specifically addresses the issue of CI is the so-called Green Paper on a European Program for Critical Infrastructure Protection (2005) [1]. In 2008, "Council Directive 2008/114 / EC on the identification and designation of European Critical Infrastructures and the assessment of the need to improve their protection" entered into force, as amended.

Following the decision of the European Commission in July 2019, the Work Program 2018-2020 under the HORIZON 2020 program Secure societies - Protecting freedom and security of Europe and its citizens was updated. The program creates a framework with topics for research teams and consortia. Faculty of Aeronautics of the Technical University of Kosice assesses a potential contribution.

Within the framework of the existing complex scientific outputs in the field of critical infrastructure in the Slovak Republic, a scientific study "Assessment of the resilience of critical infrastructure in Slovakia" was carried out based on the requirement of Tomas Bata University in Zlín, the Czech Republic. The scientific study was part of a comprehensive study on the state of critical infrastructure in selected EU countries. The study "Assessment of Critical Infrastructure Resilience in Slovakia" was prepared by a team of authors in the period November - December 2011. The aim of the study was to describe the current state of solution of critical infrastructure protection in the Slovak Republic. The objective of improving the protection of individual elements of critical infrastructure is to increase their resilience (security). The authors believe that the study provides a basic picture of the issue of critical infrastructure protection in Slovakia and at the same time it is a suitable basis for further publications and gradual formation of the whole complex of scientific knowledge in the field of critical infrastructure in Slovakia and in the European Union. The use of the acquired knowledge can be seen especially in further scientific and research activities of partial parts of the issue, but also in the pedagogical process within the study and scientific field of Transport, resp. also in interdisciplinary combination with the Department of Protection of Persons and Property. The final research report from the international research and development project "Critical Infrastructure Resilience Assessment in Slovakia" was opposed and approved on December 21, 2012, at the University of Security Management in Kosice.

Other partial technological solutions have been the subject of research, the results of which have been published in articles by authors, such as:

Security Management Education and Training of Critical Infrastructure Sectors' Experts (The 13. International Scientific Conference. Danvers (USA): Institute of Electrical and Electronics Engineers IEEE, 2018) [4],

Possibilities of using perimeter and camera systems in the protection of critical infrastructure in transport (Security and Transport 2018: Theory and practice in security and crisis management in transport) [5],



Cost benefit analysis of the design and experimental verification of UAV use as part of SMAR IT technology on an integrated security system platform for border surveillance and critical infrastructure areas (8th International Scientific Conference of Doctoral Students, 2019) [6],
Mobile Technology Platform Project for Monitoring and Border Surveillance of Illegal Migration and Smuggling of Goods (MOSATT 2019: Modern Safety Technologies in Transportation, IEEE) [7],

Criteria for the information model for assessing the risks of UAV flights in environmental research on mountain terrain (SGEM 2020 conference proceedings) [8],

Integration Of Unmanned Aerial Systems in Modern Crisis Management in The Slovak Republic (SGEM 2020 conference proceedings) [9],

Discussion on blockchain applications in unmanned aerial systems domain (New Trends in Aviation Development 2020) [10],

Drivers in Unmanned Traffic Management Architecture (9th International scientific conference of doctoral students) [11],

Applied research and development of a working substance for decontamination, disinfection, and deactivation, applied to cold plasma at atmospheric pressure, for transport services: obligatory scheme and application [12],

Model of Evaluation and Selection of Expert Group Members for Smart Cities, Green Transportation and Mobility: From Safe Times to Pandemic Times [13], etc.

The purpose of the article is to identify the research space for solving the topic in the agenda of the European Union and to identify initial knowledge from the own pre-research of the use of UAV (Unmanned Aerial Vehicle) border surveillance within anti-pandemic programs as a technological and social consequence of pandemic, as pre-research notes of authors.

Presenting main material.

Analysis of the external security environment of the critical infrastructure element - state border.
The analysis is intended to identify the sources of security risks and threats that exist in the external security environment.

External security environment:

1. Geographical characteristics.
2. Hydrometeorological characteristics.
3. Demographic characteristics.
4. Characteristics of anti-social activity.

Analysis of the internal security environment of the critical infrastructure element - state border.
The aim of the internal security environment analysis of the element is to obtain a basic overview of the existing status and structure of protection. The structure of protection is given by safeguarding the protected interest:

1. physical protection ('FP'),
2. technical security means, in particular:
3. mechanical barriers (hereinafter referred to as "MB"),
4. alarm systems, the elements of which are:
5. electrical security system (hereinafter referred to as "ESS"),
6. camera security system,
7. input control and management system,
8. regime and organizational measures.

Identification and assessment of security risks of border surveillance.



The objective of identifying security risks is to identify:

1. all significant types and sources of security risks and threats in relation to the protected element or interest and the security environment (state border),
2. the prerequisites for any security risk of border surveillance.

The identification of security risks shall include the establishment of a risk register for border surveillance.

The register shall list all the potential risks which have or may have a causal relationship to the protection of the protected interest (element) under consideration. For each risk, the risk register shall indicate its source, nature, classification, consequences, and plausibility. Different methods are used to identify individual relevant risks to identify risks. These include probabilistic models and expert estimates.

Each identified security risk must be assigned a weight that corresponds to its significance (criticality). The process of determining materiality is referred to as security risk assessment. The assessment (size) of a security risk is an expression of its size. This is given by the probability of the occurrence of an undesirable phenomenon.

The identification and subsequent evaluation of security risks should result in their prioritization (order of importance). Thus, the decision on the potentially most likely danger to which the protected element is exposed if the conditions (triggers) of the occurrence of a socially undesirable event or phenomenon (fire, anti-social activity, electric discharge - lightning, natural disasters, extraordinary events, etc.) are met.

Priority will be given to individual risks to reduce their size so that their acceptability is achieved as far as possible.

Resistance of critical infrastructure element - state border.

Effective reduction of the element's safety risks can be achieved by a complex of preventive and preventive measures. Their essence lies in the simultaneous use of technical security measures, deployment of persons charged with the exercise of physical protection and regime and organizational measures. By interconnecting they form an integrated security system (ISS).

The ISS structure consists of the interrelationship between the technical security subsystem, the organizational and regime measures subsystem, and the physical protection subsystem. Individual ISS subsystems are interdependent, interdependent, and synergistic.

We have identified the following research area for solving the problem of UAV integration into border surveillance, within selected topics based on the analysis of current topics of the HORIZON EUROPE program (EU HORIZON 2020):

SU-BES01-2018-2019-2020: Human factors, and social, societal, and organizational aspects of border and external security

- Sub-topic 2: Modelling, predicting, and dealing with migration flows to avoid tensions and violence.

Better modelling and predicting migration flows, based on a sound analysis, and considering gender aspects, is required for high-level strategic decision-making, to plan and implement operational activities. For the management of the migratory flow, including relocations within the EU, it is necessary to map public sentiment, including perceptions of migration, by analyzing data available from many different governmental or public sources, and by developing socio-economic indicators of integration strategies. Proposals should be solution-oriented and propose convincingly how to better deal with such flows and to reduce risks of tensions and violence among migrants and European citizens.



Proposals are also invited against the following topic(s):

SU-FCT01-2018-2019-2020: Human factors, and social, societal, and organizational aspects to solve issues in fighting against crime and terrorism

- Sub-topic 1: New methods to prevent, investigate and mitigate trafficking of human beings and child sexual exploitation – and on the protection of victims

With respect to the trafficking of human beings, research should bear on:

- preventing the phenomenon and to reduce the demand for all forms of exploitation in the trafficking chain and its legal and illegal sectors. The analysis of possible involvement of organized crime groups implicated in trafficking of human beings in other crimes as well (e.g., financial crimes) is recommended,
- new approaches to investigate cases involving the trafficking of human beings.

Managerial evaluation of knowledge from the experiment of using UAV for the collection of spatial data in ISS border control - pre-research of the topic.

We performed the experiment in the cadaster of the village of Lesne, except for Michalovce, Slovakia, in a closed area, with constant observance of all safety measures. The purpose of the experiment was to verify the real possibilities of deploying UAVs in real conditions. For the experiment, we used a UAV from DJI, specifically a four-rotor AIR2S device. It contains a 20 Mpx CMOS sensor with a size of 1 ". This sensor offers more detail for shooting in low light conditions. The camera is mounted on a 3-axis stabilization, which is provided by a mechanical gimbal. Of course, there are also interesting modes for taking photos and videos, as well as advanced image settings in manual mode.

An essential requirement that we must monitor is the image transmission, which oversees the OcuSync 3.0 system, which offers clear image transmission (live view / 1080p / 130 ms) with a max. range up to 12 km. This, of course, depends on the country and the fragmentation of the territory within which you will fly. There are two automated frequencies on offer - 2.4 to 5.8 GHz, which use 4 integrated antennas.

The drone was equipped with a battery with a capacity of 3500 mAh / LiPo 3S / 11.55V, which should provide up to 31 minutes of flight on a single charge. This is, of course, an indication from the manufacturer under ideal conditions, i.e., in fact it is in the range of 20 to 25 minutes.

During the experiment, we used extras who moved in a simulated space, which can be a critical infrastructure object for our purposes. The space where the extras moved was also monitored by two IP Cameras. These are the Avigilon H5A-BO1-IR cameras and the Hikvision PTZ camera. We used the Avigilon camera with a wide lens with a shot of 100 degrees as a surveillance camera. Its purpose is to monitor the overall situation in the relevant area. The camera has a resolution of 2MPX and is equipped with analytical functions. In practice, this means that the camera can recognize a qualified object (human, car), but due to the wide angle of view and low resolution, it will not provide us with much detail about an object that is too far from the camera. For this purpose, we installed a PTZ camera in the experiment. Abbreviation PTZ - Pan-Tilt-Zoom, which means Camera with rotating, tilting, and enlarging the image. The Hikvision DS 2DF7284-1 camera we use is a professional IP outdoor camera with a lens range of 4.7 to 94 mm, which represents the possibility of 20x zoom. We had camera systems set up so that if a camera with a wide lens already remotely recognizes a qualified object of interest, it sends information about it to the ISS, which then enters a command to the PTZ camera to capture the detail of the desired object.

This is the current procedure in today's security practice for designing security solutions using CCTV (Closed-Circuit Television) systems. In our experiment, we decided to add another element to the system, which is the above-mentioned UAV. Its task will therefore be to supplement the security solution with another sensor, which verified this fact in the event of a disturbance of the area of interest or the identification of a potentially undesirable object. During the experiment, we shot a total of approximately 4 hours of video and took approximately 400 images using UAV.

For these reasons, two basic research questions were formulated for the planned experimental pre-research of the issue:

- What are the advantages of using UAV as an additional sensor in designing the protection of a critical infrastructure object,
- What are the real capabilities of the analytical functions of commonly available UAVs?

During the experiment, the subjects moved in a "relevant space." They moved mixed in a group, in larger and smaller distances from each other, or in a row behind each other. If the extras encountered a natural obstacle or other element in the country that would provide them with shelter from the camera, they used it. The extras moved variably fast and slow. The purpose was to follow. The aim of the experiment was to verify in real conditions how all available elements of the security system will react to the same stimulus.

The Avigilon camera has reliably always identified people in the field of image, distinguishing their number. We also recorded cases where she lost the monitored object, specifically in the case that the helper hid behind a tree. However, as soon as the helper appeared, resp. he ran from behind the obstacle, the camera automatically marked it again and followed it. The Hikvision PTZ camera also worked well, whose task was to zoom in on the object if it was initiated by the Avigilon camera via the ISS. The following pictures show different views from both cameras to confirm the suitability of combining static cameras with PTZ.

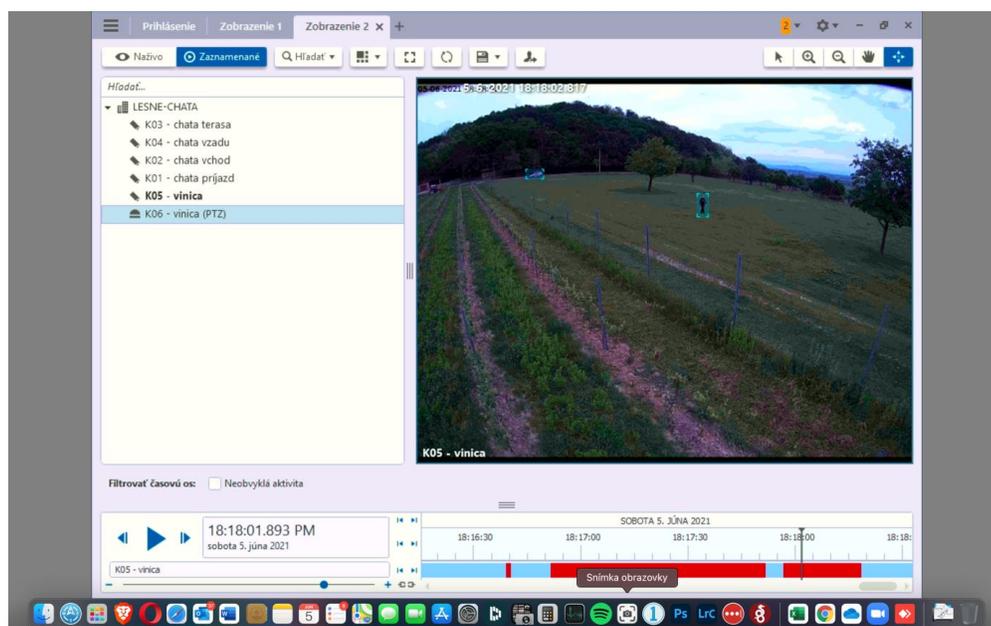


Fig. 1. View of the Avigilon wide angle camera.

Source: own source

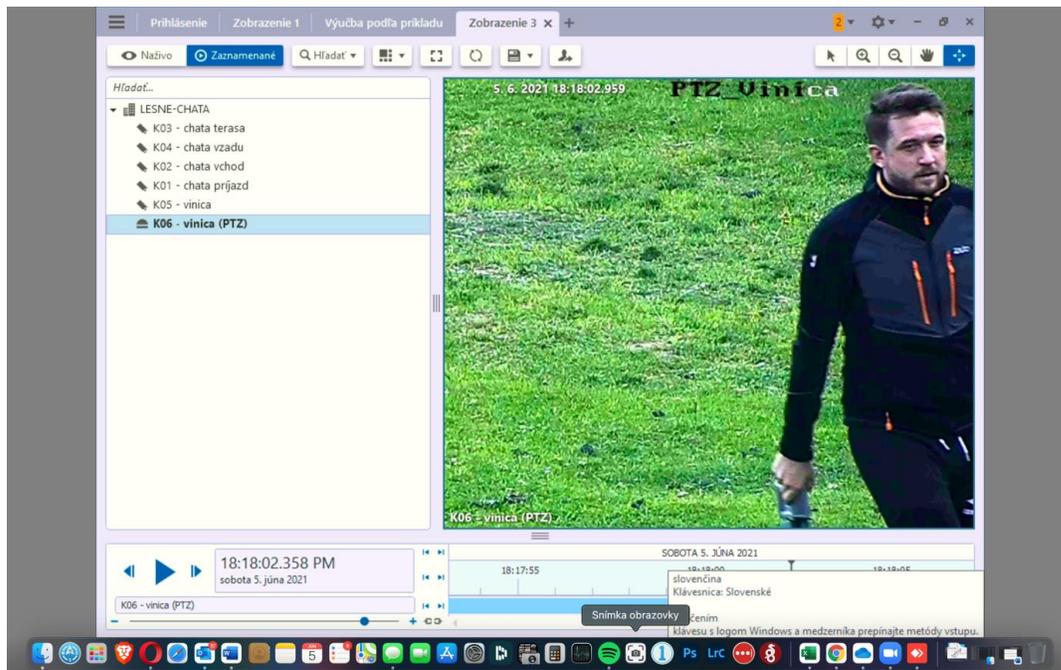


Fig. 2. View from the HikVision PTZ camera, where the camera approached a moving object based on the ISS instruction.

Source: own source

We used UVA all the time. As mentioned above, the intention was to verify how the technology of commercially sold UAVs today will complement the comprehensive security of the protected object. We controlled the UAV in manual flight mode, the shooting mode was set to Video mode. In this setting, it is possible to manually set the object to be monitored by the UAV using the appropriate application.



Fig. 3. DJI Fly graphical interface that allows you to mark an object for tracking.

Source: own source

The UAV reliably always detects and tracks a person reliably, regardless of the speed of movement of the helper. If the helper hid behind an obstacle, e.g., tree and the UAV lost sight of it, remaining in the place where it last registered the monitored object, if the helper reappeared in the shot, the UAV continued to monitor it. However, during the experiment, we also recorded cases where the UAV did not want to re-record the monitored object after the interrupted visual contact. We repeat the experiment, the helper intentionally searches for places where he gets lost from the supervision of the UAV. After a thorough evaluation of several such scenes, we conclude that the UAV loses the helper if he was hidden behind an obstacle for more than one minute. Therefore, we conclude that the UAV has the firmware programmed to cancel monitoring after this time limit. In addition to this case, the UAV provided 100% success in capturing the object and its subsequent monitoring during the entire flight time, respectively. until the operator has finished monitoring.



Fig. 4. The UAV tracks a person heading for a visual obstacle.

Source: own source

We repeated the experiment using a personal motor vehicle. We drove the vehicle through the monitored scene, and we monitored the individual elements of the security system. The Avigilon camera recognized the car and correctly analytically marked it as a car.

The UAV also offered us the opportunity to track the object, after marking it, it also automatically recognized the object as a car. We can therefore confirm our hypothesis that our UAVs with more advanced analytical functions could be used for data collection and analysis for IBS. After previous experience with object tracking, even in the car, we want to verify in practice how the UAV will behave, if the object of interest will use various obstacles to lose the UAV from sight. After performing several experiments, the previous experience is confirmed. In 100% of cases where the UAV loses visual contact with the monitored car, the UAV will continue tracking if it does not find the monitored car in its field of vision within one minute of the moment of loss of visual contact. The assumption also applies in the opposite way, in 100% of cases the UAV continues to follow the sample if the UAV finds the monitored object within a time limit of less than 1 minute. In an experiment with a car, maneuvers were performed where the vehicle moved in several directions in relation to the UAV. The vehicle was heading against the direction of

flight, trying to maneuver to the sides, and to change direction sharply and go basically directly under the UAV. We state that the UAV always adjusted its flight trajectory so that the monitored vehicle not only monitored but kept in the middle of the shot.

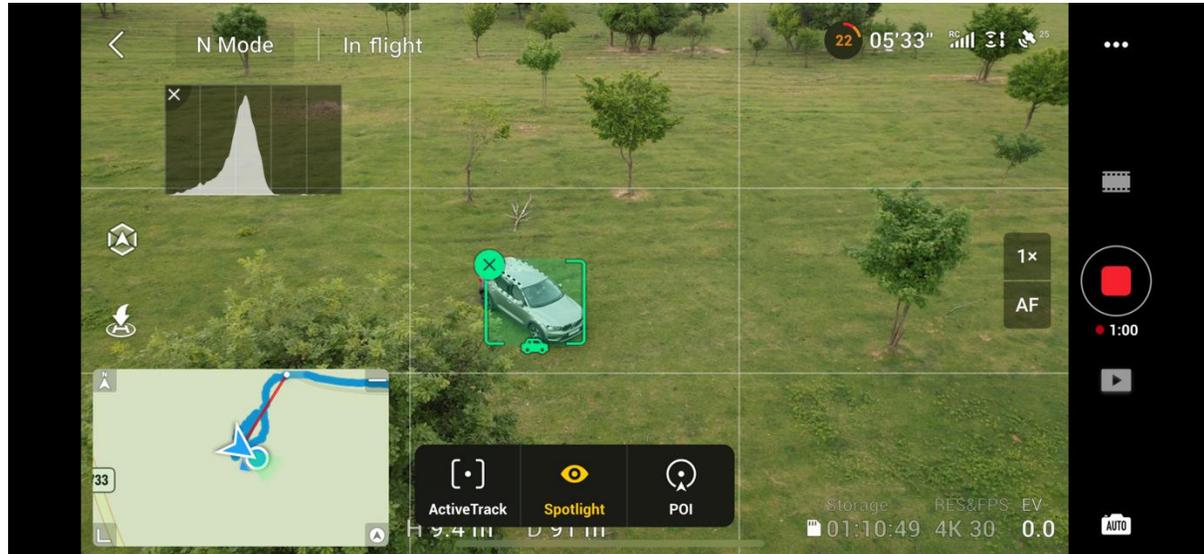


Fig. 5. Graphical interface of the DJI Fly application, which allows you to mark an object for tracking with the marked tracking options Activetrack - Spotlight- point of interest.

Source: own source

After performing the experiment - pre-research in real conditions, we can proceed to the formulation of preliminary answers to the research questions asked at the beginning of the experiment:

What are the advantages of using UAV as an additional sensor in designing the protection of a critical infrastructure facility? UAVs provide us with significant improvements to our existing security infrastructure. They complement conventional surveillance solutions, in our case a combination of static and PTZ cameras, by providing a comprehensive overview of monitored areas where traditional cameras are limited by possible blind spots. Free-moving UAVs have the additional advantage of being more difficult to neutralize than CCTV systems. The UAV will provide the operator with much wider options for monitoring and viewing the scene of interest than fixed position cameras. In addition, by disrupting a potential perpetrator, the UAV will provide more valuable time to the security system operator to respond adequately. Equally important may be the perpetrator's awareness that he has been detected, a change in his behavior may make it very difficult for him to take his next tactical action, or it may discourage him from cooperating with potential accomplices.

What are the real capabilities of the analytical functions of commonly available UAVs?

By performing an experiment within the pre-research of the topic, we demonstrated the fact that the analytical functions of the used UAV are usable for the needs of monitoring the given object of interest. It should be noted that the UAV we use is a commercially sold UAV that is primarily intended for video and photo capture. However, as autofocus and subject tracking technologies improve for video and photography, they undoubtedly provide workable solutions for other industries. The main disadvantage of UAVs compared to the cameras used in this experiment was



the fact that in UAVs we first had to manually mark the object we want to monitor. After performing this step, the UAV was able to recognize for itself whether we marked a person or a car and reliably tracked the object. We assume that several of the shortcomings that we discovered during the experiment are rather a specifically set up product, designed for video, for example. It is therefore quite realistic to imagine that the manufacturer would be able to easily program the given software parameters so that the UAV can be used for other industries as well. For example, if a UAV is tracking a designated offender and the offender is hiding behind an obstacle such as the tree in our case UAV waits in the last position where it caught the perpetrator caught. As a suitable solution, we seem to be able to program the UAV so that in case of loss of visual contact with the monitored object it rises to a height above the obstacle, where it could wait for the perpetrator to react for a long time or could start circling the obstacle to try to detect hiding. the perpetrator.

In the final assessment of the possibility of deploying UAVs, it is necessary to evaluate the analytical capabilities of UAVs. As mentioned above, the UAV we used contained a reliably functioning system that recognized objects and then tracked them. However, he does not recognize the objects in the monitored scene himself, he first needs the help of the operator. UAVs generally play a more difficult role in video analysis than static cameras.

In summary, static cameras capture a scene, analyzing changes in it and using machine learning to evaluate the results. Such a procedure ensures that the cameras can recognize predefined objects such as people, vehicles, animals from irrelevant movements in the scene such as shadows, moving trees or other elements in the captured scene. On the other hand, the UAV is constantly moving, so it is almost impossible for him to use the principle of comparing changes in the captured scene, because it changes every second. Technological development today, however, goes a mile step forward, some methods are already known today, when it was possible to automatically analyze the captured scene in flight using UAV. Automatic analysis of images obtained by cameras mounted on board UAVs attracts many scientists working in the field of computer vision. The interest is related to the growing need for algorithms capable of analyzing scenes obtained using UAVs by detecting moving objects, calculating their trajectories, and finally understanding their operation. The problem becomes challenging because in the most general case UAVs fly without any awareness of the environment; therefore, no initial configuration based on the appearance of the area of interest can be used to simplify the task, as is generally the case when working with fixed cameras. In addition, the apparent motions of the objects in the images overlap with the camera-generated motions associated with the UAV's flight (varying in altitude, velocity, and yaw and pitch angles). Finally, it should be borne in mind that the algorithm should include simple visual computational models, as only processors with limited computational resources can be in the UAV.

The authors obtained a large amount of data from the pre-research of the topic, but especially valuable knowledge for the implementation of the next experiment with UAV UAS for border surveillance, also as part of anti-pandemic programs.

CONCLUSIONS

The EU is focusing on strengthening security through border management. This includes issues of control and surveillance on land and in the maritime field. It contributes to the further development of the European Border Surveillance System (EUROSUR), its interoperability with other systems, and to the improvement of the use of new technology for border controls, including



in the context of the Smart Borders legislative initiative. It also deals with supply chain security in the context of EU customs policy and migrant smuggling.

The quality of border surveillance of illegal migration, which may be accompanied by infectious diseases, is highly topical. It is becoming a constant challenge. Border surveillance management uses tools for physical and object border protection, technologies located along the state border, but finally, "flying technologies such as aircraft sensors", the so-called UAV / UAS (Unmanned Aerial Vehicle / Unmanned Aerial Systems). Carrying out the following experiment with UAV / UAS for border surveillance, also as part of anti-pandemic programs, based on the findings from the presented preliminary research on the topic, was important for further scientific work.

„This work was supported by the Slovak Research and Development Agency under the Contract no. PP-COVID-20-0002“.

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THE GROUNDBREAKING PUBLIC GOVERNANCE OF NATIONAL SECURITY WITHIN THE CONDITIONS OF GEOPOLITICAL THREATS

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ABSTRACT

Ensuring public administration of national security is currently gaining extreme significance as seen from the perspective of geopolitical transformations. The addressed issue is particularly relevant and calls for a thorough and systematic research, in view of the global economic crisis, the fight against the COVID-19 pandemic and the global geopolitical transformations and threats that have swept over the world during the recent decade.

Despite the sound regulatory framework for public administration in the field of national security and the existing mechanisms of state regulation therein, the effectiveness of public administration in protecting national interests and ensuring the security of individuals, society and the state from external and internal threats requires further enquiry. That said, public administration of national security encompasses the mechanisms to ensure the safeguarding of vital interests of man and citizen, society and the state, and accordingly the sustainable development of society, prompt detection, prevention and neutralization of real and potential threats to national interests.

Key words: geopolitical security, geopolitical threats, public administration, national security, social security, COVID-19.

INTRODUCTION

In the course of transforming pre-industrial societies into industrial and thereafter into cutting-edge ones, global development was accompanied by changes that not only indirectly, but quite often directly compromised the security of peoples, states and entire civilizations. For this reason, the intensification of transnational processes has been a relevant feature of contemporary development worldwide. Global problems have become increasingly important, affecting humanity at large and each state (society) in particular, consolidating the controversies of social development. The dramatic geopolitical changes occurring during the first decades of the XXI century testify to the fact that the world has entered into a phase of yet another global transformation, and therewith further crises and challenges to the world order. Since the early 1990's, the world lives within the unusual conditions of transition to polycentrism, the formation of which is accompanied by exacerbation of economic, geopolitical, ethno-confessional, demographic, etc. contradictions between the power centers and world civilization. The XX century was one of the most perilous and precarious epochs, as it was marked by the increasing confrontation between the two antagonistic socio-political systems that existed at the time.



However, the self-destruction of one of the bipolar world order components did not lead to universal peace. Instead, having lost its balance in the bipolarity disintegration, civilization faced growing conflict entailed by the collision of vital national interests of the world's leading powers and the emergence of a system of new threats to their security. Reality requires a fundamentally novel and groundbreaking scientific approach to understanding the geopolitical state of the modern world. This is especially important for transitional societies where statehood is being revived, as the process of statehood relates to the need of ensuring a dependable national security [1, p. 25].

The security space has apparently undergone irreversible, often spontaneously uncontrolled changes since the middle of the XX century, drawing on three main stages of globalization that preceded the current stage, namely:

1) Stage 1 (second half of the XX century – from 1945 up to 1975) – associated with the end of World War II, determination of the path to comprehensive reconstruction of states, through the creation of a global international organization, the UN; transformation of the colonial system, resulting in a set of socio-economic problems regarding independent states' development; the processes of scientific and technological revolution unfolded; the impact of political and economic factors is highlighted;

2) Stage 2 (1970's – 1990's) – a shift of globalization processes to a formally defined by the world community took place, when instantly humanity faced a set of global problems that had to be addressed, in particular in the field of international security, assistance to countries, economic and humanitarian cooperation;

3) Stage 3 (late 1990's – early XXI century) – the expansion of globalization trends and challenges at different civilization levels, in particular:

a) the breakthroughs of science and technology in the field of computer science and communications, the rapid development of international contacts (Internet) led to the emergence of global community, which created conventions of national borders, preservation of closed, authoritarian societies, restrictions on knowledge, information, freedom of movement becomes impossible, threatening national identity and, accordingly, putting at risk the national security;

b) the growing influence of the United States (political, economic, financial, informational, technological), used exclusively in the interests of the United States. The US standpoint in solving current global problems has become crucial. However, it should be noted that American values and interests do not always coincide with other states' values and interests;

c) the spread of threats to the development and existence of nations and states due to globalization. In a number of countries worldwide, the ruling elites are concerned about globalization, which has led to the emergence of certain social groups, scientific, political and socio-economic anti-globalist movements aimed at resisting such processes. In fact, there has been a significant change of heart inherent in the processes of globalization, which has actually led to its negative perception;

d) the financial crisis of 1997-1999, which by itself confirmed the negative effects of globalization by directly transferring negative phenomena from one country to another, and oftentimes from one region of the world to another. From that perspective, the possibility of globalization to have a positive impact on the development of the modern world was challenged [18].

With this in mind, safeguarding the national interests of the state draws heavily not only on how effectively the national security system is able to respond to challenges and threats at both



domestic and geopolitical levels, but, first and foremost, on efficient public administration. That said, it is crucial to improve the current state of national security governance, in view of domestic and geopolitical threats. It is determined that from the perspective of state management of national security within the conditions of geopolitical threats and transformations it is expedient to distinguish terrorist, military-biological and the shadow economy advancement as a social sphere disparity.

Analysis of recent researches and published papers. The pinpointed issues primarily call for their consideration within the general public administration system in terms of elaborating the conceptual foundations of national security theory as its component. The study of these issues is the basis of scientific research of such scientists as O. Bondarenko, O. Bodruk, V. Bulba, K. Vashchenko, O. Vlasyuk, D. Karamyshev, A. Kuras, M. Lakhyzha, O. Polyakova, O. Potekhin, O. Rudenko, A. Sitsinsky, I. Todorov, N. Yarosh. Furthermore, V. Bichik, M. Dnistriansky, N. Kaminska, D. Lukianenko, J. Tymkiv, A. Shevtsov addressed the issues of isolating risks and threats to national security, including geopolitical ones, in the context of their classification and systematization.

Significant influence on the modern stabilization system of state governance of national security in terms of geopolitical transformations and threats was made in the works of such scientists as: O. Andriyko, V. Afanasyev, O. Bandurka, Y. Bytyak, I. Borodin, A. Vasilyev, V. Garashchuk, I. Golosnichenko, Z. Gladun, E. Dodin, T. Kolomoyets, V. Kolpakov, A. Komzyuk, V. Konoplyov, O. Kopan, E. Kubko, O. Kuzmenko, V. Kurylo, E. Kurinny, M. Kucheryavenko, D. Lukyanets, V. Marchuk, N. Myronenko, V. Nastyuk, V. Olefir, O. Ostapenko, I. Pakhomov, V. Petkov, V. Pogorilko, O. Ryabchenko, A. Selivanov, V. Selivanov, V. Sirenko, O. Skrypnyuk, I. Tymchenko, M. Tyshchenko, V. Tsvetkov, V. Shapoval, V. Shamray, M. Shvets, Y. Shemshuchenko.

The above researches have contributed significantly to the solution of certain issues of public administration in the field of national security. However, the issues of developing a unified system of national security governance in the context of geopolitical transformations, risks and threats, identifying their compliance with domestic and foreign policy factors of socio-political development, substantiation of methods for assessing the impact of geopolitical threats and opportunities for national security protection, characteristics of structural and functional features of the subjects of public administration relations in the field of national security and priority areas of coordination in the context of improving the efficiency of public administration to ensure national security in a transformational geopolitical environment.

Results of the research. At the end of the XX century, the world has undergone groundbreaking changes that have to some extent transformed the social, political, economic and government systems of the world, resulting in the structure of the world order, and the globalization processes, which were associated with poverty, environmental crisis and international terrorism, became crucial for the fate of present-day mankind.

In a globalized world, international terrorism has become one of the most challenging issues of the world community at the turn of the XX – XXI centuries, due to which there is a growing interest in research on the nature of this global threat. The events of September 11, 2001 in the United States emphasized this problem. According to many experts, the globalization of terrorist activity is evolving and transforming much faster than economic globalization. Terrorism as a phenomenon today is very different from what it was during the first massacres. Those actions were aimed primarily at destabilizing the socio-political situation in a particular country. Today, terrorism is not a factor of domestic but mostly interstate importance. While developing its



foreign policy strategy, the government of any country must take into account that the terrorist activities spread regardless of state borders, gaining uncontrolled geopolitical proliferation. Thus, the organization of international anti-terrorist cooperation is urgent, because no country, even as powerful as the United States, is able to cope with transnational terrorism on its own.

Currently, it is clear that it makes sense to create a comprehensive global convention against terrorism, which would include a definition of this concept. However, there is still opposition between those who want to engage in the war on terror and those who believe that the so-called "resistance fighters", as they call them, should not fall under the definition of terrorism. More and more countries are realizing that this is an unreasonable definition and that attacks on civilians should be considered a crime in both peacetime and wartime. The absence of a definition does not mean that there are no international legal grounds for counter-terrorism activities. Recently, with the adoption of the Convention on Nuclear Terrorism, there are 13 international conventions on various aspects of terrorism. Unfortunately, so far only a third of the world's countries have ratified the previous twelve documents.

Europe's story of terrorism is long and tragic. The IRA, the ETA, the Red Army Faction, and the Red Brigades are the best-known examples of organizations that have taken several thousand lives. However, global, religiously motivated international terrorism is a relatively new phenomenon. In recent years, Europeans have significantly strengthened their defense against terrorism, both at national level and within the European Union. However, there is no complete protection against it, as terrorists have an upper hand because of the unexpectedness of their actions. Yet, terrorists have failed to achieve what is considered to be the major goal of Al Qaeda, namely starting revolutions and uprisings against Muslim regimes in countries such as Pakistan, Saudi Arabia, Indonesia and others. Moreover, terrorists failed to ignite a mass conflict between Muslims and Christians in Europe. The doctrinal guidelines of terrorism are changing along with its organizational structures. Today, terrorists are increasingly using the cutting-edge technology, buying new weapons, and the threat of using weapons of mass destruction. The well-known researcher K. Hirschmann pinpointed the global nature of terrorism: "Terrorism today is a universal phenomenon both in terms of population coverage and geography of its spread. The crisis zone stretches from Casablanca in the west through Djerba, El Riyadh, and Aden to the island of Bali in the east, from Nairobi and Dar es Salaam in the south to Moscow and the Chinese province of Xinjiang in the north. The fire centers are Palestine, Iraq, Afghanistan and Chechnya" [8, p. 146]. In fact, terrorism is a multifaceted transnational phenomenon that takes on new features and adopts previously unavailable methods of violence. This "Terrorist International" [8] poses threats to stability in individual states and overall international security.

A striking transformation of the target terrorist instructions has occurred recently. Quite often, when committing terrorist acts, they do not put forth any demands and do not take responsibility for the crimes committed. The war on international terror is complicated by the fact that the leadership of a number of countries around the world considers the support of terrorist organizations to be an essential factor in their policy. In fact, there is a term "states - sponsors of terrorism" in the international lexicon, which includes not only states that directly support terror as a means of policy, but also those that refuse to take part in proceeding with international community's war on terror. The phenomenon of state support for terrorism takes place. This is confirmed by the cases when acts of terror planned and carried out by state bodies or terrorist organizations are aimed at carefully selected objects and are proportional in scale and content to the practical political goals of the sponsoring state. The scale of violence perpetrated by state-



sponsored terrorism is similar to that used in conflicts between ethnic, nationalist organizations or national groups advocating for social revolution. At the same time, the tactics of targeted actions are used, which should discredit the institutions of political power, demonstrate their weakness, as well as the brutality of law enforcement agencies and the armed forces, which engage the attention of the world community. When it comes to the sponsoring countries, they rely on the effects of terrorist acts, though it would be an exaggeration to believe that they are well-targeted in terms of objectives, facilities and scale. It should be added that a new, more dangerous type of terrorism, religiously motivated, has joined the phenomenon of state-induced violence. The emergence of religion is evidenced by the appearance of religion primarily among the ideas and targets of terrorist acts, as well as the increasing number of religiously motivated suicide terrorist acts. Terrorism based on Islamic radicalism poses a particular threat. In recent two decades, Islamism has evolved from a small organization operating at the regional level and having hierarchical structures to a global jihad network (such as Al Qaeda). In its new form (religious fanatics used to be terrorists before), it is characterized by increased technological and operational competence of this group of terrorists and attempts to seize weapons of mass destruction, which they believe are needed to achieve large-scale goals of "holy struggle."

In recent years, the number of terrorist groups with a predominantly religious motivation has increased significantly. At the same time, the number of victims increased accordingly: if in the mid-90's of the XX century these organizations carried out about a quarter of all known terrorist acts in the world, currently they exceed 90%. Muslim terrorist organizations have drastically increased the acts of violence: sources of funding, effective organizational structures, extensive combat experience, modern technical base, a system of training militants and their rapid relocation. Volunteers from among specialists in the field of communications, computer science and cybernetics, scholars and engineers are involved in the organizations, creating appropriate enterprises to handle their activities. This allows terrorists to use international telephone, facsimile and computer connections, obtain documents and transfer militants, and provide a prerequisite for acquiring and using the weapons and military equipment. Hence, Table 1 shows the ranking of countries in which the "terrorist potential has increased" in the process of cutting-edge technology development.

Table 1**Countries with the highest terrorism level in 2012-2019**

Country (in alphabetical order)	Years						
	2012	2014	2015	2016	2017	2018	2019
Afganistan	8.669	9.390	9.233	9.444	9.441	9.391	9.603
Yemen	7.305	7.310	7.642	8.076	7.877	7.534	7.259
India	8.147	7.860	7.747	7.484	7.534	7.568	7.518
Iraq	9.556	10.000	10.000	9.960	10.000	9.746	9.241
Nigeria	7.242	8.580	9.213	9.314	9.009	8.660	8.597
Pakistan	9.049	9.370	9.065	8.613	8.400	8.181	7.889
Somali	7.244	7.410	7.600	7.548	7.654	8.020	7.800
Thailand	7.086	7.190	7.279	6.706	6.609	6.252	6.029
Philippines	6.801	7.290	7.270	7.098	7.126	7.181	7.137

Source: [20]



In those listed in table 1. In countries, the GTI during the study periods was higher than "6.00", which indicates a high and (higher than "8.00") - a very high level of terrorism. The clear leader is Iraq, in which in 2014, 2015 and 2017 the global rate of terrorism was equal to "10.0", which is the highest on this scale.

Terrorism is not, as it is sometimes mistakenly said, the weapon of the poor, but it is a way of fighting the weak against the politically strong for their own political goals. Therefore, terrorism should not be seen as a form of expression of a particular ideology, but as a strategy to use force available to any weak political player in a globalized world. As we can see, with the global development of informatization, network forms of organization have received a new impetus for development, because for their effectiveness it is necessary that the speed and quality of information exchange in them were higher than in hierarchical structures. Because terrorist organizations are more flexible than state institutions in implementing technical innovations. They use over-the-counter technology as well as existing global information infrastructure. Modern information technology enables terrorist organizations to gather the necessary information (flight schedules, corridors of civil aviation, etc.) and link to the terrain (using global positioning systems - GPS). There is still a theoretical threat that terrorists will use systems to accurately target weapons of mass destruction. In this regard, the airliners that rammed the World Trade Center in New York in 2001 are high-precision cruise missiles, and the consequences of this act are comparable in scale to the use of powerful weapons. Therefore, the fight against global terrorism remains relevant. In the face of the transnational terrorist threat, a number of areas can be identified:

1) this is the psychological state of the population, which can be described as "heroic calm and serenity." Because terrorist attacks target primarily the mental infrastructure of modern societies and are intended to have a profound effect by relatively limited means, much of this effect will be removed if the response to terrorist attacks is not hysterical agitation but cold-blooded restraint. But to achieve this is extremely difficult. Then it will be possible neither to stop tourist flows, nor to undermine airlines economically, and to harm the economic processes of globalization in general;

2) it is a combination of law enforcement measures, special services and military operations. Their goal is to put pressure on terrorist groups through persecution, limiting their ability to attack, and deprive them of initiative. Terrorist networks have limited resources. The point is to force them to use most of their resources for self-preservation, so they will have much less power for offensive operations. The use of force is not able to completely destroy terrorist cells, but it forces them to worry about reorganization, which reduces the scale of terrorist attacks;

3) it is the separation of the actual terrorist groups from the environment that supports them, ie from the possibility of replenishment of new fighters, funds and political legitimacy. This level of defense is effective in the medium and long term, where the main task is to bleed terrorist groups in the long run;

4) it is the consolidation of the global world community and bringing the legislation of all interested countries in the field of counter-terrorism to uniform international requirements (standards).

The main trend of the XX century was the fight against military threats, first - in the first half of the twentieth century, and in the second half of the twentieth century - the fight against military threats and, at the same time, the fight against terrorism. In this case, the level of security



assurance as a result of military spending is an important issue. This level depends on many factors, including what is considered security and cost-effective means of ensuring it [19, p. 22]. Taking into account the International Militarization Index (from the English "Militarization domain") takes into account [27]: military spending (% of GDP); number of servicemen per 100 thousand people; the volume of transfers of basic conventional weapons as importers per 100 thousand people; volume of transfer of basic conventional weapons as an exporter) per 100 thousand people; financial contribution to UN peacekeeping missions; nuclear and heavy weapons power; easy access to small arms and light weapons.

Table 2

The least and most militarized countries according to the value of index militarization in 2014-2020

years	Least militarized countries	The most militarized countries
2014	Denmark, Iceland, New Zealand , Hungary, the Czech Republic	Afghanistan, Israel , North Korea, Russia, Syria, United States
2015	Bhutan, Ireland, Kosovo , Costa Rica, Latvia, Hungary	Israel, United Arab Emirates, Oman, North Korea , Russia, Syria, United States
2016	Bhutan, Iceland, New Zealand, Slovenia, Hungary , the Czech Republic	Israel , North Korea, Russia, Syria, the United States
2017	Bhutan, Iceland , Portugal, Slovenia, Hungary	Israel , North Korea, Russia, Syria, the United States
2018	Iceland , New Zealand, Slovenia, Hungary	Israel , Oman, North Korea, Russia, Syria, the United States
2019	Iceland , Moldova, New Zealand, Portugal, Slovenia, Hungary	Israel , North Korea, Russia, United States
2020	Ireland, Iceland , Malaysia, Moldova, New Zealand, Portugal, Slovenia, Hungary	Israel , Oman, North Korea, Russia, Syria, United States, France

Source: [27]

Israel and North Korea stand out among the leaders in the field of militarization. Moreover, Israel took the last place in this ranking for 5 years - all of the years studied, except in 2015, when the last place was taken by North Korea. The most militarized countries are Israel, North Korea, Russia, Syria, and the United States (Table 2).

Today, we are witnessing the world's leading countries trying to overcome financial and economic problems, but at the same time, military spending and investment in conventional and strategic weapons continue to grow. Of course, the world's attention is focused primarily on the issue of nuclear non-proliferation and control of conventional weapons, but gaining weight are issues and measures to control the transfer of sensitive products and technologies that may pose security concerns [26, p. 74].

The arms control and disarmament system has generally dealt with threats posed by government programs to prevent the use of chemical and biological weapons (IFCs). Because states have different interpretations of offensive and defensive work, there is still a risk of supporting the



potential of offensive undercover APCs, so-called defense or defense research programs, including peacekeeping and counter-terrorism programs. Problems of determining the differences between offensive and defensive APCs complicate the introduction of effective supervision of research [24, p. 237]. This issue has become especially relevant to humanity since the terrorist attacks in the United States on September 11, 2001. Analysts are paying close attention to the development of threat scenarios involving non-state subjects. The number of publications and reports on threats related to bioterrorism continues to grow. Some scenarios are based on specific events and processes, while others are based on more general and inaccurate assessments of the vulnerability of countries and objects. Due to the limited number of cases of accidental leakage of pathogens, it is impossible to assess their consequences, it is even more difficult to predict the likelihood and consequences of bioterrorism.

It was at the end of the twentieth century and in the first twentieth of the twenty-first century that environmental and biological threats and the insidious danger they posed intensified. The use of infectious agents for base purposes can have not only military but also terrorist and criminal purposes.

Biological threats and the use of biological and bacteriological weapons are not modern inventions. After all, in fact, biological weapons have a slightly longer history than the conscious study of microorganisms by mankind. For example, in 1300 the Tatar-Mongols during the siege of Caff threw the corpses of those who died of the plague outside the city walls. The Japanese worked actively in the biological weapons development sector during World War II. These were disgraceful pages in the history of microbiological knowledge - with human studies involving more than 5,000 people, about 600 of whom died. As a result of the experiments, about a thousand wells in Chinese villages were infected to study the development of cholera and typhus outbreaks. Japanese planes dropped flea plague on Chinese cities. The outbreaks that continued in the following years and killed about 30 thousand people [22, p. 195]. After the war, researchers were pardoned in exchange for complete information about the research. Thus, scientists with a criminal past have become respected citizens and founders of pharmaceutical companies. And some even published their works in scientific journals, replacing in the section descriptions of materials and methods "human" with "monkey" [21, p. 634]. As an example of research, the United States cites experimental contamination of the New York subway with the nonpathogenic bacterium *Bacillus globigii*, which simulated a potential attack by anthrax. Therefore, in 1972, the signing of the Convention on Biological Weapons was initiated, which obliged all member states to refrain from its development and application [4]. However, this did not guarantee that the participants kept their promises. It is assumed that some countries continue their research informally. At the same time, countries such as North Korea, Iran and Syria do not hide it.

Violations of safety in such studies can sometimes set precedents that violate their "secrecy". For example, the outbreak of anthrax in Yekaterinburg in 1979, when all the victims fell ill in a narrow area in the direction of the wind from a local military facility, gave rise to claims that the pathogen has developed. An example of biological terrorist attacks is the sending of letters with spores of anthrax in 2001 [25, p. 16].

The means of mass destruction include toxic and bacteriological (biological) weapons, where the action of the latter is based on the use of pathogenic properties of biological warfare agents - microorganisms that can multiply in humans, animals and plants and cause mass diseases. Such bacteriological agents include viruses, bacteria, fungi and toxic products of their activity, the use of which is possible with the help of infected vectors (insects, rodents) or in the form of



suspensions and powders in ammunition. In the absence of an effective safety assurance system (in particular, biosafety), expanding the network of research in the field of preparedness to respond to biological threats in some countries may also pose a threat [28]. Increasing the number of laboratories with a high level of protection and expanding the range of studied pathogens contribute to the dissemination of potentially sensitive data and knowledge. This complicates the algorithm for handling biological and dual-use chemicals.

In recent years, the international community has made significant efforts to analyze the effectiveness of compliance with national laws, codes of conduct and ethics, disease surveillance and response, biosecurity and biosafety. For example, back in 2007, the United Nations Office for Disarmament Affairs (ODA) launched the Bio-incident Database, as required by the 2006 UN Global Counter-Terrorism Strategy[23]. The Office requested from the UN member states to update the list of laboratories and qualified specialists, compiled in 1989, in order to provide the UN Secretary General with the opportunity to investigate reports of the use of chemical or BZ [23, p. 248].

Threat analysis and risk assessment related to the prevention, response and response to chemical and biological terrorism, as well as the assessment of the effectiveness of countermeasures, are less informative than in the case of traditional military threats from conventional weapons, in particular due to lack of reliable open information. As a result, many countries ignore the direct threat of chemical and biological terrorism, especially in the context of prioritizing limited resources. As early as May 1986, the US Department of Defense, in a report to a committee of the US House of Representatives, confirmed that genetic engineering made bacteriological warfare an effective option for combat; It was also noted that new advances in biotechnology allow the creation of an almost unlimited number of options for what can be called "substances with specified properties." New, unknown to medicine infectious diseases can become especially dangerous during bacteriological warfare. Means and methods of protection against them will have to be created in the conditions of hostilities [23, p. 426]. However, despite these measures, in 2007 there were widespread miscalculations in the fields of biopollution and biosafety at facilities where the rules of safety when working with biological material had to be followed: at the Institute of Animal Health (IAH), where live foot-and-mouth disease virus is used in limited quantities for experiments, as well as at two private biotechnology companies, Merial Animal Health Ltd and Stabilitech Ltd, which produced large quantities of foot-and-mouth disease vaccine and used small quantities of live foot-and-mouth disease virus. that produced at IAH. The strain of foot-and-mouth disease found during an investigation into an incident on farms near the town of Pearbright in Surrey, UK, where an outbreak of foot-and-mouth disease was recorded, was identical to the strain obtained during the 1967 foot-and-mouth disease epidemic in Britain. laboratories and pharmaceutical production, in particular at the facilities in Pearbright. Thus, the investigation led to the above objects in Pearbright [17, p. 129].

Along with the developed mechanisms of counteraction and security, the development of microbiological and medical technologies, the real challenge of the civilization scale at the end of 2019 was the spread of the COVID-19 virus. The most serious biosafety (biosecurity) challenges over the past 20 years have included avian H5N1, H7N9 and swine H1N1 (as well as H5N8, H7N3, H7N7) influenza viruses, prions, SARS, MERS, Ebola, smallpox and polio, and polio drugs microorganisms (including tuberculosis - M (X) DRTB), etc. And according to WHO [World Health Organization. Biorisk] and some of the world's leading scientists at the beginning of the XXI century pointed to the possibility of an influenza pandemic in the first half of the XXI



century. as extremely high. The Ebola outbreak in West Africa, where more than 10,000 people died from the virus in 2013-2016, and the outbreak in the Congo since the summer of 2018 seemed to continue with more than 3,000 outbreaks. more than 60% mortality is spontaneous but locally controlled.

The development of the COVID-19 pandemic has become a real civilizational threat, even a catastrophe. On July 1, 2020, the World Health Organization (WHO) declared a pandemic of COVID-19, but the spread of this viral disease in the world since the beginning of 2020.

Since the beginning of the coronavirus pandemic (recognized by the WHO as a pandemic on March 11, 2020), there have been 18336,159 patients in the world. The total number of patients who died from infection with the new coronavirus SARS-CoV-2 in the world is - 5024253 persons. At the same time, the number of persons cured of the coronavirus is 224662654 individuals [5].

It should be noted the disappointing fact that the dynamics of the pandemic does not decrease, but only increases, which increases the level of challenges and threats in all spheres of life.

Aware of all the threats of the COVID-19 pandemic, the governments of most countries have implemented quarantine measures since mid-March 2020, which continue to this day. As a result, a complex global crisis of economic and socio-humanitarian scale has arisen. The whole complexity of the "war" of mankind with COVID-19 is based on the fact that its origin is of uncertain origin. After all, the Chinese totalitarian government continues to hide information and data about the origin and spread of this dangerous virus, despite the fact that today the world community is aware that the widespread use of BW can cause the death of all living things on the planet. In addition, the possibility of using these weapons in local conflicts, terrorists, etc. cannot be ruled out. In this context, they become important as the only adequate measures to prevent the spread of bacteriological and toxic weapons in countries that did not have them before, as this is no less important than the non-proliferation of nuclear weapons.

Geopolitical security is a key component of national security, and ensuring geopolitical security is a priority of state national security policy. The specificity of foreign policy provides an opportunity to identify real and potential threats and dangers, respectively, to form an adequate management system. After all, threats of any kind are primarily characterized by their own origin, so the formation of state policy should be built taking into account the nature and sources of threats, rather than their consequences. The essence of geopolitical security, first of all, is to emphasize external security, but also in organic combination with internal security.

Widespread use of the potential of geopolitics to strengthen the influence of socio-political systems on the progress of international development is becoming increasingly active. It is logical that active power players in the international arena demonstrate a high degree of applied use of geopolitical tools. Powerful actors are able to directly influence world progress through opportunities to intervene in the political and geographical space of the organization of international life. The greatest influence is exerted by those state systems that have greater geopolitical potential. They are the main contenders for leadership in the global dimension of system functioning [2, p. 31]. Due to the fact that many international relations in a globalized environment lose the character of simple connections or chains of connections, and becomes interdependent, almost all dimensions of international life of great powers are correlated with global geopolitics. The most important aspect of success on the world stage is the ability to make informed strategic choices that should guarantee survival and productive development [6, p. 37-46.].



Thus, geopolitics determines the strategic direction of modern socio-political systems. Political and state decisions are impossible without taking into account the geopolitical location of foreign policy and foreign economic priorities of the world. Therefore, the key principles and criteria in the development of socio-political systems in the context of geopolitical security transformations are important. The fundamental role in the development of state systems at the geopolitical level is played by the political and geographical position of the country, which determines its location relative to other states in terms of general political, economic and military-strategic interests, their scale, reliability and prospects.

At the present stage of development, each of the countries of the world has its own economic potential, political orientation, belongs to certain international, economic, political unions, religious groups and more. Determining the geopolitical position of a particular country relative to another, it is necessary to take into account not only the individual characteristics of this country, but also its membership in these unions and groups.

Geopolitical position is a very important reserve of economic, social and political development of the country. The rationality of the structure and efficiency of the country's material production, its economic, political, environmental and military security largely depend on its use. Therefore, it is obvious that the economic component in assessing the geopolitical status and security sphere is constantly growing. Stable economic development is one of the most important indicators in the geopolitical security status of the state. Accordingly, any imbalance in ensuring the economic stability of an individual state becomes a real threat to geopolitical security. The real threat to geopolitical security is the shadow economy, as economic activity that develops outside of state accounting and control and is not reflected in official statistics upsets the balance in ensuring the security of the individual state and the geopolitical space as a whole.

The scale of the shadow sector in Ukraine's economy is the result of a systemic economic crisis caused by inconsistencies in market transformation methods. The spread of the shadow economy in Ukraine took place on the basis of the destruction of existing distribution relations and the construction of new ones, which significantly violated the established balance of interests of economic entities, parity of development of its spheres, motivation for efficient management [16]. The shadow sector of the economy exists in any country, regardless of the level of development of the national economy. However, in some countries the shadow economy is at a level that does not have a significant impact on the economy (5-12% of GDP), and in others - has a detrimental effect on all socio-economic processes (over 30% of GDP), which includes Ukraine [10, with. 127].

Insufficient effectiveness of international institutions and national governments in combating the shadow economy leads to its further spread. Despite the threatening scale of this problem, there is still no comprehensive and coordinated action plan to overcome the shadow economy. Existing program documents are either related to overcoming its individual manifestations, in particular, money laundering, combating economic crime, etc., or aimed at combating shadow economic activity on the scale of national economies [10, p. 131].

The danger of the shadow economy is based on the concealment and / or non-concealment of economic activity, the purpose of which is to intentionally or forcibly obtain excess profits due to uncontrolled socio-economic relations. According to O.V. Turchynov, there are four components of the shadow economy: economic activity is not hidden from government agencies, but for objective and subjective reasons is not taken into account, not controlled and not taxed by the state; legal economic activity in the process of which there is a full or partial evasion of taxes,



fees, fines and other mandatory payments, as well as violations of its state regulations (i.e. the subject of shadow economic activity receives additional income by violating the current tax and other legislation governing economic activity); illegal economic activity deliberately hidden from state bodies; activities aimed at generating income by committing or facilitating the commission of crimes that entail criminal liability [12].

The development of shadowing in the economy is a real threat both at the internal state level and at the external - geopolitical level. In particular, Varnaliy Z.S. identifies the following three main components of the shadow economy: 1) informal economy - the activities of households that manufacture and consume goods or services of their own production for their own needs or the needs of their family members; 2) criminal economy - production and sale of prohibited goods and services (drugs, explosives); 3) illegal economy - illegal production and sale of legal goods without their documentation and / or registration of enterprises [11, p. 94-96].

Given the identified components, it becomes clear that it is impossible to quickly eliminate them and effectively transform the economic system at this stage. Therefore, the existence of the shadow economy continues to be a real threat to Ukraine's state security and its geopolitical security status. Accordingly, the areas of counteraction to the development of the shadow economy are becoming strategically important, namely:

- 1) strengthening the fight against corruption and cleansing the government;
- 2) creating conditions for legalization of employment;
- 3) improving control over foreign economic activity;
- 4) creating a favorable business environment;
- 5) counteraction to legalization (laundering) of shadow income, etc.

In modern civilized state and economic systems, the social sphere is important, and social security is an integral part of state security, as it is based on ensuring the protection of fundamental rights and freedoms that are the basis of everyone's life. Social security is a state of society in which a high level of social conditions and social well-being is ensured for each member of society. Social security involves the creation of political, social, environmental, economic and cultural systems, laws, rules that help to survive in critical situations and ensure the well-being and dignified daily life of people. Social security implies that the development of the state takes into account the interests of each member of society and expands its capabilities as a full participant in the development process [3, p. 567].

The strategic importance of social security as a separate important component of national security should be taken into account, as it arises as a social phenomenon in the process of overcoming contradictions between the real state of society and the needs of social individuals, social groups and communities. It should be noted that most scholars justify social security as a component of national security [9, p. 23], however, in our opinion, the statement that "social security of the national economy is one of the main components of the socio-economic situation of the country" [14. with. 72], is not reliable enough, as the state of social security of the national economy is an important characteristic of the socio-economic situation of the country.

Today in Ukraine the main trends in the formation of the social security system are "the development of an adequate methodological apparatus to support the functioning of the social security system of the national economy; determination of a clear list of factors of external and internal environment constantly acting on the system of social security of the national economy" [13, p. 250-251]. There are various interpretations of social security in the modern scientific literature. Narrowly interpreted social security E.A. Podolska and P.O. Nazarkin, who understand



social security as "a set of measures and technologies aimed at preserving and developing the existing social system in the state" [7, p. 21]. O.O. Sychenko believes that "in the most general sense, social security is a state of guaranteed legal and institutional protection of vital social interests of man, society and the state from external and internal threats" [9, p. 35]. In this regard, the shadow economy is a real threat that disrupts and unbalances the system of ensuring the social interests of people, social groups and strata, in particular, and the state system in general.

An insidious danger in the development of the shadow economy is the criminalization of society, which leads to the loss of state regulatory and supervisory functions and undermines the authority of the state in the international arena, endangering all national security, especially social security. The destruction of the usual foundations of life leads to outbreaks of illegal behavior. Deprivation of people of stable sources of livelihood, prolonged non-payment of wages necessitates the search for new ways to make a profit, including illegal ones. Unemployment feeds the shadow economy with labor.

Whereas the shadow economy entails a number of negative consequences for the national economic and social sphere, namely: 1) the threat to the effectiveness of public financial mechanisms and the imbalance of tax pressure due to the loss of tax revenues; 2) the impossibility of balancing economic activity due to the distortion of statistical data; 3) monopolization of industries by the shadow sector of the economy through the mechanism of reducing the price of goods; 4) slow integration of Ukraine into the EU due to non-compliance with democratic principles; 5) uneven, irrational distribution of national income; 6) degradation of society and others [15, p. 144-145]; 7) hidden unemployment is the greatest socio-economic danger in terms of complicating the criminal situation.

Normalization and balance of national security and social security can be achieved through comprehensive reforms and economic and social transformations in our country. After all, social security is achieved when a decent standard of living is provided, which reflects the degree of satisfaction of material and spiritual needs of man, which is characterized by the amount of real income per capita, the amount of economic goods consumed, stable prices of economic goods. Based on the experience of civilized states that have carried out comprehensive reforms in economic and social spheres, the state in the process of managing the national economy stable and balanced socio-economic status, which ensures a normal standard of living and conditions of functioning and interaction of enterprises, institutions, organizations and households and other social groups at both micro and macro levels, threats to their existence are minimized and the level of human and economic potential of the country is increased, which can be realized on the basis of relevant legal norms, economic and political instruments, largely aimed at overcoming corruption and the shadow economy.

CONCLUSIONS

Thus, successful global counter-terrorism activities require the development of joint strategies and tactics to combat, coordination of efforts and plans of the world community to counter the threat at the regional and global levels, adequate funding. The main task remains the destruction of all terrorist bases, identifying the locations of terrorist leaders and blocking possible ways of their departure, sources of funding and their closure. A unified database is needed, which will accumulate information about individuals, organizations, forces, means, methods, communication channels, financial transactions related to terrorism, which allows to get rid of duplication and gaps in the work of intelligence services, intelligence to solve the problem of information support



of operational and service activities. Of particular importance is the speed of information exchange, which prevents crime, provides for the detention, arrest and prosecution of specific perpetrators. National and international legislation aimed at weakening and neutralizing international terrorist organizations through the use of a range of measures, including criminal prosecution and severe criminal liability for participation in the activities of international terrorist structures, needs to be improved.

There are several areas of control over possible biological threats developed in world practice. Thus, disease surveillance and response is important for biosafety, in particular to identify the causes of disease outbreaks, and therefore it is advisable to optimize measures to collect, evaluate and summarize information in order to improve international disease surveillance and response. Attention should be paid to the problem of global warming, because it is believed that this factor will have to be increasingly taken into account in assessing the causes (natural or intentional) outbreaks. In this context, it is optimal to create a Pan-European (or even global) disease surveillance network, database and information system to empower health and civil defense authorities to respond to both accidental and deliberate releases of biological substances.

In the context of arms control and disarmament, synthetic biology is increasingly becoming a symbol of the complexity of effective international control and oversight of scientific and technological development in order to eliminate the possibility of using its results for CBWU. Synthetic biology is defined as the development and creation of new biological elements, devices and systems, modification of existing, natural biological systems for their useful application. A 2006 report by The Royal Society states that synthetic biology technologies are available worldwide; genetic materials can be ordered by mail, and DNA synthesis can be ordered online.

At the same time, according to experts, measures to identify and reduce potential threats to CBWU should be carried out in areas such as research to ensure response capabilities; consideration of measures to limit sensitive research or public dissemination of their results; improving disease surveillance and response; development of registers of sensitive materials and objects with high levels of protection (biosafety levels BSL-3 and BSL-4) and measures for their more reliable protection; improving and expanding infrastructure and other capabilities to respond to chemical and biological attacks; awareness raising; general scientific and technical development; policy formulation and implementation taking into account these factors.

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LEADERSHIP APPROACH FOR DECENTRALIZATION AND ADMINISTRATIVE-TERRITORIAL REFORM

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ABSTRACT

The article summarizes Canada's experience in carrying out measures aimed at reforming the local government system by optimizing the administrative and territorial structure. The fundamental principles of preparation and implementation of the administrative-territorial structure reform are clarified. They consist in the use of positive and proactive leadership, transparency, openness, timely informing on changes and application of the practice of broad consultations in the activities of local self-government bodies. Ways to adapt foreign experience in organizing activities aimed at reforming the administrative-territorial structure in Ukraine are offered.

Keywords: local self-government, leadership, decentralization, administrative and territorial reform.

INTRODUCTION

Formulation of the problem. The solution of many problems of further formation and development of local self-government in Ukraine is inextricably linked with the implementation of administrative and territorial reform and the formation of a new public administration paradigm based on leadership [1, p. 155]. Such a policy provides for a system of measures of central and local authorities, designed to ensure effective management of socio-economic processes based on the optimal combination of national, regional and local interests. Taking into account the specifics of the implementation of administrative and territorial reform, there should be a change in approaches to local self-government in Ukraine. During the development and refinement of concepts and strategies for reforming the local self-government system in Ukraine, it is important to constantly and creatively use the best international experience, to take into account different options for solving problems of regional and local government.

Analysis of recent research and publications. has shown that the scientific literature examines a wide range of issues related to the preparation and implementation of administrative and territorial reform for creating and maintaining viable communities, achieving the fundamental goal of local government - providing citizens with high quality of life and public services, promoting socio-economic, cultural and environmental development of territories. Of particular interest in the context of this study are works of domestic scientists such as T.A. Kravchenko, V.V. Mamonova, I.M. Grishchenko, O.O. Nestulia and S.I. Nestulia, in which the issues of the new management



paradigm, administrative and territorial reform are associated with the need for the formation and development of leadership.

However, despite the importance of reforming the administrative-territorial structure of Ukraine, this area requires further research. To date, domestic scholars have published insufficient scientific papers examining this issue, and there are almost no works on the study of foreign experience in organizing activities to prepare and implement the reform of the administrative-territorial structure.

Presenting main material. The purpose of the article is to study the experience of Canada in organizing and conducting activities to reform the administrative and territorial structure with the use of leadership.

In recent years, Ukraine has been paying more attention to studying the experience of countries in forming an effective and efficient system of local government. One such country is Canada, where in 1998 the government of the province of Saskatchewan established a Task force on municipal legislative renewal (hereinafter – task force), whose tasks included: considering the strengths and weaknesses of a wide range of issues, to develop appropriate recommendations for reforming of the local government system.

According to the main law of the country – the British North America Act of 1867 and the Constitution Act of 1982 – local governments are subordinate to the provincial (territorial in the North) authorities, which establish and change the boundaries of territorial units, develop policy frameworks for municipalities [2, p. 46].

The need to review the activities and improve the municipal system is dictated by the fact that it is becoming increasingly difficult to meet the current and potential needs of local communities and the economy. Demographic and economic trends have a significant impact not only on local governments, but also on community residents, businesses and organizations in the province, namely: declining, migrating and growing urbanization of the population, changing its age structure; the transition from a predominantly agricultural to a more diversified type of economy, fluctuations in prices for agricultural products and manufactured goods, changes like commercial activities and transportation, and the increasing regionalization of local economies and governance. While the municipal system is structured and organized mainly at the local base level (according to the principle of “one territorial community - one municipality”), the commercial, non-commercial, socio-cultural sectors and even non-municipal management structures are organized and operate mainly on a regional basis.

Despite the positive management and financial practices of most local authorities, their collective efforts have proved inadequate to ensure and fulfil three essential tasks: good governance (effective, responsible, autonomous, authoritative and accountable government), provision of municipal services, and promotion of socio-economic development of territorial units.

The province of Saskatchewan at that time had one of the most fragmented municipal systems in Canada, heterogeneous in types, sizes, functions, jurisdictions and financial capabilities of municipalities, based on the first provincial local government legislation in 1908.

Over the centuries, the province has had 836 incorporated municipalities, as well as 170 unincorporated “quasi-municipalities” (organized small settlements and northern settlements), that is more than 1,000 municipal units in total, which can be grouped into three types: urban, rural and northern municipalities. Among the provinces of Canada, only Quebec has more municipalities, and in terms of the average population per municipality, Saskatchewan has the lowest indicator (1225), while for other provinces it is 5-8 thousand people (Quebec, Manitoba,



New Brunswick, Alberta) or 17-25 thousand (Nova Scotia, British Columbia, Ontario) [2, p. 104]. In addition, each type of municipality has different criteria for obtaining its status.

Among those set out in the previous report of the special commission [3, p. 3] the most controversial areas were the change in the municipal territorial structure of the province, namely the recommendation of the so-called “large-scale consolidation” of municipalities, that provided for reducing their number from a thousand to less than 125. Taking such a measure would make the number of municipalities and the average number of population per municipality comparable to most other Canadian provinces (5-26 thousand persons). The European experience has also shown that the optimal size of the territorial community is an administrative unit with a population of 5 to 100 thousand people [4, p. 80].

The optimization of the administrative-territorial structure was aimed at solving several issues:

- minimize the problems of fragmentation, diversity, incompatibility, disproportion, inequality and rising costs among municipalities;
- reduce running costs and expenses due to untapped opportunities for residents and taxpayers, government agencies, businesses and other organizations;
- strengthen the capacity of local self-government bodies and maximize management opportunities, providing services, planning and development of territories.

Accordingly, municipalities should be guided in their activities by a new set of principles and criteria of incorporation, containing a balance between the number of municipalities and regional socio-economic entities and a balance between their geographical size. The primary criterion for the organization of any municipality should be its viability and sustainability as a social, economic and political unit for a significant period [2, p. 204].

It was proposed to establish one or two types of municipalities: 1) “municipal districts” or 2) “metropolitan municipal districts” and “regional municipal districts”. They were to consist of contiguous integrated stronger urban and surrounding rural municipalities. Preference was given to a one-tier structure (such as the systems in Nova Scotia, Ontario, or the U.S. county system), where there would be a single “municipality” for the entire district and one or more advisory committees for each locality. “Without district or regional municipal authorities, municipalities will become increasingly problematic, inappropriate or marginalized entities as a result of regionalization that takes place around them” [3, p. 45].

It should be noted that from the very beginning of its activities, the special commission encouraged all areas of public participation, provided opportunities for discussions, explained the importance of this initiative, outlined key issues and problems related to the subject of discussion, that is, used leadership in all its manifestations to form citizens' activities. The initiative, and responsibility in terms of involving them in decision-making on the formation of new municipal legislation. In total, through rounds of organizations and associations of the municipal and non-municipal sectors, meetings and workshops for representatives of organizations and the public, it was planned to hold 4 rounds of consultations [4, p. 82].

At public forums held by a special commission, their participants (mostly practitioners - local government officials and elected officials) expressed their views and thoughts on what the ideal municipal system should be, what are the current problems, as well as options, directions and approaches to reform.

Common was the vision of an ideal municipal system of the 21st century. According to it, municipal authorities should be:

first, purposeful - to have a clear and significant purpose of their activities;



secondly, strong administrative entities endowed with significant status, power and autonomy; thirdly, capable strong management entities with significant organizational capabilities, especially about financial and human resources required to perform their functions and achieve the goal set; fourth, cooperative - to have the desire and means to cooperate in resolving issues with each other and other governing bodies; fifth, they are democratic, accessible and accountable to citizens and taxpayers; sixth, effective and productive in performing functions and achieving the goal [2, p. 94]. Arguments on the consolidation of municipalities were given by representatives of municipalities as follows.

“Against”: communities will lose their identity; smaller units will be absorbed by larger ones; representation and local influence on the decision-making process will be lost; the result is a potential reduction in the level of service delivery or expectations of its growth; consolidation (merger) will not save any money; potential financial and environmental commitments of some municipalities will also be consolidated; different communities and taxpayers have different management needs and interests; “small - more attractive and better” - more efficient, efficient, accountable and autonomous; the promised increase in powers, democratic control, and improved service due to the consolidation (regionalization) of school and health districts is not noticeable in practice.

“For”: the nature of territorial communities is changing and expanding; unviability and lack of sustainability of many municipalities; insufficient inter-municipal cooperation of existing municipalities; duplicate services; the current system creates conflict between urban and rural municipalities and leads to the decline of rural areas; larger units will have more population, resources and a revenue base; many municipal functions and services can be provided more efficiently in larger areas; small municipalities lead to local favouritism, corruption, and conflicts of interest; significant savings in administrative costs and general maintenance; facilitating the promotion of economic development; consolidation is already working successfully in other jurisdictions and has resulted in cost savings and improved service [2, p. 187].

The idea of a significant reduction in the number of municipalities met with strong opposition during following public hearings (17 meetings were held in 15 localities of the province, attended by 7,000 people, in addition, the commission considered more than 400 written appeals) [2, p. 233]. The minority of presenters did not see any need for any kind of unification of thousands of Saskatchewan municipalities, emphasizing the advantages of the current system, which were, above all, that local authorities are closest to the people and can most effectively provide municipal services; provide decision-making, formed based on their own needs, not overhead standards [2, p. 234]. Other municipalities, while recognizing the need for change, did not agree on their recommended scope or method of implementation.

Focusing on the process, participants paid less attention to other important aspects, such as the introduction of the position of municipal ombudsman, improving the way certain services or functions are provided, and whether they should be provided by local or central authorities. Some rural municipalities indicated that they did not want to be directly involved in the administration of health, education or social care, and even more wanted to play a greater role in the economic development of the territories.

The Saskatchewan Association of Rural Municipalities and the Saskatchewan Party, which opposes the coalition government of the province, actively opposed the proposed “forced unification”. In a specially conducted referendum, 98% of the residents of 145 out of 297 rural



municipalities voted against the forced consolidation of municipalities [3, p. 56]. The Saskatchewan Urban Municipalities Association has taken a more moderate stance. Some progress has been made in addressing municipal reform issues in identifying areas where legislative updates may work during the provincial municipal reform roundtable, which was attended by representatives of the provincial government and both associations. The Government agreed to develop an action plan to eliminate legislative, financial and other obstacles to voluntary municipal restructuring in close cooperation with local governments [3, p. 71].

At the same time, the Saskatchewan Department for Municipal Affairs, Culture and Housing prepared a cost-benefit analysis of municipal consolidation to assess the financial benefits of implementing the proposed municipal merger option. It was planned to consolidate all municipalities in 17 (as another option, 11) regional municipalities, which was to cause an increase in economic activity throughout the province. According to estimates, municipal taxpayers in the case of the transition to the model of 17 regions could save \$ 28.9 million annually [4, p. 80]. The provisions and indicators set out in the report have been criticized by municipal associations and the party opposition and have been scrutinized.

The projected positive financial, economic or political benefits of structural transformation must be supported by the desire and willingness of local communities themselves to make such changes. We should not forget about the leading role of leaders of territorial communities - officials and elected persons of local self-government in the formation and development of effective local government [5, p. 57].

In the final report of the task force [3, p. 81], unlike the previous one, which declared the need for "significant consolidation" of municipal units (from "modern 1000" to "less than 125"), no longer indicated the optimal number of municipalities (development of municipal restructuring projects was not included in the mandate of the task force). Emphasis is placed on defining the "structure of problematic issues, options and potential directions", "building blocks" of the municipal renewal.

The study of the Saskatchewan experience, or rather, attempts to optimize the size of territorial communities allows us to draw make some generalizations and conclusions.

1. The current administrative-territorial structure requires changes in the direction of consolidation of territorial entities to the level that is important for creating and maintaining viable communities, achieving the fundamental goal of local government - providing citizens with high quality of life and services, promoting socio-economic, cultural and environmental development of territories. Failures in administrative-territorial reform and municipal renewal can have disastrous consequences not only for individual communities but also for the region and the country as a whole.

2. When introducing new forms of municipal government, a balance should be struck between the benefits provided by relatively large units (for example, the economic impact of scale growth in administration and services, the critical mass of human and resource development, etc.) and the benefits provided by relatively small units (such as accessible and responsible local government).

3. The necessary conditions for reform are:

- availability of a complete and detailed action plan;
- renewal should be a priority for everyone: central and local authorities, the general public;
- focus on the public interest, which should be paramount. Personal, organizational, local and party interests should not stand in the way of reform;



- effective leadership by elected and appointed local and central government officials, members of the business and non-profit organizations, trade unions and other influential local communities, as well as residents and taxpayers of each local community;
- bold initiatives and bold compromises on the part of participants are crucial to achieving the kind of renewal that many communities need;
- understanding the economic, social and intergovernmental context of municipal government in its historical perspective;
- the complex and systemic nature of reform in the municipal and public sectors, especially important for those elements of the public administration system that have a direct and significant impact on local self-government;
- appropriate government strategy and programs, important and mandatory for stimulating and promoting various types of territorial development;
- an acceptable balance between local and regional authorities.

4. Reform also requires appropriate approaches based on appropriate principles. Thus, to achieve optimal and timely structural renewal, it is recommended to apply a “directed consultative approach”, which is the leading role of the central government in combination with consultations organized by it, and a negotiated approach between central and municipal authorities on other key elements of the municipal system. The organization of “round tables” as an authoritative forum for conducting negotiations and concluding agreements between central and local authorities on issues of mutual interest is intended to facilitate the negotiation process [1, p. 58-61]. The most appropriate approach for specific conditions should be used to perform the set tasks. To complete the tasks set, the approach that is most appropriate for the specific conditions should be applied. In general, the reorganization of the municipal system should be guided by five fundamental principles:

- 1) positive and proactive leadership on the part of provincial and local authorities;
- 2) transparency. The process should be conducted in such a way that everyone understands the essence of the proposed or adopted initiatives, actors and decision-making system;
- 3) openness. Everyone is allowed to express in writing or orally their views on the proposed changes;
- 4) early notification of any significant transformation initiative;
- 5) extensive consultation on any important renewal initiative.

5. Given the important interrelationships between the various main parts or elements of the municipal system, it is impractical to deal with only a few of them, not all of them. For example, it is difficult to consider the nature and extent of updates regarding the functions of municipal authorities without considering the nature and scope of changes in the status, powers and finances of municipalities.

Forms of municipal government are traditionally associated with the perception of the concept of “community”, which includes both the geographical area and the common relationship and interests of its resident members. From the point of view of implementation, the change in the territorial organization of the country and the introduction of new principles of territorial division - an action based on a political decision (and there must be a common political will) - may be one-time. However, the creation of self-governing communities within a new territorial division is a process that is difficult to predict the duration of individual stages in advance.



CONCLUSIONS

Lessons from improving the administrative-territorial structure of municipal government in Canada are also important for Ukraine, which is in the process of decentralization and finding the optimal model of administrative-territorial organization. Amendments to the Constitution of Ukraine regarding the system of administrative and territorial organization of Ukraine, improvement of legislation on formation of territorial basis of local self-government, adoption of legislative acts on the administrative and territorial structure of Ukraine and on procedures for resolving controversial issues have become priority areas. It is worth noting that in strengthening and developing local self-government in Ukraine, the task of forming the leadership potential of local self-government is crucial [6; 7].

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IMPERATIVES OF THE DIGITAL ECONOMY DEVELOPMENT IN UKRAINE

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ABSTRACT

The priority vector of development of many countries of the world is digital transformation and creation of a hypercompetitive digital economy. The key trend of modern global economic development in all countries of the world is the rapid spread of information and communication, digital technologies and the development of the digital economy, which causes changes in the business environment, transaction methods and the level of connections between individual entities.

The digital economy is an innovative dynamic economy based on the active introduction of innovations and information and communication technologies in all types of economic activities and spheres of society, which increases the efficiency and competitiveness of individual companies, the national economy and living standards.

In the third wave of globalization, the digital economy plays an important role in the development of countries, the most important factor of which is information and knowledge, as well as ways to access them. Increasingly, the digital economy is intertwined with the traditional economy, making clear demarcations increasingly difficult. The main products of the digital economy are the same goods and services of the traditional economy provided by computer equipment and digital systems such as the global Internet.

However, the rapid development of digitalization is becoming a source not only of new opportunities, but also of serious threats and problems for all segments of the population that need to be taken into account. That is, the digitalization of the economy and all spheres of public life, on the one hand, becomes a challenge and threat to established business models and successful strategies of behavior of enterprises in a market economy, on the other - opens new opportunities for improvement and competitive advantage.

Digitalization has significant benefits for economic development. Benefits at the level of the whole society include: economic and social effect of digital technologies for business and society; improving the quality of life; increasing the productivity of all social labor; the emergence of new models and forms of business that can increase profitability and competitiveness; increasing the transparency of economic transactions and ensuring the possibility of their monitoring.

Key words: digital economy, innovative activity, innovative development, competitiveness, scientific and technological progress, information and communication technologies, information society.

INTRODUCTION

Formulation of the problem. The current trend of global economic development is the digitalization of social spheres of life and national economies. This process is the basis for a new stage of "technological" race, which results in geopolitical and geoeconomic leadership. At the same time, it is a chance for both developed and developing countries to improve their domestic socio-economic situation. Today, the priority vector of development of many countries is the digital transformation and the creation of a hypercompetitive digital economy.



Digitization is also a tool for economic growth by increasing efficiency, productivity and competitiveness. In addition, the effective use of digital economy tools is a means of ensuring information security and stability.

The formation of the digital economy in Ukraine is a defining trend of rapid economic growth based on high-tech production. Therefore, the issue of priority imperatives of digital economy development and modern challenges and threats accompanying digitalization processes in Ukraine becomes important.

Analysis of recent research and publications. The scientific works of many domestic and foreign scientists are devoted to the study of the development of the digital economy. The researches of V. Apalkov, S. Veretyuk, J. Hekalo, P. Drucker, S. Kolyadenko, G. Karcheva, B. King, R. Lipsi, K. Skinner, E. Toffler, K. Schwab, and others deserve considerable attention. However, the lack of unity of views on the understanding of the digital economy and priority ways of developing the digital economy for sustainable development of countries requires a rethinking of the nature and significance of the digital economy in the context of global digital transformations. Therefore, the issues of priority imperatives for the development of the digital economy in Ukraine in the context of the third wave of globalization and the fourth industrial revolution remain relevant.

Presenting main material. In the third wave of globalization, the digital economy plays an important role in the development of countries, the most important factor of which is information and knowledge, as well as ways to access them. Increasingly, the digital economy is intertwined with the traditional economy, making clear demarcations increasingly difficult. The main products of the digital economy are the same goods and services of the traditional economy provided by computer equipment and digital systems such as the global Internet. This has its advantages, the main of which is to increase the accessibility of ordinary users to certain markets (goods or services), not just large companies, reduce transaction costs, increase efficiency and competitiveness.

The term "digital economy" appeared in 1995. in the research of Canadian professor of management D. Topscott and American scientist N. Negrofonte and quickly became widespread and replaced such concepts as "New Economy", "Web Economy", "Internet Economy", "Network Economy" [1].

The digital economy began to develop in the late 50's of the twentieth century, and in the 60's began to actively spread in the world of digital innovation.

The second phase of digitalization began around the mid-1990s, with the global spread of the Internet and mobile communications.

Today we can talk about the third stage of digitalization, associated with the spread of digital currencies and distributed registry technology in the world economy. Bitcoins and other digital currencies have already gained a place in the global financial market, their number and scale of transactions with them are increasing, resulting in a new currency component of the global financial architecture, meeting the requirements of the time. They have been used since 2009. and the demand for them is quite high [2].

It should be noted that among scientists and practitioners there is no single approach to defining the concept of digital economy. S. Kolyadenko considers the digital economy as one based on the production of electronic goods and services by high-tech business structures and the distribution of these products through e-commerce. That is, under the digital economy, the author understands the production, sales and supply of products through computer networks [3, p.106-107].



S. Veretyuk presents the digital economy taking into account its potential - as an unrealized transformation of all areas of the economy through the transfer of all information resources and knowledge to a computer platform [4, p. 51].

Most researchers use a component approach when considering the economic essence of the digital economy. Thus, the International Organization for Economic Cooperation and Development (OECD) and scientist Thomas Mesenburg identify three main components of the digital economy:

- supporting infrastructure (hardware and software, telecommunications, networks, etc.);
- e-business (conducting business and any other business processes through computer networks);
- e-commerce (distribution of goods via the Internet) [5].

Thus, the digital transformation of the economy is a permanent process related to the development of various IT sectors in order to stimulate the creation of innovative technologies for cooperation and development at the international level. Joint participation in the digital processes of the public sector, the private sector and civil society is needed.

The key advantage of the digital economy over the traditional one is the possibility of automatic control of the whole system (or individual components), as well as its virtually unlimited scaling without loss of efficiency, which significantly increases the efficiency of economic management (economic activity and resources in different industries). macro levels. This makes it clear that the digital economy is not individual industries or IT companies that are digital. This is, first of all, the existing economy - all traditional industries and companies (manufacturing, agriculture, construction, transport, etc.), which under the influence of digital transformation due to technological evolution revolutionize their production and business processes and get new opportunities for increasing business productivity and efficiency.

The peculiarity of the digital economy is its connection with the on-demand economy, which does not involve the sale of goods and services, and access to them just when it is needed. Digital spillover occurs when digital technologies accelerate knowledge transfer, business innovation and increase productivity within the company through the supply chain of industries to achieve sustainable economic development [6].

The digital economy is significantly changing traditional business processes. Achieving the most complex levels of digitalization in the economy is a radical transformation of production relations of participants, the result of which is the combination of production and services into a single digital (cyberphysical) system, in which:

- all elements of the economic system are present simultaneously in the form of physical objects, products and processes, as well as their digital copies (mathematical models);
- all physical objects, products and processes become part of an integrated IT system due to the presence of a digital copy and the element of connectivity;
- due to the presence of digital copies (mathematical models) and being part of a single system, all elements of the economic system continuously interact with each other in a mode close to real time, simulate real processes and predicted states, provide constant optimization of the entire system.

The key indicators of the country's readiness for digitalization include the four most significant factors that characterize the level of digitalization of the country:

- the level of digitalization of the economy;
 - digital coverage of households;
1. digital gaps;
 2. intensity of state participation in digitalization.



The main segments of the digital economy:

- information and communication technologies, e-business infrastructure (networks, software, computers);
- digital production and e-business, including industry, the processes of business organization using computer networks;
- e-commerce, e-retail, online sales of goods.

Thus, the digital economy is an economy based on digital computer technology and information and communication technology (ICT). At the same time, digital transformation is not limited to the introduction of information technology, which is inherent in informatization, but radically transforms business processes based on the use of the Internet and new digital technologies [6].

The concept of digitalization of the economy in Ukraine is fundamentally different from what is meant by digitalization in economically developed countries. In Ukraine, the concept of "digitalization" is focused exclusively on the creation of new types of services based on the collection and analysis of data from various physical objects (buildings and structures, vehicles, industrial equipment, etc.) and does not cover the issue of radical change in the production system. approaches to the design, production, marketing and operation of these physical objects, which is enshrined in the concept of Industry 4.0.

In the Ukrainian business environment, the understanding of Industry 4.0 is mainly in the purchase of imported equipment - relatively modern and inexpensive. This vision of modernization is rather limited and is the result of a low business culture.

However, 4.0 technologies provide full digital integration of the enterprise vertically and horizontally, the creation of more "smart" products and services, the transition to new business models. In contrast to this approach, the world's leading industrialized nations (USA, Germany, Italy, Japan, China) do not consider services based on the analysis of "big data", as I am an independent and self-sufficient sphere of economic activity. By "digital economy" they mean the processes of creating and using unified production and service (or product and service) systems. Outside of such a system, a service component without a physical product, even if it is based on the most advanced technologies such as neural networks and the Internet of Things, will not have a significant economic effect and cannot be fully monetized.

In addition, the IT products industry is difficult to assess due to the existence of mostly quasi-product companies in Ukraine. That is, when the company's headquarters and market are abroad, but all production is in Ukraine.

As for the hardware, it remains underdeveloped and mainly consists of the production of components for equipment of previous generations [7].

Comparison of the level of digitalization of the economy and society in different countries, presented in the Rating of global digital competitiveness (table 1) [8]. This ranking presents countries in terms of their ability to perceive and effectively use digital technologies as a means of transforming production, business models and society as a whole. The assessment is based on three factors that are complex and have received the following names: knowledge, technological environment, openness to the future. The top 5 in this ranking are countries such as the United States, Singapore, Sweden, Denmark and Switzerland. Ukraine took 60th place in this ranking in 2019, losing 2 positions (58 - in 2018), while the ranking includes 63 countries and the last three places are occupied by Peru, Mongolia and Venezuela, respectively. The situation in Ukraine is characterized by instability and does not show progressive dynamics.

**Table 1****The level of digitalization in Ukraine**

Assessment of the level of digitalization	2015	2016	2017	2018	2019
General level, incl. factors	59	59	60	58	60
Knowledge	40	44	45	39	40
Technological environment	60	60	62	61	61
Openness to the future	61	61	61	61	62

Today, Ukraine's economy has both an applied and theoretical and legislative basis in order to strengthen its position among the countries of the world. Therefore, a mandatory requirement for the development of the national economy is the combination of theoretical research with the modern needs of industry and the business environment.

Klaus Schwab discovered the following benefits of digitalization:

- unprecedented growth of innovations, including their speed, volume and impact, which will provide significant improvements for companies to reduce costs, increase productivity and production efficiency;
- the growth of opportunities for the use of new technologies enables the involvement of various subjects of economic relations (developers, users, consumers and customers) and promotes their cooperation;
- artificial intelligence is becoming a reality - from mass robotics to biotechnology [9].

I. Zelisko emphasizes that the improvement of business processes is a management tool aimed at increasing efficiency and creating competitive advantages of enterprises. The introduction of information and communication technologies, Big Data, business intelligence, business planning, which provides for the automation of business processes, reflects the growth of productivity, savings in running costs, operational flexibility of the business. In general, the transition from simple digitization (third industrial revolution) to innovation based on combinations of technologies (fourth industrial revolution) forces companies to reconsider aspects of doing business [10].

In the study by the Global Center for Digital Business Transformation states that in the next five years, the digital revolution could push 40% of companies that are leaders in the industry out of the market, provided they do not expose their management and business -models of digital transformation [6, p. 80].

O. Hudz notes that companies that want to operate successfully in the digital economy, according to experts from Telstra and Deloitte, should rely on the following values: invest in new abilities and talent, rather than in old business models; highly value their relationships with customers; become faster and faster; it is good to know your real competitors [11, p. 5]. That is, the digitalization of the economy and all spheres of public life, on the one hand, becomes a challenge



and threat to established business models and successful strategies of behavior of enterprises in a market economy, on the other - opens new opportunities for improvement and competitive advantage. The implementation of such opportunities involves the implementation of digital transformations in various aspects of the enterprise.

Digitalization has significant benefits for economic development. Benefits at the level of the whole society include: economic and social effect of digital technologies for business and society; improving the quality of life; increasing the productivity of all social labor; the emergence of new models and forms of business that can increase profitability and competitiveness; increasing the transparency of economic transactions and ensuring the possibility of their monitoring.

Advantages at the level of individual companies: getting rid of intermediaries and selling manufactured goods or services directly to potential customers; cost optimization; acceleration of all business processes; reducing the reaction time to market changes, reducing the time of development of products and services and bringing them to market; better understanding of its consumers and improving the quality of products and services.

Technological advantages: information sharing; accumulation of large amounts of data, the implementation of their automatic processing and analysis; creation of new innovative products focused on the development of technological intelligence; transition from paper to electronic documents.

Advantages at the level of the consumer and the worker: decrease in cost of payments and emergence of new sources of the income; goods and services take into account the consumer preferences and needs of customers; the range of information, educational and entertainment services is significantly expanding, the level of provision and speed of which are increasing.

However, the rapid development of digitalization is becoming a source not only of new opportunities, but also of serious threats and problems for all segments of the population. Thus, the report submitted by the OECD for the German presidency of the Group of Twenty states: "... digital technologies can be destructive, which in the future will negatively affect productivity, employment and well-being ... these technologies can also displace labor and increase disparities in the level of their availability and use, which will lead to the formation of a new digital divide and growing inequality"[13].

The UN also recognizes digitalization as one of the four major dangers to humanity. Technological advances are moving faster than humanity's ability to respond to them or even understand them. Despite the enormous benefits, new technologies are used to commit crimes, incite hatred, falsify information, harass and exploit people, and interfere with privacy [14].

The digital economy is the driving force behind the acceleration of global economic development, increasing production productivity, creating new markets and industries. The development of the digital economy inevitably leads to a significant transformation of the labor market. This transformation is complex and is taking place gradually, as more and more traditional sectors of the economy are involved in the digital economy.

CONCLUSIONS

Digital technologies have become the basis for creating new products, values and the basis for gaining competitive advantages for companies, industries and the national economy. Digitization has enabled small companies to create new products and bring them to market quickly, along with the large companies present there. This led to the shift of "innovation centers" from large companies to small ones (startups, etc.). Digital transformation leads to the emergence of new



unique systems and processes that make up their new value essence (for example, Uber, Airbnb, digital banking, etc.).

Modern challenges and threats to the development of the digital economy in Ukraine are the lack of a comprehensive vision and imperfection of the strategy and initiatives of digitalization of the economy and spheres of society, the country as a whole; low technological education, accessibility not for all citizens of the advantages and opportunities of the digital world, territorial digital inequality; low level of security and trust of Internet users in the digital economy, high risk of information and cyberattacks, imperfection of the anti-virus equipment system; weak infrastructural support and stimulation of business to use digital tools and development of innovative entrepreneurship.

Existing trends of the digital economy in Ukraine will help increase the competitiveness of the national economy, the emergence of new industries and the development of innovative entrepreneurship.

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STRATEGIC AREAS OF ENSURING FINANCIALLY SUSTAINABLE DEVELOPMENT OF ENTERPRISES IN UKRAINE

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ABSTRACT

The article examines strategic areas of ensuring financially sustainable development of enterprises in Ukraine. It proves that the main problem of financial stability of Ukrainian enterprises is the high level of accounts receivable. It presents challenges of ensuring financial stability of local enterprises and offers strategic tools for ensuring financial stability of enterprises. One proves that strategic management of financial stability should take into account not only financial management goals and a type of financial policy but also a kind of financial stability common to the enterprise as of today. Areas of ensuring financial stability using strategic financial management tools include the selection of the target structure of current asset financing, the establishment of principles of cost management policy optimization (relevancy, minimization, planning), which allows specifying measures for gaining targeted financial stability of enterprises.

Keywords: strategic areas, enterprises, financial stability, strategic management, financial policy, financial management.

INTRODUCTION

Formulation of the problem. In the context of self-financing, the most important economic problem is the enterprise's ability to meet operating challenges. Enterprises should define the sufficient capacity of stability to make earned profit ensure self-financing and company's independence from external involved sources. Ensuring sustainable operations of enterprises is one of the crucial characteristics of their financial condition. The steady financial state can be gained due to the sufficient capital, the efficient assets structure, a sufficient level of profitability, high liquidity, regular income and wide fundraising possibilities. The process of ensuring financial stability should be aimed at creating prerequisites for efficient enterprise operations and minimizing negative external and internal environmental impacts.

Analysis of recent research and publications. A significant contribution to this research was made by the following scientists: Vasiurenko V., Velychko O., Zelisko I., Kucher H., Lukianenko I., Melnyk V., Oriekhova A., V. Prokhorova, Sosnovska O., Tarasiuk D., etc.

The purpose of the article. The article aims to develop strategic areas of ensuring financially sustainable development of enterprises in Ukraine.

Presenting main material. The key component of ensuring the steady development of enterprises is the functional consistency of the external and internal corporate environment, as well as the ability to keep their interaction. The main challenges of ensuring financial stability of Ukrainian enterprises are shown in Table 1.



The main problem of financial stability of Ukrainian enterprises is the high level of accounts receivable. Accounts receivable is a component of the working capital, which implies particular requirements for physical or legal entities regarding the payment for goods, products, services. A large portion of accounts receivable in the general assets structure reduces liquidity and financial stability of enterprises and increases the risk of enterprise's financial losses. The sharp increase in accounts receivable and its portion in circulating assets can indicate the reckless credit policy of the enterprise concerning customers or the greater volume of sales, or insolvency and bankruptcy of some customers. The decrease in accounts receivable is considered positive if it is caused by the shorter period of its recovery. If accounts receivable reduces because of poorer sales of products, it indicates worse business activities of the enterprise.

Table 1**Challenges of ensuring financial stability of enterprises**

No.	Name	Characteristics
1	Economic stability	1) A high level of accounts receivable 2) Cost management state 3) Product quality control 4) Adoption of the 5S system at all levels of the company
2	Manufacturing and technological stability	1) One should improve the stock planning and management system 2) Out-of-date equipment for product storing and maintenance 3) One should automate internal processes
3	Marketing stability	1) Instability of the external environment and complexity of predicting the market situation 2) Tougher competition 3) Insufficient information about the market condition and competitors 4) High price compared to local manufacturers 5) Search for new marketing tools for attracting new customers and market analysis
4	Organizational and structural stability	1) Non-adaptive organizational culture 2) A low level of communications 3) Unclear job descriptions 4) The necessity to reduce centralization of managerial functions 5) Duplication of functions at company's departments
5	Social stability	1) An insufficient level of staff expenditures 2) System for personnel motivation and encouragement 3) Staff training
6	Ecological stability	1) Application of innovative resource-saving technologies 2) Eco-friendly materials for manufacturing 3) Waste recycling

At the same time, one can use various methods of accounts receivable management that can be classified in the following groups:

1. Legal ones: complaining activities, filing a lawsuit.
2. Economic ones: financial sanctions (fines, penalties and forfeitures), pledging property or property rights, suspending product supply.
3. Psychological ones: reminders by phone, fax, e-mail; mass media involvement or dissemination of information among related suppliers, which can destroy debtor's reputation.
4. Physical ones: arrest of debtor's property by court enforcement agencies.

The cost management system of local enterprises should be improved comprehensively, taking into account suggestions on all components of sustainable development. The establishment of the preferable cost management model includes the following stages (Fig. 1):

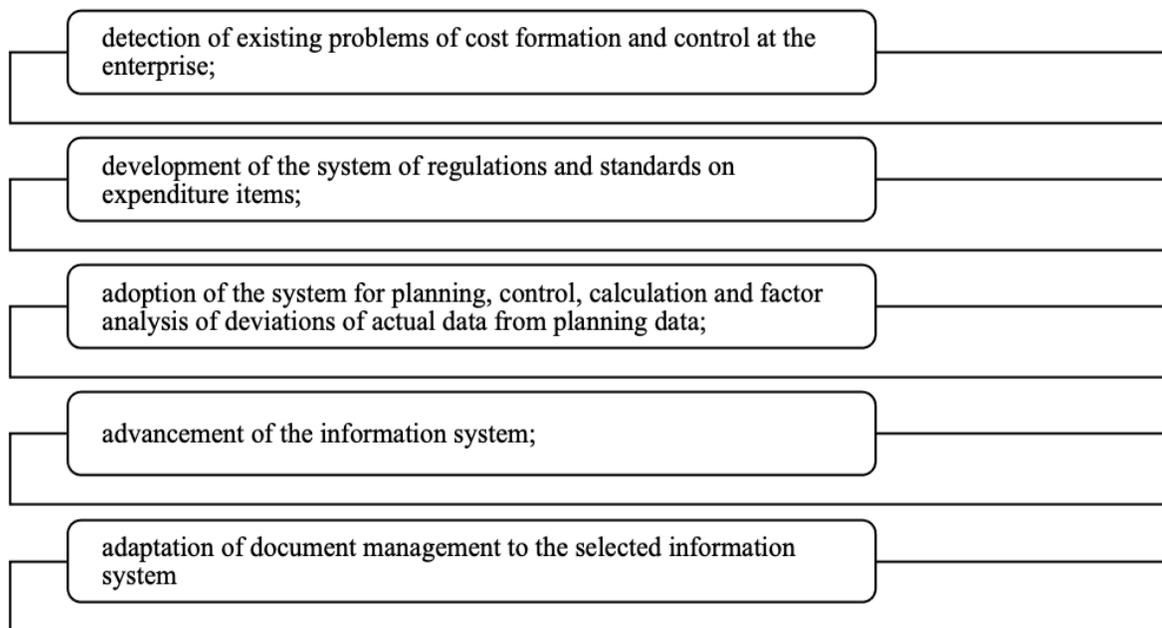


Fig. 1 Stages of improving enterprise cost management [1]

Quality control maintains an appropriate level of quality. It means that the company provides certain guaranties assuring customers in the quality of goods or services [2]. Total quality management is a concept implying the comprehensive and well-coordinated use of systems and methods of quality control in all activity areas, from research and development to after-sale service involving the administration and employees of all levels and with the rational use of enterprise's technical capacity [3]. Quality management consists of two mechanisms: quality control and quality improvement.

To solve the above-mentioned problems and improve product quality, the enterprise should develop and approve measures aimed at adopting the quality control system. The key function of quality management is coordination ensuring its steadiness and consistency. The main task of coordination is to achieve seamless operations of all segments of the organization by establishing rational communications between them. The increasing independence and responsibility of leaders of all levels and executors result in the increase in so-called informal relations ensuring



horizontal coordination of works, which simultaneously reduces the necessity of vertical coordination [4,5].

To advance quality management, one should take a systematic approach where sales of products and management are considered as a system of interrelated processes and each process as a system that has input and output of its suppliers and consumers. According to the principles of general management, the efficiency of enterprise operations results from the establishment, maintenance and management of the system of interrelated processes [7].

Only the systematic approach to management allows comprehensively using feedback between customers and consumers to develop strategic areas of quality policy. To achieve a better result, corresponding resources and activities involving them should be considered as a process. This management model consists of numerous business processes involving structural divisions and officials of the enterprise's organizational structure. The business process is a set of consistent actions aimed at creating a complex of values to meet consumers' needs due to the appropriate use and allocation of available resources. Besides, business processes are related to management of the whole corporate structure.

All business operations of the company are focused on satisfying consumers' demand, leading to the obtaining of maximum benefits for customers. Benefits from products, services and close cooperation with enterprises have a significant advantage on the market in both technical and economic terms. The efficiency of using products and services allows finding solutions, simplifying and speeding up operations, enhancing the level of safety on the construction site, as well as reducing time and expenses. Quality management and implementation of 5S principles are related to the manufacturing and technological steadiness of the enterprise.

There are a lot of concepts allowing minimizing losses and ensuring the non-waste production of enterprises with the lowest resource and time expenditures. Lean production is one of these methods. Lean production is a concept based on enterprise's desire to eliminate all kinds of losses using the involvement of each employee in the management process and the maximum focus on consumers, which requires producing as many goods as the market needs. The lean production theory allows improving enterprise operations, as enterprises take great efforts to eliminate some or all excess expenditures.

Contemporary enterprises are imposing higher requirements for marketing activities and developing a new style of relations between a company and consumers in order to consolidate the leading position on the market. The necessary measures for enhancing marketing stability of enterprises are presented in Fig. 2.

The strategy for ensuring sustainable enterprise development is a process implying the goal-oriented change in the structure and functionality, which transforms the quality of the enterprise, allowing it to successfully pass critical points and shift to a new stage, resulting in continuous development. The modern economic climate requires the optimization of the management system of construction and related enterprises. Current construction manufacturing should have a substantial potential of production increase in case of its total modernization.

Therefore, it is impossible to ensure sustainable economic development in Ukraine without changing its entrepreneurial activities. Key suggestions on improving mechanisms for implementing the concept of enterprise sustainable development in Ukraine include a range of the following measures:

- 1) to increase the amount of innovative technologies to perform entrepreneurial activities;
- 2) to reduce the period of the production process due to the optimization of business processes



- and update of enterprises' technological facilities;
- 3) to use outsourcing to keep the efficiency of company management;
 - 4) to improve the system for storing and collecting information about the enterprise condition;
 - 5) to advance staff expertise;
 - 6) to increase investments in enterprises;
 - 7) to ensure the eco-friendly process of enterprise operations;
 - 8) to use resources rationally.

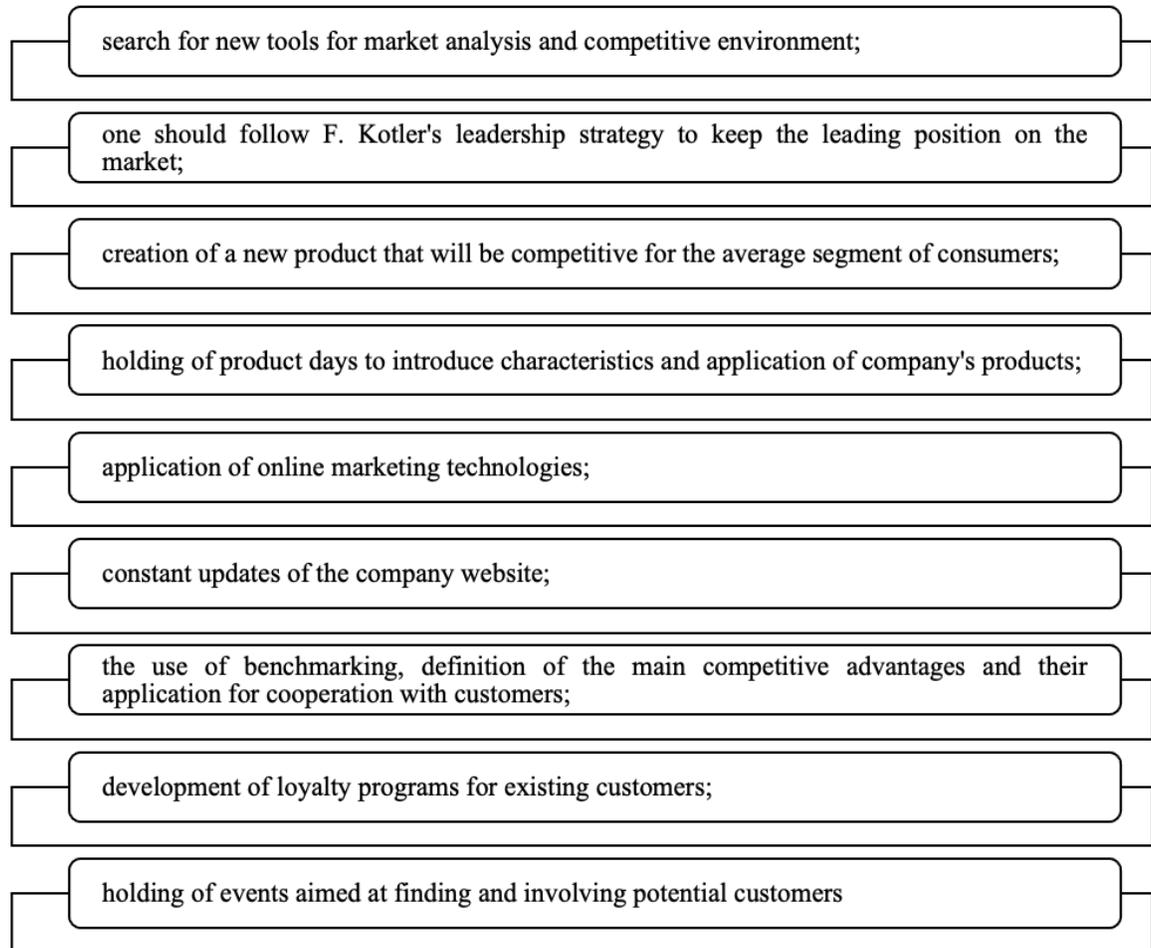


Fig. 2 Measures for enhancing financial and marketing stability of enterprises [8]

The key strategic task of a financially unsteady enterprise is to stabilize the financial state by restructuring accounts receivable, prolonging payments and selling non-core assets. Management of enterprise's financial stability depends on the type of its financial policy, as it affects the acceptable level of risks and profitability, as well as financial stability indicators.

Areas of ensuring financial stability using strategic financial management tools [9-11] can include the selection of the target structure of current asset financing, the establishment of principles of cost management policy optimization (relevancy, minimization, planning), which allows specifying measures for gaining targeted financial stability of enterprises (Table 2).

Table 2

Strategic tools for ensuring financial stability of enterprises

Conservative policy	Moderate policy	Aggressive policy
Circulating assets management		
<ul style="list-style-type: none"> - the need for circulating assets is fulfilled due to the own capital at the level of 50- 70%; - considerable expenses of the own capital for financing circulating assets; - minimization of the level of accounts receivable and accounts payable; 	<ul style="list-style-type: none"> - circulating assets are financed by 50% due to own and long-term borrowed capitals; - the whole volume of the variable of circulating assets is ensured due to the short-term borrowed capital; 	<ul style="list-style-type: none"> - circulating assets are financed by 10-30% due to own and long-term borrowed capitals; - 90-70% of circulating assets are financed due to the short-term borrowed capital;
Cost management: output cost determination		
<ul style="list-style-type: none"> - decrease in costs due to suppliers' discounts on the considerable purchase volume; - decrease in expenses for job compensation due to the advancement of staff expertise; - reduction in equipment downtime, accomplishment of the complete production cycle. 	<ul style="list-style-type: none"> - purchase of raw commodities and materials given the potential supply disruption; - modernization of equipment, which reduces the need for labor resources; - manufacturing of products involving external specialists. 	<ul style="list-style-type: none"> - tough regulations of raw purchase, the absence of storage facilities, developed logistics; - reengineering of business processes; application of outsourcing in manufacturing; - application of accelerated amortization because of purchasing equipment on lease.

CONCLUSIONS

Well, strategic management of financial stability should take into account not only financial management goals and a type of financial policy but also a kind of financial stability common to the enterprise as of today. Areas of ensuring financial stability using strategic financial management tools include the selection of the target structure of current asset financing, the establishment of principles of cost management policy optimization (relevancy, minimization, planning), which allows specifying measures for gaining targeted financial stability of enterprises. Enterprise's financial stability in the context of rapid changes in the external and internal environment is a crucial condition of its successful economic activity. Financial results of the enterprise are one of the significant criteria affecting its financial stability, as due to the increase in profits, the enterprise has such a state of financial resources that allows ensuring efficient operations with their proper allocation and use. It means that the enterprise, easily maneuvering funds, is able to ensure the continuous process of manufacturing and trading activities by their efficient use, as well as to provide costs for its development and update. Therefore, any enterprise should focus on systematic generation and efficient use of financial resources, compliance with the payment and credit discipline, rational correlation of its own and raised funds, achievement of a proper level of financial stability aimed at efficient functioning and profitability.



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CURRENT ASPECTS OF LAND RELATIONS IN UKRAINE

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ABSTRACT

The article examines the current components of land relations in Ukraine. Land legal relations are public land relations that arise in the field of interaction of society with the environment and are governed by the rules of land and agricultural law. The importance of using the potential of sustainable development is emphasized. It is established that land management (a set of socio-economic and environmental measures) is an important tool for regulating land relations. The main factors of reducing soil fertility and their depletion are identified. The relationship between the agricultural sector, society and the environment is presented.

The connection between different levels of public management on the way to sustainable development of the agricultural sector is outlined. The main directions of formation of effective land relations are characterized. It is stated that an effective system of land management is a real mechanism for resolving pressing issues and bringing agricultural land tenure and land use to an orderly state.

Key words: land relations, sustainable development, land management, potential.

INTRODUCTION

Formulation of the problem. Scholars and practitioners of public management have repeatedly emphasized that at the local government level the problem of efficient land use requires innovative thinking through improving the interaction process, as land reform in Ukraine has dramatically changed the size, sustainability and legal status of agricultural land use. During this period, collective farms also ceased to exist, and producers of various forms of ownership were formed. Along with the positive developments in recent years, a negative consequence can rightly be considered a violation and destruction of the crop rotation system, which becomes a significant cause of irrational and inefficient use of land and makes it impossible to use and protect land.

Analysis of recent research and publications. Today, scientists are actively continuing to explore ways to improve the efficiency of land use. These issues are raised in the works of domestic scientists, including: N. Kovalenko, M. Shevchenko, O. Romanov, R. Golod, O. Bilinska, G. Shubala, E. Vorobyov, T. Gela, S. Tanchyk, V. Kuvachev, V. Hudz, I. Primak, Y. Budyonny, P. Boyko. However, a number of important issues remain regarding the regulation of modern agriculture and the maintenance of the natural wealth of the soil.

The purpose of the article. To outline the range of problematic issues of land relations in Ukraine in the reform process.



Presenting main material. In the process of reforming the system of public management in Ukraine, the problem of land relations is touched upon, which requires a deep theoretical understanding and solution of a number of important issues, as it concerns a wide range of participants. Lack of effective land protection measures, increase of anthropogenic load on agricultural lands, reduction of reclamation and cultural works, violation of crop rotation system - these factors have led to a decrease in soil fertility and depletion. Erosion and other negative processes have arisen and continue, which pose a threat to land resources throughout the country. An important area of public policy in Ukraine is the priority of self-governing initiatives based on the principles of sustainable development. Local governments perform a wide range of management functions to solve local problems of territorial communities, and among them the effective management of land relations [1].

The study of the causes of unsatisfactory land management suggests that improving the efficiency of this process depends on a clear division of powers of public authorities and local governments in the field of land management. The value of land lies in their ability to provide additional income (actually - payment for land). It should correspond to the amount of money, which, if put in the bank, will give in the form of interest on the contribution of the same amount as the productivity of workers due to reduced workload [1, 2, 3].

Land legal relations are public land relations that arise in the field of interaction of society with the environment and are governed by the rules of land and agricultural law. The specificity of such relations is due to the peculiarities of the subject of these relations - land (as an object of nature, spatial and territorial basis, territory and the main means of agricultural production) [2]. O. Miroshnychenko proposes to define land relations as social relations based on land ownership, arising from the use, management and protection of land as a special natural resource [3]. As you can see, different approaches to the definition of land relations mutually clarify and complement each other. Land relations in the period of reform are exacerbated by social tensions and production relations, which are due to many reasons, both objective and subjective. Note that special attention should be paid to sustainable development, as the agricultural sector is a generator that is able to balance all components of such development. Understanding the issues of economic, social and environmental components of national development has already gone beyond theoretical research. Environmental challenges demonstrate significant levels of environmental pollution and depletion of natural resources. The urgency of balanced development is modern in such conditions and implies the need to form a new worldview in all areas of business and the population. It is worth agreeing with the point of view of leading theorists and practitioners [4] that the concept of sustainable development is the best way to achieve global development, as it is based on the requirement of harmonious coordination of economic, social and environmental components to achieve a balance between existing development needs, society, as well as the parallel development of the system of protection of the interests of future generations [5].

Today, scientists believe that sustainable development can be called that leads to minimizing the negative effects of depletion of natural resources and environmental pollution for future generations as a result of socio-economic development of the generation that now lives on the planet [6]. Therefore, studying sustainable development, it should be noted that approaches to the interpretation of this category are generally not fundamentally different. It should be noted that the sustainable development of the agricultural sector requires the active involvement of public authorities and ensuring their consistent strategic activities. It is important to emphasize that it is

important not only to take into account the components of sustainable development, but also to balance them.

Sustainable development requires the use of real tools, through which the connections between all the components are realized, which require certain costs to maintain a balance between them. To further study the prerequisites for achieving sustainable development, which includes a large number of components, it is advisable to cite the relationship between the agricultural sector, society and the environment (Fig. 1).

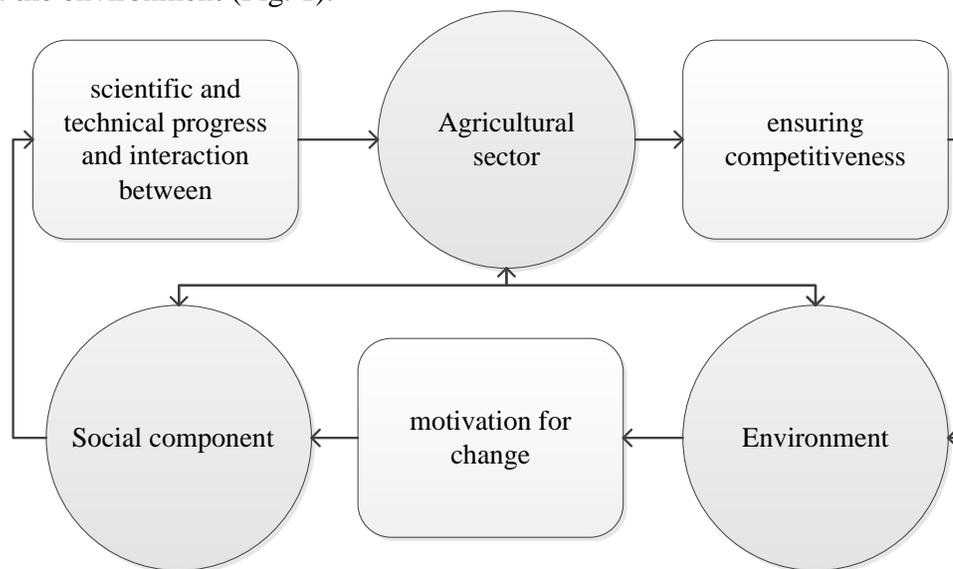


Fig.1. The relationship between the agricultural sector, society and the environment

Source: based on [7]

The initial stage of implementation of the basic concept of sustainable development of the agricultural sector can be considered the improvement of the legal framework. According to the principles of sustainable development, the priority of tactical tasks in the agricultural sector should be based on flexibility using an adaptive approach to unstable environmental conditions with the introduction of mandatory environmental responsibility of society as a whole, not just businesses; rational use of natural resources; introduction of state-of-the-art business practices; formation of a worldview with a gradual movement towards sustainable development, etc. (Fig. 2).

Land at the local level is considered not as a means (resource) of production, which is inherent in agricultural production, but as a spatial basis for livelihoods and includes the space below and above it. Land ownership in settlements is related to the interests of the territorial community, the state and other landowners. Therefore, it is necessary to make the most efficient and best use of land, which often exceeds the personal capabilities of the owner. Note that the activities of a particular owner affect the use of land by other owners in the same area. That is, when using land in settlements, the interests of land ownership are combined - both private and communal and state [8]. Thus, the main directions of land relations can be recognized: coherence between private, public and public interests; openness of actions on land use management and their distribution; stability of land use types, etc.

In this case, the sustainable development of agriculture is a condition and consequence of the highly productive functioning of the soil cover. According to scientists, soil productivity depends on the use of fertilizers by 50%, herbicides - by 15%, weather factors - by 15%, the introduction of crop rotations - by 10%. And although in this series the crop rotation factor is the lowest, due to its validity and strict compliance with the effectiveness of the previous factors can vary in a fairly wide range [9]. At the same time, as a result of changes in forms of ownership of means of production and land, on the basis of former collective agricultural enterprises, a significant number of new agricultural formations have been created, based, as a rule, on leasehold land use.

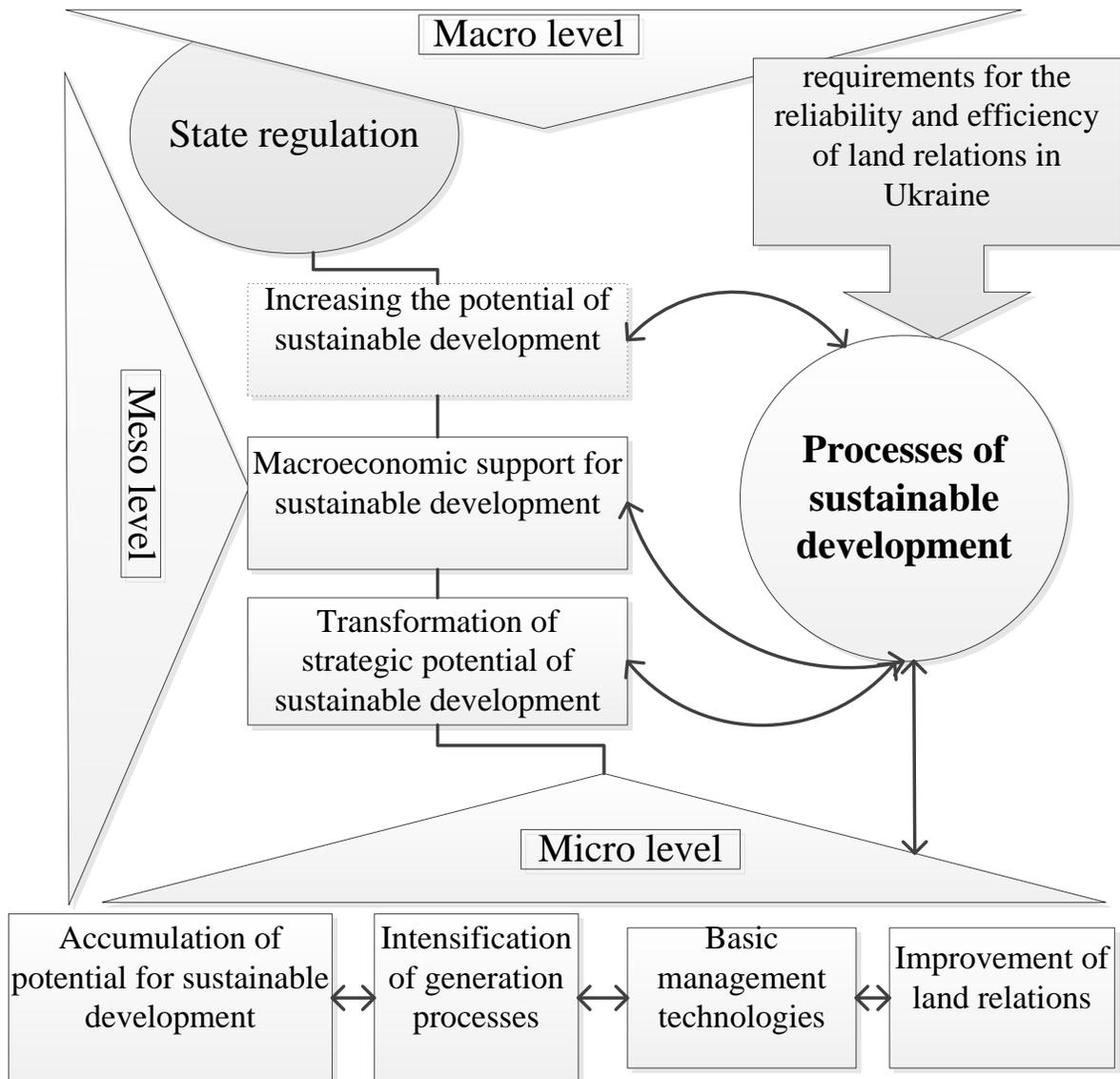


Fig. 2. The relationship of different levels of public management on the path to sustainable development of the agricultural sector

Source: suggested by the authors



In addition, the territory of former agricultural enterprises has areas and land uses that require special treatment and conditions of use (water protection zones and coastal protection zones, protection zones along roads and railways, pipelines, power lines, sanitary protection zones around underground and open water sources. , sanitary protection zones around facilities that emit harmful substances or radiation into the environment, etc.). Thus, a real mechanism for resolving pressing issues and bringing agricultural land tenure and land use to an orderly state is an effective land management system, which is regulated by the Law of Ukraine "On Land Management". The land management project is developed to organize agricultural production and landscaping of agricultural lands within land tenure and land use for efficient agricultural production, ensuring the rational use and protection of land, creating a favorable ecological environment and improving natural landscapes. For the organization of the territory of agricultural enterprises the development of land management projects is provided, which provide ecological and economic substantiation of crop rotation and land management. The basis for the development of such a project [10] land management that provides ecological and economic justification for crop rotation and land management ecological-landscape and ecological-economic approaches to organize agricultural production and agricultural land management, identifying the necessary measures to increase productivity and land protection, agrolandscapes, land optimization and directions of their further use.

CONCLUSIONS

Thus, we can state that in order to effectively organize agricultural production and management of agricultural land within land tenure and land use, it is important information on the efficiency of agricultural production, ensuring the rational use and protection of land, creating a favorable ecological environment and improving natural landscapes. arable land for growing major crops. With strict compliance with all requirements under land management projects, the efficiency of rational use of agricultural land is ensured with the creation of favorable conditions for increasing labor productivity, minimizing investment, and resolving the issue of suspending erosion processes.

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IMPLEMENTATION AND DEVELOPMENT OF THE SMART CITY SYSTEM

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ABSTRACT

Today, more than 3.9 billion people live in urban areas, that is, more than 54% of the world population. According to scientists from New York State University, urbanization will continue in the coming years, increasing the urban population to 6.0 billion people by 2045. A significant increase in the urban population increases the demand for energy, mobility, water and other urban services in cities. Therefore, cities should become smarter in providing urban services.

In addition, cities are the largest environmental pollutants responsible for more than 80% of greenhouse gas emissions, 75% of waste generation and 70% of global energy consumption. Due to global awareness of the negative impacts of such pollution on the environment, cities are under greater pressure to improve environmental performance while improving the level of services. All these trends converge at the moment when a new trend is being formed: digitalization.

The growing demand for sustainable, comprehensive, reliable and efficient urban service puts enormous pressure on our urban infrastructure, but digitalization provides a powerful tool for solving these issues and creates a paradigm shift in our concept of cities – creating the Smart City concept. The use of information technologies in the management of a modern city has long been relevant. Since the 2000s, progressive companies have mentioned Smart City as an effective way to manage urban resources and recommended it for use by officials. However, then it is only possible to talk about it, and today every city that considers itself modern wants to be Smart City. It is also worth introducing smart technologies in the public administration sector, and not only in the field of infrastructure, security and tourism. This is due to both the globalization processes, the increase in the population in cities and the growing role of the cities themselves and the systematic growth of urbanization, and the change in the role of the city itself – their transformation into modern information centres using information and communication technologies in many spheres of life of residents.

Modern cities face constant contradictions every day: the combination of social attractiveness of the city and the comfort of residents' living, the rapid growth of production and environmental norms and the growth of industrial waste, transport and production infrastructure and modern information technologies. At the same time, it is worth noting that cities are the driving engines of the economy, platforms for creating and implementing social innovations, technological innovations, centres of education and culture. Smart cities today become the basis of social progress and economic growth, as information technologies help transform traditional functions in the classical sense through the use of smart technologies. These technologies make it possible to solve the problems that arise and qualitatively change the system of the city administration. As a



result, conditions for the development of each resident of the community and the city as a whole are ensured. Smart decisions of the city authorities produce an increase in the value of the city itself due to additional emerging opportunities, as well as increasing the investment attractiveness of the city itself.

The growth of modern solutions using the latest technologies, primarily in the field of municipal management, increases the efficiency of resource use, ensures the development of economic potential, the launch of new individual business areas, and also improves the quality and comfort of citizens' living in the city. At the same time, modern city development and management systems should include smart technologies and information systems for the transformation of life in urban processes, better management and improvement of life in the city. It is also worth noting that today with the spread of infections, such as covid-19 infection, which has become a global pandemic, the role of Smart City smart technologies is not so much in demand in the world and Ukraine in particular. The role of such technologies will increase from year to year.

Also, taking into account globalization and integration processes in the world, the Smart City system has long begun to gain popularity among leading countries with developed economies and the European Union. Smart City affects both everyday life in the city and the sphere of state and local administration, public safety, industry, transport, ecology, medicine, energy, mobility and other spheres of life of citizens, both at the national and local levels.

Keywords: globalization, smart technologies, digitalization, digitalization, development, Smart City.

INTRODUCTION

Formulation of the problem. Accelerated technological development in the context of the Fourth Industrial Revolution changed the nature of competition in world markets, increasing the value of technological capabilities as a source of competitive advantage and identifying technology as a key factor in production. Every year, digital technologies change everyday life, creating the basis for sustainable socio-economic development. The global COVID-19 pandemic has significantly accelerated the digitalization processes, generating not only new needs and opportunities but also new dependencies and problems. Despite the obvious positives inherent in smart technologies (increasing the level of innovation and reducing the carbon intensity of the economy, improving the education and healthcare system, improving energy efficiency, etc.), they can increase territorial digital "gaps", form risks of disintegration of communities of individual remote towns, as well as deepen the vulnerability of the economy and the population to cyberattacks.

It is the problem of cybersecurity against the background of the increase in digital technologies identified as one of the key ones during the World Economic Forum (January 25-29, 2021), where it was suggested that the spread of the so-called "cyberpedemia". To achieve the Sustainable Development Goal No. 11, which is to ensure openness, safety, resilience and environmental sustainability of cities and towns where residents have a decent standard of living, the principles of economic prosperity and social stability are formed without harming the environment, focused on the introduction of digital technologies.

In today's world, more than 54% of the population, which is almost 4 billion people, live in cities, while the level of urbanization is variable. The city is historically considered the highest form of socio-economic achievement of mankind. At present, cities act as a communication hub, the activity of which is ensured by the development of information technologies. According to American scientists, urbanization processes will gain rapid development over the next 20 years,



the urban population will increase by 50% - to 6 billion people. This trend requires smart solutions in the development of cities because an increase in the number of people will lead to negative consequences, in particular, an increase in the level of environmental pollution. By implementing smart solutions and being guided by sensible methods of urbanization, only positive factors can be obtained, which will comprehensively improve the standard of living of the population.

At the same time, with the development of digitalization processes, the infrastructure of cities is undergoing serious changes. Digitalization becomes a powerful tool for sustainable, efficient, systematic city management. Thus, in a digitally transformed world, the process of smart cities development has become relevant. The COVID-19 pandemic has disrupted the city's ecosystem and infrastructure. Thanks to smart networks, smart administration, a system of "smart" urban transport, water supply and waste management, as well as the safety of the city, they strive to achieve sustainability of development. Using smart technologies to collect data on congestion, electricity or water use, and air quality levels in more and more cities improve urban services. At the same time, despite the wide availability of various smart solutions on the market, their implementation remains quite limited and most of them are at the level of pilot projects.

Information technologies in city management began to become widely used since the beginning of the 21st century. Any city strives for continuous development, for corresponding to the modern state of affairs. In our understanding, being modern for the city is identified with the concept of a Smart City. At the present stage of social development, the Smart City system is an integral element of municipal management. The use of technologies in management processes has been relevant for many years because progressive Western companies mentioned Smart City as one of the effective ways to manage city resources. At the same time, ongoing transformation processes, including the global COVID-19 pandemic, increase the need to implement systems using information technology to better manage and improve society. With the introduction of smart solutions in the field of city management, there is observed not only the development of cities but also the development of public administration in general.

Cities are the driving force of the economy, engines of progress, socio-cultural centre and platform for the implementation of innovations. Modern cities combine increasing the scale of production and environmental responsibility, preservation of culture and digitization, development of infrastructure and comfort for residents. Using information technology in management, smart cities become the basis of world development, which increases the efficiency of resource use and the level of investment attractiveness, qualitatively and quantitatively affects positive changes for citizens and the country as a whole.

The topics of the research are especially relevant for Ukrainian communities, which have recently begun to implement the Smart City system on the ground, while among the leading countries of the world the use of smart city technologies is a common practice.

Analysis of recent researches and published papers. The problems of the existence, implementation and development of the Smart City system are devoted to some studies of a wide range of scientists. A number of researches of a wide range of scientists are devoted to the problems of existence, implementation and development of the Smart City system. In particular, the works of R. Dameri, Griffinger, A. Kalagliu, A. Greenfield, D. Washborn, R. Hall, H. Kramar, A. Zhukovich, M. Boykova, R. Nebesny and others are devoted to this topic.

Results of the research. The formation of a smart city is a trend that covers some cities on all continents of the planet. R. Kitchin [1] explains the phenomenon of "smart" cities as "an attempt



to solve a fundamental dilemma – to reduce costs while increasing economic growth, while ensuring stability, acceptability of public services and maintaining a high level of quality of life of the population", but warns "that the neoliberal, market-driven, technocratic perspective has a dominant tendency, as opposed to an alternative paradigm, which consists in "targeting the city on each individual", promoting the introduction of social innovations, inclusivity, fairness and involvement in a "smart" society". Such dominance in terms of economic benefits may not take into account social needs and can be characterized by the lack of appropriate legal regulation. At the international level, there is no single well-established concept of a "smart" city and much depends on the commitment of different stakeholder groups: business, government, civil society and individual citizens. At the same time, one of those that explains its essence quite widely is the definition proposed in 2014 by the International Telecommunication Union: "A sustainable smart city is an innovative city that uses ICT and other means to improve the quality of life, improve the efficiency of urban operations and services and competitiveness in an unambiguous way to meet the needs of present and future generations in economic, social and environmental plans" [2]. The concept of a civilized urban metropolis was once considered science fiction [3], but the development of digital technologies embodied it. Smart cities "interconnect people, data, things and processes in a dynamic global infrastructure." Cities use this infrastructure to "enhance economic, resource, and political efficiency while ensuring social, cultural and urban development." [5] B. Pepper, Vice President of Global Technology Policy at Cisco (a leading provider of smart solutions for cities), said that "the city makes it "reasonable" that it recognizes the importance of technology and information to improve its processes."

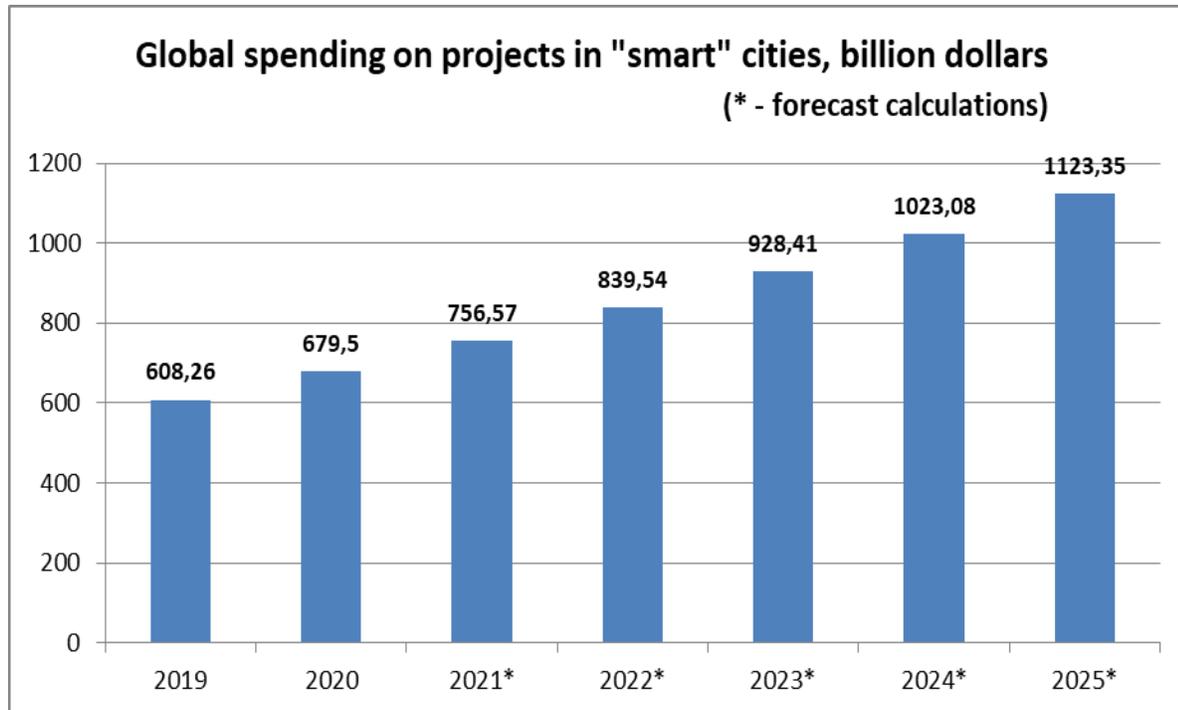
Using the concept of a smart city opens up many possibilities. In developing countries, due to the rapid urbanization of the city, there is an urgent need to create an appropriate level of urban infrastructure. Meeting requests for the development of smart infrastructure opens up the possibility of technological progress in front of cities. Cities such as Barcelona, London, Dubai and Singapore have access to advanced technologies and are characterized by their faster implementation than they do at the level of North America and Western Europe, and already occupy a leading position among the cities of the world in the development of digital technologies [6]. The development of smart cities can lead to the formation and establishment of production and financial centres rich in highly skilled human capital territories built under a less bureaucratic system. Smart infrastructure components are used in research and various ratings as markers indicating the level of "smartness" of cities. Singapore, Helsinki, New York, Zurich, London, Barcelona take the leading positions in the vast majority of ratings. The ratings themselves are critical every year, as they are the "green light" to stimulate the development of cities by governments, local authorities, and businesses.

According to the latest data, the costs of smart cities in the world in 2020 were the largest in the United States - the largest regional market, which is about 26% of global spending. The total costs (local budgets, financing of companies and individuals) for projects of "smart" cities may exceed in 2025. \$1 trillion. (Global Project Spending in Smart Cities chart).

Along with legislative support and institutional support, it is important to develop and disseminate digitalization and smartization processes both in countries and in cities and to finance the creation of digital technologies (scientific research and pilot projects) and their implementation. According to the Sustainable Development Agenda 2030, governments have pledged to increase public and private spending on research and development. This is an important determinant of structural transformation and the transition to the digitalization of economic processes. It should be noted



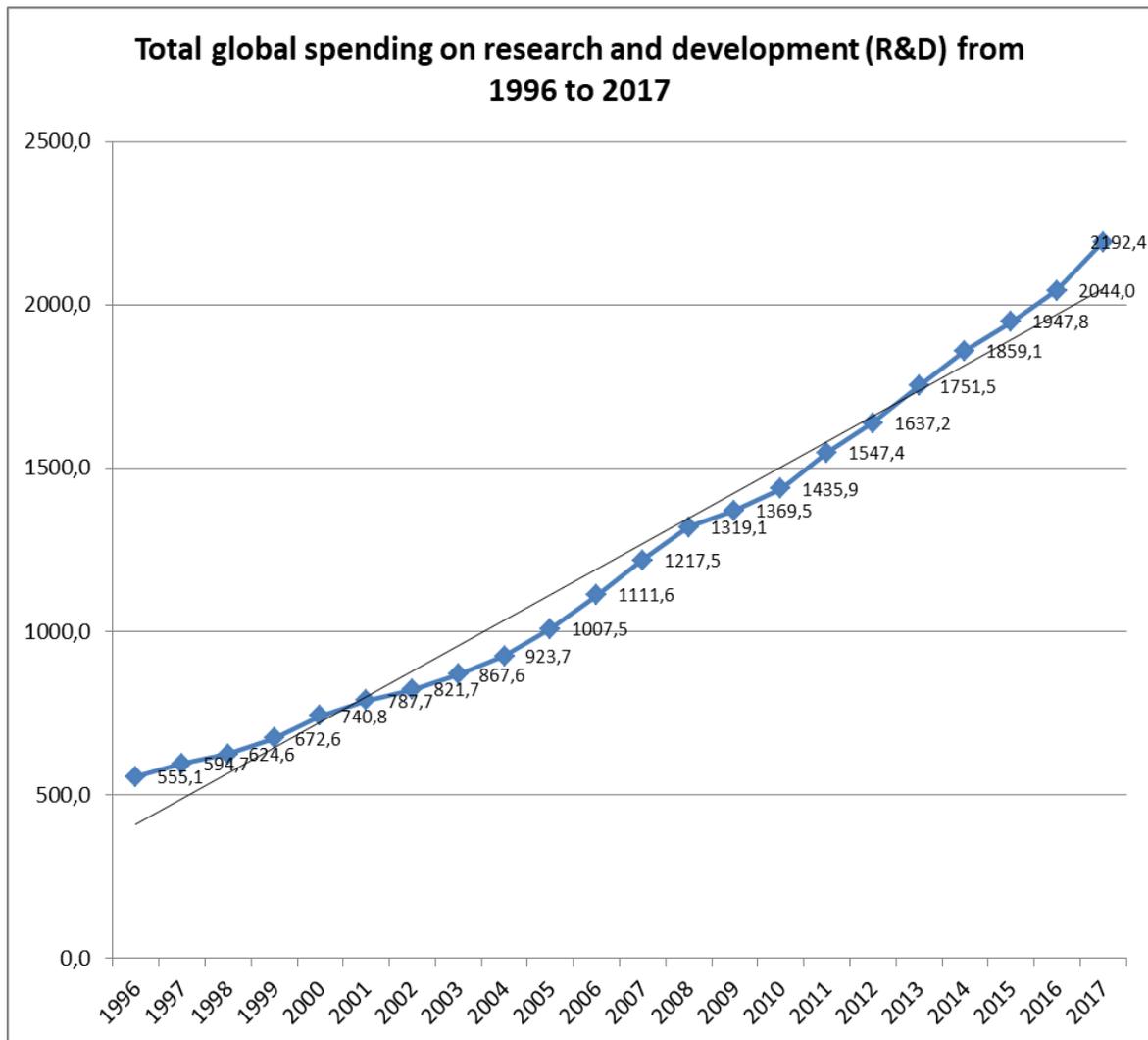
that globally, the costs of R&D continue to grow at a rapid pace: since the early 2000s, the total world spending on R&dDKR (for PKS) has increased from \$ 741 billion. to approximately \$2.2 trillion. in 2017. (latest available data) [9] (R&D Total Worldwide Spend").



R&D costs are increasing, but the growth rate should be higher, given the need for widespread implementation of smart infrastructure, the spread of industrialization and innovation, including to combat the consequences of the COVID-19 pandemic.

The need to finance smart infrastructure is increasing every year: large amounts of investments in the development and modernization of infrastructure are necessary, which can not only improve the quality and condition of infrastructure but also bring positive results to society. It should be mentioned that smart cities are the result not only of investments in traditional infrastructure and digital technologies but also in human and social capital that contribute to sustainable economic growth and high quality of life.

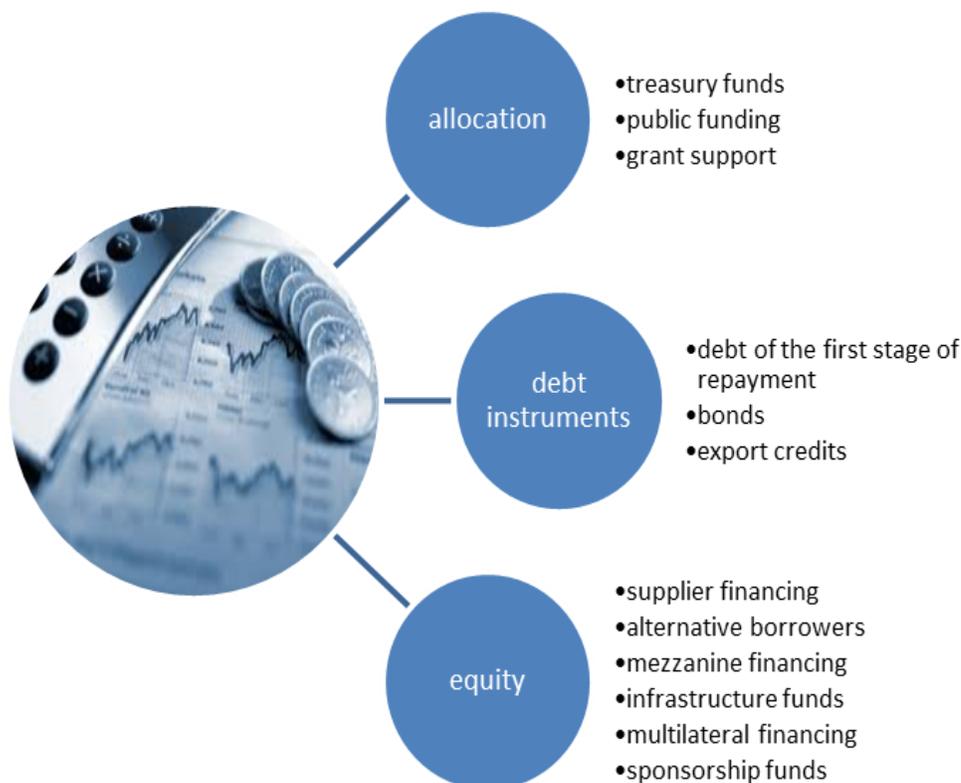
Taking into consideration the critical importance of digital technologies, governments, city authorities and companies, the issue of financing smart infrastructure rises, taking into account the fact that it is relatively expensive (investments in it have a long payback period), associated with the dynamics of technological changes and the risk of frequent changes in government policy. Difficulties in accessing the necessary amounts of funding are recognized as one of the main obstacles to the development of smart infrastructure. One of the main challenges is the initial capital expenditures for the deployment and operation of the internet infrastructure, which can be significant, and support, modernization or expansion of networks requires additional funds. Another obstacle is the low level of profitability in rural and remote areas. Fewer potential subscribers in such areas, along with higher infrastructure deployment costs over longer distances, often reduce the rate of return and, accordingly, deter investment.



The obstacle to investment can be difficult to predict traffic growth and the necessary bandwidth. Also, additional resources (additional data, data models, data storage and processing algorithms) may be required to deploy the digital infrastructure, which, in turn, does not contribute to stimulating investment in data. Another obstacle that makes it difficult to finance projects of "smart" cities is technological risk: within the framework of the project, technology can be used for the first time, which reduces investors' confidence in the effectiveness of the technology due to the lack of evidence of its acceptability. It is also difficult to secure funding for a smart project if it is impossible to monetize the benefits of the project. For example, a project can have a clear positive socio-economic impact (for a city or country), but the financial benefit (profits) will be negligible. Among other obstacles: projects are not characterized by ensuring stable profits in the future, profitability of investment is uncertain, and projects of smart cities are based on communication (via the Internet, Wi-Fi and various smart technologies) with physical devices and infrastructure that requires additional funding (multi-sectoral orientation). Smart infrastructure

development requires a wide range of financial instruments. In the initial stages, smart project financing is often financed at the initiators' own expense, since due to the lack of income information, as a rule, lenders and large investors are sceptical about smart solutions. After the commissioning of the smart project, institutional investors, venture funds and banks will intensify their activities. On the one hand, digitalization requires financing, and on the other hand, it can contribute to the emergence of new financial instruments, especially for innovative SMEs. We are talking about FinTech, which is a combination of technologies and innovative business models in financial services that can improve risk assessment and increase SME funding. Although the innovative financing tools introduced by FinTech are in the early stages of development and distribution, they promise in the long run to provide financing in a short time and under relatively flexible conditions.

Digitalization has also led to new forms of funding - online platforms involving a large number of people - among it crowdfunding is best known. Although it accounts for a small share, compared to other financing instruments (and is designed to finance specific projects rather than enterprises), crowdfunding can play an increasing role, including financing innovative enterprises. This form of funding can be a tool for implementing innovative solutions in the city and "revolutionizing" democracy. Financial support for smart technologies and infrastructure should become a global phenomenon. Therefore, the financing of smart cities requires a combination of different financial instruments (chart "Financial instruments used for the development of smart infrastructure").



Financial instruments used for the development of smart infrastructure



Despite the available numerous sources of funding for investments in smart city projects, the difficulty of using them lies in the compliance of the project with a certain financing instrument. This requires an understanding of the essence of the project, its potential benefits, available financing options (at the local and international levels), prospects for purchasing smart solutions at the state/local level (to understand the payback of invested investments). The financing of smart solutions in cities can be carried out both at the expense of state and local budgets and the expense of other sources (private, international technical assistance, grant support, etc.). Expansion and the maximum possible use of all potential sources of financing is a priority for the development of the financial services market. The most effective popular instruments of state financial policy that can mobilize funds to support innovation are government loans/ guarantees, the PPP mechanism and subsidies. One of Deloitte's "Smart City" project funding challenges examines the sources of funding that cities use to implement smart projects. It is noted that 41% of municipalities rely on funding from public and private sources, 49% rely solely on public funds [10]. Despite the widespread recognition of the advantages of smart city technologies, inland investment is not sufficient [11] and the search for additional finance is long-term process. Since requirements for the development of smart infrastructure are high, funding from the local budget may be reduced or insufficient. Here, one of the most acceptable financing options may be the PPP mechanism.

In the EU, city development is carried out through a cohesion policy. European structural and investment funds meet various development needs of EU regions and cities, the budget of which for the period 2014-2020. €376 billion. (approximately 1/3 of the EU budget) [12] The EFRD with a budget of almost €200 billion for 2014-2020 has focused on investments in the following priority areas: (1) innovation and research; (2) digital development; (3) support for SMEs; (4) low-carbon economy. Taking into account the fact that more than 2/3 of the EU population live in urban areas, approximately 50% of the EFRD resources are directed to cities. The EFRD activities are aimed at reducing the economic, environmental and social problems of urban areas, with a focus on sustainable development (at least 5% of the EFR resources are directed to this area – approximately €10 billion).

From the point of view of funding, the URBACT program is important, a European exchange and training program that contributes to the sustainable development of cities. For the period 2014-2020, budget of URBACT III amounted to €96.3 million. Within the framework of horizon 2020, the EU has invested about €1.2 billion. in support of innovative projects, while the EFRD envisaged in the programs of 2014-2020 approximately €16 billion for the construction or modernization of scientific research and innovation infrastructure and about € 21 billion in support of R&D, which contribute to the use and development of technologies. Such investments focus on the priorities identified in Smartization Strategies at the national or regional levels [13]. In 2016 the EC has launched a large international project of smart cities – Sharing Cities – which aims to address the most relevant urban issues, such as reducing the level of electricity use, introducing low-carbon transport, energy saving in buildings, as well as using data in cities (security and privacy issues). The five-year program is funded by the EC and supports smart city technologies to maximise its benefits for the population. The Programme brings together 34 partners (representatives of governments, the industrial sector and academia) and aims to achieve its goal in 2021. with funding of €500 million. All six participating cities have already demonstrated positive results of the use of smart technologies (reduction of carbon emissions,



provision of high-quality and timely services, general improvement of the welfare of the population). Cities also have access to funding through the Connecting Europe Facility, the European Framework Research Programme (Horizon 2020 [14] and its "successor" Horizon Europe [15]), the Just Transition Fund, the Mechanism for Important Projects of Common European Interest, EU Invest, the Next Generation EU Instrument and other EU funds/instruments. In 2021-2027 the European Urban Initiative will operate with a total budget of €500 million. Among other things, in 2018 the EIB Council has approved the creation of a new financial instrument – the Smart Finance for Smart Buildings Initiative in order to improve the energy efficiency of residential buildings, which will attract private investors. This tool, together with other EU initiatives, aims to accumulate €10 billion. from public and private funds to energy efficiency projects. This can create up to 220 thousand new jobs and increase the wealth of small businesses to €120 billion. In addition, up to 3.2 million European families can be withdrawn from the so-called energetic poverty. The spread of smart technologies and, accordingly, the development of smart infrastructure requires proper funding. The investments for digital infrastructure, especially high-speed broadband networks are important to support innovative and digital economies. Investment in smart initiatives is expected to grow. The United States, Western Europe, and China invest the most in smart city projects, using a variety of smart financing options. However, the COVID-19 pandemic has formed uncertainties about further investment. Digital development, which is spreading in countries and cities around the world, requires a targeted investment policy to build smart infrastructure, further the companies promoting digital technologies. There is no doubt that large-scale investments in economic and social infrastructure are needed to maintain economic, environmental and social activity. But given the complex nature of infrastructure decisions, the institutional and legislative conditions in which these investments are made will be a determining factor in success. Promoting investment in smart infrastructure requires a holistic approach (covering interrelated characteristics) so that infrastructure development can provide the highest benefits. Funding should be reflected in long-term strategic decisions that need to be made taking into account the overall innovation policy of the state. In general, support for investment in smart infrastructure should be an important point for both local and national development strategies.

Modern technologies are gradually being introduced into the processes of urban management in Ukraine. If you look at the latest Smart City 2020 ranking from the Institute for Management Development, the first in the ranking are Singapore, Helsinki and Zurich. Next to them are Auckland, Oslo, Copenhagen, Geneva ... It means that there are cities which are far from poverty, that can afford to spend money on sensors, analytical systems, centres for processing large amounts of information and the like. Kyiv, with a budget of more than UAH 60 billion for 2020, took only 97th place. The first steps towards the smart capital were taken back in 2015 – then the concept of Kyiv Smart City was first introduced. In Kyiv, there is already a digital ticket for transport, a "smart" video surveillance system on some streets and in the metro, e-petitions, electronic document management, there is an opportunity to make an online reservation for a doctor's appointment, including vaccination.

However, several gaps make it difficult to implement smart principles.

The first problem that Ukrainian cities face on the way to digital development is the lack of a strategic vision. Smart solutions, as well as those responsible for their implementation, should be fixed in the strategies (master plans) of each settlement. Many of the world's megacities have already developed separate Smart City programs.



The second is the issue of financing such projects. In the EU countries and the United States, programs are being implemented to attract funds for the development of "smart" cities. In addition to state budgets, investors and patrons of the world take part in financing the systems of "smart" cities. In Ukraine, budget funds are periodically allocated for the technological development of cities, but often most of the interesting projects remain unrealized.

The third is the problem with the availability of experienced personnel capable of launching and supporting innovative solutions, as well as the lack of a single state body responsible for the development of the smart concept. Thus, in Ukraine, some projects are initiated by ministries and municipal authorities, others are launched by non-governmental organizations and individual experts.

If we talk about specific proposals, then within the framework of the first problem, it is necessary not only to install video surveillance cameras but also to establish effective data analysis and their prompt transfer to law enforcement agencies. Such a set of actions helped to make life safer for citizens in Mexico City, where the crime rate decreased by 56% in one year.

Ukraine should also gradually introduce "smart" meters. Taking into account global environmental challenges and more mundane problems – rising utility prices – this solution will help save consumed resources. Another smart solution in the housing and utilities sector could be the installation of systems that analyze the state of engineering networks in residential buildings. The information obtained will make it possible to extend the life of the communal infrastructure.

Local authorities should establish a dialogue with all stakeholders in smart development – the government, business and public organizations. The latter, in turn, can control the effectiveness of actions on the part of the state, and business can help to introduce clear standards in project management.

In addition, Ukrainian cities will need a comprehensive management model and a systematic approach. For example, the authorities of Dubai, implementing the Cyber Smart Nation strategy, created a consistent implementation plan, conducted an information campaign, opened cybersecurity offices in each government organization, with the main goal of making the city one of the safest.

It is also necessary to communicate with residents about the importance of introducing smart systems, to involve them in discussions and debates, identify the pressing problems of the city. As an option is the creation of a public platform for generating ideas. Today, within the framework of Smart Kyiv City, there is a program "Accelerator of Urban Projects", but the public presentation was held only once.

At the same time in the world's megacities, the institution of civil society is an influential mechanism, but it is approached in different ways. By the way, in New York, the NYCx Challenges program initiated by the mayor's office invites experts - entrepreneurs and specialists from the IT field - to submit recommendations for improving urban life. In Barcelona a digital platform where they collect ideas from all interested residents was created.

In nowadays world the presence of a smart concept is a strategic necessity. By promoting sustainable development, smart megacities are becoming more innovative, competitive and attractive to both residents and investors.

When implementing the principles of a "smart" city in Ukraine, first of all, it is necessary to determine the priority areas, develop a systematic implementation plan and follow an integrated approach to implementation.



And finally not the last thing is the readiness for innovation. Smart City is about reforms, and deep reforms rarely bring quick victories. It is possible to observe a situation where the head of the community tries to implement innovative solutions, but he is faced with crushing criticism of residents with comments about the feasibility of such investments. As a result, the reforms were completed without starting. The reason is the lack of a clear strategy for communication with residents. Society should understand what benefits people will receive from the introduction of the Smart City. It is important that the results of these improvements coincided with the expectations of the residents themselves.

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TRANSFORMATION OF THE SOCIAL FUNCTION OF THE STATE: CONCEPTUAL APPROACHES

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ABSTRACT. This article conceptualizes modern approaches to the transformation of the social function of the state in the context of the influence of globalization processes, the ambiguity of the formation of the socio-cultural context, the actualization of the latest risks and threats associated with the spread of the COVID-19 pandemic. We accentuate the inconsistencies and contradictions between the declared social priorities and the inefficiency of the management mechanisms of their practical implementation. The article substantiates the priority directions of the regulatory role of the state in the context of social risk management, formation of social security, adherence to the principle of social justice, and harmonization of interests of representatives of various social groups.

Key words: public administration, state, social functions, governance mechanisms, globalization, social risks, COVID-19 pandemic, social justice.

INTRODUCTION

Formulation of the problem. In the context of transformation processes characterized by the aggravation of socio-economic problems, the emergence of new threats and risks, the issues of transforming the social function of the state, increasing social responsibility of all social policy actors, including public authorities, civil society organizations, and business structures, become of significant importance. Effective interaction and mutual understanding of various social groups and institutions, ensuring the consolidation of society, achieving social cohesion and stability are becoming crucial.

The process of reforming the public administration system provides for conceptual changes in social relations between the authorities and the public directed to the transition from subordination to dialogue and partnership. The cooperation should be constructive and functional to improve the social system according to public interests [1].

Modern trends in the implementation of the social function of the state are due to deep contradictions between the declared social priorities and goals, and the inefficiency of management mechanisms for their practical implementation, non-compliance with the principle of social justice, and harmonization of interests of representatives of various social groups.

The elimination of these contradictions requires the scientific conceptualization of approaches in the implementation of the social function of the state, the development and implementation of modernized public-management mechanisms in the field of social security formation, protection of rights, and social support for socially vulnerable categories of the population.



Analysis of recent research and publications. In the conditions of transformational processes, the issues of the social function of the state are the subject of numerous studies of both foreign and domestic scientists. In particular, we should mention the works of such foreign researchers as A. Aslund, J. Buchanan, G. Esping-Andersen, E. Lindal, W. Lawrence, G. Turborn, R. Titmus, F. Williams, etc. The theoretical and applied aspects of the implementation of the social function of the state studied such Ukrainian scholars as I. Aristova, V. Bulba, S. Horbatiuk, V. Hoshovska, N. Dieieva, M. Kravchenko, E. Libanova, O. Melnychenko, I. Moiseienko, V. Tropina, V. Troshchynskyi, etc. At the same time, despite significant scientific interest, the issues of influence of external and internal factors on the transformation of the social function of the state, systematic analysis of the effectiveness of the activities of state and civil society institutions in terms of ensuring social rights and interests of citizens, modernization of mechanisms of public-management practice in the implementation of the social function remain under-covered.

The purpose of the article The purpose of the article is to conceptualize modern approaches to the transformation of the social function of the state in the context of new challenges and threats.

Presenting main material. A fundamentally new system of social relations, which is currently under formation, provides for the refocusing of the social policy of the state on the achievement of European standards, creation of a new quality of social existence, and increase in the human development index.

Based on the multi-aspect and multidisciplinary phenomenon of social, there are various scientific approaches to interpreting its general and specific understanding. In general, the concept of "social" as an integrative entity involves two aspects: a system of social relations and a specific section of various subsystems of societies.

In a specific interpretation, "social" is:

- a set of characteristics of interacting individuals as members of different groups formed, distributed, and redistributed between them due to the status dynamics and character changes associated with this dynamics of interactions and relationships;
- only those aspects of social, which are determined by the situation of people in the social structure of society, relations between social groups, and between people as representatives of different classes, nations, labor collectives, professional qualification, and other social groups, caused by inequality existing in society.

Taking into account the abovementioned approaches, the category "social" concerns the functioning of various spheres of public life as subsystems of public-managerial influence related to the interaction and allocation of resources between the main actors aimed at achieving cohesion, balance, and order in society. Such understanding actualizes the importance of studying the specifics of the social function of the state, the peculiarities of its transformation in the light of current risks and threats. The content of the social function consists, first of all, in ensuring the rights and freedoms of citizens, taking measures to meet their social needs, maintaining an appropriate level of social well-being, creating proper conditions for the realization of social potential, etc.

Based on the fundamental mission of the state, which is to ensure socio-economic stability and civil harmony, the state strives for fair, in the interests of the majority of citizens, regulation, and allocation of resources of their vital activity to meet economic, social, spiritual and other needs. In this context, the approach to the recognition in the conceptual field of the modern science of public administration of human life resources as social benefits, and the related regulation of their



receipt as a mechanism for the implementation of the social function of the state, deserves attention [2].

One of the main tasks of social policy, and a crucial factor in the implementation of the social function of the state, is to ensure social security and guarantee the provision of social services to families (persons) in need of support. This approach provides for the state of protection of vital interests of the individual, family, and society from internal and external threats to quality and standard of living. World experience shows that without the active regulatory role of the state, there can be no effective, socially-oriented market economy and the efficient formation of social security of the state.

The systematization of the main approaches to the interpretation of the content of the social function involves the following: it considers social function as generalized social actions related to the solution of problems affecting the whole society; the goal is to promote the achievement of social priorities and objectives; it concerns the problem of social and labor relations and is focused on their stabilization, regulation of labor and capital relationships; it combines concepts based on the consideration of the social function as a type of social activity aimed, first of all, at ensuring through the system of state aid and public charity a minimum acceptable level of satisfaction of needs, the welfare of potentially vulnerable social groups aimed at preventing their possible uncontrolled reaction; it interprets the social function as a tool that mitigates the negative impacts of individual and social inequality through a system of redistribution measures; regulates the differentiation of income level within the safe framework; it bases on the principles of social justice and social partnership as the fundamental values of modern civil society and social state.

The generalized foreign practice of social function implementation shows that most developed countries combine elements of different approaches. The implementation provides for a multi-level system of economic, social, and legal relations on the management of social risks of society to eliminate their undesirable consequences and adhere to proper standards of living. The implementation practice is directly related to the type and level of development of society, characteristic national and mental peculiarities, specific goals and objectives defined in social development.

The most important and influential social and organizational institution that ensures the implementation of social function is the state itself. At the same time, there is a whole system of social institutions that are active entities of social policy: insurance companies, specialized funds, charitable associations, public and political organizations, etc. The main priorities of the social function in Ukraine are to grant efficient social support and assistance for orphans and children deprived of parental care, homeless, internally displaced persons, combatants, people of retirement age, unemployed, low-income and large families, disabled, and other socially vulnerable categories of citizens.

The main content of the social function of the state is socio-economic human rights. The formation of the human rights and social state concept was like two mutually-agreed processes. The acknowledgment of the human rights and freedoms concept historically and logically preceded the creation of a social, legal state. The right to social protection is one of the social rights that the state should guarantee and ensure. Social measures should derive from the objectives of ensuring the social security of citizens and the state, preventing the need for large-scale elimination of threats to socio-economic stability and social disadvantage.

Social standards are valuable representations of society about decent quality and standard of living, namely the level of minimum state social guarantees and indicators of achieving living



standards. It is a system of interrelated criterion standards for improving the quality of life from acceptable to average, from medium to higher. It is necessary to develop and establish social standards of quality and level of living, according to international principles and approaches resulting in ending the process of poverty reproduction, ensuring constitutional guarantees of public access to social services, creating conditions for the development of human potential. Such standards should ensure equal starting opportunities, prospects for social horizontal and vertical mobility, opportunities for self-development to representatives of different social groups. It makes possible the provision of expanded reproduction of human potential. Cross-sectoral cooperation is especially effective if there is a lack of funds, qualified specialists, political instability [3].

According to experts, despite current trends in strengthening the value of economic factors, the priorities of social policy and dialogue remain important strategic arguments that should play an appropriate role in solving global problems, achieving social justice and harmony.

European countries associate conceptual approaches to the transformation of the social function with its implementation based on scientific justification, the use of social expertise, monitoring, means for checking the level of need; strengthening the active preventive nature of social protection, creating conditions for the implementation of the economic initiative of citizens; increasing the role of the non-governmental sector in providing social services and benefits to socially vulnerable categories of citizens; strengthening the targeted nature of social assistance. These trends, in general, correspond to possible directions of the use of European experience in Ukraine. Ukraine's desire for full EU membership closely links to the need for significant changes in social policy, dialogue, and regional security. Consequently, only the conditions of economic success can lead to positive changes in this area. The construction of a transparent economic environment, the introduction of generally accepted European economic functioning mechanisms require the creation of an environment based on the European traditions of the social state and security. Quite indicative in this context is the intention of the European Council in the Green Book to create a dynamic and effective European security market with a reliance on progressive business circles and companies with a reliable social and environmental base that are aware of their social responsibility [4].

Despite some positive aspects of the reform practice, the need for fundamental changes in the modernization of the social services system and financing of social services remains urgent in Ukraine. The main goal of improving the mechanisms of social services is to form a system granting efficient, targeted support to the needy; stimulating the provision of services through direct budget financing; contributing to raising social standards in the state, and improving the material conditions of disadvantaged segments of the population, attracting funds from non-governmental structures through social services and social sponsorship. In conditions when relevant state organizations are not able to perform their duties properly due to the complex political situation, lack of funds, other resources, the state should look for partners and develop cooperation between different sectors, such as the public sector (central and local authorities) and non-state or non-governmental sector (civic and other organizations).

The National Strategy for Promoting the Development of Civil Society in Ukraine for 2021-2026 emphasizes the importance of improving approaches to state support for the activities of civil society organizations and strengthening cooperation between them and executive authorities. Among the main objectives of the Strategy are: expanding the support for civil society organizations by the state, increasing the order of services, improving the transparency and accessibility of the supporting mechanism for competitive civil society projects [5].



According to the practice of developed countries, the contribution of non-profit organizations to gross domestic product there is much higher than in Ukraine. They maintain employment in the sector, develop social entrepreneurship, help vulnerable categories of citizens. In particular, the vast majority of civil society organizations in the world take part in the provision of services and assistance. In Ukraine, to ensure guaranteed social services for those who need them, the state has to solve the issue of normalization of the list of social services, their amount, cost calculation, etc. It will allow us, both at state and local levels, to determine required funds for the provision of social services to different target groups, to build a full-fledged partnership between the state and the non-governmental sector. Compliance with the principle of subsidiarity, which contributes to the involvement of civil society institutions in the implementation of state, regional programs and solving local issues, is of great importance.

CONCLUSIONS

In the context of the influence of globalization processes on the development of the economy, the ambiguity of the formation of the socio-cultural context, the emergence of new risks and threats, the aggravation of the situation associated with the spread of the COVID-19 pandemic, the importance of transforming the social function of the state, strengthening its activity and responsibility in the context of solving social problems of citizens, protecting their rights and interests becomes urgent.

The specifics of decentralization processes prioritize the implementation of the principles of social partnership and mutual consideration of social interests of various social groups and categories, involvement of non-governmental structures in cooperation, increasing the effectiveness of network forms of management interaction to ensure prompt response to citizens' requests, provide high-quality social services, strengthen transparency and openness of public authorities based on the application of a service approach in the implementation of the social function of the state.

The implementation of the social function of the state should aim at the development of a comprehensive dynamic system of institutions and social relations that regulate the reproductive functioning of society. The main elements of the social function measurement are demographic processes, the level of living of the population, trends in the labor market, standards and indicators of social protection, organization of social insurance, quality of the pension system, social partnership, etc.

The priority directions of transformation of the social function of the state should include:

- improvement of approaches to the formation of a system of state social standards and guarantees in line with international practice;
- creation of an efficient social risk management system;
- studying the possibilities of introducing and functioning of social enterprises for the employment of vulnerable categories of citizens, in particular, internally displaced persons, the use and active promotion of flexible forms of employment for disabled people, persons caring for young children or ill people, residents of rural areas and other groups requiring special working conditions;
- increasing the level of access, quality and timeliness of social services for the population in rural areas by intensifying the work of mobile multidisciplinary teams for the provision of social services, on-site receptions of employees of social protection bodies, institutions, and establishments providing social services;



- developing preventive social services for families with children to prevent social orphanage;
- establishing social support for families with children in difficult life circumstances, supervision and control over living conditions, moral, mental, and physical conditions of children from such families;
- ensuring the efficient, professional rehabilitation of persons with disabilities, arranging their training for professions and specialties according to the needs of the labor market;
- expanding employment opportunities for persons dismissed from military service after participating in the anti-terrorist operation, including the provision of a voucher for professional retraining or advanced training;
- taking into account the latest world practices and domestic experience, optimize the system of providing housing for the most vulnerable segments of the population from the state housing stock, including orphans, children deprived of parental care;
- increasing the efficiency of social dialogue between the state, trade unions, and employers' organizations on the regulation of labor relations, formation, and implementation of social policy;
- reforming the social services market, increasing the number of non-state social service providers involved in their provision at the expense of budgetary funds;
- modernizing the social sphere in terms of improving the quality and accessibility of medical services, determining the standards and financial conditions for their provision, taking into account the threats and risks associated with the COVID-19 pandemic.

Thus, the transformation of the social function should take place in the direction of forming a socially responsible state based on modern approaches to using the horizontal model of subsidiarity of the state and civil society as a guarantee of democratic development, a significant prerequisite for the formation of social well-being by activating innovative projects and resources.

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METHODOLOGICAL PRINCIPLES OF MANAGEMENT PHILOSOPHY

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ABSTRACT

The article is dedicated to the comprehensive examination and analysis of basic methodological approaches to management. So, the functioning of management philosophy should update methodological tools due to the cutting-edge constructive methodology fruitfully applied in the context of contemporary solutions by scientific authors engaged in the management sector. The article aims to generalize conceptual provisions for the philosophical methodological apparatus in management and determine modern scientific approaches to management philosophy. It reveals the concept of a project-based approach in management philosophy as well as characterizes the content of transforming a quantitative kind of information (mathematically logical constructions) into the qualitative setting of goals, purpose, mission and philosophy of corporate management.

Keywords: management philosophy, constructive methodology, methodological approaches, project, information trends in management, etc.

INTRODUCTION

Formulation of the problem. Complimentarity, binarity and globalization of our times encourage the rapid development of interdisciplinary methodological tools. Current traditional philosophic approaches (general scientific methodology) quite extensively transform into upgraded methodological mechanisms caused by the demand of recent trends. Such a situation is completely reasonable given the dynamic environmental changes. Present realities make us survive in the period of uncertainty, crisis and higher anxiety (because of the Covid-19 pandemic). Therefore, updated methodological tools based on economic, financial, cultural, social, political and information factors speed up adaptation processes and perception of dynamic changes (force-majeure and crisis management). Hence, researchers, practitioners and business analysts are deeply interested in the establishment of new interdisciplinary methodological constructions in planning, organization, motivation, etc.

It is quite relevant and reasonable now to talk about such an upgraded general scientific system of knowledge as management philosophy [4; 8; 11; 5]. According to R. Shevchuk, an Ukrainian researcher of contemporary methodological principles, the active struggle against uncertainty, risks, force-majeure and crises urges the humankind to make bold and self-sacrificing decisions, find new mechanisms for exploring the social management methodology, i.e., management of social groups both in the global context and in business activities. Intelligent and socially active people require the efficient weapon and adaptive tools for operating management techniques and best practices. These tools are developed by the philosophical methodology and then the methodology of particular industry-specific science – management philosophy [13, p. 190].

In general, philosophy as a science has at least a two-dimensional definition: understanding of the framework for existence processes, world order, constructive existence of the universe, as well as the investigation of life activities of each separate component. Thus, it is quite relevant and



reasonable to talk about the integrated system of the methodological apparatus of management philosophy as a science of current millennia.

The key area of Management philosophy is to explore philosophical and methodological principles in management as a basic tool for objective reality and multi-purpose enterprise structure. According to the subject of scientific research, management philosophy aims to study the updated methodological apparatus of basic subject-object management activity.

With the research considering management as a science in human (social) activities [1; 2], it functions and develops according to particular methodological tools that are primarily a system of laws, general principles, provisions and methods, as well as a cognitive platform of social management theory, which applies a set of techniques, methods and research procedures as a scientific area of knowledge.

Well, the problem of this investigation driven by the increasing interest in philosophical comprehension of the upgraded functioning mechanism of business structures, state and non-governmental organizations, namely: management of developing non-linear processes of organization functioning regarding its overcoming of crisis local and global phenomena, etc.

In particular, reengineering of business processes, development and hard-soft management of private structures, public institutions and non-governmental organizations in terms of philosophical (ontological and gnoseological) rethinking.

In the period of the active integration of social forms of existence (society of information culture, emotional intelligent, post-modern and cloud smart technologies), we can see the increasing problem of mechanisms for management philosophy and multiplication and methodology of specific scientific knowledge.

The purpose of the article is to actualize the general philosophical methodological apparatus in management and determine contemporary scientific approaches to management philosophy.

Analysis of references. The problem of the methodology of management philosophy is widely highlighted by foreign specialists in constructive methodology (C. Barrow, J. Bornstein., R. Brown, P. Pruitt, B. Ford, V. Popov, S. Liapunov, A. Voloskyi [9; 12], etc.) and Ukrainian researchers (S. Pokropyvnyi, H. Shvydanenko, H. Tarasiuk, M. Malska, S. Sobol, O. Derevianko [12], etc.), revealing the essence of the available range of designing development methods (TACIS, EBRD, UNIDO, etc.) successfully applied in the world and local guidelines [9].

Presentation of the main material. From the earliest times, management of the social and ideological structure has featured a variety of corresponding principles, methods and approaches used at a certain level of management. Konosuke Matsushita, a well-known Japanese manager and founder of Matsushita Group and PHP Institute, writes the following in his work 'My Life and Management Philosophy': management at the highest level takes on a form of strategic social management and organization of society's life activities, i.e., state management. Besides, in the times of comprehending philosophical issues of state management, philosophers were the first to note this level of management, namely: Confucius, Lao Tzu, Socrates, Plato, Aristotle, N. Machiavelli, T. Hobbes, I. Kant, G. Hegel, K. Marx, M. Weber, A. Bohdanov, etc. They are the luminaries of state system research. Their works are still relevant and contain constructive notes on management at the national level [10]. A new form of management appears at the average level: management of organizations, stock companies, or local government systems, while small individual enterprises and institutions are at the end of the chain.

Nowadays, in the context of the current general philosophical methodology (methodological reflection, constructive methodology, post-modern philosophy) and its advanced structural



components (multiplication, project, multicultural approaches, etc.), one actively takes scientific approaches while designing a methodological mechanism of interdisciplinary research. For example, philosophy of motivational management reveals key postulates of methodological encouragement and motivation tools, allowing developing operating mechanisms for enhancing staff productivity, conditions and skills in leader management, and creating ergonomic labor conditions, which positively affects professional activities and individual existence, worldview and cognitive activity of employees.

Fundamentals of the methodological background of management philosophy were examined by such well-known Ukrainian and Russian scientists as V. Andrushchenko, Y. Bekh, H. Voronkova, D. Novikov, D. Diiev, V. Kozakov, V. Kremen, etc.

In her monograph “Philosophy of social systems management”, Y. Bekh [2] describes philosophical principles of management from the perspective of the living organism concept, “management philosophy brings a social body to formal algorithms of organizational activities, makes it an organism and thus animates it” [2].

Therefore, management philosophy as a variety of the applied scientific system of knowledge is a general scientific fundamental construction of institution management during its life sustaining and goal setting, which builds a system of diagnosis, adoption and optimization of corporate management activities due to the upgraded methodological platform.

In a narrower approach, management philosophy means basic methodological principles, methods and techniques of management, allowing efficiently and/or profitably leading business structures and public and non-governmental organizations. The management term has a broad, scaling and comprehensive value. However, it is worth noting that as part of our research, management philosophy is focused on fundamental development (progressive or regressive) of the managerial social structure, definition of the main categories of management, development of tools for enterprise and institution functioning, implementation of strategic measures, analysis of the viability of designing tactical operating plans, etc.

The methodological background of management philosophy is formed in certain circumstances:

- application of theoretical and methodological aspects of social management in the context of business activities;
- interaction between general laws and principles of corporate management philosophy as a special process of social activity within a particular institution and in society;
- establishment of the specific categorial scientific apparatus of management philosophy;
- establishment of personnel management principles, establishment of the managerial action apparatus according to enterprise operations;
- development of knowledge and skills in applying methodological tools for efficient management activities;
- analysis of epistemological principles of management;
- characteristics of the mission and role of employees in the management process;
- focus on value-based and eco-friendly principles of the management process.

Starting management activity, newcomers to the key management mechanism should develop their own application technique, a kind of a mechanism for learning theoretical and practical materials and conditions that encourage efficient and rational operations.

Learning the methodological background of management is a relevant issue today, which is the main subject of management philosophy. Going back to the origin of society and its development



(ontological and cognitive aspect of scientific research methodology), managers should focus on the fact that management philosophy enable consistent, informative and constructive process of learning management principles. For example, scientific principles and administrative functions of management (schools of F. Taylor, H. Fayol, M. Follett, Gilbert husband and wife, etc.), bureaucratic mechanisms for management activities (M. Weber), interaction between contemporary classic quantitative management schools and corresponding management systems (D. Lorsch, P. Lawrence, D. March, A. Chandler, etc.), which have been affecting the social structure and remains relevant. Specific indicators of management activities (analysis and adoption of artificial intelligence, supply of goods on the market, relevancy of offered services, viability of using basic and circulating assets, application of innovative IT products, etc.) are formed according to the general philosophical structure of the dialectic approach to self-organization of the management system. In other words, in terms of the methodology of management philosophy, it is the shift from general to specific, from qualitative to quantitative, from theoretical to practical, etc. [3].

Special attention should be paid to the revelation of the content of transforming the quantitative kind of information (mathematical and logical constructions) into the qualitative setting of goals, purpose, mission and philosophy of corporate management. It means that the specified components are methodological tools for management philosophy. Therefore, the analysis of the financial and economic component in management allows reading out information in the so-called digital and logical language and detecting its impact on the socially oriented organization strategy. Financial and analytical reports, financial channels and flows, indicators of project profitability and return on investment, as well as any management activity, outline strategic priorities of corporate management. The methodological apparatus of management philosophy plays a crucial role in such a kind of activities.

In the context of general scientific methodological approaches, one should pay attention to the main constructions in management philosophy. So, a classic activity approach established the system of management structure values in the form of process (action), which includes moral and legal norms revealed as the regularity of a range of shifts: needs – interests – values – norms – motives – impetuses – action.

The teamwork of employees in their synergetic cooperation is organized in a corresponding manner: uniting values, one sets common goals and determines means, defines roles and functions of each employee, develops an algorithm of subordinated actions, etc. It is the steady organizational interaction between staff members at the organization, as well as between interrelated and interdependent departments, that ensures the efficient functioning of the management system in modern society. The methodological apparatus of management philosophy within this approach shows the importance of examining key value-based (axiological) priorities, motives, impetuses and principles of individuals engaged in management activities.

An ecological approach to management activities direct entrepreneurs to corporate social responsibility and compliance with international environmental standards. In the context of the ecological approach, one should create adaptation mechanisms that will include eco-friendly thinking, transformation of social behavior in the ecological and organic environment [4].

A constructive (project) methodology is quite relevant nowadays. The process of implementing desired goals, objectives and plans of the enterprise, achieving particular financial performance, and constructing new models (products, goods) is referred to as a *project*.

Currently, projects can be implemented according to national and international standards that



prescribe methodological principles of project development and implementation. Core globally known and approved methods include: an international development standard of the TACIS project; an international designing standard of EBRD; the UNIDO international standard. To ensure specific unification and improve planning processes and procedures, the national best practices use Methodical recommendations for developing business plans of enterprises [9] and Methodical recommendations for developing business plans of investment projects [12] approved by corresponding statutory acts.

That is why the constructive methodology is widely used in management activities worldwide.

Business processes at the enterprise are aimed at achieving particular corporate goals. Any managerial action (decision making, ways of communication, partnership with third parties) carried out from the highest level of management (top management) to the lowest one (low management) results in consequences that somehow (directly or indirectly) affect social and cultural changes, i.e., transform society's existence and life processes. Hence, the ontological and cognitive area of management philosophy faces such notions as company mission, philosophy of its management, social and ecological focus, corporate social responsibility, etc. At the deeper (axiological) level of organization, we can consider the impact of management philosophy on the corporate culture, the style of company management, communication channels, the effective Corporate and Ethics Code of management, staff motivation mechanisms, etc. Such a semantic level of management is based on the axiological (value-based) approach to management philosophy, as methodological principles of axiology accounts for the types of corporate values and company's social and cultural compliance with realities of modern society, its basic motivational profile, and the system of current values. Consequently, it is management philosophy in the context of carrying out business processes that defines the synchronization of value-based principles of management compared to the Ethics Code of this organization in particular and society in general.

It is worth mentioning that a lot of managers do not perceive the methodological apparatus of management philosophy as a fundamental updated and efficient platform for making managerial decisions on a global scale. However, current environmental changes make specialists apply the field-specific methodology, directing the vector of company management philosophy to eco-friendly thinking.

To understand better and apply methodology approaches analyzed in this research, one should focus on the following applied aspects in corporate management on information networks.

- modern trends in informational support, computer availability and cloud programming invoke managers to be technically competent and use all contemporary methods of goods promotion (social media, network links, online shops, websites, online channels and online sales platforms, etc.);
- huge flows of information and data caused by integration processes and globalization of free information flows (Big Data etc.) put the necessity for fast data processing on the agenda among managers in order to analyze high-quality information and bring it to the language of figures and indicators; to reveal the procedure for using obtained financial reports to enhance the viability of corporate management (financially oriented organizations) or social efficiency (the effect of social utility from management activities) for public institutions and non-governmental organizations;
- processes of collecting, recording and processing the customer database are also related to the large amount of digital data (number of clients, their relevant phone numbers, volume of ordered



products), which should be seamlessly drawn up to enhance successful management activities, namely: development of individual CRM systems, 1C: Enterprise, Parus, etc.

– the investigation of human demands, motives, dynamics of human tastes, laws of shifting from the marketing policy to a clear structured strategic development plan will be efficient while taking an axiological approach to the methodology of scientific cognition. In general, axiology is a set of value-based and spiritual determinants of social or individual activities, as well as related social and psychological formations [6].

CONCLUSIONS

Currently, general philosophical methodological tools should be upgraded and should face contemporary globalization and risk challenges. The main task of these tools is the adaptation of the management methodology at all levels (state, corporate and individual). With the general philosophical methodology being fundamental, methodological approaches to management philosophy establish tools for efficient company management, especially in the current critical conditions and the period of uncertainty (Covid-19 pandemic). Therefore, we highlight relevant methodological approaches to management philosophy, as well as define practical mechanisms for efficient management activities.

The key ones include the project approach (constructive methodology), value-based (axiological), dialectic and synergetic (non-linear effect and multiplication effect), eco-friendly and activity approaches, etc.

Core objectives of management philosophy in the unstable period: application of conceptual, methodological, logical and gnoseological analyses of basic ideas, notions, results, methods, functions and theories in management science; translation of philosophy laws to enrich management laws; use of achievements in theory and practice of management science to enrich the content of categories and laws of philosophy; methodological analysis of management in regard to different areas of human activities and different classes of management entities; detection and systematization of axiological dominants in science and practice of management.

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STRATEGIC PROSPECTS FOR THE IMPLEMENTATION OF LAND REFORM IN UKRAINE AND THE LAUNCH OF THE LAND MARKET

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ABSTRACT

Theoretical and practical aspects of development of strategic prospects for the land reform implementation in Ukraine have been analysed, possible consequences of termination of moratorium on land sale and the need to improve management in the process of the national land reform implementation have been determined in the article. The main strategic priorities of land relations in Ukraine have been covered. The research vector is focused on taking into account principles of land resource management regulated by specific methods and forms of legal impact on the land market formation and free circulation of land in general, management in a particular area complying with theoretical foundations of basic mechanisms of public administration and regulation. The conceptual foundations of strategic prospects for the implementation of the land reform in Ukraine and the launch of the land market have been presented in the article. It has been noted that the strategic prospects for the implementation of land reform in Ukraine will make it possible to achieve economic, social and environmental effects and to implement a number of sustainable development goals. The main legislation issues and the need of certain changes, improvement of public administration in the area of land relations enabling the economic growth in Ukraine have been covered.

Keywords: land market, moratorium, land reform, land protection, monetary valuation of land, strategy, sustainable development, competitiveness.

INTRODUCTION

Formulation of the problem. Current challenges and issues, globalisation of life, change in vectors of political and economic influence, the increasing role of information processes make the issue of developing the strategic prospects for the implementation of land reform in Ukraine relevant. This important aspect is determined by the presence of undesirable signs of Ukraine's lagging behind the developed countries of the world.

At the present stage, a particular focus is made on approaches to reformation of land relations and launch of the land market of Ukraine. Therefore, developing conceptual foundations of strategic prospects for the implementation of land reform in Ukraine and launch of the land market is relevant. In addition, restrictions on the sale of land to legal entities do not allow land prices to rise, as individual buyers are currently hesitant to buy land. We also emphasise that the combination of existing theoretical achievements with the practical side necessitates the definition of strategic prospects for the implementation of the land reform in Ukraine and that the launch of the land market is a difficult problem and requires further research.



Analysis of recent research and publications. A sufficient number of research works on the land market introduction in Ukraine has been carried out. The concept and development of the land market was frequently covered in academic works of V. Mesel-Veseliak, P. Sabluk, V. Trehobchuk, V. Nosik, P. Kulynych, O. Shulha and many other scientists. For instance, Plutalova O. dedicated one of her research works to important and relevant issues of the current state of the land reform. Nowadays there is a need to study this issue in an objective and thorough way, but constant changes in legislation, temporary nature of reforms prevent us from referring to research of past decades and making long-term predictions [9; 10].

The purpose of the article. Study of theoretical and practical aspects of developing the strategic prospects for the land reform implementation in Ukraine, determining possible consequences of termination of moratorium on land sale and the need to improve management in the process of the national land reform implementation.

Presenting main material. The land reform has long been necessary for Ukraine. In 2020, the Verkhovna Rada of Ukraine adopted necessary amendments to regulatory documents on the land market. Since the launch of the land market in Ukraine, from 01 July 2021, 15 thousand of land purchase and sale agreements have been concluded. In total, about 36,000 hectares of land were sold [2]. Currently, after termination of the moratorium on land sale, every citizen of Ukraine can buy no more than 100 hectares of land. Only individuals have this right. A notary, formalising a purchase and sale agreement, checks whether the buyer has not exceeded the limit of 100 hectares, whether such person is under sanctions, and whether the owner has the right to sell it. Later, from the beginning of 2024, it is planned to limit it to 10,000 hectares for one buyer. Both Ukrainian individuals and legal entities will have this right. Until then, the Verkhovna Rada of Ukraine can make many amendments to the legislation, and accordingly, much can change [8].

At the moment the main issue for notaries to start working in this direction is access to the State Land Cadastre. There are about 6,000 private notaries in Ukraine. Since the launch of the land market, 5.6 thousand applications for access to the State Land Cadastre have been registered. Almost 5,000 of them have been accepted, but 600 have been rejected. 99% of all applications received from private notaries have been accepted, which is almost 5 thousand [15]. Such data suggests that work between the State Land Cadastre bodies and bodies or notaries registering land purchase and sale agreements is effective and is arranged at a sufficiently high level.

In order to get rid of trespasses and raids as much as possible, during the land reform certain land market rules and the necessary preventive measures to protect the interests of landowners, buyers and tenants have been introduced. It is important that it is the tenant who has the preferential right to purchase land. The landowner, after his/her decision to sell land, notifies the tenant about it, and the latter, within 2 months, must inform if he/she wants to buy land or not. The tenant can also offer the owner to buy land from him [1].

We believe that the economic effect of the land reform will begin to grow only after 2024, unless the necessary amendments are made to the legislation. The state is only at the beginning of the land reform, and, accordingly, a free market for land circulation is opening. Public administration bodies in the field of land resources play an important role in all these processes. Each subject of land resources management is guided by certain methods, forms and strategic prospects for the implementation of the land reform in Ukraine. Accordingly, each subject should manage in a particular area, guided by the theoretical and methodological principles of developing conceptual foundations of strategic prospects for the implementation of the land reform in Ukraine and the launch of the land market.

**Table 1****The main strategic priorities of development land relations in Ukraine**

<i>Strategic priority</i>	<i>Priority measures</i>
Improve accessibility, integrity and interoperability of registers	<p>To ensure compliance with restrictions defined by law on land circulation.</p> <p>To reduce the number of raider attacks.</p> <p>To improve the quality, integrity and availability of registry data.</p> <p>To adapt the existing infrastructure for registration of new types of transactions/land rights.</p> <p>To regularly provide data on land prices based on market transactions.</p> <p>To improve legal awareness and ways to resolve land disputes.</p> <p>1.7 Further improvement of the land management system.</p>
Create and ensure operation State Agrarian Register (SAR)	<p>To develop and approve a regulatory framework for SAR.</p> <p>To design, test and assess SAR software so that land plot registration procedure would be more complete and of high quality.</p> <p>To make SAR registration nationwide with features of correcting mistakes and updating registry information on lease agreements.</p> <p>To develop and introduce the procedure for allocating state support through SAR.</p> <p>2.5 To expand SAR into a single marketplace and an online support centre for farmers.</p>
Improve the quality and completeness of cadastral data and interoperability of electronic systems to reduce corruption	<p>To ensure integrity of the State GeoCadastré software and data.</p> <p>To eliminate the monopoly of the State GeoCadastré on control functions by involving the private sector.</p> <p>To develop, implement and monitor the strategy to reduce corruption in land relations at all levels.</p> <p>3.4 To regulate and introduce the system to monitor the land market.</p>
Improve mortgage lending and access small landowners to credit resources	<p>To establish the Fund for Partial Credit Guarantee to reduce risks of bank lending to agricultural small and medium enterprises.</p> <p>To improve the regulatory framework for mortgage lending.</p> <p>To improve access banks' access to reliable information for assessing customer risks.</p> <p>To improve the financial literacy among small farmers and their ability to prepare credit applications.</p> <p>4.5 To use state support programmes to facilitate access of small and medium farmers to credits.</p>
Increase the capacity of local communities effectively plan and manage land	<p>To provide local authorities to dispose land within the administrative boundaries of communities.</p> <p>To ensure a transparent regulatory environment to plan land use at different levels.</p> <p>To increase the capacity of local authorities to increase revenues from land taxation.</p>



Protect and organize environmentally vulnerable land categories	To mark environmentally vulnerable territories and cultural objects on the public cadastral map and organise the regulatory base so that environmental restrictions would be followed. To monitor the use of environmentally and culturally valuable lands and to promptly respond to violations identified.
Provide communication support land reform	To debunk the myths and raise public awareness. To increase legal literacy and to provide legal support to citizens. To manage expectations of key participants and reduce risks. To actively involve interested participants and create a coalition for a transparent land market. To support introduction of the State Agrarian Register. 7.6 To monitor public attitude and assess the efficiency of communication campaigns.

Source: compiled by the authors based on [16].

Creating a transparent and efficient land market will boost economic growth and ensure the desired long-term effects of land reform (increased investment, productivity and fair economic performance) and mitigate significant risks in the event of a land market opening (moratorium on sales, difficult access to land for current users, an increasing number of raider attacks and depriving local authorities of future budget revenues). It is necessary to apply priority measures of strategic prospects to complete the development and implementation of the necessary regulatory framework to move forward the reform in the field of land management (Table 1). At the same time, it is required to continuously monitor the state of key determinants in order to track restrictions and security threats and timely eliminate them [3].

Today, data sharing has become important due to the growing number of information resources (databases, knowledge bases, software components, etc.) that vary in content, structure and volume. Subject area data created in various applications according to individual specifications by different developers is usually duplicated, and their sharing is complicated by the inability to combine [20]. Data compatibility or suitability for integration in specific conditions is based on the concept of interoperability. It means the ability to interact, which is achieved by complying with certain rules for creating independently developed geospatial datasets based on common approved standards [16; 17].

Limited access to information allows specialists in land management, registrars and other authorities to conceal potential illegal activity on land distribution, tax collection, execution of court decisions, etc. Therefore, one of the strategic prospects for the implementation of the land reform in Ukraine is the development of a national infrastructure of spatial data by ensuring the openness and interoperability of information of sectoral and institutional cadastres.

Strategic prospects for the implementation of land reform in Ukraine and the launch of the land market should focus on global challenges and take into account the industry needs. At the same time, changes at different levels (complex, industry, subcomplex, holding, enterprise) should also be taken into account, since it will make it possible to identify shortcomings and further opportunities during implementation of the national land reform. A comprehensive generalised

assessment of prospects for the land reform and implementation directions are combined in two blocks: stabilising-operational and perspective-transformational (Fig. 1).

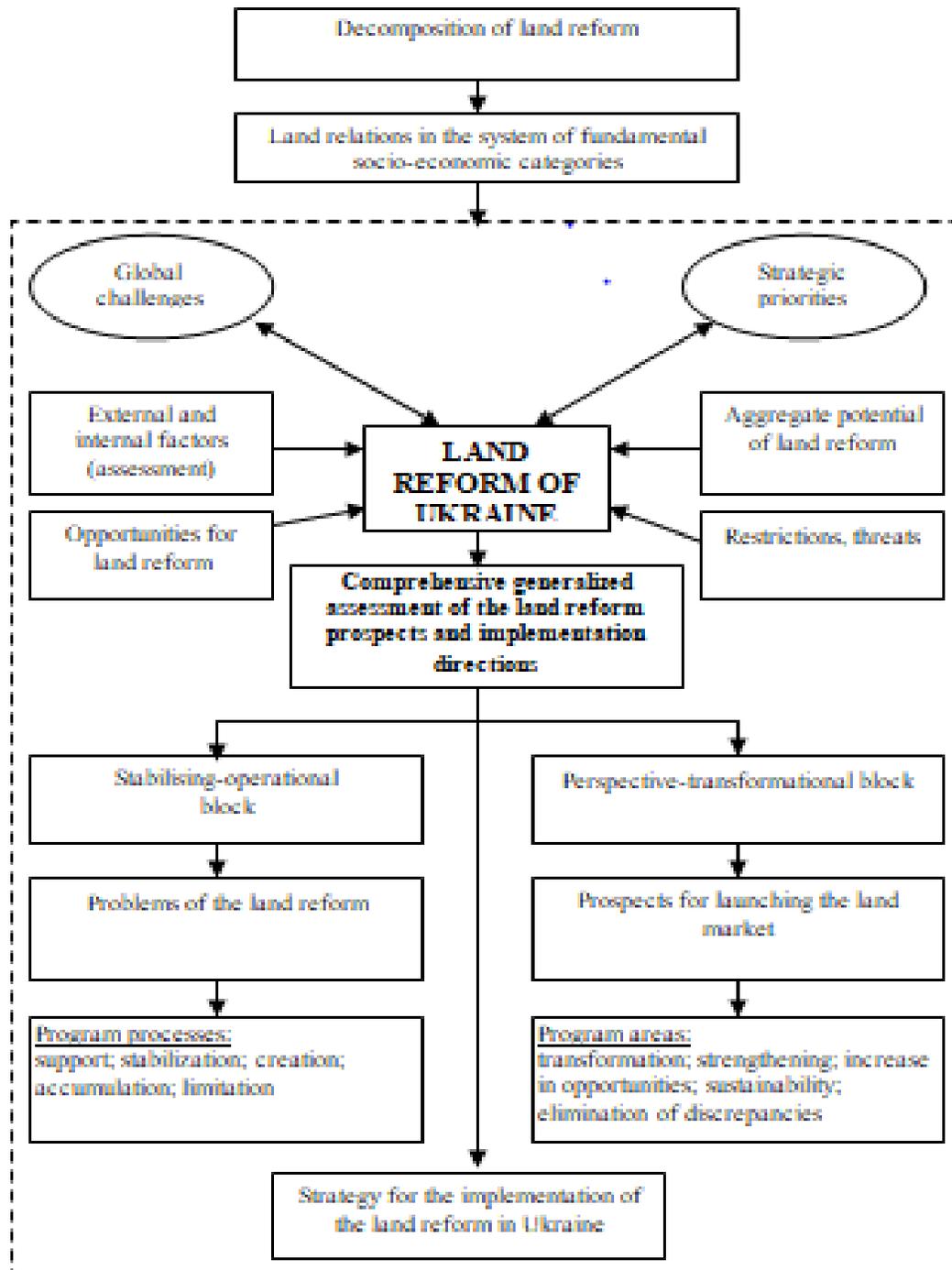


Fig. 1. Conceptual foundations of strategic prospects for the implementation of land reform in Ukraine and the launch of the land market

Source: built by the authors



The effectiveness of the land reform strategy combines consideration of all external and internal factors, the total potential of the land reform, opportunities of the land reform, their limitations and threats. A comprehensive generalised assessment of the prospects for the land reform and the directions of block systems implementation – stabilising-operational and perspective-transformational blocks – will allow introducing an effective national model of the land market in Ukraine.

CONCLUSIONS

Summarising the main aspects of the research it worth noting that the population of Ukraine has a lot of questions after amendments made to the legislation on free land circulation, access to the databases, termination of the moratorium on land sale, etc. Creating a transparent and efficient land market will boost economic growth, ensure the desired long-term effects of the land reform (increased investment, productivity and fair economic performance), and mitigate significant risks in the event of launch of the land market.

At present, we see that an effective strategy identifies the main problems and conflicts in legislation, the need for appropriate changes in public administration in the field of land relations, and low land prices do not give impetus to economic growth, which should also be corrected by amending legislation. As a result of the implementation of strategic prospects for the land reform in Ukraine and the launch of the land market, a set of effects is achieved, namely economic, social, environmental and technological ones, and the principles of sustainable development are formulated. We believe that the concept of strategic prospects should take into account all the priority measures and stages of implementation of the land reform in Ukraine, which will identify shortcomings and further opportunities in the course of economic growth in Ukraine.

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FINANCIAL MONITORING OF CRYPTOCURRENCY TRANSACTIONS IN THE PUBLIC ADMINISTRATION SYSTEM: FOREIGN EXPERIENCE

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ABSTRACT

The article examines the current international experience of Japan, Spain, Poland, Bulgaria, and the Republic of Belarus in the development of financial monitoring of cryptocurrency transactions. The methodological basis of the research was general scientific methods of cognition: observation, generalization, comparison, deduction, induction, analysis, synthesis. The article summarizes the models for building a financial monitoring system for transactions with cryptocurrencies: the «observation» model; the «risk minimization» model; and the «prohibition» model. The main characteristics of financial monitoring of transactions with cryptocurrency are determined by the following criteria: regulatory document, state body, punishment for committing a crime. Measures from foreign practice to improve the Financial Monitoring System in terms of the use of cryptocurrency for terrorist financing are defined, which can be taken into account by domestic regulators (in particular, identifying customers and beneficiaries for all transactions with cryptocurrency, regardless of its amount; developing mechanisms for information exchange between the State Financial Monitoring Service and law enforcement agencies; stimulating and supporting the work of the state financial monitoring service; strengthening and expanding international cooperation in the field of countering the financing of terrorism).

Keywords: financial monitoring, terrorist financing, public administration, cryptocurrencies, digital assets

INTRODUCTION

Formulation of the problem. Virtual currencies are increasingly being used to finance terrorism due to their specific functional features. The main manifestations of the use of cryptocurrencies in this direction are seen in the purchase of illegal goods and services on the DarkNet network and money laundering on digital exchanges.

Cryptocurrencies with increased anonymity are specifically designed to perform transactions with undetermined sources of origin and provide almost complete anonymity. The use of virtual currencies to support illegal activities, including money laundering, poses security threats to many countries [4]. Therefore, this phenomenon is very dangerous for separate countries and the entire world community as well.

A component of the system of countering the financing of terrorism is the system of State Financial Monitoring. In terms of transaction with cryptocurrency, this system is at the stage of its formation, which is due to the uncertain legal status of this object. Therefore, it is relevant to study the foreign experience of countries around the world in the development of financial monitoring of transactions with cryptocurrencies.

Analysis of recent research and publications. Theoretical and practical aspects of financial monitoring as the main tool in countering the financing of terrorism were considered in the works



of Bysaha K.V., Vozniakovska Kh.A., Dolbnia A.A., Diakonova I.I., Lysak S.P., Pavlova D.M., Shyian D.V., Khmeliuk A.A.

The purpose of the article is the assessment of the current foreign experience of financial monitoring on the example of countries with different levels of development. For the study, we selected not only countries that are the best examples of "foreign practice", but also those that are only at the stage of implementing a financial monitoring system for transactions with cryptocurrencies and those that have already started conducting such transactions several years ago. This will allow us to identify both trends that exist in the development of financial monitoring and problems, as well as identify opportunities for taking into consideration in domestic practice.

Presentation of the main material. In *Japan* virtual assets are legal means of payment for which tax is paid. The main legislative acts regulating the circulation of cryptocurrency money in Japan are: "Financial Instruments and Exchange Act" (FIEA) and "The Payment Services Act" (PSA).

The law of Japan "Financial Instruments and Exchange Act" is a regulatory document that defines the main provisions of transactions on the securities market, as well as the operating activities of related companies. First of all, the law guarantees the protection of market participants and ensures maximum transparency by setting specific requirements for entities engaged in transactions with securities and financial derivatives. Since electronic assets can be used as a means of payment, operators must have a separate institution that will operate with an existing license to process electronic assets. According to "The Payment Services Act", these operators are equated with payment institutions. Subjects of storage of electronic assets are required to register if they are part of the cryptocurrency exchange activity. Without registration, only those entities that provide simple wallets that are not related to the exchange of cryptocurrencies can operate. An entity that wants to obtain a license to process electronic assets must meet and comply with the following conditions: have an office in Japan, a minimum authorized capital of 10 million yen, have a local representative – a resident or citizen of Japan, have managers for the Internal Audit Department, etc., and pursue a policy of combating money laundering and terrorist financing.

In order to combat dirty money laundering, token turnover is regulated by strict rules governing this market. The token issuer is required to comply with a strict public disclosure system, submit applications for registration of securities that are accessible to the general public, as well as submit annual reports and fulfill other obligations for continuous public disclosure of information. Intermediaries and issuers registered as operators of financial instruments are subject to the rules of due diligence of counterparties, requirements for providing explanatory documents, as well as requirements for preventing unfair transactions.

The state organization of Japan that performs financial monitoring of the turnover of electronic assets is the Financial Services Agency (FSA) [1]. This organization oversees banking, securities trading and currency exchange transactions, and insurance in order to ensure the stability of the entire financial system in Japan. The Financial Services Agency registers cryptocurrency exchanges and has the authority to check exchanges and, if necessary, apply administrative measures. The agency recommends that when opening cryptocurrency trading platforms, submit a special application to the commission on virtual assets, as well as take appropriate measures to counteract the legalization (laundering) of proceeds from crime.

Electronic assets in *Spain* are classified as electronic means of payment. Moreover, such transactions are exempt from paying taxes. However, for entities that work with electronic assets, a strict procedure for their activities is provided.



A Regulatory Act in the field of combating the legalization of funds obtained illegally is the Spanish "Specific Measures for the Prevention of Money Laundering Act" [3]. Spanish anti-money laundering legislation explicitly involves and regulates the activities of entities providing services in the field of electronic assets. All participants are free to trade or exchange digital currency, which makes them subject to supervision. AML legal requirements also are applied to companies that serve the cryptocurrency exchange and processing processes.

Now Spain has taken the path of specifying the requirements for the subjects of electronic funds circulation. Relevant exchanges and e-wallet entities are required to register and obtain a license from the Central Bank of Spain.

Spain's special body in the state financial monitoring system is the Commission for the Prevention of Money Laundering and the Securities and Stock Market Commission" [3]. Financial monitoring entities are required to provide information to the department of Financial Intelligence Unit about transactions if they are related to the transfer of cash, checks or other bearer documents exceeding 30 thousand euros.

In Spain criminal liability is established for violations of legislation in the field of financial monitoring. The penalty is from 6 months to 6 years in prison. For minor violations in the field of financial monitoring, an entity may be punished with a fine of up to 5% of its constituent capital and revocation of a license to carry out relevant activities.

In *Poland* the sale and mining of cryptocurrencies is allowed, but suppliers of virtual assets are subject to state registration with the authorized body. The National system for countering money laundering and terrorist financing in Poland consists of the General Inspector of Financial Information, mandatory institutions and cooperating units. The limits of their functioning are determined by legislative provisions, in particular the provisions of the "ACT of 1 March 2018 on counteracting money laundering and terrorist financing" [6].

Bulgaria at the legislative level, did not define electronic assets or cryptocurrencies. However, the National Revenue Agency provided an explanation in order to approximate the tax regime for electronic assets. The Basic Law of Bulgaria in the field of combating money laundering is "The Law on Measures against Money Laundering".

Legal entities should not obtain licenses to operate with electronic assets, since cryptocurrency does not fall under the definition of a financial instrument. Bulgaria considers cryptocurrency as a financial asset. The main condition for using electronic currency is the payment of a tax by the subject in the amount of 10% of the transaction with cryptocurrency.

The Bulgarian Financial Supervision Commission (FSC) is a special body of Bulgaria that carries out activities to combat electronic currency laundering [2]. This Commission monitors the electronic asset market. It focuses on four main areas: establishing requirements for possible licensing or registration of companies offering innovative products and services in the non-bank financial sector; analyzing the need for a regulatory framework for outsourcing services; creating innovation hubs; and managing cybersecurity risks. The main task of the non-bank financial sector is to introduce advanced technologies and maintain the financial stability of consumers and investors of electronic assets.

The main areas of work of the Bulgarian Financial Supervision Commission are: participation in the development of draft laws related to the financial market; control over the admission of participants to the financial market; licensing of controlled organizations; control of the activities of financial market participants; imposition of sanctions when violations are detected.

In *Republic Of Belarus* the law of 30.06.2014 No. 165-Z "On measures to prevent the legalization



of proceeds from crime, the financing of terrorist activities and the financing of the proliferation of weapons of mass destruction" is in force [7]. This law defines the legal and organizational basis of state policy in the field of preventing the legalization of proceeds from crime, financing terrorist activities and financing the proliferation of weapons of mass destruction. Separately, the law highlights that the concept of funds includes money itself, as well as electronic money.

A high-tech park has been created and is actively operating, i.e. a special legal regime that applies to resident companies operating in the areas provided by law. These include 37 activities, including software development, fundamental and applied research, experimental developments in the field of natural and technical sciences, mining, and others.

Decree of the President of the Republic of Belarus of December 21, 2017 No. 8 "On the development of the digital economy" [8] expanded the scope of activity of the Hi-Tech Park, improved the legal regime of residents' activities. After the adoption of this regulatory document, Belarus became the only country in the world with comprehensive legislation regulating the sphere of blockchain and cryptocurrencies.

The authorized financial monitoring body is the Financial Monitoring Department of the State Control Committee of the Republic of Belarus. This department was created with the aim of improving the system of measures to prevent the legalization of proceeds from crime and the financing of terrorist activities.

Liability for money laundering obtained by criminal means is established by Article 235 of the Criminal Code of the Republic of Belarus. For performing financial transactions with funds obtained knowingly by criminal means, in order to give a lawful form to the possession, use and (or) disposal of these funds in order to conceal or distort the origin, location, placement, movement or actual ownership of these funds – the penalty is provided from a fine to imprisonment for a term of 2 to 4 years. And if such acts are committed by an organized group, then the penalty is provided in the form of imprisonment for a term of 5 to 10 years. Article 290-1 of the Criminal Code of the Republic of Belarus provides punishment for providing or collecting funds in any way for the purpose of using in terrorist activities, material support or other support knowingly for the perpetrator of terrorists, terrorist groups and terrorist organizations, and is punishable by imprisonment for a term of 8 to 12 years with a fine.

Let's summarize the main characteristics of financial monitoring of transactions with cryptocurrencies in the countries under consideration (Table 1) with disclosure of information about Ukraine.

It is possible to define the following main approaches to building a system of financial monitoring of transactions with cryptocurrency – preventive and reactive [5] (both positive and negative). Depending on their combination a specific model is formed for each country:

- 1) the "observation" model. At the state level, favorable conditions are being created for the development and distribution of transactions with cryptocurrencies. State regulators set rules for doing business in the field of virtual assets, but they are not restrictive or prohibited;
- 2) the "risk minimization" model. Compliance with this model provides for the adoption of minimum regulatory documents on the control of virtual assets, but without taking measures to encourage transactions with such objects;
- 3) the "ban" model. This model provides a complete or partial ban on activities related to cryptocurrencies.



Table 1

Key features of financial monitoring of cryptocurrency transactions in different countries of the world

Feature	Ukraine	Belarus	Poland	Japan	Spain	Bulgaria
Main regulatory document	Law "On preventing and counteracting to legalization (laundering) of the proceeds of crime, terrorist financing, and financing proliferation of weapons of mass destruction"	Decree of the President of the Republic of Belarus No. 8 "On the development of the digital economy", Law "On measures to prevent the legalization of proceeds from crime, the financing of terrorist activities and the financing of the proliferation of weapons of mass destruction"	Law "On countering money laundering and terrorist financing"	The financial instruments and Exchanges Act (FEA) and the Payment Services Act (PSA)	"Specific Measures for the Prevention of Money Laundering Act"	Law "On measures to combat money laundering"
Main State Financial Monitoring Body	State financial monitoring service of Ukraine	Department of financial monitoring of the State Control Committee of the Republic of Belarus	General Inspector of financial information	Financial Services Agency (FSA)	Commission for the Prevention of Money Laundering; the Securities and Stock Market Commission	Bulgarian Financial Supervisory Commission (FSC)
Punishment for committing a crime of legalizing any assets obtained illegally	From a fine to 12 years in prison	From a fine to 12 years in prison	Imprisonment from 6 months to 10 years, confiscation of property is established	From a fine to 10 years in prison	From a fine to 6 years in prison	Fine from BGN 100 – up to 3 years of imprisonment



So, based on the results of the comparison, it is established:

- the system of financial monitoring of transactions with cryptocurrency depends on the chosen model of state regulation of transactions with this object;
- each country has an authorized body in the field of countering the financing of terrorism, and it is also possible to assign these functions to specialized regulatory bodies in a certain field of activity;
- identification of individuals and legal entities can be carried out depending on the types of assets or the amount of the transaction, or it can be established for all clients regardless of these indicators;
- the use of cryptocurrencies to finance terrorism is recognized as a criminal offense with various types of penalties.

Certain measures from foreign practice to improve the Financial Monitoring System in terms of using cryptocurrencies to finance terrorism can be taken into account by domestic regulators, taking into account the specifics of the Financial Monitoring System in Ukraine.

We see it necessary to establish stricter control over transactions with cryptocurrencies and pay attention to the implementation of a number of preventive measures to counter its use for terrorist financing. In this regard, we consider it appropriate to hold such measures:

- identify customers and beneficiaries for all transactions with cryptocurrency, regardless of its amount. According to the amendments to Law of Ukraine "On preventing and counteracting to legalization (laundering) of the proceeds of crime, terrorist financing, and financing proliferation of weapons of mass destruction", financial monitoring covers transactions with cryptocurrency in the amount of more than 30 thousand UAH. Despite the fact that this limit is quite low compared to other countries, taking into account the high level of threat that cryptocurrency carries in the conditions of the armed conflict in eastern Ukraine, we consider it necessary to remove restrictions on the amount;
- develop mechanisms for information exchange between the state financial monitoring service and law enforcement agencies to ensure rapid operational access to data on funds and cryptocurrencies, the origin of which raises doubts and suspicion of being used to finance terrorist operations;
- it is more effective to encourage and support the work of the state financial monitoring service, since it is on the initiative of this body a fairly large number of criminal cases are initiated;
- strengthen and expand international cooperation in countering the financing of terrorism.

Conclusions. Legal regulation of transactions with cryptocurrencies in almost every country is at the stage of registration. Some countries have almost completely settled issues related to cryptocurrency, while others, realizing the speed of cryptocurrency distribution in the near future, are just beginning to investigate this issue. In any case, effective anti-money laundering procedures should be built at the state level of each country, including the imposition of certain obligations on participants in the digital currency market.

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BACKGROUND PROVISIONS OF THE STATE DEPARTMENT OF THE LAW ENFORCEMENT SYSTEM

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ABSTRACT

Study of the initial provisions of public administration in the field of law enforcement reform, we have limited their composition and establishment of features. It is established that the object of public administration in the field of law enforcement reform should be understood as public relations to which the tools of law enforcement are used, the actual methods of law enforcement, and the activities of entities implementing law enforcement. In turn, the subjects will be the central executive bodies that implement state policy in the field of law enforcement, local governments, and law enforcement agencies. The tasks of public administration of the law enforcement system include: establishing a system of communication between law enforcement agencies to perform the tasks assigned to them by law; formation of financial support for the activities of law enforcement agencies; development and implementation of law enforcement reforms; formation of resource support for the implementation of reforms and the functioning of law enforcement agencies; formation of information support for the implementation of reforms in the law enforcement sphere; organization of training and retraining of law enforcement personnel; organization of information and communication system of interaction of law enforcement agencies with international police organizations. The implementation of these tasks will ensure the adoption of highly effective public administration decisions on the development and implementation of reforms in the law enforcement sphere, which should ensure the effectiveness of the law enforcement system. The selection of the following principles of the law enforcement system, the observance of which should be aimed at public administration decisions: legality; justice; equality; professionalism; competence; political ness; continuity; independence.

Keywords: public administration, law enforcement, law enforcement reform, highly effective public administration decisions, legality, justice, equality, professionalism, competence, policy, continuity, independence.

INTRODUCTION

Formulation of the problem. Law enforcement of the state is a special area of public administration because the effectiveness and efficiency of the first depend on the security of social systems and the level of public order in society. Accordingly, in order to form an effective reform of the law enforcement system, there is a need to identify the properties of its initial provisions and determine the directions of their transformation in view of social challenges and the current state of social relations. The theoretical basis for the development of public administration in the field of law enforcement reform is the following starting points: objects and subjects, tasks and functions, principles and features of law enforcement.

Analysis of recent research. Some issues of forming the initial provisions of public administration in the field of law enforcement were raised by domestic and foreign scholars. Among domestic scientists in the field of public administration, the issues of law enforcement



development and its initial provisions were raised by: A.V. Antonov, L.V. Antonova, D.O. Gritsichen, W.W. Evdokimov, A.L. Pomaza-Ponomarenko, S.P. Lisak, M.F. Krishtanovich, G.I. Lyaxovich, C.M. Dombrovska, V.F. Zagurska-Antonyuk, V.V. Nonik, A.I. Semenchenko, V.P. Udovichenko, N.I. Shevchenko, O.V. Kravchuk, V.O. Kopanchuk and others. Peculiarities of the formation of the law enforcement system were considered in the works of legal scholars: V.B. Averyanov, M.I. Anufriev, I.V. Aristova, O.M. Bandurka, V.M. Timeless, V.T. Belous, V.V. Galunko, I.P. Holosnichenko, Yu.O. Zagumenna, R.A. Kalyuzhny, V.M. Kolpakov, A.T. Komzyuk, A.M. Kuchuk, I.E. Marochkin, N.P. Matyukhina, O.A. Martinenko, M.I. Melnik, T.I. Pikula, V.M. Plishkin, V.O. Seryogin, V.Ya. Tatsiy, P.I. Hamula, Yu.S. Shemshuchenko, M.K. Yakimchuk, H.P. Fairs and others. The works of these scientists are of great importance in the development of scientific and practical aspects of the law enforcement system, but the dynamic development of public relations makes its adjustments, which requires revision of its initial provisions for public administration

Presenting main material. For the purposes of public administration of the processes of reforming the law enforcement system of Ukraine, an important component is the identification of the initial provisions of this area of public administration. Identification of functions and tasks, objects and subjects, principles of the law enforcement system is the basis for the development of effective and socially significant reforms that will increase the effectiveness of law enforcement and ensure public confidence in law enforcement agencies. The formation of the initial provisions of the law enforcement system of the state is a rather complex process, because:

- 1) on the one hand, management is an area of public administration, which is entrusted with the function of ensuring public order and security of social systems;
- 2) on the other hand, the law enforcement system is the object of public administration and state regulation.

In this context, the scientific research on the formation of a coherent system of initial provisions of law enforcement as an object of public administration is relevant. The starting points, being the theoretical basis for the development of public administration in the field of law enforcement reform should take into account the properties of the current system of public relations, due to the important role of law enforcement in ensuring social security and public order. Applying a systematic approach to the study of public administration in the field of law enforcement reform can be a complex approach to determining the composition of the initial provisions and their properties.

“The system, by definition, involves not just a set of components, but also the interaction between them. The system is stable and resistant to external influences due to the fact that its relationships form a number of positive and negative feedback mechanisms that allow the system to respond to such influences while maintaining homeostasis⁶. In other words, certain basic components of the system form vicious circles that allow them to be self-sustaining and self-propelled, and therefore able to compensate for any changes brought about by external influences without changing the nature of the system as a whole. All these components, in their own way, are subsystems. This leads to the formation of a complex network of relationships, which, however, is based on several fundamental phenomena” [3]. Accordingly, such fundamental phenomena determine the properties of the initial provisions of public administration in the field of law enforcement reform.

“The main methodological factor in the organization of the system of cooperation in the field of law enforcement is a systematic approach, which allows: to determine the required composition of bodies interacting in the field of law enforcement; select the necessary characteristics of the



interaction management system, which would fully reflect the purpose of the interaction system; eliminate ways to get inaccurate and incomplete information about the state of the system of interaction and the environment. The leading nature of the system method is due to the characteristics of the complexity of the system of interaction in the field of law enforcement: the presence of a large number of entities and other components of the system; the variety of forms of connections between them; the existence of a significant number of contradictory criteria that must satisfy the system of interaction for its quality and effective functioning; a large number of factors influencing the components of the system” [3].

Domestic researchers studying public administration as a complex system of social governance, note that “Any social system is considered in the aggregate of two integral components - the subject and the object. The managerial influence of the subjects is carried out in relation to the objects of public administration” [1, p. 239].

The main starting points of the law enforcement system are the following: an object of the law enforcement system and state management of law enforcement reform. The object is an important component of any social system or system of management of social processes in the state and abroad. Domestic scientist V.V Yevdokimov points out that an important component of the formation and implementation of state policy in the field of law enforcement is the justification of the subject-object field and the order of formation of state policy to ensure compliance with law enforcement activities. These issues are relevant in the context of reforming public administration and law enforcement, a transformation of society, globalization challenges and changes in the emphasis on social management of social processes” [2]. “It is necessary to emphasize the defining importance of the object in the management system and the related interpretation of the purpose of public administration. In a democratic, legal, socially-oriented state, public and, in particular, public administration is aimed at ensuring human rights and freedoms, high quality of life of citizens, security of their existence. Hence such an essential feature of the functions of such management as a constant focus on the vital needs of the object, ie the activities of each entity must be analyzed in terms of real provision, first of all, these and not some other internal needs of the entity”. [1, p. 240]. An object is a phenomenon or process in which the subject's actions are directed. Any actions of the subject must ensure the effectiveness of the object and its compliance with certain standards and properties. Given the peculiarities of this research, it is worth highlighting the object of law enforcement and public administration of law enforcement, because these concepts and their structure are fundamentally different because the former is included in the latter.

- subjects of the law enforcement system and public administration of the law enforcement system. The subject plays a key role in the management system of any social system because its actions and response to feedback will attract the effectiveness of both its own government decision and the effectiveness of the system, including law enforcement.

- tasks and functions of the law enforcement system and public administration of law enforcement reform processes. These provisions may overlap, but from a theoretical point of view it is necessary to study the functions of the law enforcement system, and the position of the implementation of law enforcement activities must define the tasks. Moreover, the tasks of the law enforcement system and public administration of the law enforcement system in some respects will differ,

- principles of law enforcement system and public administration of law enforcement system. As well as any sphere of realization of functions of the state law enforcement activity is endowed



with the corresponding principles as should characterize properties of the given system from a position of its stability and continuous development. "Principles of law enforcement are objectively inherent in this type of public activity starting principles, indisputable requirements for the subjects of legal protection, expressing the most important laws of this type of relationship and are universal, higher imperative, general importance and stability. However, it should be remembered that the principles of law enforcement are not ready-made instructions, much less universal rules by which law enforcement can automatically achieve high results. They do not replace special knowledge, experience or skills. In turn, the principles of public administration in the field of law enforcement reform should correspond to the general system of principles of public administration and public policy.

According to the above, the initial provisions characterize the law enforcement system as a holistic system of relations between public authorities, law enforcement agencies, and participants in public relations, in order to ensure the legality and security of the latter. That is why the identification of the properties and structure of the above initial provisions of public administration in the field of law enforcement reform is very important, from the standpoint of developing innovative mechanisms and making public administration decisions.

Object of state management of law enforcement reform in Ukraine. "The main objects of public administration according to the European approach should be considered subordinate executive bodies, sectors of public administration, industry, government agencies, organizations and enterprises subordinate to the executive authorities. Accordingly, the objects of public administration are the system to which the power of the subjects of government is directed. The direct objects that are influenced by a particular entity are subordinate sectors (branches) of public administration. According to a broader, American approach, the objects of public administration are the whole society and any of its spheres, industries, relations. The object of management is a system that is subject to the power of the subject of management and executes its decisions, ie the system that is managed" [1, p. 241].

From the point of view of administrative law "the object of management can be considered in two aspects: elemental-structural - as a set of people (personally), industrial, sectoral entities and groups, and functional - as activities, the behavior of individuals and specific groups of people" [4, c. 123]. This approach is quite narrow and may not fully correspond to modern research on public administration in the field of law enforcement reform in Ukraine.

Evdokimov V.V. In the monographic study I emphasize the difficulty of identifying the object of state policy in law enforcement, in particular, noting: "The complexity of this process is that law enforcement is one of the tools of public administration and at the same time is the object of public policy. However, we believe that the object-subject field of state policy in the field of law enforcement is much wider than law enforcement as a tool of public administration. This is due to the fact that the object of law enforcement is public relations, and the object of state policy in the field of law enforcement is both public relations and the actual system of law enforcement" [2]. It is quite logical to apply an identical approach to the identification of the object and structure of objects of public administration and the field of law enforcement reform. After all, the system of public administration forms mechanisms for regulating public relations and establishing their boundaries, and law enforcement activities determine areas for ensuring the security of such relations and establishing their compliance with certain norms.

Some scholars suggest highlighting the features of public administration, in particular:



1) stable characteristic signs have those objects-organizations which are connected with the production of any product (material production, spiritual goods, scientific ideas);

2) for organizations-objects are characterized by a merger, an organic combination of actual management functions with the functions of production, provision of services [2, p. 168].

According to the above, we believe that the object of public administration is public relations in general and instruments for their regulation in particular. In general, you can

Given the complexity of the system of public administration in general and in law enforcement in particular, we believe that the object of public administration is public relations and the processes of their regulation and management. After all, the system of public administration is multilevel and each lower level is the object of higher-level management. This indicates a close relationship between the object and the subject of public administration, which was once emphasized by domestic scholars in the field of public administration: "It should be noted that between the subject and the object of government in the executive branch is not there are absolute limits: the system that governs, being the subject of a particular object, itself, in turn, maybe the object of control by another subject. For example, the oblast state administration, which exercises executive power within the oblast, is the subject of management of the district state administrations of the respective oblast, while being the object of management in relation to the government, which in turn is the object of management by President of Ukraine and the Verkhovna Rada of Ukraine" [1, p. 240].

In this context, we believe that the object of public administration in the field of law enforcement reform is public relations in relation to which the tools of law enforcement are used, the actual methods of law enforcement, and the activities of law enforcement agencies. Accordingly, we can present the following structure of public administration facilities in the field of law enforcement:

- public relations;
- law enforcement system;
- activities of law enforcement agencies.

Subjects of state management of law enforcement reform in Ukraine. The systems approach assumes that the key elements of the system will be the object and subjects of management that influence the former through methodological action and feedback. "The subjects of public administration are not only public authorities but also their leadership. The main feature of the subject of public administration is that it has a certain competence and authority, which allows exercising their will in the form of management decisions, management teams, binding. Powerful influence, emanating from the subject to the object of management, makes it possible to subordinate the will of the first will and activities of the latter, which is a necessary condition for achieving goals and solving tasks defined by the subject of management. Accordingly, the object of public administration is obliged to obey the will of the subject and to comply with its decisions. The subject of management is a system endowed with a certain competence and state-authoritative powers that enable it to implement its will in the form of management teams or decisions that are binding, ie it is a system that manages. From the standpoint of the European approach (model), the subjects of public administration include public authorities (government, ministries, other central executive bodies, local public administrations); heads and management of these bodies (politicians; officials; officials who are endowed with state powers). From the standpoint of the American approach (model), the subjects of public administration include all bodies and heads of three branches of government - legislative, executive, judicial" [1, p. 239].



Given the specific object of public administration in the field of law enforcement reform, we believe that the subjects will be the central executive bodies that implement state policy in the field of law enforcement, local governments, and law enforcement agencies.

Tasks of public administration reforming the law enforcement system. The main task of public administration in the field of law enforcement reform is to ensure the effectiveness of reforms, which in turn are aimed at improving the efficiency of law enforcement. The effectiveness of law enforcement will depend on solving the tasks assigned to the law enforcement system. In the context of the specified tasks of law enforcement activity which will become a basis of the definition of tasks of public administration are identified.

Studying the approaches to the system of tasks of law enforcement activities of the presented scientists, we believe that these approaches do not fully correspond to the current realities of society and the role that the state assigns to the law enforcement system. We believe that it is worth highlighting the tasks of the law enforcement system in general and law enforcement agencies in particular. The tasks of the law enforcement system include:

- crime prevention and counteraction;
- assessment of the criminogenic situation of certain territories;
- ensuring respect for the rights and freedoms of citizens as defined by the constitution
- development and implementation of measures to maintain public order;
- development and implementation of measures to prevent crime;
- development and implementation of the mechanism of punishment for the committed crime;
- execution of court decisions;
- other tasks of the law enforcement system.

Regarding the tasks of law enforcement agencies, the following provisions should be defined:

- can be determined in the context of the tasks of the law enforcement system to prevent and combat crime by various types. For example, the Bureau of Economic Security - economic crimes; State Bureau of Investigation - crimes committed by law enforcement officers; National Anti-Corruption Bureau of Ukraine - corruption crimes; Security Service of Ukraine - crimes against state security;
- can be determined in the context of the functional activities of the law enforcement agency in the following areas: prevention and combating crime; organization of the system of punishments; ensuring public order through personal and property protection - the National Guard; protection of the state border - the state border service;

In accordance with the above, we can identify the following tasks of public administration of law enforcement:

- establishing a system of communication between law enforcement agencies to perform the tasks assigned to them by law;
- formation of financial support for the activities of law enforcement agencies;
- development and implementation of law enforcement reforms;
- formation of resource support for the implementation of reforms and the functioning of law enforcement agencies;
- formation of information support for the implementation of reforms in the law enforcement sphere;
- organization of training and retraining of law enforcement personnel;
- organization of information and communication system of interaction of law enforcement agencies with international police organizations.



The implementation of these tasks will ensure the adoption of highly effective public administration decisions on the development and implementation of reforms in the law enforcement sphere, which should ensure the effectiveness of the law enforcement system. establishing a system of communication between law enforcement agencies to perform the tasks assigned to them by law;

- formation of financial support for the activities of law enforcement agencies;
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- organization of information and communication system of interaction of law enforcement agencies with international police organizations.

The implementation of these tasks will ensure the adoption of highly effective public administration decisions on the development and implementation of reforms in the law enforcement sphere, which should ensure the effectiveness of the law enforcement system.

Principles of law enforcement system and public administration of law enforcement system.

The principles of the law enforcement system (law enforcement activities) and public administration in this area are fundamentally different. After all, the principles of law enforcement are determined by the development of the legal system and compliance with its norms. In turn, the principles of public administration lie in the plane of management and social governance.

The division of the principles of public administration into Administrative and legal principles of public administration into system-target, system-functional, system-organizational, and adaptive characterize it as a special managerial activity that pursues a set of goals for the safe development of society. In the context of certain principles in the scientific literature, we believe that the modern law enforcement system must meet the following principles:

- legality;
- justice;
- equality;
- professionalism;
- competence;
- political ness;
- continuity;
- independence.

We believe that the law enforcement system should meet these principles, and the public administration system should ensure the formation and implementation of mechanisms that will allow their observance.

CONCLUSIONS

Study of the initial provisions of public administration in the field of law enforcement reform, we have limited their composition and establishment of features. It is established that the object of public administration in the field of law enforcement reform should be understood as public relations to which the tools of law enforcement are used, the actual methods of law enforcement, and the activities of entities implementing law enforcement. In turn, the subjects will be the



central executive bodies that implement state policy in the field of law enforcement, local governments, and law enforcement agencies. The tasks of public administration of the law enforcement system include: establishing a system of communication between law enforcement agencies to perform the tasks assigned to them by law; formation of financial support for the activities of law enforcement agencies; development and implementation of law enforcement reforms; formation of resource support for the implementation of reforms and the functioning of law enforcement agencies; formation of information support for the implementation of reforms in the law enforcement sphere; organization of training and retraining of law enforcement personnel; organization of information and communication system of interaction of law enforcement agencies with international police organizations. The implementation of these tasks will ensure the adoption of highly effective public administration decisions on the development and implementation of reforms in the law enforcement sphere, which should ensure the effectiveness of the law enforcement system. The selection of the following principles of the law enforcement system, the observance of which should be aimed at public administration decisions: legality; justice; equality; professionalism; competence; political ness; continuity; independence.

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POLITICAL AND LEGAL REGULATION OF ILLEGAL MIGRATION AS A THREAT TO NATIONAL SECURITY

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ABSTRACT

Thus, migration is a characteristic feature of the new millennium, which has the ability to spread. At the same time, the number of problems associated with this trend is growing: legal, economic, social, ethnocultural, religious, psychological [9, p. 18]. Their solution is possible with the coordination of efforts of all branches of government, a comprehensive approach to combating illegal migration, and close international cooperation in solving this problem. Thus, illegal migration in Ukraine is an acute problem that affects the rule of law, the economic situation, and the international image not only of our country but also of many others. For Ukraine, the problem of illegal migration is completely new and its growing trend is of concern, as it is associated with illegal operations and various types of crime. The rapid development and expansion of the geographical boundaries of illegal migration are due to various economic and political factors. Illegal migration occupies a significant percentage in the structure of migration flows. It is a socially dangerous, harmful, illegal phenomenon that really threatens the economic interests and public security of our state. It is one of the reasons for the growth of crime, the spread of dangerous diseases, the development of the underground labor market, the emergence of tensions between many countries.

Keywords: political regulation, legal regulation, illegal migration, national security, threats.

INTRODUCTION

Formulation of the problem. The development of modern civilization at the present stage is directly related to the intensification of globalization. Thus, the processes of globalization, European integration, and destabilization of the peaceful situation in Ukraine and at the geopolitical level have become the latest challenges, including for the state migration policy. Migration processes have acquired not only mass character but also uncontrolled forms.

Analysis of recent research. This should be reflected in the strategic documents and regulatory support of migration policy, which necessitates further theoretical and methodological research. Because, without deep analysis and clarification of the causal links and the mechanism of migration processes, it is almost impossible to improve public administration. The practice of regulating the migration of the population within Ukraine and abroad requires a new vision of the human situation in employment, which is associated with competition, freedom, and voluntary choice of community service and change of residence and work, in particular, going abroad. Large-scale migration of the population of the most active reproductive age has a negative impact on marriage and fertility, which, in turn, affects the reproduction of the population as a whole, as well as its labor potential. That is why it is extremely necessary to develop and implement priority mechanisms of state regulation in the field of labor migration in modern Ukraine. However, the biggest threat is illegal migration.

A number of scientists study migration problems and, in particular, migration policy in Ukraine,



including T.A. Dragunova, E.M. Libanova, O.A. Malinovskaya, S.I. Pirozhkov, I.M. Prybytkova, M.D. Romanyuk, S.B. Chekhovich, M.O. Shulga and others. Such Ukrainian scientists as O. Vlasyuk, S. Vovkanych, P. Haidutsky, E. Libanova, Y. Makogon, O. Malinovska made a significant contribution to the development of theoretical and applied research of population migration and problems related to its regulation. S. Pirozhkov, O. Poznyak, I. Prybytkova, M. Romanyuk, U. Sadova, L. Semiv, O. Khomra, S. Chekhovych, M. Shulga and others. Significant scientific achievements in the development of theoretical and methodological principles of formation and implementation of mechanisms of state regulation of migration policy have been developed by such scientists as V. Averyanov, V. Bakumenko, T. Vasilevska, L. Gaevska, I. Hrytsyak, N. Hrytsyak, I. Degtyareva, O. Petrov, O. Pukhkal, O. Sukhodolya, and others. Studies of migration processes conducted by Ukrainian scholars, in particular Yu. Rymarenko, N. Myronenko, A. Matsko, N. Nyzhnyk, show that the phenomenon of illegal migration directly affects the growth of crime, public order, and public safety. It promotes the development of drug trafficking, arms trafficking, prostitution, etc. [6, p. 82].

Presenting main material. Scientists have been paying special attention to the study of labor migration trends in Ukraine since the late 1990s. Comprehensive studies of illegal migration in its various aspects were carried out by such domestic scientists as E. Libanova, O. Malinovskaya, S. Pyrozhkov, O. Piskun, O. Poznyak, I. Prybytkova, Y. Rymarenko, V. Troshchynsky, Y. Shemshuchenko, and others. These researchers studied the processes of labor migration, including illegal, research methods of migration processes in general, the processes of urbanization and mobility of the population, the main directions and measures of state regulation of these processes [1, p. 87].

The high standard of living in developed European countries and the simultaneous impoverishment of the majority of the population in Central and South-East Asia, as well as in Eastern Europe, have led to the migration of many people in search of better living conditions. At the same time, the ethnic, religious, and economic upheavals of the last fifteen years in the countries of the former Soviet Union have intensified the wave of illegal migration to the west of the citizens of these countries.

Due to its geographical location, Ukraine has become one of the main countries on the way to this migration to the EU. The flow of illegal migrants from eastern Ukraine across the border with Russia and Belarus is increasing, and those detained under bilateral readmission agreements with Poland, Hungary, and Slovakia are returning from the West. At the same time, due to the difficult economic situation, Ukraine itself has become one of the largest donor countries of illegal migrants in the EU [4, p. 300].

Illegal migration is a problem that harms the economic, social, and cultural development of countries. The concept of national security of Ukraine, approved by the Verkhovna Rada of Ukraine on January 16, 1997, uncontrolled migration processes is considered a threat to the national security of Ukraine, which can lead to negative phenomena in various spheres of activity of individuals and government agencies [7, p. 18].

The purpose of this article is to identify and improve the mechanisms of political and legal regulation of illegal migration as a threat to national security.

Based on the research of Yu. Rymarenko, O. Piskun, and I. Prybytkov and others, the following types of migration can be distinguished [10, p. 71]:

- by the method of implementation: organized and unorganized;
- by the degree of control: legal and illegal;



- on a territorial basis: internal and external;
- on a time basis: permanent, temporary, seasonal, nomadic;
- in relation to the country: emigration, immigration, transit migration.

S. Collinson identifies four types of international migration: 1) economic voluntary migration (labor migrants); 2) voluntary political migration (for example, migration of Jews to Israel); 3) political forced migration (flows of classic "refugees"; 4) economic forced migration (refugees from places of environmental and other disasters) [13, p. 2].

According to the UN classification of international migration, there are five main types (Fig. 1):

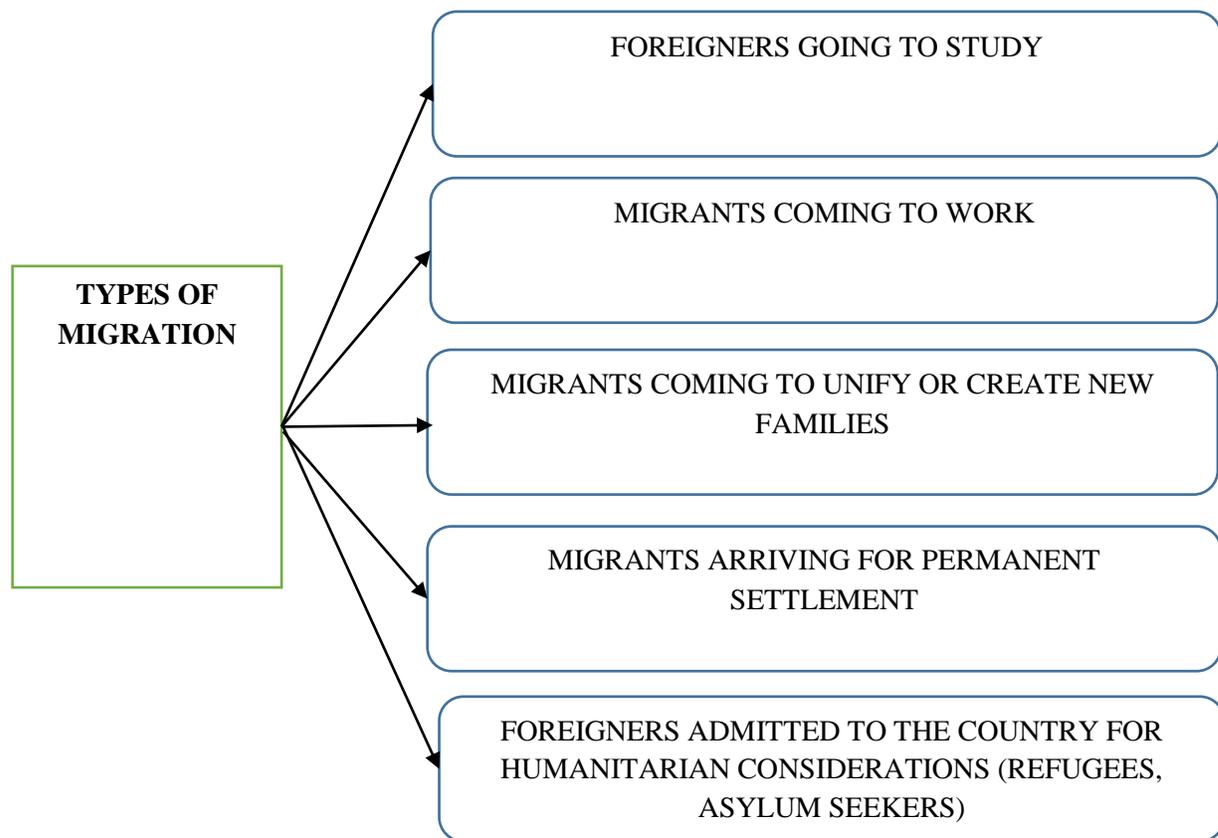


Fig. 1. UN International Classification of International Migration

Regarding this study, we are primarily interested in illegal migration. Regarding the category of "illegal migration" - there is no unanimous definition among scientists. In particular, illegal migration should be understood as illegal entry into the state of non-permanent residence and departure from its borders; illegal stay in the state of non-permanent residence (residence without valid documentation for a long time (for a year or more), semi-legal arrival in the state of non-permanent residence (purpose of the trip does not correspond to the visa) and further illegal residence in Ukraine to prepare illegal departure to another country [5, p. 84].

The problem of illegal migration must be considered in the context of such a global phenomenon as international migration. Research on this problem should be carried out in three directions: international, European and national, but taking into account those political, economic, social,



integration processes that are inherent in international relations at the present stage of development of the world community [11, p. 56].

That is, illegal migration is a problem of both national and international nature, which implies the need to regulate it at the universal legal level. Universal legal norms mainly include international treaties adopted within the framework of the United Nations. These agreements are universal in the number of participants. Regulatory regulation of illegal migration at the universal level was achieved through the adoption by General Assembly resolution 55/25 of 15.11.2000 of the United Nations Convention against Transnational Organized Crime [3] and its protocols (Protocol to Prevent and Abuse cessation of and punishment for trafficking in human beings, in particular women and children, of the Protocol against the Smuggling of Migrants by Land, Sea and Air [8]). The Convention was signed on behalf of Ukraine in Palermo on 12 December 2000. The universal legal norms of the Convention, established to regulate illegal migration, are contained in the Protocol against the Smuggling of Migrants by Land, Sea, and Air. The Protocol was signed on behalf of Ukraine in New York on November 15, 2001. The States Parties to the present Protocol declare that a comprehensive international approach, including cooperation, is needed to take effective measures to prevent and combat the smuggling of migrants by land, sea, and air; exchange of information and other relevant measures, the Protocol notes the urgent need for such an act, as, despite the work done in other international fora, there was no one-size-fits-all document addressing all aspects of the smuggling of migrants and other related issues. with him the question. The purpose of the Protocol to the Convention against the Smuggling of Migrants by Substance, Sea, and Air [8]) is to prevent and combat the smuggling of migrants and to promote cooperation between States Parties in achieving these objectives in protecting the rights of smuggled migrants.

The scope of this Protocol is the prevention, investigation, and prosecution of crimes recognized as such under this Protocol, they (crimes) are transnational in nature and committed with the participation of an organized criminal group, as well as the protection of the rights of persons the object of such crimes. A separate section of the Protocol sets out measures to combat the smuggling of migrants by sea. It can be defined as organizational, as the States Parties have developed a mechanism to stop the use of a vessel suspected of involvement in the smuggling of migrants by sea.

Ukraine's participation in international cooperation in the fight against illegal migration is just beginning. The signing of the Protocol by our state is a significant step towards the formation of legislation aimed at combating illegal migration [2, p. 23-24].

Regarding the connection between national security and illegal migration, it should be noted that the relevant issues are regulated by the Constitution of Ukraine, laws "On Citizenship", "On Refugees", "On Immigration", the Code of Administrative Offenses, the Criminal Code and a number of other regulations. legal documents [11, p. 56].

At the present stage, there is a tendency to increase the scale of migration processes in the world, expand and develop ties and integration between countries. Migrants have always contributed to the development of any country, its economic, social, and cultural components. Currently, the world's largest migration volume is the Mexico-US corridor, which exceeds 10 million people each year. Also, one of the largest corridors is Turkey - Germany, Algeria - France, Afghanistan - Ukraine (caused by the harsh Islamist policies of the Taliban, who came to power in 2021). And the East Asian corridor is Belarus, which emerged at the end of 2021 as one of the insidious ways of blackmailing Belarus and Russia into the EU and accepting a "hybrid war" against Ukraine. If



we consider migration to the EU as a whole, then such a corridor will not yield, or even prevail for a long time, the mentioned direction, Mexico - the United States.

Thanks to its advantageous territorial position, Ukraine has become a transit country for the flow of migrants to EU countries, as our country has common land borders with Romania, Poland, Slovakia, and Hungary, which stretch for hundreds of kilometers. Despite its economic location, Ukraine is also suitable for illegal migration, ie illegal movement outside checkpoints or hiding from border and customs controls.

Many people, including Arab and Muslim countries, dream of reaching developed EU countries. Citizens of Pakistan, Afghanistan, Iraq, the Caucasus republics of Russia, Palestine, Nigeria, Syria, Ethiopia, and Sudan are among the main flows of illegal migrants and asylum seekers who come to our country or, most often, use it as a transit zone. Egypt. In particular, there was a reorientation to the transportation of citizens of the post-Soviet space. This is especially true of Georgia, Russia, and Moldova.

In addition, there has been an increase in the use of the legal channel of student entry and the use of refugee status for the temporary legalization of foreigners in Ukraine, including Syrians, Somalis, Afghanistan, and Vietnam.

It should be noted that in 80% of cases, illegal migration through the territory of Ukraine is not spontaneous, on the contrary, it is a well-organized and well-established business over the years. Few migrants are able to embark on such a "journey" alone. The motives that motivate a migrant to enter the country illegally may be different: economic, asylum or it may be the dependents of a person who has already settled in the country. Most migrate illegally for economic reasons. Usually, in their own country, they agree on the illegal transfer to the EU with international crime, which specializes in deported people. The price of such services range from \$ 4 thousand to \$ 7 thousand, depending on different conditions, such as country of origin, transit route, number of intermediaries during the crossing. Some who want to join the EU are selling their apartments, houses, and last resort to raise these sums, especially if the whole family has decided to emigrate. The best option for asylum seekers is if they manage to open a tourist visa to Ukraine, in which case they will have to cross only one border - Ukraine - EU [12].

There are now more than 150 million migrants in the world. According to this indicator, the first place is occupied by Europe - more than 56 million people. It is important to note that since the early '90s of the twentieth century. the level of official immigration there decreased, but the number of the foreign population did not decrease. This situation is explained by the high percentage of illegal immigrants, as well as refugees and internally displaced persons in the overall migration flow, for the registration, accommodation, and assistance of which European countries spend a lot of money. If in 1990 there were about 3.5 million refugees in the world, at the beginning of the XXI century. their number increased tenfold.

The peak of migration through Ukraine came in the late 1990s and 2000s, falling significantly after 2010 when Ukraine signed a law on readmission. Under this agreement of January 1, 2010, the state undertook to receive tens of thousands of illegal immigrants from the EU who arrived there through the territory of Ukraine.

A specific feature of modern migration is the increase in the share of women (up to 58.5%) and children in the migration flow. Illegal movement of women, girls, and children for sexual exploitation is quite common. According to experts, every year from 700 thousand to 4 million people enter the world market of intimate services. [12].

Illegals who are willing to work under any conditions nullify the social guarantees that exist in



European countries (minimum wage, maximum working day), and also require huge financial costs for border control, the establishment of camps for refugees, social and medical services, detention, deportation.

The dominance of illegal migrants is a challenge to international security. Security threats, which can be both real and potential, arise at various levels. We are talking, on the one hand, about the safety of the host party, and on the other - about the safety of people. The important components of security are:

- personal or individual security, physical security in a broad sense;
- social security, preservation of a decent social status and a system of guarantees and benefits;
- economic security.

At present, illegal immigration poses a particular threat in the sanitary-epidemiological dimension of the host country, given the COVID-19 pandemic.

In addition, illegal immigrants, lacking stable employment and wanting to return to worse conditions, are joining the "exiles" of society and becoming a source of crime and terrorism. Illegal migration poses real and potential threats to virtually any aspect of host security. It distorts the social, demographic, territorial structure, intensifies competition in local labor and housing markets, creates entire sectors of employment that are not regulated, causes social tensions, growing xenophobia, and extremism.

Illegal migration is increasingly seen as one of the possible ways in which international terrorism can spread. In addition, the tragic events of recent years have led to the need to choose between individual freedom and security. It is important to note that everyday consciousness in European countries has so deeply mastered the tradition of freedom and security that security has become one of the most important cultural values in Europe. And if in the '90s of the twentieth century, freedom came first, and now Europeans increasingly prefer security. In other words, illegal migration is closely intertwined with both national and personal security.

CONCLUSIONS

Thus, migration is a characteristic feature of the new millennium, which has the ability to spread. At the same time, the number of problems associated with this trend is growing: legal, economic, social, ethnocultural, religious, psychological [9, p. 18]. Their solution is possible with the coordination of efforts of all branches of government, a comprehensive approach to combating illegal migration, and close international cooperation in solving this problem. Thus, illegal migration in Ukraine is an acute problem that affects the rule of law, the economic situation, and the international image not only of our country but also of many others. For Ukraine, the problem of illegal migration is completely new and its growing trend is of concern, as it is associated with illegal operations and various types of crime. The rapid development and expansion of the geographical boundaries of illegal migration are due to various economic and political factors. Illegal migration occupies a significant percentage in the structure of migration flows. It is a socially dangerous, harmful, illegal phenomenon that really threatens the economic interests and public security of our state. It is one of the reasons for the growth of crime, the spread of dangerous diseases, the development of the underground labor market, the emergence of tensions between many countries.

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ILLEGAL EXPORT-IMPORT OPERATIONS AS AN OBJECT OF RESEARCH IN THE SCIENTIFIC WORKS OF RESEARCHERS

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ABSTRACT

The article provides a bibliometric analysis of publications on the queries of "illegal import operations" and illegal export operations during 1984-2021. Emphasis was placed on Scopus as it is the largest bibliographic database in the world, representing over 21,000 international scientific publishing houses. The work is devoted to the study of the application of bibliographic analysis as a quantitative approach in assessing the documentary and informational workflow, which makes it possible to carry out a formalized analysis of the results of scientific activity quite accurately. The main results demonstrate an increase the topic interest of illegal export-import operations in different social and economic areas and in different countries. The analysis of publications proves the lack of a literature review on the topic with the keywords illegal import operations and illegal export operations. It has also been found that bibliometric analysis is an effective tool that can be used for literature reviews across all branches of the social and economic sciences.

The results obtained in this study provide additional information on the development of the topic of illegal export-import operations, sources of publications, and their dynamics, as well as justification for the development of a literature review as an obligatory part of scientific articles on the topic under study.

Keywords: bibliometric analysis; Scopus database; illegal import transactions; illegal export transactions.

INTRODUCTION

In a modern open economy, where the trends of globalization and integration are gaining momentum, an increasing number of countries are actively engaged in foreign trade and economic activities, which is reflected in the stable growth of export-import operations, an increase in the volume and geographical diversification of labor migration. At the present stage of the development of society, the free movement of goods across the state border becomes impossible. The lack of customs borders and the movement of goods across the border without government control will lead to economic chaos, environmental degradation, and public health. Therefore, the establishment of administrative restrictions and bans on foreign economic operations with export-import goods is a necessary condition for the development of a legal, social, economically stable state.

In modern conditions of the rapid growth of competition, export-import activity is a necessary component of the comprehensive functioning of the country's economy and an important type of foreign economic activity. Considering the importance of exports and imports for the country's economy and for the functioning of all spheres of business, an important element of effective export-import activities is the constant analysis, assessment, and identification of trends in this type of foreign economic activity.



The purpose of the article is to analyze research in the field of studying illegal export-import transactions as an object of research in scientific works of Ukrainian and foreign researchers based on the use of bibliometric methods for the analysis of scientific research in the international scientometric database Scopus.

Analysis of recent research and publications. Such modern researchers as L. Kavunenko, A. Kostrytsa, A. Chernogaeva pay attention to the study of questions of bibliometric research. The issues of export and import were considered in their works by A. Kyrychenko, I. Dyshko, A. Derevyanenko, G. Kushnitska, and others. An analysis of the studies of domestic and foreign scientists on the study of illegal export-import operations allows us to conclude about the scientific research initial stage of scientists on this issue. Therefore, international experience in solving the illegal export-import operations problem is a necessary trigger for the future development of scientific directions in this area.

Presentation of the main material. Priorities identification and promising directions is one of the main tasks in planning a scientific organization research activities of scientific developments. The tasks of choosing promising directions are largely solved by expert assessment methods. At the same time, the previous bibliometric studies results provide experts with a lot of important information, largely contributing to an objective prospects final assessment of the certain studies. The use of bibliographic analysis to assess the documentary and information flow (in the context of thematic) makes it possible to fairly objectively conduct a formalized analysis of the results of scientific activity. Approaches for determining the development patterns of documentary and information flows are studied in such areas as bibliometrics, informetrics, scientometrics, webometrics, cytometry, documentometry, mediometry.

As a rule, abstract databases are sources of scientific information. The journals selection and articles was based on Scopus, as it is the largest bibliographic database in the world, representing more than 21,000 international scientific publishing houses. At the same time, it provides links to publishers' websites and full-text articles related to illegal export-import transactions. Also, the use of the Scopus database makes the research more organized, since, firstly, different categories are presented on the topic under study, and secondly, this database allows you to download other databases in order to compare search results. Also in the study, the following search restrictions were set: 1984 was chosen as the starting point of the study, since the first article on the topic "illegal export-import transactions" appeared exactly this year.

We analyzed Scopus data from 1972 to 2021, during this period, 508 publications were found on the "import" search and 1078 documents with the "export" query. The array of publications for bibliometric analysis was formed on the basis of specialized queries for sets of keywords related to the terms under consideration. The time interval was not limited, the search was carried out for all types of documents.

The distribution dynamics of scientific publications by search queries are presented in the diagram 1. There has been a sharp jump in import research between 2001 and 2004, and there has been an upward trend in focus on exports between 2006 and 2021. In our opinion, the study analysis of export issues and import operations may indicate a scientific interest in this research area.

For the first time in 1972, the imports issue in his work was considered by Merklein. The author explores the issues of the energy crisis emanating from the oil industry. Examines the implications of certain tax incentives and imports. This article is an attempt to provide a simple yet comprehensive analysis of the major economic forces vital to the US oil industry [1].

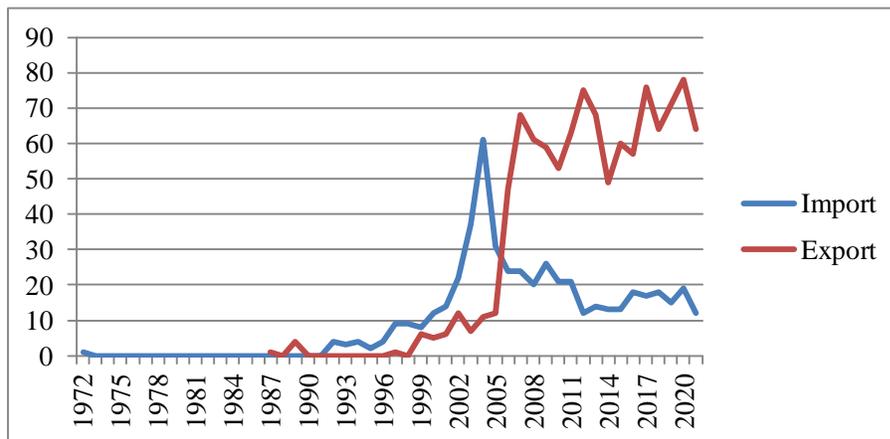


Diagram 1. The number of scientific publications on the exports study and imports for the period 1972-2021

Source: Based on data from www.scopus.com

Export issues were first considered in 1987 by Hanink. In his writings, he examined the recent competitive trade results between the United States and Japan, considered in the hypothesis context of the international trade markets and marketers. The hypothesis is taken from the theory of differentiated markets and includes the export and import sides of international bilateral markets. Typically, indirect test results support the markets and marketers hypothesis [2].

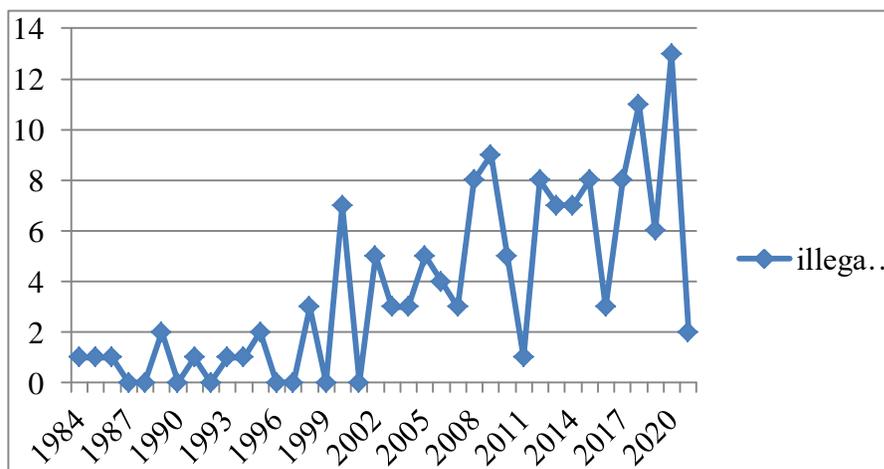


Diagram. 2. Number of scientific publications for the query "illegal import operations"

Source: Based on data from www.scopus.com

Note that not only an increase in the publications flow is recorded, but a significant number of documents increase. In 2021, there are more than a thousand documents, which testify to the relevance, social problem significance, the scientific research intensity, and the real scientists contribution and specialists to its development. We consider it expedient to investigate the issues of illegal export and import operations in terms of time and geography, as well as the source of funding. It should be noted that every year there are new publications in all areas of science on the topic of "illegal import operations". This indicates a greater interest in this topic from a wider scientific range. In addition, research on this topic has increased since 2000. It should be noted that in recent years the number of published works on this topic has been growing.

For the first time, the issue of illegal import operations was investigated in L. Martin and A. Panagaria's work published in 1984. Researchers provide a simple but fairly general model of smuggling that can deal with both the type of illegal trade through illegal entry points and the type of trade through legal entry points. The article focuses on the latter type of trade. The authors take into account the risks and uncertainties associated with illegal activities, and also consider the real cost of smuggling as a variable of choice. It has been shown that smuggling, legal trade, and price disparities can coexist. The reaction of the economy to the increased enforcement of anti-smuggling laws is analyzed in a detailed way. It is shown that the strengthening increases the real cost per unit of smuggling and the domestic price of imported goods but reduces both the absolute number and the share of illegal imports in the overall structure *структурі* [3].

The study revealed the unstable nature of publishing activity. In 2000, the interest in this topic grew and the number of articles doubled, and in 2001 no work on this topic was published. In 2003 and 2004, the activity of publications was at the same level. Within the period from 2006 to 2011 the unstable dynamics of growth in the number of publications continues. In addition, we found that 2009 was a peak year when the number of publications increased significantly. In 2011 there was a sharp decline in publications. The largest peak in the activity of publications falls on the period of 2020.

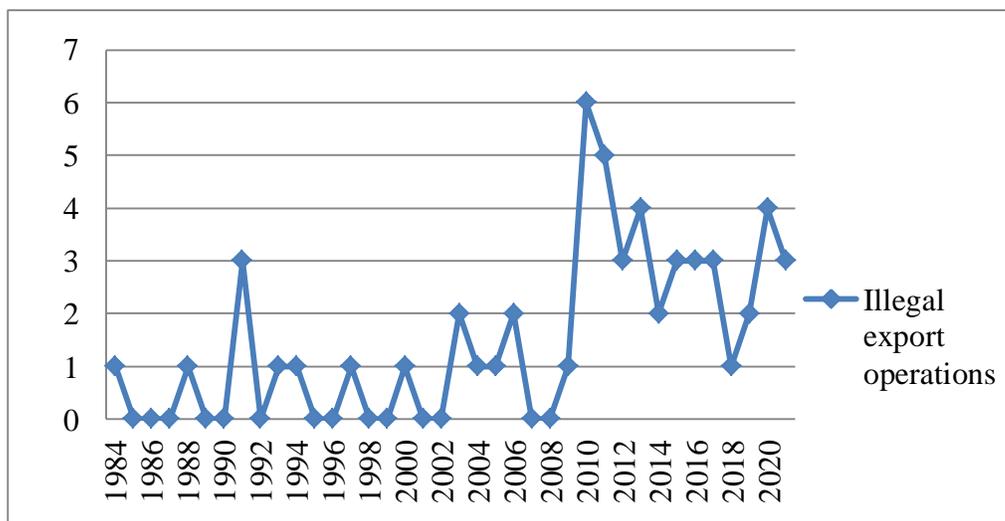


Figure 3. Number of scientific publications on the search query "illegal export operations"

Source: based on www.scopus.com

In 1984, a study was published for the first time examining the issue of illegal export transactions. Bassert, the author of the work, investigated illegal exports and industrial espionage. The scientist stressed that the USSR was set up to receive high-tech equipment for automatic testing of equipment from the West. The paper notes that the complexity of testing Soviet technology is crucial to achieving an effective export policy, as well as to assessing the effectiveness of Soviet military electronic systems. Examples of Soviet mainframes, laboratories, and portable constructions are given [4].

The largest number of publications on the study of illegal exports was recorded in 2010. By 2018, there is a downward trend in scientific activity. Recently, scientists have begun to pay more attention to the study of illegal export operations.

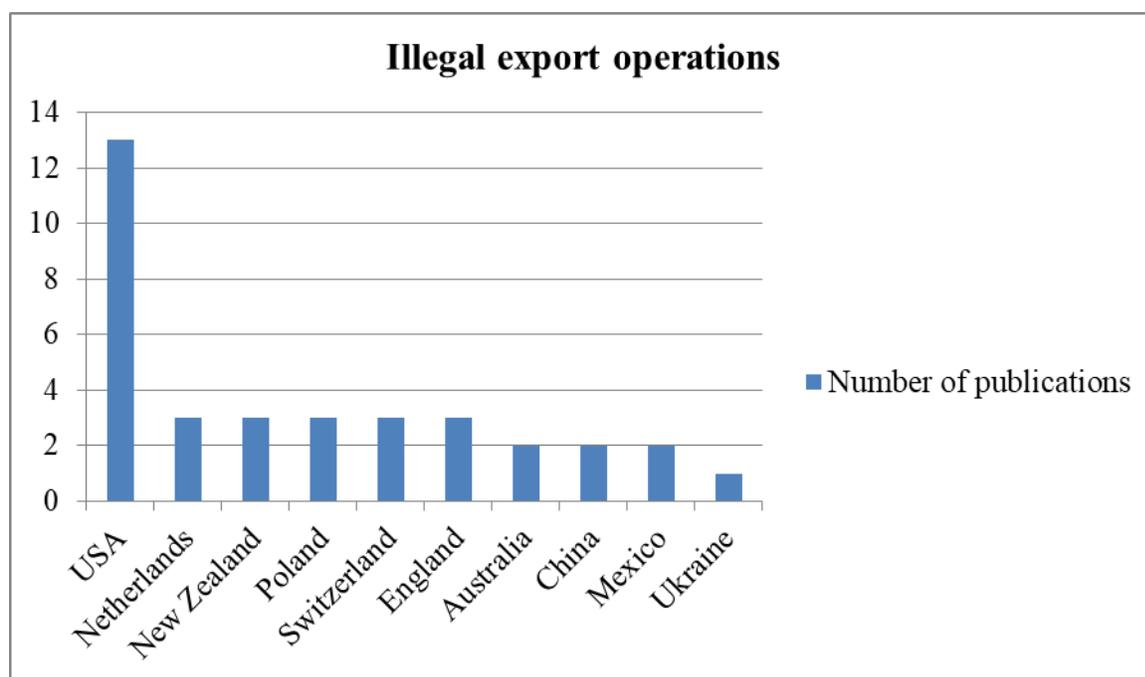


Figure 4. The number of scientific publications on the search query “illegal export operations” in the geographical dimension

Source: based on www.scopus.com.

If one takes into account the geographical distribution of documentary and information flow of scientific publications, the largest number of publications has been published by scientists from the United States. Much of the research has been conducted in the Netherlands, New Zealand, Poland, Switzerland, England, Australia, China, Mexico, and Ukraine.

Given the geographical distribution of articles in Scopus, differences between countries were found. Germany represents the largest number of publications and ranks first throughout the period, while other countries occupy lower positions in the ranking. A significant quantity of research on illegal import transactions has come from the United Kingdom, the United States, Japan, Belgium, France, China, Italy, Norway, and Spain. At the same time, most of the publications on the keywords “illegal import operations” are presented in English.

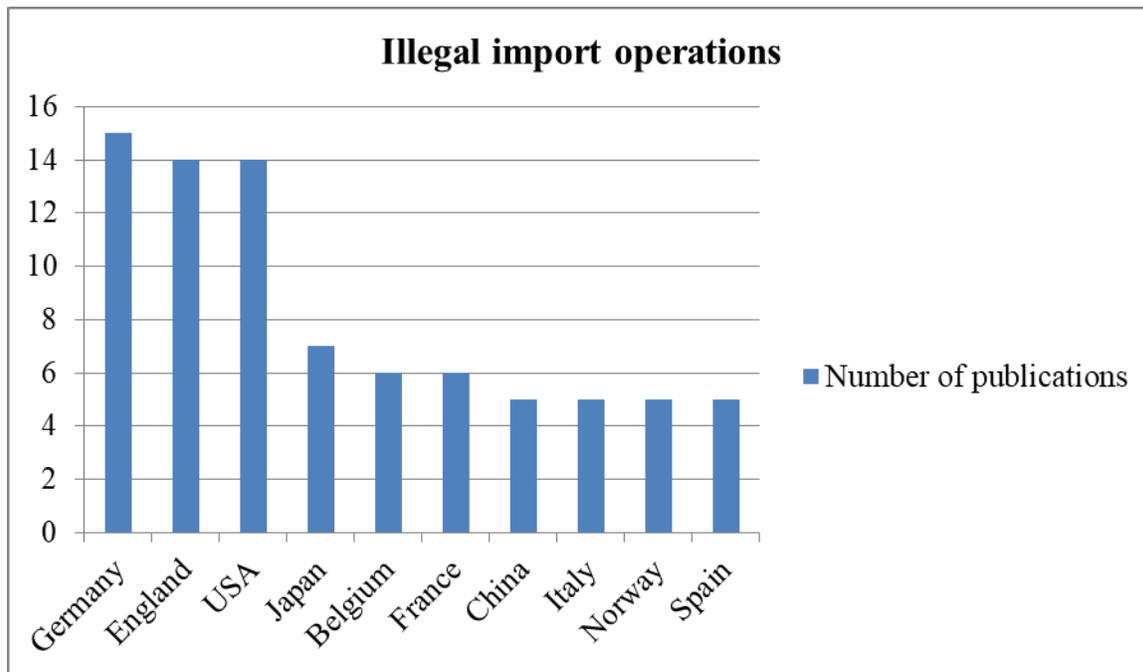


Figure 5. Number of scientific publications on the search query “illegal import operations” in the geographical dimension

Source: based on www.scopus.com

It should be noted that there is a significant difference between the number of publications on search queries “illegal import operations” and “illegal export operations” in terms of the geographical dimension. Thus, the United States ranks first in the study of illegal import transactions and second in the study of illegal export transactions. Germany is a leader in research on illegal imports, but it does not have a leading position in research on illegal exports.

Bibliometrics as one of the special methods of research of documentary and information flows nowadays is a tool for quantifying the scientific potential of individual scientists, organizations, regions, and countries, as well as their productivity in time and space. Thus, the methods of bibliographic analysis allow searching for the necessary information in the metadata of publications, and in this case - to trace the evolution of research on illegal export-import operations, identify research centers for knowledge generation, as well as the most relevant topics. An analysis of articles related to illegal export and import transactions presented in the international Scopus database was conducted. These studies were extracted from Scopus, which is one of the world's largest bibliographic databases. The use of this database has both advantages and disadvantages in the context of compiling a bibliometric profile of publications dedicated to illegal export-import operations. It was identified 55 scientific publications published from 1984 to 2021, which contain terms (in the title, annotation, or list of keywords), that determined the research topic (“illegal export operations”). 114 publications were found for the search query “illegal import operations”. It is established that most articles on illegal export and import transactions are published in foreign journals.



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Accepted for publication in this edition 23.09.2021

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ISSN: 2733-2713; E-ISSN: 2733-2721; DOI: 10.36962/SWD

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ISSN: 2733-2713; E-ISSN: 2733-2721

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VOLUME 06 ISSUE 04 (01) 2021

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