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Address for contacts:

Lviv Polytechnic National University
79013, 12 Bandera Str., Lviv, Ukraine
E-mail: info@d-governance.com.ua
<https://d-governance.com.ua/>



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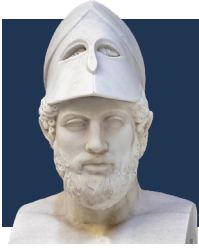
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CONTENT

I. Cherleniak, M. Tokar Effective governance and the doctrine of “total defence” as factors of state stability in wartime.....	5
M. Chulaievska Challenges of balanced development of regions in the context of centralisation, the case of Ireland	18
Ye. Matviyishyn, V. Pylypenko, M. Bunyk Comparison of the activity of regional authorities of Ukraine on social media.....	32
O. Sydorчук, M. Sydorчук Conceptual approaches to spatial development management in current conditions.....	43
M. Yanyshivskyi Regulation of artificial intelligence in Ukraine in the framework of harmonisation of legislation with EU legal norms.....	53



Effective governance and the doctrine of “total defence” as factors of state stability in wartime

Ivan Cherleniak*

Doctor of Public Administration, Professor
Uzhhorod National University
88000, 14 University Str., Uzhhorod, Ukraine
<https://orcid.org/0000-0001-6270-5549>

Marian Tokar

Doctor of Public Administration, Associate Professor
Uzhhorod National University
88000, 14 University Str., Uzhhorod, Ukraine
<https://orcid.org/0000-0001-8426-4481>

■ **Abstract.** In wartime, effective governance and the doctrine of “total defence” are critical factors that ensure the stability, security, and sovereignty of the state. The purpose of this study was to investigate the aspects of the effectiveness of management of the national security and defence system of the state. Analytical modelling of the systemic components of Ukraine’s resilience in wartime through the lens of the total defence doctrine and the concept of social self-organisation was used. The study investigated the barriers and difficulties in preparing the public authorities of Ukraine for effective management of resistance to the threats of hybrid warfare and threats of a full-scale high-intensity war along the entire line of the state border of Ukraine with the Russian Federation. The study analysed the specific features of the low-intensity hybrid war of 2014-2021 and the specific features of the initial stage of the high-intensity war of 2022. The study considered the achievements, omissions, shortcomings, and mistakes of public administration bodies and official systems in the first stages of the full-scale invasion of the Russian occupation forces into the cities and villages of Ukraine. It was shown that as a result, the Ukrainian defence forces were unable to organise an effective response to the large-scale invasion of Russian troops in a prompt and complete manner. The study analysed the principles of organisation of the total defence system by public administration bodies of the Scandinavian and Baltic States. It was proved that at the present stage of the country’s defence, the concept of strengthening the resilience of the country’s social, economic, and military potential should be the most expedient. It was substantiated that in a high-intensity positional war, effective public administration should be based on the concept of resilience, which is systematically linked to the doctrine of total defence of Ukraine. The findings of this study can be used by governments and civil society institutions for management and coordination strategies for agencies in times of war

■ **Keywords:** preservation of statehood; state security; management system; resilience; economic stability

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■ Introduction

The Moscow Kremlin’s transformation of a low-intensity hybrid war into a full-scale high-intensity war along almost the entire state border between Ukraine and Russia has created existential threats not only for Ukraine but also for other European countries. The experience of Ukraine’s struggle in the extremely difficult conditions of a high-intensity war shows that the problem of strengthening and developing the factors of state resilience in modern war-time conditions is becoming increasingly relevant. Threats to the stability of the state are increasing due to modification of the tools of hybrid warfare, formation of corruption networks of collaborators, and activation of dormant Kremlin agents; the Russian rulers’ increasing the scale of destruction of Ukraine through the increasingly intensive use of missiles, aircraft, and guided aerial bombs, a large occupation military contingent, etc.; a general decline in the quality of public administration due to inefficient and populist techniques of exercising power.

Many researchers have investigated the impact of Russia’s full-scale war against Ukraine on the European security architecture, including L. Bazhunaishvili & I. Gorgiladze (2022) and M. Kozub & A. Mitreġa (2023). The latter emphasise that this war has changed not only the European security architecture, but also the international understanding of Ukraine’s significance as one of the principal factors in maintaining stability and security in Europe. Y. Alshamy *et al.* (2024) noted that, contrary to the predictions of many experts, the Ukrainian army still proved to be resilient to a full-scale invasion by the Russian army. The researchers also note that to explain this phenomenon, many have pointed to the prevalence of corruption in the Russian Federation, which ranks 136th among the least corrupt governments. Therewith, corruption in Ukraine is also high, as it ranks 122nd, and therefore the researchers suggest paying attention to the polycentric nature of the initial stage of Ukraine’s defence in a full-scale war.

A. Kudlenko (2023) explores the sources of Ukraine’s resilience. It is noted that the role of volunteering in Ukraine (since 2014 and as of 2024 inclusive) has been and continues to be important in resisting Russian aggression. It was also noted that horizontal networks in communities should be fully supported and invested in the development of the

volunteer sector. M. Rabinovych *et al.* (2023) examine aspects of the theoretical interpretation of the concept of resilience and analyse the possibilities of explaining Ukraine’s resilience in the face of full-scale Russian aggression by the growing role and capacity of local territorial communities created by the decentralisation reform after 2014.

M.S. Nazarov (2020) assesses the problem of national resilience to a full-scale invasion of Russian troops. The study points out that the annexation of Crimea and the war in Donbas have revealed systemic gaps in Ukraine’s national security. The researcher emphasises the need to think about possible alternative strategies in the field of security and defence of Ukraine. It is concluded that the development of national resilience is possible due to the well-developed civil society and volunteerism in Ukraine, which is an integral part of ensuring resilience. O. Reznikova (2022) examines the options for the content of the “national resilience” construct. The report by S. PyrozHKov (2022) conceptualises the priority areas and general stages of implementation of the national resilience strategy of Ukraine. V. Palyvoda (2020) analyses Poland’s practices in approaching the problem of implementing the “total defence” doctrine and emphasises the fundamental responsibility of the political leadership for implementing fundamental changes in the security environment, as well as prompt rethinking of approaches to ensuring the comprehensive national (military) security of the state.

The study highlights the problem of scientific and practical construction of the content of the comprehensive doctrine of mobilisation of defence resources of Ukraine based on social self-organisation and improvement of the efficiency of public authorities and the public administration system. The purpose of this study was to investigate the effectiveness of the management of the national security and defence system of the state, specifically, to analyse the key aspects that affect its functioning and ability to respond to threats.

■ Materials and Methods

For this, an array of factual, scientific, and analytical materials was processed, grouped into four blocks, the components of which are presented in Table 1.

Table 1. Characteristics of the reviewed materials

Information block	Sources
Information reports on current events in the socio-political and public administration process in the field of national security and defence in the media of the national, regional, and local scale	<ul style="list-style-type: none"> ■ New military doctrine. What defence strategy will Ukraine implement (2021) ■ Everything you need to know about national defence and national resistance (2022) ■ S. Zvorych (2022)
Analytical developments, sociological studies, and articles that explore aspects of the problems of state sustainability and resilience in the face of threats and challenges of high-intensity war and martial law	<ul style="list-style-type: none"> ■ V. Palyvoda (2020) ■ O. Reznikova (2022) ■ O. Reznik (2022) ■ M. Lobko <i>et al.</i> (2022) ■ O. S. Bondarenko (2023) ■ Y. Alshamy <i>et al.</i> (2024)

Table 1. Continued

Information block	Sources
Laws of Ukraine, Decrees of the President of Ukraine, other official state defence planning documents	<ul style="list-style-type: none"> ■ Law of Ukraine No. 1702-IX “On the Foundations of National Resistance” (2021) ■ Decree of the President of Ukraine No. 121/2021 “On the Decision of the National Security and Defence Council of Ukraine ‘On the Military Security Strategy of Ukraine’” (2021) ■ Strategy of Military Security of Ukraine “Military Security – Comprehensive Defence” (2021) ■ Decree of the President of Ukraine No. 479/2021 “On the Decision of the National Security and Defence Council of Ukraine ‘On the Implementation of the National Resilience System’” (2021) ■ The Verkhovna Rada of Ukraine adopted in the second reading and as a whole Law No. 10449 “On Amendments to Certain Legislative Acts of Ukraine on Certain Issues of Military Service, Mobilisation and Military Registration” (2024)
Statements by officials and decisions of public authorities and public administration	<ul style="list-style-type: none"> ■ Abnormal situation – Zelensky comments on Khomchak-Taran conflict for the first time (2021) ■ Vitaliy Klytschko appealed to the people of Kyiv, who care about the country’s future: Join territorial defence to protect your families and your city (2022) ■ Decision of the City Council No. 16/VIII-8 “On the Program for the Preparation of Territorial Defence and Preparation of the Population of Chernihiv for Participation in the National Resistance Movement for 2022-2023” (2022) ■ Territorial defence of Chernihiv. What does the mayor propose? (2022)

Source: compiled by the authors of this study

A series of methods and research concepts were employed in a comprehensive manner to process the content, understand the essence of the materials under study, understand and objectively interpret the complexity of the aspects of the topic under study, and formulate relevant conclusions: systemic and structural approach and grouping of information by essential typological and/or structural features; general scientific methods of logic, analysis, and synthesis; comparative and chronological-evolutionary research methods; logical methods of scientific induction and deduction; progressive-regressive method of cognition and interpretation (Zubrytska, 1996), which focuses on understanding and explaining the phenomena of social and managerial processes as recursive-semantic interaction of three time dimensions: past, present, and future; synergistic concept of social self-organisation and optimisation of public administration. The use of these methods helped not only to analyse the research materials, but also to gain a more profound understanding of the development and interaction of various aspects of social and governance processes. This has opened opportunities for effective formulation of conclusions and recommendations aimed at improving governance practices and social transformations in war-time. Based on a systematic approach, factual, review, and analytical materials from official state and alternative (Ukrainian and foreign) sources, the study interpreted the situation of the state’s defence that was formed before the beginning of the Russian war against Ukraine.

■ Results and Discussion

In 2014, the Armed Forces of Ukraine (AFU), with the help of volunteer battalions, managed to localise the war zone. The basis for these successes was the managerial decisions

and diplomatic efforts of Ukraine’s public administration bodies, which were renewed in 2014 on the wave of patriotic upsurge. In 2014-2019, Ukraine lived, worked, and fought in a hybrid war waged by the Russian Federation against it. Over this time, Ukraine’s public administration system has gradually adapted to the specifics of the war and learned to deal with the “direct” methods of hybrid warfare aimed at destroying the ideological foundations of statehood and fuelling inter-ethnic and inter-confessional confrontation. Therewith, the “indirect” methods of hybrid warfare in the area of forming collaborative political parties, NGOs and media that were guided by the Kremlin’s playbooks, permanently created an atmosphere of distrust and disobedience towards the current legally elected state authorities (Ilnytskyi *et al.*, 2022). At the same time, the state authorities and the Armed Forces of Ukraine, with the help of state security and law enforcement agencies, were constantly fighting three localised hotbeds of military aggression (Crimea, Donetsk Oblast, Luhansk Oblast). The significant costs of this localised war and the government’s fear of losing popularity because of a sharp decline in living standards prevented it from increasing the defence budget and funding for the growth of the Armed Forces sufficiently in 2014-2019. Notably, at the beginning of 2022, the basis of the combat capability of the AFU was the insufficiently large contingent that gained combat experience in the local phase of the war in 2014-2021 (Zvarych, 2022).

In 2019, as a result of the presidential and parliamentary elections, there was a dramatic change in the political framework of the public administration system due to the effectiveness of the populist technology used (Scherbak, 2023). The leaders of the new governance system received their powers and responsibilities without, for the

most part, having any experience in public administration or experience in political parties. As a result, they failed to recognise the risks and threats of a localised war escalating into a full-scale war in time. The structural and functional analysis of relevant events and documents shows that in 2019-2020, work on increasing the material and technical support of the Armed Forces, forming an effective mobilisation resource, and preparing the general population for the country's defence was virtually suspended (The Accounting Chamber..., 2023).

The Servant of the People political party, established in 2017, quickly became the dominant mono-majority in the legislative body, the Verkhovna Rada of Ukraine, and formed the government in 2019. Comparative and chronological-evolutionary methods suggest that neither the mono-majority of the Servants of the People nor the government of O. Honcharuk, and later the government of D. Shmyhal, managed to promptly process the experience of the hybrid phase of the local war of the previous years. The ruling party's parliamentarians and government officials failed to recognise the need to immediately strengthen all areas of the national security and defence sector with experienced professionals with a proven patriotic background. The use of scientific induction and deduction proves, specifically, that in 2020-2021, the Ministry of Defence of Ukraine (MoD) failed to ensure the production of weapons necessary for the country's defence, including the production of shells (Why was the production..., 2022). Instead of strengthening the organisation of arms supplies to the Armed Forces and enhancing the combat training of their personnel, the then Commander-in-Chief R. Khomchak and the then Minister of Defence A. Taran spent their time organising mutual confrontation (Abnormal situation..., 2021). And the quality of the AFU's management improved only after the appointment of the commander of the troops of the Operational Command “North” V. Zaluzhnyi (2019-2021) as the Commander-in-Chief of the AFU (2021-2024).

The methods of induction and deduction applied in a cyclic-recursive manner to the problem of understanding and interpreting the shortcomings of defence organisation suggest that one of the key factors of the insufficient effectiveness of public administration in the security and defence sector of Ukraine was the threats and risks to the sustainability of the national security of the state in 2021 were not promptly recognised and considered by the Ukrainian state authorities; the threats of a “great war” were not recognised in January-February 2022, even though at that time there were repeated substantive reports from the international intelligence community about the high probability of an attack. Evidence suggests that international partners have already directly informed the Ukrainian authorities about the sharp increase in the threat of a full-scale war in the second half of February (The historical parallels..., 2023). However, on 22-23 February 2022, officials of the central public administration did not issue an order to prepare the border troops, to prepare enhanced airfield protection, and

to put the units of the Armed Forces, Territorial Defence Forces, National Police, and National Guard on full combat alert (Haj-Nyzhnyk, 2022). Based on the structural and functional analysis of the basic components of national resilience, the formation of spontaneous factors of “total local self-defence” is noted.

Conscientious citizens-patriots (How Mariupol..., 2022) and local government officials (e.g., Kyiv Mayor V. Klychko, Chernihiv Mayor V. Atroshenko, Okhtyrka Mayor P. Kuzmenko) have repeatedly stressed the immediate need to prepare for the threat of a full-scale invasion (Vitaliy Klychko appealed..., 2022; Reznik, 2022). On 27 January 2022, the Chernihiv City Council adopted Decision of the City Council No. 16/VIII-8 “On the Programme for the Preparation of Territorial Defence and Preparation of the Population of Chernihiv for Participation in the National Resistance Movement for 2022-2023” (2022). On 22 February 2022, the mayor of Chernihiv, V. Atroshenko, held an operational meeting, at which he stressed that the city council would do everything to form a terrorist defence force. At this operational meeting, the mayor of Chernihiv also proposed to expand the circle of reservists and mobilise people to protect the city's critical infrastructure (Territorial defence of Chernihiv..., 2022). However, Ukraine's national defence system was not activated on time. Just as other important proposals to improve Ukraine's national security and defence system were not considered in time (Nazarov, 2020; Reznikova, 2022). Based on the systemic and structural approach and grouping of relevant and reliable information, it can be concluded that in the absence of a developed and approved doctrine of “total defence” in Ukraine, not many officials whose responsibilities included the organisation of defence were ready for its actual organisation. Thus, the enemy was partially able to take the country by surprise, as the Ukrainian public administration system as a whole was not prepared to repel the aggression promptly.

The progressive-regressive method of learning about trends and relevant facts indicates the following. Despite the suddenness of the attack, on the morning of 24 February 2022, the Armed Forces Command, the General Staff of the Armed Forces, the leadership of the Ministry of Internal Affairs (MIA) headed by D. Monastyrskyi, and the leadership of the State Border Guard Service quickly managed to organise some effective resistance in the North and Centre of Ukraine in most areas of the Russian army's offensive. Units of the regular army of Ukraine, together with volunteers from the Territorial Defence Forces of Ukraine and spontaneously joined citizen volunteers, fought extremely hard against the heavily armed forces of the invaders, which were several times superior. However, in the south of Ukraine, when leaving Crimea, the enemy occupied a territory of thousands of square kilometres in a few days without any obstacles and without organised resistance. This indicates that if the doctrine of “total defence” had been implemented in 2020, Ukraine would not have suffered such human and territorial losses. It is worth recalling that the Territorial Defence Forces were created with a considerable

delay only shortly before the invasion began, based on the Law of Ukraine No. 1702-IX “On the Foundations of National Resistance” (2021). The formation of the Territorial Defence Forces was to be completed by 15 February 2022 (Fediyenko, 2022; Everything you need..., 2022). In 2022-2023, at the cost of the Armed Forces’ efforts, with the help of citizen volunteers who were forced to take up arms on short notice without adequate training, they managed to defend Kyiv, Mykolaiv, Kharkiv, and other cities and villages, liberate Kherson from occupation, and push the enemy back from Kharkiv. There were other successful operations. However, the occupation forces’ mining of the occupied territories, construction of fortifications using the production capacity of Russian enterprises, the explosion of the Kakhovka hydroelectric power station and other circumstances limited the possibility of conducting a manoeuvre war to de-occupy the South and East of Ukraine.

By the beginning of autumn 2023, the war had become a positional war with the depletion of military, mobilisation, and economic resources of both belligerents. In January-February 2024, the attention and energy of civil society was constrained by the removal of Commander-in-Chief General V. Zaluzhnyi from the Armed Forces of Ukraine. At the same time, the Russian occupation army launched a massive offensive in the area of Avdiivka using guided aerial bombs, which soon ended in the loss of this important stronghold. This situation urgently requires both an increase in the ability of all public authorities to produce the resources necessary to resist the aggressor’s pressure and an increase in the overall level of resilience of the “country-state-society-citizens” system. The volunteer movement to support the Armed Forces became one of the amateur areas of development of the flexibility of public administration needed in wartime. It is critical for strengthening organisational and mental links between the levels and components of the “country-state-society-citizens” system.

However, even in this rather narrow segment of the flexibility of public figures and concerned citizens to respond to the needs of the country’s defence, problems often arise. As a rule, they are created by officials’ attempts to regulate volunteer activities to provide opportunities for corrupt practices for officials. A considerable number of officials still believe that the state is the property of officials and that it is possible to “boost” ratings and “extract rent” through high ratings. And ratings can be easily “stimulated” by populist technologies. This is a short-sighted and, in times of war, even criminal understanding of the purely personal resilience of a civil servant (official, commander, etc.). At the present stage, “civil servants” are constantly being renamed “public servants”, “employees of public administration bodies”, etc. However, most officials have not yet developed a stable understanding of their personal responsibility for the survival of Ukraine and their personal functional role in the public administration system, even in wartime. Criminal negligence of the interests of the country’s defence is more often observed in the expectation of creating grounds for corruption schemes. To the detriment

of the country’s resilience, in the minds of a sizeable number of officials, every economic transaction, whether in the public sector, private business, or to meet public interests and needs, and even in the field of defence and security, should bring them personal corruption income (Bondarenko, 2023; The Ministry of Defence..., 2023).

Corruption attempts by officials also affect many economic and planning operations necessary to replenish material resources for the state’s defence and address the challenges of Ukraine’s security and resilience (The Accounting Chamber..., 2023; Petyk & Batsman, 2023). At the same time, the synergistic concept indicates that a multi-level system of self-organisation “country-state-society-citizens” should work as an analogue of an integral multi-level biological organism that has a self-regulatory need and purpose to direct the forces of hardiness of all its levels for the survival of the entire system (Cherlenyak, 2010). Corruption, as a process that destroys the stability of the state as a self-regulating organism, must be eradicated from the state at least for the duration of the total full-scale war. A systematic approach to defence and security issues allows understanding that an essential aspect of the flexibility and resilience of the system of public administration bodies and institutions of Ukraine at the current stage of war is the problem of effective management of the development of the concept, substantiation of the doctrine, and implementation of the practice of “total defence”. Certain steps were taken in this area, but, as wartime showed, they were not effective enough. In 2020-2021, when a new military doctrine was being developed, the foundations of which were presented in the Decree of the President of Ukraine No. 121/2021 “On the Decision of the National Security and Defence Council of Ukraine ‘On the Military Security Strategy of Ukraine’” (2021), military analysts and experts foresaw the need and possibility of developing the concept of total defence. However, the final document still contained a substantially vaguer wording – “all-encompassing defence”. Therewith, the term “all-encompassing” here refers not to the depth of the problem, but to the breadth of the list of areas of possible threats.

According to the aforementioned deterrence strategy, in the context of Ukraine’s comprehensive defence, it is envisaged to repel armed aggression against Ukraine at the expense of the readiness of the Ukrainian defence forces; the national economy; the population; the entire state (Strategy of Military Security of Ukraine..., 2021). The document also points to the need to develop the capabilities of the Armed Forces, such as air defence and other branches of the armed forces. It also mentions the need to create an integrated system of territorial defence, but does not even make provision for a purpose, let alone a programme of training the population to take part in territorial defence. Upon a systemic approach, total defence is first and foremost a link between all possible levels of existence, sustainability, and resilience of the “state (government)-country-society-citizens” system. But in the content of this state regulatory document, the resilience of

the state and its defence system is factually reduced to the doctrine of “resistance mechanics”. The same document also uses the term “state resilience”, but in the following narrow context: “resilience in comprehensive defence of Ukraine is achieved... by maintaining the ability to carry out strategic deployment, territorial defence of Ukraine, resistance movement...” (Strategy of Military Security of Ukraine..., 2021). However, when describing the aspects of “all-encompassing defence”, the need to establish reliable channels of communication between the state authorities and the population is pointed out.

The concept of total defence is absent from the final version of this potentially crucial document. And this is even though the term “total defence” is included in the national security doctrines of the Baltic states, Norway, and Sweden. That is, all countries that remember history and consider Russia as a potential “total enemy” (New military doctrine..., 2021). The structural-functional analysis shows the Ukraine, apart from military and political problems, also suffers from certain institutional and legal problems for the introduction and implementation of an effective doctrine of “total defence”. The inhibiting factor is, specifically, the fact that the existing state mechanism lacks a real factor of political responsibility of the President of Ukraine and the Verkhovna Rada of Ukraine for the actions (inaction) of the Cabinet of Ministers of Ukraine (Chornous, 2011). This situation reduces the effectiveness of the entire executive branch, which is essential in wartime. The problems of creating a doctrine and practice of “total defence” are urgent for the qualitative and rapid improvement of the efficiency of all levels of public (state) management of the country’s defence in times of war. These problems are organisational, legal, and psychological. For instance, the development and functioning of territorial defence forces based on the doctrine of total defence in Estonia is ensured by a profoundly layered system of incentives to motivate Estonian citizens to join the national defence. Even in peacetime, the question in Estonia is put as follows: the education of each generation should be based on the ideological imperative of readiness to allocate part of one’s free time and the time of the professional career of every healthy citizen to prepare for national defence (Estonian Ministry of Defence, 2010).

A synergistic approach to optimising public administration of the defence sector suggests that a practically effective, rather than purely declarative and imitative, solution to the problem of Ukraine’s resilience should begin with the introduction of the following modes of organisation/self-organisation: rapid but high-quality development of an idea; popularisation of an idea; development and popularisation of a moral “maxim”; philosophical substantiation of the national ideological doctrine; respective legislative substantiation and regulatory support (Cherlenyak, 2010). However, this process should not become a formality beneficial to inactive and inefficient officials, as is often the case. The renaming of regional state administrations into regional military administrations did not automatically

create a new quality of defence management. Especially when they are usually not led by professional military personnel from the ranks of the Armed Forces of Ukraine, who have real frontline combat experience and the moral right to be called “military administration”. Moreover, such renaming merely removed officials from public scrutiny and only formally brought the regions of Ukraine closer to the simplified concept of “general defence”. But total defence is much more than a formally established “general defence” or “all-encompassing defence”. A total defence doctrine suitable for the full-fledged organisation of the relevant levels, segments, and units of effective total defence in each region and in each territorial community should first of all practically envisage, develop, and use a respective ideology; individual and social morality; resources (including financial and legal); responsibility and authority. It is in this focus that it is necessary to ensure real responsibility and mutual control of the following public authorities and public administration entities: local territorial communities and their bodies (local self-government); regional territorial communities and regional public administration bodies; law enforcement agencies; the Cabinet of Ministers of Ukraine; the President of Ukraine; the Verkhovna Rada of Ukraine; and civil society institutions and agencies.

In many critical areas, the Armed Forces of Ukraine, with the support of patriotic groups of citizens and patriotic public administration officials, managed to put up a strong resistance to the invaders according to the concept of “resistance at any cost” (The level of stability..., 2023). According to the authors of this study, this is what ultimately made the occupation of Kyiv and Kharkiv impossible and preserved the foundations of Ukraine’s resilience. However, in a long-term positional war, the concept of enhancing the capabilities of “resistance at any cost” is not promising enough. In the new conditions of a positional war of attrition, to solve the problem of radically improving the joint effectiveness of the public administration and military management systems, it is necessary to develop national defence and security doctrines based on the understanding that resistance, resilience, and survivability are related but fundamentally different semantic constructs.

In his report, delivered in the first months of the full-scale war at a meeting of the Presidium of the National Academy of Sciences of Ukraine, S. Pyrozhev (2022) the need to transition from the concept of resistance through hardiness to the concept of resistance and struggle through resilience in the dimension of the state. The authors of the current study share the significance of this thesis. There-with, in different sciences, the concepts of hardiness and resilience have rather complicated mutual correspondences. In the dimension of an individual, social psychology also defines the concept of hardiness. It is ensured by such adaptive personal characteristics as stress resistance, emotional stability, and emotional intelligence. Resilience in the dimension of a social community (social group) is the ability to find such internal forces and resources that they are effective in dealing with the crisis.



M. Ganor & Y. Ben-Lavy (2003) believe that resilience should become a higher degree of adaptation and flexibility to the situation. S. Jackson & T.L.J. Ferris (2012) believe that in the country and state dimension, social (or societal) resilience forms an integral part of national resilience and is defined as the preservation of the nation-state's ability to maintain its social cohesion when faced with external or internal conflicts caused by socio-political change and/or violent unrest. Resilience is the ability (potential or manifested) of a dynamic system to successfully adapt to disturbances that threaten the system's functioning, survivability or development, positive adaptation or development in the context of negative impact. O. Reznikova (2022) emphasises that resilience in the state dimension primarily implies the ability of the state and society to effectively counter threats of any origin and nature, adapt to changes in the security environment, maintain their sustainable functioning, and quickly recover from crises to the level of equilibrium that is optimal under certain conditions.

In the area of social self-organisation, Ukraine's overall resilience should, among other things, include both the potential for immediate response to sharp situational threats and the ability to adapt key processes of a dynamic system to the content of challenges that threaten its survivability over extended periods of time. Accordingly, the two formally close semantic constructs of hardiness and resilience in the relevant project formulation "challenge-issue-task-solution algorithm" in the context of this war should become the systemic basis of two essentially different doctrines of formation and support of sources and resources of Ukraine's defence in the short-term (hardiness) and long-term (resilience). The doctrine of "defence hardiness" is in fact always mechanistic. In the context of the topic, the doctrine of "hardiness" and its corresponding strategy of adequate military resistance is based on the organisation of resistance to aggression by the state administration with the forces and means of the subordinate Armed Forces and law enforcement agencies based on those pre-prepared resources that are operationally controlled by state bodies and international aid agreements. There are situations when, in the short term, in a certain local area, it is expedient or necessary to quickly use the doctrine of resistance-hardiness.

However, it is necessary to consider the thesis of Y.T. Maru (2010) that in the context of social, psychological, and ecological systems, the term "resistance" adequately describes the ability of the system to withstand the immediate (current) consequences of stressful situations and ensure its return to normal functioning in conditions comparable to those that preceded the crisis event. Developing this thesis, Ukraine needs to consider the following factors and processes to win a long-term war: resistance is a special state of tension in a system; tension needs to be provided with a safety margin and supply flows to restore resistance forces; the reconstruction of links between system components necessary for the existence of resistance may, after some time, cause a stable dysfunction of the

system in a changed environment; when the nature and character of the threat changes, the construct of "familiar resistance" becomes ineffective. Developing the concept of S. Pyrozhev (2022), the authors of the current study argue that the doctrine-concept of "resilience" in the dimension of the country's "past-present-future" relations is more organic and multivariate in the context of a long-term war of attrition than the concept of "resistance hardiness". The doctrine and strategy of mobilising resources of the system "state-country-society-citizens" should be based on semantic constructions of dynamic (organic) vitality. In fact, the following triad should always be kept in mind: resilience-hardiness-survivability. For systematic modelling of the content of operational, tactical, and strategic tasks of Ukraine's development and hardiness in war, it is necessary to apply a corresponding group of relevant concepts: in relation to the problems of operational repulsion of aggression in the context of the possibilities of providing resources for resistance; in relation to the problems of adaptive reconstruction of Ukraine as a dynamic system in a long-term life cycle of resilience.

Notably, Ukraine's resilience, hardiness, and survivability depend on the interaction and struggle of negative and positive factors, both of an "internal systemic" and external nature. It is worth emphasising that public authorities should always consider that the profound ties of the system "state-country-society-citizens" are based on the people's love for their native land, for their kin and family, for the bright pages of their history, culture, and traditions, which preserve the memory of the valour and virtue of its historical heroes. In response to this historical challenge, the current public authorities need to modify the content of internal policy to become the ideological, moral, and organisational core of the state's resilience system. Ukraine's hardiness requires a harmonious combination of the integrity of the semantic core and historical roots of the state's resilience with the flexibility of democratic public administration approaches to solving operational and tactical tasks and strategic challenges of the war of attrition.

The authors of this study support the thesis of V. Palyvoda (2020) that the doctrine of total defence should be understood and comprehended by the entire society. Preparation of citizens for total defence should be carried out with the active and persistent work of all state institutions, as well as with the active support of non-governmental organisations. The newly adopted Law of Ukraine No. 10449 "On Amendments to Certain Legislative Acts of Ukraine on Certain Issues of Military Service, Mobilisation and Military Registration" (2024) should become one of the key strategic steps and substantive blocks in the development of Ukraine's defence potential. However, it is not organically linked to the need for and doctrine of "total defence". Therefore, it becomes a purely "mechanistic" document of "resistance hardiness" that does not increase the ability of society to self-organise in the time of war of attrition. Moreover, the controversial process and procedure of its adoption led to partial disorganisation of society. To ensure

the synergy of society and the state, the initiative in developing and implementing the doctrine and practice of total defence must belong primarily to the President of Ukraine as the Supreme Commander-in-Chief. The Parliament of Ukraine and the Government of Ukraine should also play a vital ideological and organisational role in this matter. The search for answers to the threats of sabotage groups infiltrating the regions of Ukraine (specifically, Sumy and Chernihiv regions), the deployment of psychological aggression technologies (pro-Moscow “telegram channels”, intimidation and demoralisation of the population, rocket attacks and destruction of energy facilities) is not a narrow issue of “documenting”. This is a fundamental issue of the sustainability of public authorities represented by the entire nation and the resilience of those public figures who synergistically recognise and promptly implement the will of the people in relevant management models and decisions. Total defence is a doctrine of responsibility and actions of the people as a source of public power, and a guide for the authorities and institutions as its strategic executors. The doctrine and practice of Ukraine’s total defence should directly apply to legislative, executive, judicial, military (in wartime) authorities; all segments of the population, regardless of age and gender. Therefore, all state and non-governmental institutions should be involved in educational and patriotic training of all participants in this defence system. Its systematic nature should be universal and comprehensive. The President, the Parliament, the Government, ministries, and heads of territorial communities should be personally responsible for the effectiveness of the “total defence” system.

Military experts M. Lobko *et al.* (2022) also point out that both central government and local government and self-government bodies organised and carried out defence in 2022 unsuccessfully. Therewith, they emphasise that the interaction between the state authorities, the Armed Forces of Ukraine, other military formations and law enforcement agencies was insufficiently effective. The authors of the present study fully agree with this statement. Moreover, this situation has arisen precisely because Ukraine does not have its own doctrine of “total defence”. The authors of the study are convinced that the qualitative development, legal support, and practical implementation of Ukraine’s “total defence” doctrine is also of international significance, as it will lead to a qualitative improvement of the European security architecture as a whole. It is worth recalling that military experts considered the introduction of a “total defence” system to be relevant in 2020-2022, but then lacked the managerial courage to organise their solution. In 2024, these issues have become even more pressing. The situation in which Ukraine has found itself since the beginning of the full-scale invasion is still exceedingly difficult. Many segments of the state administration and public authorities were indeed unprepared for systemic defence and long-term resistance. Therewith, some problems and issues are slowly being resolved. However, there is a need to emphasise that even in 2024, it is still difficult and too

slow to build high-quality defensive fortifications in the areas of possible offensive by the Russian occupation forces. And this is even though the public and the media are again repeatedly discussing precedents and risks of large-scale corruption. An analysis of the resistance of Ukrainian citizens to the Russian military invasion organised in February-March 2022 showed how strategically important are systematic and planned defence actions.

The authors of this study share the opinion of V. Palyvoda (2020) that the experience of states such as Norway, Sweden, Finland, Israel, Poland, Singapore, Estonia, etc., in applying the doctrine of “total defence” proves the benefits of preventive planning of actions to resist external aggression. According to the authors of the current study, the development and adoption of the Total Defence of Ukraine doctrine will allow for a rapid and qualitative increase in the resilience of the state and the army. This doctrine should ensure the sequence of stages in the formation of the following defence actors resistant to crisis challenges and stressful situations: an individual citizen, each public authority official, and society as a self-organising whole. This doctrine should ensure the emergence and functioning of effective public authorities and public administration bodies and functionaries, even in crisis conditions. We are convinced that the threat of corruption can be quickly eliminated if the doctrine of “total defence”, specifically, makes provision for the moral and “official” obligation of immediate atonement for corruption by officials of all branches and bodies of state power in military service on the front line for at least 6 months. The authors of this study also share the opinion of O.S. Bondarenko (2023) on the negative role of elevated levels of corruption on the level of Ukraine’s defence capability. When developing the doctrine and legal support for total defence, it is necessary to clearly consider that the extensive networks of corrupt business created over 33 years often focus on the interests of the Kremlin’s special services. Corruption networks have now become not only a lever of political and economic influence on the Ukrainian authorities. They have become significant economic agents in the political and economic system of Ukraine with considerable capital accounts in both Ukrainian and international banks. It was through corruption networks and schemes that these firms and corporations provided funding for pro-Moscow TV channels, newspapers, and social media segments that were supposed to inform the Ukrainian population about Moscow’s occupation.

At the same time, the Kremlin’s special services, using the above-mentioned corruption networks in Ukraine’s economy, can intensify the emergence and functioning of sustainable corruption schemes in the judiciary, executive, and legislative branches. This duality of defence and self-defence of corruption networks allows them to create effective criminal schemes even in times of war. That is, to provide “total security” for participants in corruption networks in industry, energy, agriculture, and mining sectors linked to the interests of politicians and special services



of the Kremlin. One clear example of this anti-Ukrainian policy of corruption networks in the past was the privatisation of Ukraine's powerful primary aluminium metallurgy enterprises, which destroyed the development of Ukraine's own military aviation (Prygunova *et al.*, 2022). Another well-known example is the case of V. Bohuslayev, who was arrested on 24 October 2022 and was the *de facto* head and owner of the strategically important enterprise for the production of military helicopters "Motor Sich", which sold military equipment and components for the needs of the Russian army (Ex-president of "Motor Sich"..., 2024).

The level of stability and cohesion of citizens of Ukraine (according to the results of sociological research) (2023), based on the analysis of sociological research conducted in the second half of 2023, draws the following important practical conclusions: 1) the resilience of Ukrainian society to the challenges of war is quite significant; 2) the situation may change depending on the deterioration of the economic situation or the situation at the front; 3) the resilience of society also depends on its psychological state, specifically, on the feelings associated with its country. The authors of the current study agree with these practical conclusions. In this regard, and in the light of the above arguments, it is necessary to immediately start developing the doctrine of "total defence" at the level of competence of the Cabinet of Ministers and the Institute of the President of Ukraine. The Verkhovna Rada of Ukraine should consolidate around the task of legislating and consolidating the foundations of total defence. We are convinced that in creating a Ukrainian doctrine of total defence, the proven experience of the Scandinavian and Baltic states should be used first of all. It is worth agreeing with the opinion of V. Palyvoda (2020) that it is worth investigating the practices of the Polish Government in this area. The author's analysis confirms the view that the doctrines of "total defence" have a dual content focus: introduction of a system of defence means to minimise the success of a potential enemy; ensuring the survival of the state and society in the face of a potential military invasion of the country's territory. Therewith, in Ukraine, the doctrine of total defence should include a third substantive area: merciless and serious punishment for corruption under martial law. Notably, in the context of Ukraine's current war for its sovereignty and state survival, a fourth content area is needed: increasing the level of responsibility, a sense of belonging to the people, developing spirituality and cohesion, especially among the wealthy strata of society in patriotic hardening. This applies primarily to officials of state executive authorities, intelligence officers, police officers, judges, MPs, businesspeople, customs officers, intermediary firms, and the gambling business. All this should be supported by a qualitative leap in the level of skills and knowledge of state authorities, both the "supreme" military and political leadership and members of the Cabinet of Ministers of Ukraine and all public officials. Particular attention should be paid by citizens and civil society to the development of such socio-political conditions in which the improvement of the

competences of members of the Ukrainian parliament will become a personal necessity for each parliamentarian and a "condition of parliamentary existence" for the party that brought them to the parliament.

The authors of this study ask scientists, the public, and the authorities to draw their attention to the fact that effective public administration and democracy of the appropriate quality can quickly become a systemic competitive advantage of Ukraine over Russia. It should be recalled that in a democracy there is a dynamic problem of unity of sources of public power due to the diversity of interests of social and property strata, differences in the political culture of citizens, and interests of political parties, which only together and in a coordinated manner can effectively express the will of the people as the sovereign power holder. To be ready to achieve the common goals of sustainability in the "state-country-society-citizens" system, synergy between public authorities and active segments and groups of society is necessary. There is a need for an ideology of unselfish responsibility for the sustainability of the state, which should be demonstrated primarily by the Ukrainian authorities. Synergy and a sense of mutual responsibility should offset the existing political strife and misunderstandings. It is necessary for officials of the current government to reject the technologies of daily populism in the struggle for power and find the strength to lead the country to the development and clear implementation of the doctrine and strategy of "total defence" (Burdiug, 2023). A suitable option for creating such synergy at the present stage may be the formation of a "Government of National Unity" that can focus the most competent representatives of patriotic forces on governing the state.

One of the key prerequisites for the success of the "total defence" strategy is the development of the psychological readiness of an organised society to resist the aggressor. The educational and training aspect and the psychological factor are also important for effective resistance, as they facilitate the adaptation of citizens to act in emergency situations of risk and threat. For the practical implementation of "total defence", it is also necessary to prepare a reasonable and fair legal basis and broad regulatory support. However, this is insufficient: it is necessary to develop, substantiate, explain, and cultivate a relevant ideological doctrine of active patriotism that harmonises the worldview and self-awareness of national, regional, and local communities in the interests of Ukraine's total defence.

Y. Alshamy *et al.* (2024) believe that it was the polycentric defence of Ukraine's regions in February-March 2022 that ensured the defeat of Russian troops during this period by the Ukrainian defence forces. Moreover, they believe that this result reflects the overall benefits of polycentric systems, as they are generally more adaptive and resilient. The authors of the current study partially agree with this thesis. But this thesis is valid only within the framework of short-term "resistance at all costs" based on the doctrine of resilience. Instead, we emphasise that the long-term destruction of all spheres of state life caused by the

war can only be countered by a sophisticatedly organised polycentric system of “state-country-society-citizens”. This multi-level organised system cyclically reproduces itself in the interaction of such semantic and activity images, which, from a certain perspective, always have somewhat contradictory parts and combinations: historical, resource, activity, economic, political, cognitive, and emotional content. This kind of self-organising reproduction requires both a social and political atmosphere of justice and responsibility for the future. It requires an awareness of the need to develop and implement effective defence doctrines and effective plans for Ukraine’s economic development.

When assessing the effectiveness of officials, the public should consider the fact that wartime puts forward new and contradictory requirements for the quality and content of public administration. Complex questions and problems arise about the correlation between directive methods of rigid public administration and more flexible and multivariate methods of public administration. A rigid system, as opposed to a flexible system, cannot withstand sharp shock loads, while a flexible system, by reconstructing surface connections and engaging deep connections, can rebuild, distribute, and extinguish the force of the shock load of the challenges of war. At the same time, the flexible system should not be transformed into schemes for abuse and corruption.

Public administration as a system and a principle, as a process of mutual influence of citizens, territorial communities, social strata, non-governmental organisations and political parties, and state bodies, differ substantially in peacetime and wartime. One of the sources of this transformation is the restrictions that are usually imposed on meetings, rallies, and other public events in wartime for reasons of national security. However, even in such circumstances, democratic control of society over officials at all levels of public authority should still be maintained in a reasonable manner, specifically to reduce corruption. In this regard, O.S. Bondarenko (2023) expressed an extremely relevant opinion on the need to strengthen the legal regime for combating corruption. It is worth emphasising that without such a regime (which is also an important factor of social self-organisation), it is impossible to create an atmosphere of justice and respect for the dignity of the citizen. This includes the dignity of a citizen-soldier. The national security system and the public administration system should interact based on the doctrine of “total defence” of Ukraine in such a way as to create effective practical mechanisms for managing the country’s economy, governance of the state administrative apparatus, the Armed Forces, and law enforcement forces. Overall, a functionally sound solution to the problem of security and building effective strategies of “total defence” depends on the quality of the entire set of regulatory, organisational, managerial, social, group, material and financial, innovative and technological, information and semantic, prognostic and modelling factors. Reconciling them is not an easy task, as it requires, among other things, the systemic eradication of corruption in all these areas. At the same time, all sectoral and general

governance mechanisms should make provision for and ensure a prominent level of responsibility of both the individual politician, civil servant and ordinary citizen to the state and society for the total defence of the country. The mechanisms of social governance should accommodate the reality of wartime and still direct the dynamics of the political regime and public administration, socio-economic and national-cultural development of the multiethnic Ukrainian people to the rails of real, not manipulative, democracy.

■ Conclusions

Ukraine’s resilience as a form of dynamic sustainability of the meta-system “state-country-society-citizen” requires constant attention to the expanded reproduction of the security system of the same meta-system based on self-organisation modes. In a broad sense, this is a problem of social self-organisation. In a narrow sense, it implies, first and foremost, the quality institutionalisation of the security system of the state and communities. The sustainability of the state security system can only be responsible, viable, and resilient based on clear rules and requirements understood by both citizens and officials. In the context of the crisis, Ukraine’s resilience can only be ensured through the involvement of broad sections of civil society in the state’s security system. The creation and regulation of a sustainable system of “total defence” in the context of a positional full-scale war is an urgent and necessary condition for Ukraine’s hardiness, resilience and survivability. The development of the state security components should be actively pursued by means of public administration, whose institutions should act as an important bridge between the state, society, and citizens. This should lead to the strengthening of patriotic motives for social self-organisation in the context of preserving the foundations of the democratic regime in Ukraine. This is important because democracy is Ukraine’s valuable competitive advantage over the totalitarian and authoritarian Russian Federation.

In the country’s dimension, effective total defence is impossible without effectively functioning legislative and representative bodies, a flexible executive branch, active local governments and non-governmental civil society institutions, and control of special services to protect the state’s security. The system of total defence requires both state and meticulous public oversight (“reanimated” public control). It is important not only to develop and improve laws and plans, but also to ensure that both government officials and ordinary citizens strictly adhere to the norms and spirit of the relevant laws, strategies, and plans. The need to immediately regulate the responsibilities and powers of all public and military authorities in the area of national security, military, economic, and political stability of Ukraine is a vital requirement of wartime.

Solving these problems requires the daily work of all patriotic factions and committees of the Parliament of Ukraine. The unity and coadaptation of the state and society in the security and defence of the country should immediately become the ideology of Ukraine’s hardiness.

The awareness of unity is also expressed in the possibility of civil society control over the authorities and institutions of power, and in the accompaniment of public administration with the processes of preparing citizens for emergencies, conflicts, and war based on the doctrine of “total resistance”. Training should be organised in families, educational institutions, and workplaces in state and non-state institutions. Systematic basic training in security and “total resistance” should become a vital necessity for every citizen of Ukraine. In the 21st century, this is the only way for Ukraine to successfully resist the Kremlin’s long-term military and political expansion and not only guarantee Ukraine’s security, but also improve the architecture of pan-European security. Prospects for further research in this area include a detailed analysis of the advantages of

international total defence doctrines, conditions, and strategies for their application; investigation of the possible impact of these strategies on the stability and development of the state in war and the post-war period; developing recommendations for effective systemic and public management of national security and defence of Ukraine.

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■ Conflict of Interest

None.

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Ефективне управління та доктрина «тотальної оборони» як фактори стійкості держави в умовах воєнного часу

Іван Черленяк

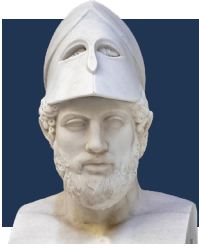
Доктор наук з державного управління, професор
Ужгородський національний університет
88000, вул. Університетська, 14, м. Ужгород, Україна
<https://orcid.org/0000-0001-6270-5549>

Маріан Токар

Доктор наук з державного управління, доцент
Ужгородський національний університет
88000, вул. Університетська, 14, м. Ужгород, Україна
<https://orcid.org/0000-0001-8426-4481>

■ **Анотація.** У воєнний час ефективне управління та доктрина «тотальної оборони» є критично важливими факторами, які забезпечують стабільність, безпеку та суверенітет держави. Метою цієї роботи було дослідити аспекти ефективності управління системою національної безпеки і оборони держави. Використано аналітичне моделювання системних складових стійкості України у воєнний час через призму доктрини тотальної оборони та концепції суспільної самоорганізації. Досліджено бар'єри та труднощі підготовки системи публічної влади України до ефективного управління опором загрозам гібридної війни та загрозам повномасштабної війни високої інтенсивності вздовж усієї лінії державного кордону України з РФ. Проаналізовано особливості етапу гібридної війни низької інтенсивності 2014–2021 років та особливості початкового етапу війни високої інтенсивності 2022 року. Розглянуто здобутки, упущення, недоробки та помилки органів влади і посадових осіб системи публічного управління на перших етапах повномасштабного вторгнення окупаційних військ РФ в області та міста і села України. Встановлено, що як система організації державного управління національною безпекою та обороною, так і законодавче та нормативно-правове забезпечення підготовки військового та промислового потенціалу країни не відповідали тому рівню загроз, які були сформовані військово-політичним керівництвом РФ у 2021 році та особливо в січні – лютому 2022 року. Показано, що внаслідок цього сили оборони України не змогли своєчасно та в повній мірі забезпечити організацію ефективної відсічі широкомасштабному вторгненню військ РФ. Проаналізовано принципи організації системи тотальної оборони органами публічного управління скандинавських і прибалтійських держав. Доведено, що на сучасному етапі оборони країни найбільш доцільною є концепція посилення резильєнтності соціального, економічного та військового потенціалу країни. Обґрунтовано, що в умовах позиційної війни високої інтенсивності ефективне державне управління має базуватися на такій концепції резильєнтності, що системно зв'язана з доктриною тотальної оборони України. Результати розвідки можуть бути використані органами публічного управління та інституціями громадянського суспільства України при розробці і впровадженні ефективних стратегій управління під час війни, а також для покращення координації дій різних відомств у сфері оборони на основі впровадження доктрини тотальної оборони

■ **Ключові слова:** збереження державності; державна безпека; система управління; резильєнтність; економічна стабільність



Challenges of balanced development of regions in the context of centralisation, the case of Ireland

Maryna Chulaievsk^a

PhD in Public Administration
Training Centre of Prosecutors of Ukraine
04050, 81B Yuriy Illienko Str., Kyiv, Ukraine
<https://orcid.org/0009-0007-4569-3567>

■ **Abstract.** The relevance of this article topic lies in assessing the impact of centralization of governance powers on ensuring balanced regional development, which is crucial for shaping effective regional policy and reducing socio-economic disparities. The aim of this research was to analyze the challenges of achieving balanced regional development in the context of centralization of authority, using Ireland as a case study. During the study, regulatory acts, official materials of government bodies, results of sociological research, and scientific publications were analyzed using historical, comparative, and predictive methods of inquiry with an interdisciplinary approach. Analysis of sources from different historical periods allowed elucidating the evolution of phenomena and concepts under investigation.

The concepts of balanced development of regions, development of metropolises, and sectoral development of the economy are contrasted in the article. The negative effects of strong centralisation, as well as its advantages for the development of the country are unpacked. The impact of the European Union's policy on the socio-economic growth of Ireland, aimed at reducing the level of centralization of decision-making, building local self-government, and reducing regional disparities, is highlighted. Based on these researches the possible impact of centralisation in Ukraine on post-war recovery and development was analysed and conclusions about the advantages, disadvantages and possibilities of applying the Irish experience in Ukraine in the context of conflict and post-war reconstruction is made. The possible development of public administration and local self-government in Ukraine is projected, taking into account the experience of Ireland. The approaches to regional development, which assume that the country's socio-economic development can be better ensured by reducing regional disparities, and approaches to the development of agglomerations and metropolises as a basis for the prosperity of the national economy is analysed. The findings of the study can be valuable for substantiating further development of decentralisation and reducing the level of forced centralisation that has emerged due to martial law, as well as for defining a conceptual vision for the reconstruction of the territory and regions of Ukraine

■ **Keywords:** decentralisation; public administration; regional development; metropolises; the European Union; disparities; recovery

■ Introduction

Since the beginning of Russia's full-scale invasion of Ukraine the Government of Ukraine faces a number of challenges: fighting Russian aggression; combating the economic crisis caused by the war; restoring and developing the affected territories; overcoming the socio-demographic crisis; and implementing its EU and NATO integration

policy. However, sustained European integration requires Ukraine to continue implementing reforms aimed at ensuring the principles of democratic governance. In these circumstances, there is a need to research cases of other democratic countries that have faced challenges similar to Ukraine's, especially those that have liberated themselves

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from authoritarian rule or faced threats to the national security and territorial integrity. It is reasonable to explore the experience of countries that, at the time of accession to the EU, were in a political, social, and economic situation similar to the current situation in Ukraine. The study offers the experience of the Republic of Ireland, which is not widely studied in Ukraine, unlike the experience of Poland, Germany, or other Central and Eastern European countries. The paper examines the centralisation of power in Ireland and the ongoing attempts to maintain it despite the EU's efforts to reduce the level of centralisation, empower local authorities, and balance the development of Ireland's regions. The experience of one of the EU's most successful economies can be useful for Ukraine in obtaining European assistance, implementing reforms and developing a conceptual vision of the country's post-war reconstruction.

The issue of the balance of powers between central and local governments, as well as approaches to regional development, is widely studied in the world. This study provides an analysis of European, mainly Irish and Ukrainian experts. In Ireland, the topic of centralisation and balanced regional development is of interest to many researchers. M. MacCarthy *et al.* (2023) offer an analysis of the strong executive dominance and power accumulation in the Irish central government and examine the economic protectionism of the Irish government. J. O'Brennan (2021) highlighted the arguments in favour of the impact of European integration policy and EU institutions on the formation of a new paradigm of governance in Ireland, emphasising the problems of the functioning of central executive authorities, inconsistency of their actions, a high level of centralization and the resilience of centralization to change, etc. In addition, reveal the essence of the centralised government in Ireland and its search for new instruments of interaction with regions and local authorities. N. Moore-Cherry *et al.* (2023) thoroughly investigate balanced regional development, the evolution of local government and its impact on regional prosperity, identify the features of metropolitan development and management, understand the role of metropolitan areas in the country's economic growth, the dynamics between state control and the ability to manage a metropolitan area, etc.

F. O'Leary (2023) examined the development and functioning of local authorities in Ireland, their competences, problems of coordination between local and central authorities, inadequate distribution of functions, results and prospects of local government reform. P. Idczak *et al.* (2024) proposed to apply the place-based planning methodology for the development of infrastructure, local economy, local entrepreneurship and services in the regions. R.J. Paulsen *et al.* (2024) provided arguments for the feasibility of moving from balanced regional development to the development of urban agglomerations. R. Belderbos *et al.* (2024) investigated the advantages and disadvantages of agglomeration for the country's economic development and problems of interaction between central authorities and agglomerations, and also the impact of the spatial planning policy of Ireland, implemented

by the central authorities, on the balanced development of regions. W. Disch & R. Slaymaker (2023) studied the government's housing policy in comparison with the needs of society, as well as the housing crisis in Ireland

Problems related to the decentralisation of power and regional development are widely studied by Ukrainian researchers. Specifically, the issues of governance, a new dimension of development and intensification of decentralisation processes, state regional policy, problems of balanced development of territorial communities and regions of Ukraine are revealed. O. Muzyka-Stefanchuk *et al.* (2021) focus on analysing the security and financial challenges of decentralisation in Ukraine and some other European post-communist countries. The authors conclude that the decentralisation reform should be treated with caution, as they believe that the principles and achievements of the reform are populism that has not brought real results, and that the reform was implemented only to redistribute financial flows and remove some actors from the budget. The researchers stress that it is necessary to further identify the negative consequences that decentralisation may bring to Ukraine. N. Kulchytska & L. Dermanska (2024) analyse the impact of the war on financial decentralisation in Ukraine, ensuring the smooth functioning of the population and the state in the context of reorientation of local and state budgets towards military purposes. The authors conclude that local self-government is capable of meeting all challenges, including those in the financial sector. The authors stress that each region should choose its own development paradigm and that regional development strategy should be revised to take into account the consequences of the war. O. Keudel & O. Huss (2024) analyse decentralised governance in Ukraine during the war, its ability to respond to crises and to meet the challenges of war, in particular by disseminating knowledge, attracting innovation and expanding networks. The authors conclude that despite ambivalence about the effectiveness of decentralised states in responding to crises, Ukrainian local authorities proved quite resilient during the war. Therefore, in a situation of protracted and extreme crisis, a polycentric system of governance can contribute to resilience. O. Podzizei & T. Shmatkovska (2023) unpack the issues of restoration and development of regions and local authorities in the wartime and postwar period. They conclude that each community should develop its own development strategies based on competitiveness models. The researchers support the broad involvement of businesses and communities in restoring community competitiveness and emphasise the need to coordinate this process with various areas of government, local authorities and other stakeholders. The following aspects remain under-researched: the consequences of the restoration and strengthening of centralisation after the war on the balanced development of Ukraine's regions, understanding the further development of decentralisation reform, taking into account a different range of issues of balanced development on the one hand and security and defence on the other.

The aim of the study is to analyse the impact of the centralisation in Ireland on the balanced development of the regions in order to identify the advantages and disadvantages that increased centralisation may bring to Ukraine, especially during the post-war recovery. The study is intended to help define a conceptual vision for the further evolution of central and local authorities in Ukraine in order to ensure balanced post-war development of all territories, taking into account their specific needs, and to avoid the restoration of strong centralisation.

■ Materials and Methods

The method of comparison was applied for the study to match the state of socio-economic development of Ireland in different periods of its independency, as well as to identify similarities in different areas of the development of Ukraine and Ireland at the stage of EU membership. The method of comparison was imposed to compare the impact of theories of regional development and the development of metropolitan areas and agglomerations and their influence on the balanced regional development, on the provision of public services to citizens. The application of the analytical method allowed to explore the effects of centralised authority on the development of the country's economy in terms of balanced regional development and overall enrichment of the state.

The overlay of Ireland's experience on the situation in Ukraine, especially with regard to the likelihood and grounds for maintaining and strengthening centralisation in Ukraine after the war was made using the projection method. Forecasting further development of Ireland and Ukraine in case of increased centralisation or the extension of local self-government, identification of possible risks of centralisation in Ukraine was supplied.

Method of historical interpretation was used to describe the ways of evolving and transforming centralised government in Ireland as well gradual introduction of the development and empowerment of local authorities under the influence of the EU. The method of logical argumentation was applied to determine the issues of regional development in light of centralised government and due to the prioritisation of metropolitan expansion in spite of the balanced regional development. The interdisciplinary approach is used to explore various areas of the regions' life influenced by the centralisation, including social services, standard of living, migration, rural development, electoral preferences, etc.

The analysis method was used to study the peculiarities of centralization and balanced regional development and individual elements of these phenomena in various facets of its existence: development of the institutional system to ensure the functioning of the state and achieve the government's goals, decision-making processes, addressing the needs of citizens, impact on the economic development of the state as a whole and individual territories, etc. Using the method of synthesis, the general conclusions regarding the impact of centralisation on regional development are

presented at the end of the paper, and the problem areas arising from centralisation are highlighted.

Information sources, including theoretical materials, researches, planning documents, legal acts were examined in the preparation of the study:

- the materials on the Parliament and Government of the Republic of Ireland official webpages: Planning and Development Act (Law of Ireland..., 2000); National Development Plan, 2000-2006 (Ireland & Ireland..., 1999); National Spatial Strategy 2002-2020: People, places and potential (Ahern & Cullen, 2002); Local Government Reform Act, 2014 (Law of Ireland, 2014); National Planning Framework – Ireland 2040 our plan (NPF) (2018) (2020); National Development Plan 2021-2030 (Government launches the renewed..., 2021); Government launches Housing for all – a new housing plan for Ireland (2021); Planning and Development Bill (Law of Ireland..., 2024);

- statistical materials: Population and Labour Force Projections (Central Statistics Office, 2018), EU Commission (Communication from the Commission..., 2022);

- reports and studies of international organisations: Organisation for Economic Co-operation and Development (OECD): Towards balanced regional attractiveness in Ireland (OECD, 2023); Building Trust to Reinforce Democracy (OECD, 2022); Regional Outlook, (OECD, 2019);

- research of Irish academic institutions: University College Cork on Irish Emigration in an Age of Austerity (Glynn *et al.*, 2013), Institute of Public Administration (O'Malley, 2011; Boyle *et al.*, 2020), research on Ireland's regional imbalance by AONTU (Regional Development, n.d.). The sources of different periods were examined in order to show the dynamics of the development of phenomena and the opinions of researchers regarding them.

Ukrainian resources were also examined, including the Order of the Cabinet of Ministers of Ukraine on approval of the concept of reforming local self-government and territorial organisation of power in Ukraine (2014), sociological study – Citizens' assessment of the situation in the country and the actions of the authorities by Razumkov Centre (2024).

■ Results and Discussion

On the eve of joining the EU, Ireland was in a similar situation to the current and predicted post-war situation in Ukraine, in particular: due to the ongoing threat to security and territorial integrity, the country's power was highly centralised, and local authorities were severely limited in their powers, especially in terms of influencing the formation of national and regional policies; there was a high level of social tension, the risk of social conflicts and unrest; the population emigrated en masse, in particular, citizens of working age; the level of corruption remained high; there were significant disparities in the development of different regions of the country; the economy was exhausted by the long wars for the independence of the state, there was a lack of external investment; the agricultural sector was in decline; the country was under



strong economic and political external influence, in particular, of Great Britain; the traditionally strong rural identity of the Irish population remained stable; support for EU membership among the population was over 80%; etc.

An in-depth analysis of the Europeanisation of the Irish public administration system, conducted by E. O'Malley (2011) shows that preparation for membership in the European Communities played a crucial role in reforming the public authorities and decision-making system in Ireland. Changes in the public administration system were made to ensure the proper functioning of Ireland within the EU institutional system. It was Ireland's accession to the EU in 1973 that prompted the government to undertake public administration reforms. Prior to that, Ireland's institutional system and administrative procedures were staid outdated, overly centralised, and inflexible (Rees *et al.*, 2010). After gaining independence in 1949, Ireland established a system of government based on the existing system according to the traditions and law of Great Britain (Kenny & Casey, 2021). In fact, Ireland essentially left the old system of government based on a strong centralised authority and political structure as opposed to local democracy. In the Westminster/Whitehall administrative tradition, the primary actor for managing these endeavours is the ministerial 'department', which acts as the central organisational entity for formulating and coordinating public policy measures, and accounting for their implementation. Power was concentrated in the hands of the central government and the prime minister, who played a key role in policy making, implementation and funding. As N. Moore-Cherry *et al.* (2021) have pointed out, the 1937 Constitution of Ireland did not mention local self-government at all. It was only in 1999 that the Constitution was amended to provide for the constitutional recognition of local self-government and the granting of appropriate powers to it. The 2014 Act on Local Government Reform (Law of Ireland..., 2014) created 95 municipal districts instead of the previous 80, from which councillors are elected to 31 local councils. The number of local councillors was also reduced from 1,627 to 949. Municipal districts are the smallest local authorities. From an administrative point of view, Ireland has 26 counties, which belong to 4 provinces.

According to the above-mentioned law, the powers of local authorities include: adopting an annual budget with democratic accountability for all local government expenditures; appointing, removing or dismissing their governing bodies, supervising and controlling their work; adopting integrated local economic and community development plans and service delivery plans; participating in decision-making on the development of local and community plans; participation in decision-making on local business and community development; performing delegated functions on: roads, traffic, housing, environmental services, recreation, amenities and community development; general representative and oversight role; citizen and community engagement. Institutional reform in Ireland continues. In view of the future goals of the local government

reform, the powers of local authorities are planned to be expanded thanks to ongoing interaction and discussions with relevant government departments.

Ireland remains one of the most centralised system with extremely limited local government powers among OECD countries (OECD, 2023). Despite a number of attempts to reform the system of governance and transfer to the regions more autonomy in financial and decision-making areas, power has been concentrated in the central government of Ireland. The first attempts to partially decentralise authority and devolve planning powers to the regions were made in 1968 and 1973, when Ireland was preparing to join the EU, as E. O'Malley (2011) identified. These attempts did not bring real results. According to N. Rees *et al.* (2010), their greatest achievement was to outline the problems of regional development in Ireland in a memorandum and to raise the debate on their development to the level of the European Communities. The strong centralised government focused on shaping national development policy as opposed to encouraging regional development. According to N. Cussen (2011), in the 80s and 90s, discussions intensified about identification and consideration of the needs of the regions to plan the spatial development of the republic. Later, the National Development Plan (Ireland & Ireland..., 1999) and the National Spatial Strategy (Ahern & Cullen, 2002) aimed to implement balanced regional development, but they were not implemented. These documents have been heavily criticized. As B. Hughes & L. Sirr (2015) pointed out, they were inflexible, did not meet the requirements of rapid agglomeration development, and their approach to rationalising local government powers on the principle of "people first" did not have a legislative basis for implementation in practice. The policy was formally cancelled in 2013, and three new functional regional assemblies were created in 2015 to replace the eight regional bodies (Boyle *et al.*, 2020). The new regional division was better aligned with the principles of EU regional policy and the NUTS system, and provided for the involvement of local authorities in the elaboration of regional development strategies. At the same time, the newly created assemblies became responsible for formulating strategies for the economic and social development of the territories in line with EU programmes, and for overseeing local authorities. Thus, the level of centralisation remained quite high.

Unlike Ireland, Ukraine actively implemented the decentralisation reform until 2022 (Order of the Cabinet of Ministers of Ukraine, 2014), and its results are considered to be the most fruitful. According to the EU Commission (Communication from the Commission..., 2022), "This is one of the most effective and successful reforms implemented in the country. It has become a decisive factor in social and economic development". This reform was implemented in the context of the European integration policy and took into account the EU's system of regional divisions (NUTS). However, after Russia's full-scale invasion of Ukraine, the central government was strengthened through the use of political and legal instruments: military administrations

were introduced, local authorities in many areas, including the war zone, frontline areas cannot perform their functions at all or perform them to a very limited extent, etc (Horlo, 2023). As S. Yehorycheva & A. Berezna (2023) show, martial law had a significant impact on local authorities, where decentralisation policy lost its delegated powers and the issue of centralising financial flows became a priority. The centralisation has helped to make decisions faster and provided tools for their quick implementation, which is extremely important in times of war and contributes to the country's security and defence capability, as well as enhances the efficiency of public administration and helps to allocate resources more effectively in a crisis. It can be predicted that a centralised system of government will also facilitate rapid planning and coordination of the country's reconstruction and development after the war, but it also carries dangers, including the monopoly of the central government, increased corruption and non-transparent distribution of funds, and failure to consider the needs of the regions. According to sociological research presented in 2024 by Razumkov Centre (2024), Ukrainian citizens trust local authorities more than central authorities (with the exception of the President and defence authorities in times of war). In particular, the level of distrust in the state apparatus (officials) reaches 75%, and in the Government of Ukraine – 64%. While trust is expressed more often than distrust to the head of the settlement where the respondents live (49% and 43% respectively), trust and distrust are expressed to a similar extent in the local council where the respondents live (43% and 45% respectively). According to research by the Kyiv International Institute of Sociology (Hrushetskyi, 2023), over the period 2022-2023, there has been a decline in trust in central government institutions: from 91% to 76%, there was fewer people who trusted the President, from 74% to 39% - the Government, and trusted in local authorities has not changed: both in 2022 and 2023, 50% trusted them, and 46% did not trust them. Therefore, it can be stated that Ukrainians trust local authorities equally before and during the war. Most Ukrainian researchers note the effective performance of Ukraine's local authorities when faced with a full-scale war. They also highlight many of the emerging risks of decentralisation, as well as dangerous trends that could lead to a reversal of reform and decentralisation (Krusian, 2023; Keudel & Huss, 2024). Since the polls are still favourable to central government, if centralisation increases and central government takes steps to discredit local government, the scales of trust could quickly tip against local government. There is therefore a risk that public opinion will not protect local authorities from possible recentralisation and curtailment of decentralisation.

Following the example of Ireland, the achievement of centralised power during the war may lead to its further strengthening and maintenance. The reasons for this in Ukraine may be: the need to restore state power in all territories of the state, and especially in those under Russian occupation, where hostilities were conducted and the local

government system was destroyed; elimination of risks to national security and threats to national defence, including the emergence of separatist action, the fight against the sabotage and reconnaissance groups (SRGs), etc. The expediency of maintaining the centralisation can also be justified by the complexity of administration the post-war reconstruction, including technical, administrative and financial management, and the lack of qualified local staff.

However, Ireland's experience shows (Walsh *et al.*, 2010) that under conditions of centralisation, state development focuses on the growth of capital cities and large towns (urban agglomerations, megapolises) as opposed to balanced regional development. In Ireland, resources have been and continue to be allocated to certain regions or cities, while other regions do not receive the necessary support. This allocation of resources is based on an industrial rather than regional economic development approach. This has resulted in the emergence of large, developed industrial centres while the situation in remote regions has deteriorated.

As J.A. Walsh (2019) emphasised, for a long time the Irish government's development strategies envisaged reducing regional disparities by developing industry (as opposed to agriculture and fishing), balancing regional development, reducing illegal migration, and even banning the spending of resources on the development of the Dublin region. As G. Mullally (2004) identified, the EU's requirement to receive funds was to prepare a detailed and clear governmental action plan, including a regional development plan, which are the basis for providing resources and monitoring their use. Since the late 1980s, the Irish government has been developing planning documents in cooperation with the EU. However, as researchers N. Rees *et al.* (2010) point out, the goals were formulated solely with the pragmatic aim of obtaining maximum resources from EU funds, but the goals were never achieved, and the peculiarity of the Irish regional development policy is its pragmatic use of EU regional policy instruments and their adaptation to domestic conditions. For some time the European Union has been satisfied with the general data submitted by the government to receive funds from the Structural Funds, but with each new report, monitoring and evaluation of the results of the use of funds was more thorough, and more detailed and more diversified evidence is required for further funding (O'Donnell, 2020). Thus, the problem of control over the government's activities in a centralised environment was appeared. The problem was that Ireland did not have reliable and disaggregated data reflecting the situation in each region of the country. Due to excessive centralization, until the early 2000s, data were generated at the national level, and therefore no system of data collection and verification was established at the regional level. As noted by F. O'Leary (2023), local authorities lack information on the detailed distribution of local economic indicators. A more specific set of indicators will provide local authorities with a detailed understanding of how well individual parts of the local economy are functioning, and



will allow them to better see and take into account the specific needs of regions and make targeted decisions.

Ireland's regional policy at the governmental level is set out in the National Planning Framework (NPF) (2018) (2020), supported by a ten-year public investment strategy until 2027, and the National Development Plan (NDP) of 2020 updated on 2023 (Government launches the renewed..., 2021). Together, the NPF and the NDP constitute the overall strategy "Ireland 2040" (Project Ireland 2040, 2018), aimed at developing Ireland's regions, cities and rural areas in accordance with ten common goals. It is important that the basis of the Ireland 2040 strategy is investment planning. The main purpose of these documents is to overcome the existing problems of regional development in Ireland, in particular, it is noted that balanced development of regions, reducing imbalances, bringing the development of the Northern, Western and Southern regions of Ireland to the level of economic development of the Eastern and Central regions are the priorities of the strategy.

However, an in-depth analysis of the documents, in particular their main objectives, reveals opposing objectives and shows that the documents aim to develop prosperous territories without ensuring balanced regional development. More specifically, these objectives include:

- creating conditions for strategic planning for the future and optimising investments by concentrating them in a small number of prosperity centres;
- coordinating efforts at the international, national and regional levels to build strong settlements;
- achieving compact prosperity within urban centres;
- aligning spatial planning with capital investment and infrastructure development;
- realising the growth potential of Cork, Limerick, Galway and Waterford, and strengthening Dublin's role as a unique international metropolitan city;
- targeted compact, consistent and sustainable development of large urban areas along the Dublin-Belfast economic and transport corridor, which includes settlements with a significant population, such as Dundalk and Drogheda;
- development of logistics and road infrastructure on key routes to major centres in the regions to facilitate their self-sufficient economic development;
- emphasis on consolidating the development of places that have grown rapidly over the last decade due to large-scale housing development orientated towards commuter trains etc.

These planning documents were developed in accordance with the Planning and Development Act (Law of Ireland..., 2000), which defines the basic planning rules and planning authorities (county council, council of a territorial unit with a special status, city district council), and establishes ministerial oversight of local planning. However, at the beginning of 2024, the Irish Parliament received a Bill of the new Planning and Development Act (Law of Ireland..., 2024). The document introduces many changes. The Bill defines new planning authorities – state and local authorities, strengthens the role of ministers in determining

at what level and who will carry out planning, introduces the position of a planning commissioner, and defines a new list and hierarchy of planning documents:

- National Planning Framework,
- National Planning Statement,
- Regional spatial and economic strategy,
- Development Plans,
- Urban Area Plans, Priority Area Plans and Coordinated Area Plans.

The Housing Strategy is being implemented as a specific type of planning document. Under the Bill, local authorities can choose from a range of new area-based plans tailored to different contexts, such as Urban Area Plans for more densely populated areas and Coordinated Area Plans for towns and locations that straddle more than one local authority. This document has passed the lower house and is expected to be adopted by the end of 2024. The Bill does not diminish the influence of the central government on regional development at the planning stage, but even strengthens the role of ministers, introducing new central-level positions to ensure and coordinate regional development planning. And by defining new types of local development plans (urban, priority), the government keeps the leverage to support the development of specific territories rather than the balanced development of all regions. However, the Bill recognises the achievements of the previous Act allowing the involvement of regional assemblies in the formation of the Ireland 2040 strategy.

Regional assemblies have been involved in the preparation of the Ireland 2040 strategy, developing regional spatial and economic strategies and spatial plans for metropolitan areas that are aligned with the strategy. This involvement is aimed not only at taking into account the needs of the regions, but also at increasing the level of implementation of the strategy on the local level. However, as N. Moore-Cherry *et al.* (2021) underlined, a survey among local authorities conducted three years after the launch of the strategy showed that most respondents were unable to determine whether the new strategy contributes to the implementation of local needs and whether it serves to promote cooperation between different regions. At the same time, respondents expressed concern about the lack of mechanisms to support and develop Ireland's rural areas, the central government's lack of understanding of rural needs, inadequate infrastructure and funding for non-metropolitan areas, and the fact that the biggest beneficiaries remain metropolitan areas. According to OECD research (OECD, 2019), the government's current strategy, Ireland 2040, aims to strengthen the development of four regions of Ireland, in addition to Dublin – Cork, Limerick, Galway and Waterford – as metropolitan cities. At the same time, it supports Dublin's continued role as the main driver of national growth. The strategy also identifies five smaller regional and cross-border development programmes, which are also aimed at developing the areas around the five cities.

The centralisation in Ireland leads to the development of a country of megapolises, and this is the concept behind

the Ireland 2040 strategy. For example, the Dublin region receives 48% of all infrastructure spending, such as roads, including motorways, railways and utilities. Therefore, economic activity, investment, infrastructure and population are concentrated in the Greater Dublin area, while the western and northern regions remain the least developed areas. Infrastructure management is identified as a priority area, but it focuses on developing the capacity of metropolitan areas to develop cities and regions efficiently and livably. Centralisation detains the ability of regions and communities to promote enterprise and plan sustainable development based on their needs and strengths. Decisions on revenues and investments are almost entirely in the hands of the central government.

According to expert research (Heydon, 2024), rural areas are degenerating, only 37% of farmers are independently economically sustainable, and assistance is distributed in a way that favours large farmers. In addition, the volume of construction in cities is growing. For example, in 2022, 84.1% of all new homes were built in urban areas, with the rest in rural areas. For comparison, at the beginning of 2011, 38% were in cities and 62% in rural areas.

As AONTU (Regional Development, n.d.) identifies, hundreds of post offices providing delivery services and social assistance in rural areas have been closed; more than a hundred Garda stations (police stations) have been closed; rural businesses have declined; banking institutions have been liquidated; shops and entertainment venues in rural areas have been closed; educational institutions, including schools, have been closed, etc. Poor telecommunication infrastructure in many regions and lack of acceleration of the Broadband delivery in the government's plans for the coming years seriously hinder economic progress in the regions.

As P. Breathnach *et al.* (2021) indicated, until the early 2000s, Ireland positioned itself as a single region in the European Structural Funds, and despite recommendations, the government refused to divide the country into several regions to address their specific development challenges. The situation changed when it became apparent that the economic and social development of the central and other regions was twofold, which led to the Dublin region no longer being eligible for the funds. Under pressure from the EU Commission, the Irish government formed three functional regions depending on their development needs: Eastern and Midland Regional Assembly (EMRA), Southern Regional Assembly (SRA), and Northern Western Regional Assembly (NWRA).

However, one of the main conceptual changes compared to previous approaches is the new emphasis on balanced growth rather than balanced regional development. The National Planning Framework Ireland-2040 (2020) provides for 50% of investments to be allocated to the development of EMRA, and the remaining 50% of investments to be distributed to the other regions/provinces (Southern Region – SRA, Northern and Western Region – NWRA) combined. Moreover, the aforementioned Bill (Law of Ireland..., 2024) introduces Urban Development Zones

(UDZs) in place of Strategic Development Zones, which were a feature of the 2000 Act. These areas will be the focus of State investment in key enabling infrastructure. This provides even more opportunities for the growth of developed urban settlements as opposed to blended regional development. Thus, it is clear that the Irish government is focusing on the development of metropolitan areas. But this strategy requires a new approach to metropolitan management from the central government.

Currently, there is a debate in Ireland around two approaches, one of which involves the introduction of a system of metropolitan authorities with appropriate powers of strategic planning and spatial development planning, and the other proposes that city authorities apply a place-based planning approach that focuses on taking into account the characteristics and forecast of local development (Duran-ton & Venables, 2018; Idczak *et al.*, 2024). Since 2010, the EU has been discussing the feasibility of balanced development of regions, and opposing the development of agglomerations and metropolises. Some experts, including B. Hughes & L. Sirr (2015), consider it more appropriate to ensure the effective development and functioning of urban agglomerations as opposed to a balanced regional development. Other proponents of the Irish metropolisation and agglomeration concepts (Belderbos *et al.*, 2024; Paulsen *et al.* 2024) use as their main argument the existence of much greater opportunities for the development of entrepreneurship in metropolises and agglomerations, which brings revenues to local and state budgets, and thus contributes to the development of the country, and the second argument is the existence of better conditions for human life and functioning in metropolises and agglomerations, thus justifying the principle of “people first” of the concept of rationalisation of local self-government (O’Leary, 2023). However, they do not answer the question of providing citizens in peripheral regions with social, medical, educational and other services, as well as the development of peripheral regions in general. Therefore, their approach is somewhat one-sided and needs to be improved in terms of ensuring the development of the entire territory of the state, the implementation of specific functions of the state, including ensuring security and defence of the territory, and providing all citizens with equal opportunities to exercise their rights.

As N. Moore-Cherry *et al.* (2023) elaborated, the search for new approaches to governance in Ireland has arisen due to the shortcomings in the regulation of relations between the authorities of cities, regions and the government, due to the current challenges of economic development of metropolitan areas. The development of metropolitan areas involves cooperation and collaboration between authorities at different levels, the consolidation and distribution of powers and resources, as well as a territorial policy focused on collective provision. H. Tolkki & A. Haveri (2020) emphasise the strong central control of the national government in solving local and metropolitan problems, which has provoked the need of local and

metropolitan authorities to seek new ways of cooperation. First of all, it is about the relationship between the various levels of government in matters of land management and spatial planning. These issues were problematic due to the unclear responsibilities of different levels of government in this area. To ease tensions, the government created the Land Development Agency (LDA), which is responsible for managing complex land and development agreements (infrastructure, housing, etc.).

To ensure that the country's development is coordinated with the development of metropolitan areas, the National Planning Framework introduced Metropolitan Area Spatial Plans (MASPs) (National Planning Framework..., 2020), which are a new level of planning in Ireland and are aimed at ensuring that development is coordinated at the metropolitan level. MASPs have been prepared for each metropolitan area: Dublin, Cork, Limerick, Waterford and Galway. The purpose of large-scale metropolitan planning is to provide an instrument for effective land management and infrastructure development, as well as to create a structure for attracting investment and coordinating work between administrative units.

Despite the proclaimed goals of regional development and the change in the planning system, there is a resilience of the central government through the creation of the Office of the Planning Regulator, responsible for coordinating local development plans with central plans, the Land Development Agency, the Industrial Development Authority, government commissions and a number of other agencies and organisations at the central level to implement Ireland's strategic development documents at the central and local levels. Moore-Cherry *et al.* (2021) noted that despite the fact that these agencies participate in regional meetings and meetings on the implementation of MASP, they do not have the same statutory powers, there is a lack of coherence in their activities in remote regions, in particular the north-west and south-west.

P. Breathnach (2023) indicated, that in Ireland the system of public administration in the late 70s and early 80s was characterised by excessive administrative and political influence, as well as the creation of regional development organisations that received neither funding nor authority. For example, the government created various organisations tasked with coordinating and harmonising regional development at the national and local levels. However, the drawback was that such organisations were never given the necessary powers and funding to carry out their activities. In most cases, these organisations had no or few regional representatives. Their proposals had no legal force. Nevertheless, the Irish government continues the practice of creating special bodies at the central level to administer policies. As M. MacCarthaigh *et al.* (2023) identified, these institutions and organisations require increasingly complex technologies to coordinate their internal functions and multiple policy objectives, as well as to engage with agencies under their remit and other peer departments. The above-mentioned factors had a negative

impact on various sectors of regional development, which still remain problematic.

The analysis of the sources showed for example that insufficient consideration of the needs of the regions had a negative impact on the migration situation within Ireland. The lack of regional development, in particular the lack of jobs in remote areas, has been one of the key reasons for the mass emigration of the Irish population for a long time (Glynn *et al.*, 2013; Whelan, 2020). According to Ireland's experience, the high level of GDP and high rates of economic development did not lead to a decrease in emigration, but the social, economic and infrastructure development of the regions contributes to positive changes in the lives of residents and motivates them to stay in the country.

Another aspect of the migration situation in Ireland has been the increase in internal migration from rural areas to large cities and the influx of foreign migrants and refugees. The government's inconsistent and ill-conceived migration policy, which did not take into account the ability of regions to receive migrants and their needs in human resources, led to oversaturation of migrants in undeveloped areas that did not have enough resources (housing, jobs) to absorb them. This led to a catastrophic lack of housing and rising prices (Lima, 2021; Brown *et al.*, 2022). According to the Central Statistics Office (2018) the Irish government predicts that the country's population will grow by 1 million people by 2050, which is about 20% of the current population. By 2040, the highest growth rates of population and jobs per capita are expected in Dublin (almost 40% of the total growth) and four surrounding counties, as well as in Cork and Galway. Therefore, increasing housing problems, rising living costs, and infrastructure overload will be among the key issues in the next 20 years.

The Irish government seeks to integrate migrants into its society, and the availability of housing is considered one of the keys to success in this regard (Gilmartin & Dagg, 2022). In 2022, Ireland launched a national housing and homelessness programme (Government launches housing..., 2021). The Programme aims to increase the supply of housing to an average of 33,000 per year by the end of 2030. The plan provides for a mix of social, affordable and private housing for sale and rent. The plan is based on four pathways, leading to a more sustainable housing system: support home ownership and increase affordability; eradicate homelessness, increase social housing delivery and support social inclusion; increase new housing supply; address vacancy and make efficient use of existing stock. One of the main initiative is to implement the largest ever social housing build programme – over 90,000 social homes by the end of 2030. These measures are supported by over €4 billion in guaranteed State funding every year, the highest ever level of government investment in building social and affordable housing. Nevertheless, the problem remains unresolved, and as of early 2024, the housing market crisis is deepening.

Also a negative consequence of the centralisation of regional development planning in Ireland has been the extremely poor development of transport infrastructure,

especially as P. Carroll *et al.* (2021) indicated, in remote regions and rural areas. In some regions, such as the northern county of Donegal, the railway infrastructure was completely lifted till the 1960s (Patterson, 1962), while other transport infrastructure, such as roads, has not undergone significant changes and there are still no modern motorways. The development of roads is mainly aimed at resurfacing existing roads, which remain narrow, winding, passing through settlements and laid in mountainous terrain. This makes it extremely difficult to develop logistics and communication, and thus the economic development of the regions. In such regions, public transport is inadequately developed, sometimes absent altogether, even in large settlements, which, among other things, complicates access to social and medical services, especially for people in difficult life circumstances, access to educational services, especially for children, etc. According to N. Rees *et al.* (2010), this is due to the fact that the needs of different territories were not explored when designing the urban transport development strategy.

Discussions about identifying and taking into account the needs of regions and involving their representatives in shaping regional development policy were initiated in Ireland under the influence of the European Union (Breathnach *et al.*, 2021). To confirm the EU's influence on the balanced development of Ireland's regions, the example of EU mediation between the government of Ireland and executives of Northern Ireland to promote the development of Ireland's north-western territories and establish cross-border interaction and cooperation between border regions can be used. The north-western region of Ireland were almost cut off from the rest of the country as a result of the establishment of Northern Ireland. This led to the degradation of the region, as local authorities did not have sufficient sources, and the central government did not take the needs of the region into account in its development plans, focusing on the metropolitan regions, as shown above. Due to the implementation of EU cross-border cooperation programs and the EU cohesion policy, a road highway was built between the southern and northern parts of Ireland, which passes through the territory of Northern Ireland, as detailed by K. Hayward & A. Winer (2008). Such a connection significantly reduced the time and length of the journey from Dublin to the settlements of Co. Donegal, which had a positive effect on the development of the economy of the north-western region of Ireland and helped the region reach the level of a transitional economy. M. Adshead & B. Quinn (1998) argue that the changes have resulted from structural funding reforms at the European Union level and the growth of public initiatives at the sub-national level.

Since 2018, county development plans have been coordinated by ministries with the regional level for the first time, with the involvement of key stakeholders in line with the new strategic planning approach stemming from the National Planning Framework (NPF) (2020). However, the institutional relationship between central, regional

and local governments and governance in general remained unclear and blurred.

This has led to increased sectoral influence on policy-making as opposed to regions. The systematic limitation of regional influence on policy-making was accompanied by an expansion of the influence of representatives of certain sectors. As a result, funding was not allocated evenly to the socio-economic development of the territories, including rural areas, but was targeted at the development of certain industrial facilities and large agricultural entities. This has led to a lack of adequate funding for social, medical and educational services, and the development of human infrastructure in the regions, especially in rural areas. The EU institutions were also dominated by representatives of Irish industrial and agriculture groups, rather than the regions, which had a negative impact on the allocation of funds for regional development. In other words, the sectoral lobby prevailed over the regional lobby.

The high centralization of power in Ireland had not only economic but also political consequences. As noted by researchers J. Schulte-Cloos & P. Bauer (2023), it caused the phenomenon of local elections. Localism is considered to be the main feature of Irish politics in which politicians focus exclusively on the problems and needs of one ("own") region, which does not contribute to the development of the region itself and to the coordinated planning of different regions of the country, the achievement of national strategic goals. Researchers believe that it is the large gap in regional development, the presence of backward or depressed areas (for example, former mining villages, seaside resorts and mill towns) that have led to changes in the electoral preferences of the population. As the experience of Ireland shows, regions that have been excluded from the economic growth experienced in the capitals and instead show multiple forms of relative social deprivation (the Midlands, North and West) vote for isolationist, populist, nationalist policies (Lüders *et al.*, 2021; Turner & Ryan, 2022).

To summarise, the following negative impacts of centralised governance in Ireland can be identified: unfair distribution of resources and their uneven impact on the regions; inadequate coordination of economic development and spatial planning at the national and regional levels; focus on the development of megapolises, which leads to uncoordinated development of rural and urban areas, increasing urban-rural divisions; lack of coordination at the vertical and horizontal levels; disruption of horizontal links and reduced involvement of local authorities in identifying and overcoming local problems, implementing the plans developed; inadequate resource provision for overcoming chronic problems of the regions; planning of dummy goals; localisation of electoral processes; lack of reliable data diversified by region; complication of the migration situation.

However, centralisation has a number of advantages, especially in the face of threats to national security and public order. In addition, it is believed that the advantage of a



strong centralised government with a small administration and the use of informal policy-making rules in Ireland was its ability to quickly adapt to the European political process.

The analysis of the consequences of the centralization of power in Ireland is quite useful for the formation of the regional policy of Ukraine, since in certain aspects both countries have similar problems. In particular, for Ukraine, the problem of sectoral lobbying against regional development may also become typical after the war, as it is much more difficult for central government to plan sustainable, coordinated development of individual regions and territories than to plan and organise support for particular sectors of the economy that have suffered the most. This is due to the fact that regional development is a more complex and comprehensive phenomenon that should cover the development of a wide range of social relations, economy, services, etc. The process of regional development planning is also complex and involves several levels and a large number of stakeholders. As V. Tertychka (2023) points out, the government is only one of the organisations directly involved in the process of governance, and the key actors of governance are markets, power hierarchies and networks. These factors slow down the planning process. Whereas sectoral development engages a smaller number of stakeholders: business entities in a particular sector and the central government; as well as sectoral forecasting and planning are simpler. The disadvantage of sectoral development is that this approach does not consider the specifics of the development of different territories, localities, regions, unlike the place-based planning approach, which focuses not only on studying the geographical characteristics of the region, but also on identifying external influences on its development, internal trends, including cultural, educational, climatic, political, etc.

The Ukrainian government has no vision of post-war rebuilding the country, and experts mostly focus on what not to do, including suggesting that settlements that are completely destroyed and where residents will not return should not be rebuilt. However, they do not propose a solution – what should be done. The plans and expert proposals by O. Podzizei & T. Shmatkovska (2023), I. Myroniuk & H. Slabkyi (2023), V. Erfan & Y. Koltsov (2023) set out the main areas, specific elements, and objects of reconstruction, by which it is proposed to allocate resources, but are not tied to the needs of individual territories or regions of the state. Therefore, the conceptual vision of spatial development, metropolises and agglomerations growth, and balanced development of regions remains unclear. Such uncertainty can lead to unbalanced and unsystematic development of territories, non-transparent allocation of funds, lack of understanding of the needs of regions in the future, difficulties in assessing and monitoring the results of recovery, and low impact on the state's economy of investments in recovery. Nevertheless the issue of regional development in the wartime and post-war periods is widely studied in Ukraine. As noted by N. Kulchytska & L. Dermanska (2024), each region must choose its own paradigm

and development model to ensure the region's competitiveness and realise its potential. Insufficient consideration of regional needs and forecasting of future socio-demographic changes focuses recovery efforts on the destroyed and affected areas, but diverts attention from the need to develop the regions of the country where people and businesses have moved. Such regions need additional development of logistics, infrastructure, and public services no less than the affected regions, and this can bring additional benefits to the state's economy in the long run. Therefore, recovery should be aimed not only at rebuilding and developing the affected areas, but also in leveraging the advantages and prospects of the regions that have not suffered significant damage, have not been affected by hostilities, where a significant part of the country's population has moved, and where economic growth has been positive. Strategies for the balanced development of large cities and regions need to be defined. As M. Melnyk & I. Leshchuk (2023) aptly pointed out, conceptual approaches to the formation of regional development policy need to be revised and updated to achieve the effect of synergy between stakeholders and use the opportunities of intersectoral, intraregional and interregional partnerships. As V. Tertychka (2023) indicated, it is possible to achieve sustainable diversity in interaction during the post-war reconstruction of the country through the transformation of power structures. Government should be transformed from a highly hierarchical superstructure into a guiding mechanism for all governance actors. The role of the central government as a policy maker should be reduced. The central government should play a major role in building national security and defending the country's interests in the international arena. While, representatives of the regions, metropolises and megalopolises, local authorities, civil society and business should become the main actors in governance.

■ Conclusions

The Irish government has managed to maintain maximum centralisation of executive authority. However, under pressure from the EU, it has introduced a participatory approach to public policy making and expanded the network and powers of local authorities. It was the retention of centralised decision-making on regional development issues that did not allow Ireland to eliminate disparities and disproportions in regional development, cultivate the most backward regions, build modern transport infrastructure across the country, and solve social problems. Conversely, the strong centralisation has led to the accumulation of resources in the capital region, and thus the development of this particular region, and has put the solution of socio-economic problems in different regions of the country on the back burner. Regional disparity is one of the key features of Ireland, and the ways and feasibility of overcoming it have been discussed over the past fifty years. However, the accelerated growth of regional disparities and their impact on the political preferences of the country's population proves that the approaches used are not effective.

The centralised government has a number of advantages, especially in the face of threats to national security, public order, rapid adaptation to membership in international organisations, prompt planning and coordination of the country's reconstruction and development. However, it also carries dangers, including the monopoly of the central government, growing corruption and non-transparent distribution of funds, failure to take into account the needs of the regions, development of large cities and focus on sectoral economic development as opposed to regional development. The difficulty of weakening centralised management of regional development is primarily due to the fact that Ireland, at the time of its accession to the EU, had developed its own clear centralised management system with its own political culture, which was not sensitive to local needs and, in principle, the authorities did not seek to change it.

The situation in Ukraine is different, as the country is in the process of developing a new system of decentralised governance in line with EU requirements and principles. Ukraine's recovery requires rethinking and setting new concepts and approaches to the formation and development of a new state, including maintaining a balance in the enhancement of megapolises and regions. Therefore,

strategies need to be defined to ensure that metropolitan and regional areas develop in a balanced way. The social, economic and infrastructural development of the regions is the main key to the country's successful post-war recovery. Ukraine should make a move to preserve the achievements of the decentralisation reform, to regain all rights and powers of local governments and to strengthen the capacity of local authorities in the post-war period. The experience of Ireland should be considered in order to avoid the negative effects of centralisation and to ensure balanced regional development during the country's reconstruction.

Prospects for further research would be to investigate various decentralisation models that could be useful for Ukraine. Studying the international experience of decentralization will help to develop recommendations for the creation and implementation of own models that are most effective for Ukraine, which will contribute to a more balanced development of regions.

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■ Conflict of Interest

None.

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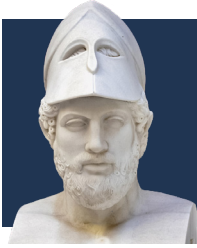
Виклики збалансованого розвитку регіонів в умовах централізації влади на прикладі Ірландії

Марина Чулаєвська

Кандидат наук з державного управління
Тренінговий центр прокурорів України
04050, вул. Юрія Ілленка, буд. 81-б, м. Київ, Україна
<https://orcid.org/0009-0007-4569-3567>

■ **Анотація.** Актуальність теми статті полягає в оцінці впливу централізації владних повноважень на забезпечення збалансованого регіонального розвитку, що є важливим для формування ефективної регіональної політики та зменшення соціально-економічних нерівностей. Метою цього дослідження був аналіз викликів досягнення збалансованого регіонального розвитку в умовах централізації влади на прикладі Ірландії. Під час роботи були проаналізовані нормативно-правові акти, офіційні матеріали органів влади, результати соціологічних опитувань та наукові публікації за допомогою історичного, порівняльного, прогностичного методів пізнання із застосуванням міждисциплінарного підходу. Аналіз джерел різних історичних періодів дав можливість висвітлити еволюцію явищ і концепцій, що стали предметом вивчення. У статті протиставлено концепції збалансованого розвитку регіонів, розвитку метрополій та секторального розвитку економіки. Розкрито негативні наслідки сильної централізації, а також її переваги для розвитку країни. Висвітлено вплив на соціально-економічне зростання Ірландії політики Європейського Союзу, спрямованої на зниження рівня централізації прийняття рішень, розбудову місцевого самоврядування, зменшення регіональних диспропорцій. На основі цих досліджень проаналізовано можливий вплив централізації в Україні на повоєнне відновлення та розвиток. Зроблено висновки про переваги, недоліки та можливості застосування ірландського досвіду в Україні в умовах конфлікту та повоєнної відбудови. Спрогнозовано можливий розвиток державного управління та місцевого самоврядування в Україні з урахуванням досвіду Ірландії. Розкрито підходи до регіонального розвитку, які передбачають, що соціально-економічний розвиток країни може бути краще забезпечений шляхом зменшення регіональних диспропорцій та розвитку агломерацій і мегаполісів як основи процвітання національної економіки. Результати дослідження є важливими для обґрунтування подальшого розвитку децентралізації та зниження рівня вимушеної централізації, що виникла внаслідок воєнного стану, а також для визначення концептуального бачення відновлення території та регіонів України

■ **Ключові слова:** децентралізація; державне управління; регіональний розвиток; метрополії; Європейський Союз; диспропорції; відновлення



Comparison of the activity of regional authorities of Ukraine on social media

Yevhen Matviyishyn*

Doctor of Economics, Professor
Lviv Polytechnic National University
79013, 12 Bandera Str., Lviv, Ukraine
<https://orcid.org/0000-0001-9522-4645>

Vita Pylypenko

PhD in Public Administration
Lviv Polytechnic National University
79013, 12 Bandera Str., Lviv, Ukraine
<https://orcid.org/0009-0006-2584-4965>

Mykola Bunyk

PhD in Political Sciences, Associate Professor
Lviv Polytechnic National University
79013, 12 Bandera Str., Lviv, Ukraine
<https://orcid.org/0000-0002-6116-3642>

■ **Abstract.** This article examines the presence of regional military (state) administrations and regional councils in social media. It substantiates the importance of developing communication between these regional authorities and the public, as well as other stakeholders, through social media. The analysis of authorities' activity on social media allows for assessing their ability to adapt to changes associated with the development of modern communication technologies. The purpose of this article is to develop criteria for evaluating the activity of regional authorities on social media and to trial the proposed methodology. It has been found that Facebook is the most commonly used social network by regional authorities, with 24 regional military (state) administrations and 21 regional councils actively using it. To compare their activity on social media, the population size of each region in Ukraine was taken into account. The ratings of regional military (state) administrations and regional councils were calculated based on the ratio of the audience of their Facebook pages and the population in the region. The differences in the representation of regional authorities across various regions of Ukraine were identified. The best results are achieved mainly by western and some front-line authorities (Kherson Oblast, Mykolaiv Oblast). Overall, regional military (state) administrations tend to use social media more actively than regional councils, with the exception of three regions. This is evidenced by the larger number of followers on their Facebook pages, which is the most popular network among the population of Ukraine. Overall, regional military (state) administrations are more active than regional councils in monitoring the Facebook pages of other organizations. Familiarization with the results of a comparative analysis can help the heads of authorities evaluate the performance of their communication units in comparison to other regional authorities

■ **Keywords:** benchmarking; competencies; communications; local self-government; public administration; regional development; e-governance

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■ Introduction

In an era of rapid development in information technology, social networks have become an important means of communication for government authorities and local self-government bodies with the public and various organizations. Government personnel must embrace and capitalize on the new opportunities that arise with the development of modern communication tools. The ability to adapt to changes associated with the advancement of these technologies can be assessed through a comparative analysis of the authorities' activity on social media. By the way, both "social networks" and "social media" are commonly used terms, but they have slightly different connotations. The term "social networks" emphasizes the connections between people and the social aspect of the platforms. It regards the network of relationships and interactions, such as Facebook, LinkedIn, or Twitter. The term "social media" is broader and encompasses all forms of digital communication and content sharing, including social networks, blogs, forums, and multimedia platforms like YouTube and Instagram. For this article, "social media" might be the better choice because it covers a wider range of platforms and communication tools used by the authorities.

Social media are seen as effective tools for both horizontal and vertical integration in the public sphere, gaining significant traction with the advent of relevant applications (programs) on mobile devices. Social media can contribute to the development of transparent and participatory public governance. The use of social media by government authorities offers several important advantages. Firstly, it allows for the quick and effective reach of a wide audience and facilitates receiving feedback. Since a large portion of the population uses social media, authorities can effectively communicate with citizens from various age and social groups. Through social media, the government can receive direct feedback from citizens. This helps in better understanding the needs and problems of the population, enabling more informed and balanced decision-making. Secondly, the openness of government authorities on social media increases the transparency of their activities. This helps build trust among citizens towards the authorities, as people see that their requests and issues are not being ignored. Social media can serve as a platform for involving citizens in the decision-making process. Through surveys, discussions of projects, or initiatives, the government can actively engage the population in public life. Thirdly, in terms of cost-benefit ratio, the use of social media is more economical compared to traditional means of communication such as print media, radio, or television. This allows for relatively inexpensive communication at various levels. The role of social media in Ukraine has changed since the full-scale Russian invasion: they have started to be actively used by government authorities to highlight important events, assist victims, and more (Prokop, 2023). It is important to assess the effectiveness of the use of social media, particularly by regional authorities, which in Ukraine are the regional military (state) administrations and regional councils.

The importance of active communication by government authorities and regional-level local self-government bodies is driven by the need to stimulate regional socio-economic development, attract investments, and quickly convey relevant information to interested parties. Especially important is the bidirectional exchange of information between the authorities and the public. In this context, scholars emphasize the need for effective management of two opposing interacting information flows: one formed in the public administration sphere and the other within civil society (Ladonko *et al.* 2020). Among the directions for improving these processes, they consider increasing civic competence, particularly special skills in communicative interaction with government authorities. A similar position is expressed by H.O. Dzyana & R.B. Dzyanyi (2020), who recommend paying attention to the development of the communicative function of education, which contributes to the formation of a creative personality capable of effective professional activity in the context of the development of the information society. L. Todisco *et al.* (2021) studied the perception of Italian public servants regarding the opportunities provided by the use of social media for decision-making and service delivery by government authorities. These researchers found that the groups with a better perception of social media impact were civil servants aged 35 and younger. This is likely due to the fact that young people generally use social media more actively. In Ukraine, among regional-level civil servants, the majority are aged 36-60 years (over 60% of men and over 70% of women) (NAUCS, 2022). It can be assumed that this leads to a somewhat poorer perception of the advantages provided by social media among public servants.

In scientific publications related to the analysis of social media, the focus is most often on the field of marketing in a business environment. This is not surprising, as many organizations have introduced a type of activity known as social media marketing (SMM), which focuses on influencing consumer relations through social media (Jamil *et al.*, 2022). For example, social media are used in Ukraine to promote publishing houses. In this field, social networks are used not only to promote book products but also to study the interests and reading preferences of followers. O. Pohribna (2023) concluded that it is advisable to follow moderation rules for social media pages representing various publishing houses.

We believe that analyzing the effectiveness of social media use by regional government authorities – regional military (state) administrations and regional councils – can be beneficial for domestic public administration practice. The conditions of martial law have intensified the need for disseminating timely information to the population and receiving feedback. It is appropriate to assess social media activity from a geographical distribution perspective. This can help identify which regions have the highest activity and understand regional differences in the interaction of government authorities with the population and other

stakeholders. Additionally, individual government authorities can see their ranking and compare their social media pages with those of the top-performing authorities in the ranking. This comparison provides valuable insights into best practices and areas for improvement, enabling authorities to refine their social media strategies and better engage with their audiences.

Despite the diverse coverage of approaches to using social media in public administration, there is a lack of studies that reveal the results of a comparative analysis of their use by various government authorities in Ukraine, particularly regional military (state) administrations and regional councils. The aim of the study is to develop criteria for evaluating the representation of regional authorities from different regions of Ukraine on social media and to trial the proposed methodology by comparing the social media activity of regional military (state) administrations with that of regional councils.

■ Materials and Methods

For the comparative analysis of the activity of regional authorities on social media, the “Engagement Metrics” method was used. This method involves counting the forms of interaction with content, which include the number of followers on social media (Trunfio & Rossi, 2021). Engagement Metrics allows for the assessment of the audience engagement level (A) by authorities using social media. Quantitative results of the comparative analysis were obtained using benchmarking methodology, which enables the identification of groups of authorities with the best performance in using social media. Relative indicators, calculated proportionally to the population (P) of the respective regions based on data from the State Statistics Service of Ukraine (2022) as of February 2022 – the latest data on the official website, were used for the comparative analysis. Since the latest elections to the respective councils were neither appointed nor held in the Autonomous Republic of Crimea, Donetsk, and Luhansk regions in 2020, there is no information on the use of social media by the Donetsk and Luhansk regional councils for the comparative analysis. Therefore, the official websites and social media pages of the Regional State Administrations and regional councils of all regions of Ukraine, except for Donetsk and Luhansk, were investigated. The activities of the Crimean authorities were also excluded due to the temporary occupation of this territory and the absence of elections.

The first stage of the study involved identifying the social media used by regional authorities. It turned out that Facebook was the only network used by almost all regional authorities. Therefore, the subsequent stages of the study were based on the analysis of Facebook pages of the Regional Military (State) Administrations and Regional Councils. Given the significant variations in population size across Ukraine’s regions, the comparative analysis accounted for both audience size (A) and regional population (P). Specifically, during the benchmarking process, the data was normalized by dividing the number of

Facebook page followers (A) by the population (P), with the resulting ratio (A/P) used for ranking. The overall social media activity of regional authorities was reflected through this ranking – a rating (R) was calculated for each region based on the A/P ratio. The maximum possible rating score was 24 (the best possible value), corresponding to the total number of regional authorities analyzed. The ranking was also used for a comparative analysis of how regional authorities follow the pages of other organizations in social networks. However, regions’ population size was not taken into account at this stage. Therefore, the ranking was determined based on the number of Facebook pages each regional authority follows. To improve clarity, cells in the Excel table were color-coded: shades of green for high (good) ratings, yellow – for average ratings, and red – for low (worse) ratings. This was done using the “Conditional Formatting” tool in Excel.

The information base includes official websites of regional military (state) administrations and regional councils, their social media pages in Facebook, YouTube, Telegram, Twitter, Instagram, WhatsApp, legal acts: the Law of Ukraine on Local Self-Government in Ukraine (1997), the Law of Ukraine on the Legal Regime of Martial Law (2015), Decree of the President of Ukraine “On the formation of military administrations” (2022).

■ Results and Discussion

The activities of regional councils (hereinafter referred to as RCs) in Ukraine are regulated by the Law of Ukraine on Local Self-Government in Ukraine (1997). Essentially, RCs are local self-government bodies representing the collective interests of territorial communities of villages, settlements, and cities at the regional level. The formation of regional military (state) administrations (hereinafter referred to as RMAs) occurred on February 24, 2022 (the first day of the full-scale Russian invasion) in accordance with the Law of Ukraine on the Legal Regime of Martial Law (2015) as per Decree of the President of Ukraine No. 68/2022 (2022). According to the decree the heads of the previous state administrations assumed the status of military administration chiefs. Information about the activities of each RMA and RC is available on their websites. These sources are used by media, citizens, research institutions, business representatives, and other interested parties. Social media also serve as an important means of disseminating information about the activities of RMAs and RCs.

The presence of RMAs and RCs on various social media platforms enhances the opportunities for building trust in these regional authorities. Their activity on social media platforms allows for quick feedback from both authorities and the public, reveals public opinion on specific events or planned activities, and so on. In the context of rapid information dissemination, RMA and RC managers can swiftly respond to problematic situations reported by followers through social media posts, as well as quickly convey relevant information, which is especially important in the face of threats posed by war.

Overall, in Ukraine, popular social media are YouTube, Facebook, Instagram, Twitter and others. The web service StatCounter (2024) showed that in 2024, the most popular in Ukraine were Facebook and YouTube (Fig. 1), although

StatCounter did not cover Telegram (possibly because Telegram is considered more of a messaging app than a social media). It is evident that regional authorities should take this distribution of social media audience into account.

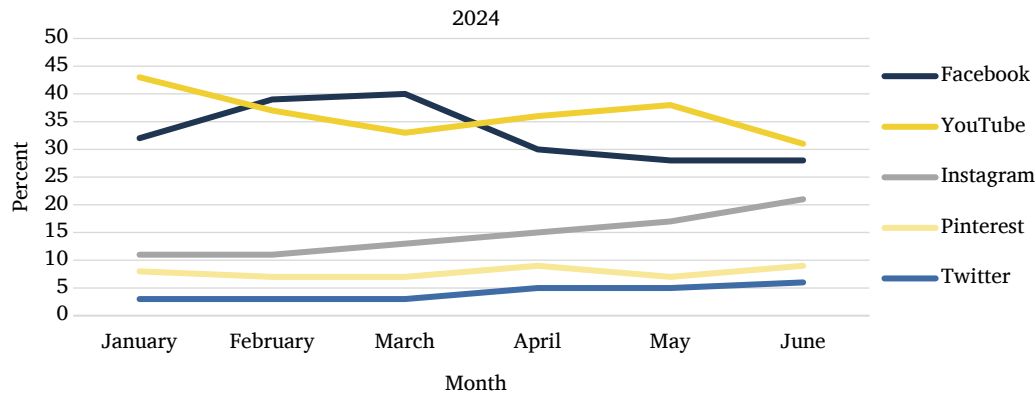


Figure 1. Dynamics of audience changes on selected social media platforms in Ukraine in 2024

Source: data of StatCounter (2024)

The analysis of the representation of RCs on social media was compiled based on the availability of social media links on the official websites of the RCs. It was found that links to own official pages in social network are primarily placed on the main pages of official websites. However, some RCs provide links to social media in the “Contacts” section. The list of social media with available links mainly includes Facebook, YouTube, Twitter, Telegram, and Instagram. Some RCs limit themselves to using just one social network, while others utilize multiple platforms. For example, Sumy Regional Council has integrated links

to all the aforementioned social media, with Facebook being the most frequently used (Table 1). The results of the analysis show that 95% of RCs (21 out of 22) have Facebook pages, and 59% (13 out of 22) use YouTube. Far fewer RCs use Twitter (32%), Telegram (27%), and Instagram (9%). A similar analysis of the representation of regional military administrations (RMAs) on social media showed that Facebook is predominantly used, with 100% of RMAs having a presence there. (Table 2). However, unlike RCs, RMAs do not use Twitter at all; instead, two RMAs use WhatsApp.

Table 1. Social media in which RCs are represented

RC	Facebook	YouTube	Twitter	Telegram	Instagram
Vinnitsia	v	v		v	
Volyn	v	v			
Dnipropetrovsk	v	v			
Zhytomyr	v	v		v	
Zakarpattia	v	v		v	
Zaporizhzhia		v			
Ivano-Frankivsk	v		v		
Kyiv Oblast	v	v			
Kirovohrad	v				
Lviv	v		v	v	
Mykolaiv	v		v		
Odesa	v				
Poltava	v	v	v		
Rivne	v	v			
Sumy	v	v	v	v	v
Ternopil	v	v			
Kharkiv	v				
Kherson	v	v			
Khmelnitskyi	v				

Table 1. Continued

RC	Facebook	YouTube	Twitter	Telegram	Instagram
Cherkasy	v	v			
Chernivtsi	v		v	v	v
Chernihiv	v		v		
Total	21	13	7	6	2
Share among social media	43%	27%	14%	12%	4%

Source: author's development

Table 2. Social media in which RMAs are represented

RMA	Facebook	YouTube	Telegram	Instagram	WhatsApp
Vinnitsia	v	v	v	v	
Volyn	v	v			
Dnipropetrovsk	v	v	v	v	
Donetsk	v	v			
Zhytomyr	v	v	v		
Zakarpattia	v	v	v		
Zaporizhzhia	v	v	v		
Ivano-Frankivsk	v	v			
Kyiv Oblast	v	v	v		
Kirovohrad	v				
Luhansk	v		v		
Lviv	v		v		
Mykolaiv	v	v			
Odesa	v	v			
Poltava	v	v	v		v
Rivne	v	v			
Sumy	v	v	v		v
Ternopil	v	v			
Kharkiv	v	v	v	v	
Kherson	v	v			
Khmelnyskyi	v	v			
Cherkasy	v	v			
Chernivtsi	v		v		
Chernihiv	v	v			
Total	24	20	12	3	2
Share among social media	39%	33%	20%	5%	3%

Source: author's development

Many RMAs use YouTube – 83% (20 out of 24), which is significantly higher than the rate for regional councils (59%). 50% of RMAs use Telegram, while far fewer use Instagram (13%) and WhatsApp (8%). As in the previous table, the last two rows show the frequency of use for each social media. Of the social media that use RMAs and RCs, Facebook is the most common. It is closely followed by

YouTube, especially among RMAs, where its share of social media use (33%) is only slightly lower than that of Facebook (39%). Information on the number of readers (audience) of the Facebook pages of these regional authorities was taken for a comparative analysis of audience reach. At the same time, relative indicators calculated in proportion to the population of the respective regions are used (Table 3).

Table 3. The results of the rating assessment of RMAs and RCs according to the relative number of readers of Facebook pages

Region	P, million people	RMAs			RCs			Difference A(RMA) and A(RC)
		A, 1,000s of people	A/P (per 1 thousand)	R	A, 1,000s of people	A/P (per 1 thousand)	R	
Vinnitsia	1.51	25.0	16.6	11	5.0	3.3	13	20.0

Table 3. Continued

Region	P, million people	RMAs			RCs			Difference A(RMA) and A(RC)
		A, 1.000s of people	A/P (per 1 thousand)	R	A, 1.000s of people	A/P (per 1 thousand)	R	
Volyn	1.02	30.0	29.4	17	9.4	9.2	20	20.6
Dnipropetrovsk	3.09	41.0	13.3	7	28.0	9.1	19	13.0
Donetsk	4.06	14.0	3.4	2	-	-	0	14.0
Zhytomyr	1.18	15.0	12.7	6	6.3	5.3	16	8.7
Zakarpattia	1.24	46.7	37.7	21	19.1	15.4	21	27.6
Zaporizhzhia	1.64	23.7	14.5	10	-	-	0	23.7
Ivano-Frankivsk	1.35	18.0	13.3	8	3.3	2.4	8	14.7
Kyiv Oblast	1.80	33.0	18.3	13	4.9	2.7	10	28.1
Kirovohrad	0.90	4.8	5.3	3	6.4	7.1	18	-1.6
Luhansk	2.10	51.9	24.7	15	-	-	0	51.9
Lviv	2.48	16.8	6.8	4	84.0	33.9	23	-67.2
Mykolaiv	1.09	1.3	1.2	1	73.0	67.0	24	-71.7
Odesa	2.35	50.0	21.3	14	1.7	0.7	4	48.3
Poltava	1.35	23.0	17.0	12	4.1	3.0	11	18.9
Rivne	1.14	46.0	40.4	22	8.1	7.1	17	37.9
Sumy	1.03	33.0	32.0	19	2.4	2.3	7	30.6
Ternopil	1.02	33.0	32.4	20	3.8	3.7	14	29.2
Kharkiv	2.60	20.0	7.7	5	5.3	2.0	6	14.7
Kherson	1.00	47.0	47.0	23	3.1	3.1	12	43.9
Khmelnyskyi	1.23	34.0	27.6	16	4.6	3.7	15	29.4
Cherkasy	1.16	16.0	13.8	9	2.2	1.9	5	13.8
Chernivtsi	0.89	62.0	69.7	24	15.5	17.4	22	46.5
Chernihiv	0.96	30.0	31.3	18	2.4	2.5	9	27.6

Notes: P – population size of each region; A – the number of followers of RMAs' and RCs' Facebook pages; R – rating of the respective regional authority

Source: authors' development

In Ukraine, considering the relative audience size (taking into account the varying population sizes of the regions), the most actively represented Regional State Administrations on Facebook are: Chernivtsi, Kherson, Rivne, Zakarpattia, and Ternopil Regional State Administrations. The top five most actively represented Regional Councils on Facebook are: Mykolaiv, Lviv, Chernivtsi, Zakarpattia, and Volyn Regional Councils. Therefore, the list of regional government authorities best represented on Facebook includes western and some frontline authorities (the Kherson Regional State Administration, the Mykolaiv Regional Council). It appears somewhat surprising that Regional State Administrations and Regional Councils of certain regions differ significantly in ranking; for example, the Mykolaiv Regional Council has a rank of 24 (best), while the Mykolaiv Regional State Administration has a rank of 1 (worst); the Lviv Regional Council has a rank of 23, while the Lviv Regional State Administration has a rank of 4.

In the last column of the Table 3, a difference between the number of followers of Facebook pages of RMAs and

RCs is shown. It is evident that the Facebook audience of RMAs generally exceeds that of RCs. However, in three regions (Kirovohrad, Lviv, and Mykolaiv), the Facebook pages of the RCs have more followers than those of the RMAs. These findings are consistent with the trend observed by I.B. Shevchuk (2018), where in the different regions (Zhytomyr, Zakarpattia, and Kirovohrad) the number of followers of RC Facebook pages also exceeded those of the RMAs. Overall, since then (from 2018), the number of followers of Facebook pages has increased approximately tenfold: from 72.7 thousand to 715.2 thousand for the Facebook pages of the RMAs, and from 26.2 thousand to 293.6 thousand for the Facebook pages of the RCs. The activity of the RMAs and the RCs on social media can be judged not only by the size of their audience. It can also be assessed by the number of Facebook pages of other organizations they follow (S). For the comparative analysis, rankings (R) were calculated (Table 4), using absolute rather than relative numbers. This is because, unlike in the previous comparative analysis, the population size of the region is not a relevant factor here.

Table 4. The results of the ranking assessment of RMAs and RCs based on the number of Facebook pages of other organizations they follow

Region	RMAs		RCs		Difference S(RMA) and S(RC)
	S	R	S	R	
Vinnitsia	166	21	10	8	156
Volyn	103	16	0	1	103
Dnipropetrovsk	31	7	18	9	13
Donetsk	125	18	-	0	125
Zhytomyr	20	5	0	1	20
Zakarpattia	0	1	0	1	0
Zaporizhzhia	71	12	-	0	71
Ivano-Frankivsk	149	19	19	10	130
Kyiv Oblast	70	11	132	19	-62
Kirovohrad	0	1	206	21	-206
Luhansk	76	14	-	0	76
Lviv	163	20	47	11	116
Mykolaiv	29	6	88	18	-59
Odesa	15	4	3	6	12
Poltava	119	17	8	7	111
Rivne	418	24	47	11	371
Sumy	0	1	0	1	0
Ternopil	67	10	0	1	67
Kharkiv	91	15	52	13	39
Kherson	51	9	87	17	-36
Khmelnyskyi	264	22	181	20	83
Cherkasy	302	23	63	15	239
Chernivtsi	73	13	79	16	-6
Chernihiv	48	8	53	14	-5

Notes: S – the number of Facebook pages of other organizations followed by RMAs and RCs; R – rating of the respective regional authority

Source: authors' development

According to the obtained results (Table 4), the regional authorities that track the most Facebook pages are as follows: among the RMAs – Rivne, Cherkasy, Khmelnytskyi, Vinnitsia, and Lviv; among the RCs – Kirovohrad, Khmelnytskyi, Kyiv, Mykolaiv, and Kherson. In this parameter, the RMAs also proved to be generally more active compared to the RCs.

The described approach based on benchmarking makes it possible to assess the activity of regional authorities in social media. This approach can be seen as a “stakeholder evaluation” in line with the forms of evaluation in governance outlined by E. Vedung (2010). The obtained results show that their level is relatively different in different authorities. One of the reasons may be the low level of development of digital competences among employees. In the context of growing demands for employees' digital literacy skills and the mastery of information and digital technologies, the need to introduce innovations that would improve the quality of management activities is urgent.

The conducted analysis showed that regional authorities in Ukraine actively use various social media platforms,

most frequently Facebook (43% share for Regional Councils and 39% share for Regional State Administrations) and YouTube (27% share for Regional Councils and 33% share for Regional State Administrations). Thus, Facebook is the most widely used social media platform by regional government authorities. The subscription to Facebook pages is a somewhat simplified indicator of the effectiveness of regional authorities in social networks. The activity of the communication units of the RMAs and RCs is manifested not only in making posts but also in the interaction of responsible employees with subscribers. In particular, such indicators as the quality and frequency of posts, the number of comments, etc., say much more about activity. As the analysis of the mentioned indicators was not carried out within the scope of this study, it may be the direction for further deeper research in the context of interaction with citizens.

Given the similar experiences in public administration development, including the structure of regional governance in Ukraine and Poland, it is of interest to examine



the state of social media usage by regional authorities in Poland. A selective analysis of the representation on social media of the voivodeships of a neighboring country, the Republic of Poland, showed that the number of followers of their Facebook pages is to some extent larger compared to the regional authorities in Ukraine. There are also differences in this indicator among the various voivodeships: for example, the Lublin Voivodeship has over 13,000 followers on its Facebook page (Office of the Marshal..., 2024), while the Lesser Poland Voivodeship has over 260,000 followers (Malopolska, 2024). The larger number of followers of the voivodeships' Facebook pages compared to those of the regional authorities in Ukraine might be related to the longer history of reformed self-government in Poland. Additionally, the difference in the number of followers among the various voivodeships may be explained not only by population size but also by the volume and content of information that is interesting to followers. For instance, information about local cultural-historical and tourist destinations can generate more interest. This factor evidently influences the visit rate of the Facebook pages of the regional councils (RCs) and regional military administrations (RMAs) in Ukraine. Furthermore, the varying number of followers of Facebook pages may be influenced by the different population sizes of the corresponding regions in Ukraine, as well as changes in population due to large-scale movements caused by the Russian military aggression in Ukraine.

L. Dorosh & Yu. Kopey (2020) conducted a comparative analysis of social media usage by government authorities in the USA and Ukraine, revealing that a broader range of social media platforms with a larger number of followers is employed in the USA. The study analyzed data from the social media accounts of central government bodies (ministries) in both countries. However, it did not include data on social media usage by regional authorities. Incidentally, publications indexed in the Scopus database on the topic of government use of social media (as of 2022) most frequently pertain to the experiences of three countries: United States, Canada, and China. This conclusion was drawn by R.M. Widayat *et al.* (2023) after analyzing English-language publications using Scopus's search tools.

Some studies on the effectiveness of social media are based on the analysis of their usage experience. In their study, W. Tafesse & A. Wien (2018) proposed a scale for measuring the implementation of social media in firms' activities. This scale encompassed various parameters grouped into categories, including Social Media Strategy, Active Presence, Customer Engagement Initiatives, Social Media Analytics, and more. Specifically, in the latter group, it was suggested to consider the use of social media analytics to plan and execute social media efforts, learn about customers, measure effectiveness, and monitor relevant social media metrics. The development of this scale involved surveying over 400 respondents representing various firms in Norway. This approach could serve as a foundation for developing a similar scale to assess the implementation of social media in government agencies.

C. Zachlod *et al.* (2022) reviewed over 40 approaches to social media analytics. The majority of the approaches reviewed focus on identifying consumer preferences across different sectors (e-commerce, tourism, banking, health-care, education, etc.). Their research was based on an analysis of publications related to social media data analysis. The analytics primarily relied on Twitter post statistics, reflecting consumer sentiments and the results of content analysis. Among the approaches described by those researchers is social media monitoring, which involves searching for posts on related topics, identifying target audiences, and so on, to enhance a firm's competitiveness. Clearly, the approaches described in that study are more suitable for commercial firms than for government agencies. However, the subscription of government agencies to other organizations' pages, as mentioned in Table 4, can be considered a "social media monitoring" approach.

Social media can and should be actively utilized for interaction between government and citizens. In the field of public administration, a key advantage of social media is its ability to swiftly gauge public opinion. The findings of K.S. Al-Omouh *et al.* (2023) indicate a positive impact on trust in government from various aspects of government use of social media, including transparency, participation, and collaboration. However, certain challenges persist in this area. O. Khomenko *et al.* (2024) note that rapid technological changes necessitate the enhancement of legislation to protect citizens' personal data and regulate social media without infringing on their rights and freedoms. L. Spytka (2024) argues that legislation, technology, and education should be directed towards creating a cyberspace that not only guarantees freedom of expression but also serves as a platform for communication and cooperation. In particular, from the perspective of promoting sustainable development, an important area of cooperation is "environmental governance" (Chang *et al.*, 2024). Advances in information technology provide additional opportunities for government-citizen interaction. For instance, researchers have explored the potential of integrating cloud computing with social media data analysis for the monitoring and control of government policies (Singh *et al.*, 2020). On the one hand, researchers M. Blikhar & I. Narbut (2023) emphasize the importance of the legal protection of "sensitive" types of information, such as personal data or data belonging to specific user groups, and, on the other hand, stress the protection of the right to information as one of the most fundamental human rights.

The use of social media by regional authorities is an important tool for improving communication with the external environment, involving citizens in decision-making processes, and increasing the openness of authorities. To improve the work of regional authorities towards communication through social media, it is advisable to coordinate the activities of units and officials responsible for the distribution and receipt of information. It is expedient to conduct a more detailed assessment of these

divisions in the RMAs and RCs, analyzing not only pages in social media but also other indicators, in particular those that reflect the state of feedback from citizens and various organizations.

■ Conclusions

This article is aligned with research focused on the methodology for evaluating the performance of public authorities, specifically proposing the consideration of regional authorities' activity on social media as a criterion for such evaluation. The activity on social media can be viewed as an indicator of their ability to adapt to new communication tools as well as a measure of their interaction with the public, particularly with stakeholders. Social media make it possible to carry out purposeful communication with various categories of citizens. This contributes to increasing the efficiency of management and strengthening trust in the authorities.

The methodology for assessing regional authorities' activity on social media has been developed and trialed through examples of regional military administrations (RMA) and regional councils (RC). To trial the developed methodology, the activity of RMAs and RCs on social media was used. Social media platforms where RMAs are represented include Facebook (39% share), YouTube (33%), Telegram (20%), Instagram (5%), and WhatsApp (3%). For RCs, the platforms are Facebook (43% share), YouTube (27%), Twitter (14%), Telegram (12%), and Instagram (4%). The conducted research showed that all regional authorities in Ukraine use the Facebook network. Twenty RMAs and thirteen RCs also use YouTube. Other social media are used less often. RMAs have slightly larger audiences for their Facebook pages compared to RCs, but there are a few exceptions. Among the platforms – Facebook, YouTube, Twitter (X), Telegram, WhatsApp, and Instagram – Facebook was chosen for detailed research as it is the most popular media in Ukraine with the largest audience. Activity was assessed by comparing the audience size of regional authorities' pages on Facebook to the

region's population. A comparative analysis was employed to evaluate this activity.

The evaluation results showed that the regional authorities in the western regions of Ukraine, as well as in some front-line regions (Kherson and Mykolaiv regions), are more active than those in the central and eastern regions. Additionally, Regional Military Administrations (RMAs) are generally more active than Regional Councils (RCs). The quantitative assessment of activity was conducted based on the ratio of the audience of Facebook pages of regional authorities to 1,000 inhabitants of the respective regions. Overall, the most active RMAs were the Chernivtsi RMA (69.7 per 1,000 inhabitants) and the Kherson RMA (47.0 per 1,000 inhabitants), while the most active RCs were the Mykolaiv RC (67.0 per 1,000 inhabitants) and the Lviv RC (33.9 per 1,000 inhabitants). A clear difference is evident in the quantitative assessments for the regional authorities with the highest rankings. Therefore, it is advisable to present the results of the analysis not only in the form of rankings but also as quantitative assessments, as shown in the tabular format in this article.

The proposed methodology has demonstrated its ability to calculate the activity of regional authorities on social media, but it also requires further development to establish cause-and-effect relationships and to explain the obtained results. Since individual structural subdivisions of RMAs and RCs have their own accounts in social networks, it is advisable to conduct a comparative analysis of their activity according to the methodology outlined in this article. Further research should also be directed to the development of proposals for improving the work of the RMAs' and RCs' units, which are entrusted with the functions of communication with the public through social media.

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■ Conflict of Interest

None.

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Порівняння активності регіональних органів влади України в соціальних мережах

Євген Матвішин

Доктор економічних наук, професор
Національний університет «Львівська політехніка»
79013, вул. Степана Бандери, 12, м. Львів, Україна
<https://orcid.org/0000-0001-9522-4645>

Віта Пилипенко

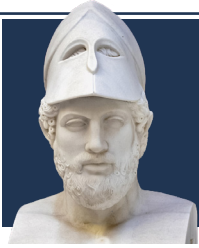
Кандидат наук з державного управління
Національний університет «Львівська політехніка»
79013, вул. Степана Бандери, 12, м. Львів, Україна
<https://orcid.org/0009-0006-2584-4965>

Микола Буник

Кандидат політичних наук, доцент
Національний університет «Львівська політехніка»
79013, вул. Степана Бандери, 12, м. Львів, Україна
<https://orcid.org/0000-0002-6116-3642>

■ **Анотація.** У статті розглядається присутність обласних військових (державних) адміністрацій та обласних рад у соціальних мережах. Обґрунтовано важливість розвитку комунікації між цими регіональними органами влади та громадськістю, а також іншими зацікавленими сторонами через соціальні мережі. Аналіз активності органів влади в соціальних мережах дає змогу оцінити їхню здатність адаптуватися до змін, пов'язаних із розвитком сучасних комунікаційних технологій. Метою статті є розробка критеріїв оцінки діяльності регіональних органів влади в соціальних мережах та апробація запропонованої методики. Виявлено, що Facebook є найпоширенішою соціальною мережею, яку використовують регіональні органи влади, зокрема 24 обласні військові (державні) адміністрації та 21 обласна рада активно використовують її. Для порівняння їхньої активності в соціальних мережах було враховано кількість населення кожної області України. Рейтинги обласних військових (державних) адміністрацій та обласних рад були розраховані на основі співвідношення аудиторії їхніх сторінок у Facebook і чисельності населення області. Було виявлено відмінності в представленні регіональних органів влади в різних регіонах України. Найкращих результатів досягли переважно західні та деякі прифронтові органи влади (Херсонська область, Миколаївська область). Загалом, обласні військові (державні) адміністрації, за винятком трьох регіонів, активніше використовують соціальні мережі, ніж обласні ради. Це підтверджується більшою кількістю підписників на їхніх сторінках у Facebook, яка є найпопулярнішою мережею серед населення України. Загалом, обласні військові (державні) адміністрації активніше, ніж обласні ради, моніторять сторінки інших організацій у Facebook. Ознайомлення з результатами порівняльного аналізу може допомогти керівникам органів влади оцінити ефективність роботи своїх комунікаційних підрозділів у порівнянні з іншими регіональними органами влади

■ **Ключові слова:** бенчмаркінг; компетентності; комунікації; місцеве самоврядування; публічне управління; регіональний розвиток; електронне врядування



Conceptual approaches to spatial development management in current conditions

Oryslava Sydorчук*

Doctor of Economics, Professor
Lviv Polytechnic National University
79013, 12 Stepan Bandera Str., Lviv, Ukraine
<https://orcid.org/0000-0002-7078-1557>

Maksym Sydorчук

Master of Spatial Management
University of Gdańsk
80309, 8 Jan Bażyński Str., Gdańsk, Poland
<https://orcid.org/0009-0001-1184-5004>

■ **Abstract.** Managing spatial development of the Ukrainian state in the conditions of war is becoming critically important for ensuring security, maintaining economic stability, and restoring the affected regions. The war leads to the destruction of infrastructure, significant changes in the distribution of population, and economic activity that requires prompt and effective planning to minimize negative consequences. Therefore, the article aims to consider and justify conceptual approaches to spatial development management in modern conditions. For this purpose, a comprehensive scientific approach was used to study and analyse normative legal acts and scientific sources on this issue using the methods of theoretical generalization, abstraction, modelling, and system and graphic methods. The article presents the authors' definition of spatial development management, which should be understood as the activity of management entities aimed at changing resource connections and flows to ensure the balanced development of complex systems. The orientation of spatial management to people and their needs was noted. The main factors characterizing the spatial development of Ukrainian territories were identified and described. The main threats to national security in the context of ineffective spatial development management were analysed. The article offers a conceptual scheme of spatial management organization with functional elements and connections between them. Particular emphasis is placed on the resilience of communities as a property of the system and a significant factor of national security. An assessment of the main types of resilience, according to which spatial development management should be built, is provided. The practical value of research lies in the possibility of using the developed conceptual model for the organization of effective management of spatial development that considers the feasibility of economic activity in a specific territory, socio-economic relations between settlements, environmental requirements for living conditions, etc

■ **Keywords:** regional management; territorial communities; state; regional development; model of spatial management; resilience

■ Introduction

Each region is an integral part of the general space of the country and functions due to the interdependence and close interaction of social, economic, and political relations in a specific territory. Therefore, the study of the

peculiarities of regional development requires an integrated approach and should be based on the synergy of the factors mentioned. It makes it possible to identify the potential of self-organization and self-regulation of

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economic entities contributing to their effective development, which under martial law is extremely important for the stable functioning of the state as a whole and the rapid recovery of the territories affected. Regulation of spatial development is a mechanism that prevents economic disintegration, provides conditions for the preservation of the socio-economic and territorial integrity of the country, and plays a significant role in solving economic security tasks.

Spatial development and regional policy have been studied by many scholars, including V. Bezhin (2022), I. Semygulina *et al.* (2023) and others. They considered the changes in regional policy in Ukraine during the war and the peculiarities of spatial development of regions and settlement structures in the system of public management of territories from the standpoint of a security aspect. Authors substantiated proposals for improving the state regulation of spatial development of territorial communities and forming a mechanism for managing the potential of sustainable spatial development of the region.

The definition of the spatial development of the region was given by Y.S. Paliichuk & G.A. Horvat (2020). Authors deeply analysed the interpretation of this concept in scientific works of other researchers and gave their own author's understanding of it. Yu. Ivanov *et al.* (2021) presented a conceptual framework for state regulation of spatial development of territorial communities. Scientists investigated how peculiar the functioning of territorial communities is and how they are influenced by the state. Given the need for sustainable functioning of regions, they proposed directions for state regulation of spatial development of territorial communities. An in-depth understanding of this concept was presented by I. Semygulina *et al.* (2023), who examined the essence of the concept of "territorial community in the aspect of spatial development" by focusing on the positioning of territorial communities as separate entities involved in the processes under study.

M.O. Kyzym *et al.* (2022) investigated the factors of spatial development of territorial communities in the system of public management of territories. Scientists characterized the main factors influencing spatial development and proposed ways to improve public management of processes taking place at the level of territorial communities. T.A. Zaiats *et al.* (2018) studied the peculiarities of spatial development of regions and settlement structures from the standpoint of security aspects, as there is a significant number of risks present in its development that need to be taken into account. The potential of Ukraine's spatial development from a global perspective is presented by E.O. Marunyak (2020). The scientist sees it in close synergy with the social and economic development of other countries, which lays the ground for the progressive and comprehensive growth of Ukrainian territorial communities.

The global context was reflected by G. Cotella (2020) and O. Komelina & H. Kondratieva (2023). They studied the impact of the European Union's policy on territorial management and spatial planning in the EU countries and the European experience of organizational and legal

support for sustainable spatial development. Given the possibility of borrowing positive experience, these elaborations are valuable for Ukrainian scientific thought.

The point of view that modern social development seems impossible without the use of the latest technologies and intellectual developments takes a central place in the work of A. Melnyk & V. Adamyk (2022). Studying the peculiarities of intellectualization of management in implementing regional development strategies and examining current challenges and ways of problem-solving, they emphasized the importance of introducing innovative achievements of scientific and technological progress into regional development management.

Though literature analysis shows a significant interest in various aspects of spatial development management, scientific thought requires comprehensive conceptual approaches to understanding the essence and peculiarities of management in this area due to the conditions of uncertainty and turbulence caused by hostilities on the territory of the Ukrainian state and the need to enhance security of management processes during martial law. Consequently, the article aims to justify conceptual approaches to spatial development management with the view of security aspects and the ability of the system to adapt to new conditions of existence. Accordingly, the objectives of this research are as follows: to formulate the authors' understanding of spatial development management; to characterize factors of spatial development of Ukrainian society; to identify threats to national security in terms of ineffective spatial development management and the causes of their occurrence; to propose a conceptual model of spatial development management in the context of resilience of a socio-economic system.

■ Materials and Methods

The methodology of this research grounds on employing an integrated approach to the study of conceptual approaches to spatial development management in the conditions of war in Ukraine using the methods of theoretical generalization, abstraction, modelling, and system and graphical ones. At the initial stage of research, scientific articles, monographs, dissertations, and other scientific publications that cover the aspects of spatial development and management under crisis were searched for. Then, they were critically analysed to identify the main approaches and methods used in modern research on spatial development. Particular attention was paid to the approaches considering the resilience of communities as a core element in ensuring their viability in crisis conditions. The use of the method of theoretical generalisation made it possible to synthesize the main concepts and approaches found in literature and formulate a personal vision of spatial development.

To define the concept of "spatial development", theoretical scientific articles were analysed, and education programs in the spatial management specialty of the Slovenian Technical University (Spatial Planning..., 2023), Krakow



University of Economics (2023), and Lviv Polytechnic National University (2023) were considered. The analysis of these programs made it possible to identify the key competencies and knowledge necessary for effective management of spatial development in conditions of conflict and instability. The method of abstraction helped to identify the main components that are important for successful spatial development management.

Based on literature analysis, the main factors influencing spatial development were identified and classified according to various criteria, such as economic, social, environmental, infrastructural, etc. In addition, the main threats to national security arising from ineffective spatial development management were identified, as well as an analysis of possible consequences and ways to minimize these threats was carried out. Using the system method, these factors and threats were structured into a single system.

The final stage of research was the development of a conceptual model for spatial development management, which takes into account the specific conditions of war and focuses on the resilience of communities. The modeling method made it possible to create a model, which is a scheme that represents the interconnection and interdependence of all components of spatial development. The graphical method was employed to visualize the model, which makes it convenient for use in the practice of spatial development management. The proposed conceptual model aims at improving the efficiency of spatial development management and ensuring the sustainability of communities in a crisis with a particular emphasis on their resilience.

■ Results and Discussion

Effective management underlies the harmonious development of the spatial system and requires responsiveness to external influences. Appropriate management procedures make it possible to coordinate actions of various elements of spatial development. The war-time challenges in the Ukrainian state necessitate the development of new management approaches for the reconstruction of the country in the post-war period. In particular, there is a need for specialists who will possess knowledge about spatial ways of development of complex systems and enterprises. Thus, the understanding of the essence and specificity of spatial development management becomes of particular importance.

First of all, it is worth paying attention to the definition of “spatial development”, which lays the basis for the interpretation of the concept of spatial development management. In scientific literature, this term is interpreted as “the reproduction process of the elements of space, which functions as a system of material and energy flows (raw materials, goods and services, organizational, financial and human capital, etc.)” (Morozova, 2013).

A. Vitiuk (2020) views this concept as “a dynamic process of interaction between objects and subjects of reality that exist under certain conditions in a system of vectors of individual or joint interactions under the systemic, single or chaotic influence of time”. The dynamic peculiarity of

this category assumes that at different stages of management, diverse mixtures and combinations of various factors that determine characteristics of spatial development are of significance.

Thus, the understanding of spatial development makes it possible to better comprehend the essence of its management as a whole. At the same time, the training of specialists in this area and the development of appropriate educational programs both in Ukrainian higher educational institutions and abroad testify to the importance of the concept of “spatial development management” in modern conditions. In particular, to coordinate the interests of various actors and subjects of territorial development and direct it towards social and territorial cohesion, the relevant educational program of the Slovenian Technical University in Bratislava offers the knowledge of natural, technical, social, and economic sciences necessary to ensure integrated management of sustainable spatial development in the unity of socio-cultural, natural-ecological, technical, and economic aspects of the development of territorial socio-ecosystems of regions, cities, and municipalities (Spatial Planning..., 2023).

At the University of Krakow, future specialists focus on the economic aspects of space management. Accordingly, spatial management is characterized in the educational program from the standpoint of a high degree of interdisciplinarity due to business needs for specialists with knowledge and skills, capable of collaborating in interdisciplinary groups solving practical and complex tasks of spatial problems (University of Economics in Krakow, 2023).

In the educational program of Lviv Polytechnic National University, spatial development management is interpreted as a term that combines an economic and business approach to the development of complex systems and focuses on effective management of resource potential, including finance, real estate, investment zones, public spaces, etc. The specialty involves the knowledge of spatial development of infrastructure of cities and regions necessary for reasonable placement of industrial enterprises, institutions, and organizations to provide the population with the full range of services (Lviv Polytechnic National University, 2023).

Thus, spatial development management is a complex process that covers activities of management entities in planning, organizing, coordinating, and controlling the use of resources and infrastructure to ensure the sustainable development of complex systems. These activities are directed at coordinating resource connections and flows aimed at formulating priority strategies to balance these systems. In other words, the essence of spatial development management is the integration of various aspects – economic, social, environmental, and cultural – to achieve a balance between the conservation of natural resources and the satisfaction of population needs in certain territories.

From the standpoint of public administration, spatial development management is of utmost importance for ensuring sustainable and balanced development of territories,

which is currently scarcely imaginable without the use of digital technologies and innovative approaches. Modern technologies such as geographic information systems (GIS), the Internet of Things (IoT), big data, and artificial intelligence are significantly changing approaches to spatial development management. These technologies allow for more accurate planning, various management scenario modeling, and more informed decision-making. For example, GIS helps to visualize and analyse spatial data, which is of critical importance for infrastructure planning and zoning.

In addition, modern spatial development management necessitates the involvement of the public in the decision-making process. This includes holding public hearings and consultations as well as engaging citizens in the development of territorial development strategies. Transparency in decision-making helps to increase public trust, reduce social conflicts, and consider the needs of diverse population groups.

Effective spatial development management requires coordination between different levels of government (national, regional, local) and varied sectors of the economy (transport, housing, healthcare, etc.). Integrated approaches allow for the coordination of policies and measures which contribute to more efficient use of resources and achievement of goals. Spatial development management is obliged to take into account global challenges such as climate change, natural disasters, migration processes, and economic crises, which in turn requires the development of adaptive strategies able to respond fast to unpredictable changes and ensure the resilience of territories to external influences, for example, to develop the infrastructure resilient to climate change or to create early warning systems for natural disasters. Thus, modern spatial development management is a complex and

multifaceted process that necessitates the use of innovative technologies, public involvement, policy integration, and adaptation to global challenges, therefore creating comfortable, sustainable, and safe conditions for the life and activities of the population.

Public administration in this context performs the function of coordinating, regulating, and stimulating various processes related to using territorial resources, developing infrastructure, and ensuring environmental sustainability. The specificity of these management procedures lies in the coordination of business interests and the common good, the search for ecologically, socially, and economically compatible solutions, the rational use of territories and natural resources, the protection of ecological systems, and the enhancement of the standard of living of the population. The processes of managing the potential for sustainable development of the spatial system should be guided by the main need – to ensure the continuity of this process and take into account the peculiarities of a specific phase of development of macroeconomic processes in the context of regional ones. Therefore, when creating concepts of management systems, it is necessary to use the knowledge of peculiarities of economic changes in the external environment and from the previous phases of spatial development and to consider the prospects of these processes.

The socio-economic development of a particular territory undergoes the influence of a range of factors illustrated in Table 1. These factors underlie the life of territories and communities of the state and form conditions for their existence in the process of managerial decision-making that leads to progressive changes in the context of territory development precisely due to the interconnection of individual factors and their coordinated impact on spatial development as a whole.

Table 1. Factors that characterize spatial development

Factors	Characteristics
Geographic	The geographical location of the territory, its proximity to the main highways and central transport interchanges
Natural	Ecological situation and recreational living conditions, standards and lifestyle of the population, peculiarities of the natural environment of the territory as a whole
Regulatory	Regional public policy, the possibility of using a valid mechanism for regulating the economic development of the territory, etc.
Economic	External and internal economic ties, resource provision of the territory, investment policy, budget revenues, market conjuncture, dependence on external sources of resources and energy
Industrial	The use of the natural resource and labour potential of the territory according to the requirements of environmental safety, development of international industrial integration, etc.
Institutional	Completeness of institutional market reforms and structural transformations in the region
Market	Availability of infrastructure for business development in the region, conditions for the reproduction of goods, services, and labour, conditions of preferential taxation, investment attractiveness of the region
Demographic	The main characteristics of the population of the territory, its labour potential, and the demographic situation in the region
Humanitarian	Social and economic activity of the region's population, human and social capital, social and professional networks, etc.
Social	Priorities in the field of social territorial infrastructure
Infrastructural	Infrastructural opportunities that stimulate or constrain territorial development
Technological	Implementation of achievements of scientific and technological progress to ensure sustainable development of territories

Table 1. Continued

Factors	Characteristics
Affecting food security	The level of food security according to the socio-economic situation, natural and climatic conditions, food sufficiency, the state of agro-industrial production, the food market, etc.
Ecological	The state of environmental pollution and the use of environmentally friendly technologies
Territorial	The influence of historical and cultural heritage, customs, traditions, local peculiarities, and culture that form local competitive advantages and characterize the uniqueness of the relevant territory
Informational	The openness of local self-government bodies for dialogue with society, the possibility of free access of the population to the necessary information, information security
Inclusive	Inclusive innovations and creation of inclusive business models and markets

Source: compiled by authors using data of G. Cotella (2020)

Organizing territories of settlements, improving the quality of the environment, and harmonizing the life of the population of regions with the help of new infrastructure facilities lay the basis for ensuring sustainable spatial development. The implementation of management actions in the field of spatial development necessitates the following steps:

- 1) improvement of the well-being and living conditions of the population at the level of individual regions;
- 2) reconstruction and integrated development of rural and urban settlements and inter-settlement territories on an ecological basis;
- 3) development of environmentally friendly engineering, transport, and industrial infrastructure;
- 4) development of health improvement systems and social infrastructure;
- 5) preservation of the historical and cultural heritage of individual regions;
- 6) improvement of the land use system in the context of spatial development.

While taking into account environmental and social aspects, these measures should be directed to creating conditions for the harmonious development and sustainable functioning of spatial systems.

Although in the context of decentralization, spatial development management opens up new opportunities for using the potential of specific territories, in particular by supporting self-organizing principles of local governance, introducing a new system of administrative service provision, and expanding access to financial resources, there evolves a risk of “institutional traps” caused by conflicts of interest or inconsistency of actions of different levels of government which complicates the solution of local problems.

The experience of amalgamation of territorial communities showed that a significant part of communities, taking into account the powers and functions granted, did not

manage to direct their efforts to solve urgent problems and effectively organise local self-government. M. Kyzym *et al.* (2022) emphasize that many territorial communities have not been able to strengthen their institutional capacity yet. It takes much time, and the significant politicization of decentralization changes remains the main risk in the process of implementing management functions in the field of spatial development.

Currently, the management of spatial development should be exercised primarily from the standpoint of national security. Ill-conceived functional and structural shifts in the spatial development of regions give rise to problems, such as excessive urbanization, which creates an additional burden on the infrastructure, a decrease in the stability of the settlement network and the destruction of small settlement structures, an increase in spatial remoteness from infrastructural and economic facilities. These problems, resulting from the irrational amalgamation of rural territorial communities and the lack of the necessary experience of self-organization at the level of individual communities, lead to an imbalance in the structure of settlements in the state, thus complicating the implementation of measures to ensure an appropriate level of national security and reducing the effectiveness of social development and functioning of economic entities. Areas with low population density form centres that, in case of war or threat, may become unattractive for taking protection and security measures, creating thereby problems for the development of existing engineering, energy, and transport infrastructure. These aspects should be taken into account during the development of effective policies and strategies in the field of national security and spatial development. The uneven settlement of territories, decrease in population density, and loss of settlement potential may lead to a range of threats to national security (Table 2).

Table 2. Threats to national security in the context of ineffective spatial development management

Threats	Causes of threats
Expansion of territorial areas of poverty	A possible decrease in the number of workplaces and the curtailment of economic activity may lead to an increase in poverty and the spread of areas with a low level of economic development
Increase in the number of unpromising settlements	An increase in the number of investment unattractive, highly specialized, and single-industry settlements may arise as a result of degradation and economic decline

Table 2. Continued

Threats	Causes of threats
Weakening of social and economic functions of settlements	Reducing the role of settlements in ensuring effective local development may lead to their capacity weakening in these aspects
Slow socio-economic development	The slow pace of local development may make it difficult to strengthen defence capabilities
Limited use of resources	Low population density limits the use of resources necessary for the safe development of territories (cultural, environmental, material, financial, human, natural)
Insufficient concentration of capital	The low level of development of information, engineering, and road transport infrastructure leads to a limited concentration of capital, which may affect the economic potential of territories

Source: compiled by the authors

To minimize national security threats and risks, it is urgent to move to the project-spatial anti-crisis management of socio-economic development of settlements. Therefore, at the state level, the latest progressive standards of organization and planning of territories should be introduced in the main functional zones. Accordingly, spatial development needs the development of effective social and economic inter-settlement ties. This demands consideration of environmental requirements for living

conditions through the cooperation of different types of economic activity and the principle of settlement optimization based on the feasibility of economic territory development. Thus, given the essence, purpose, and specificity of the processes of spatial development management as well as their importance in ensuring the national security of the state, a currently relevant conceptual model of spatial development management has been proposed (Fig. 1).

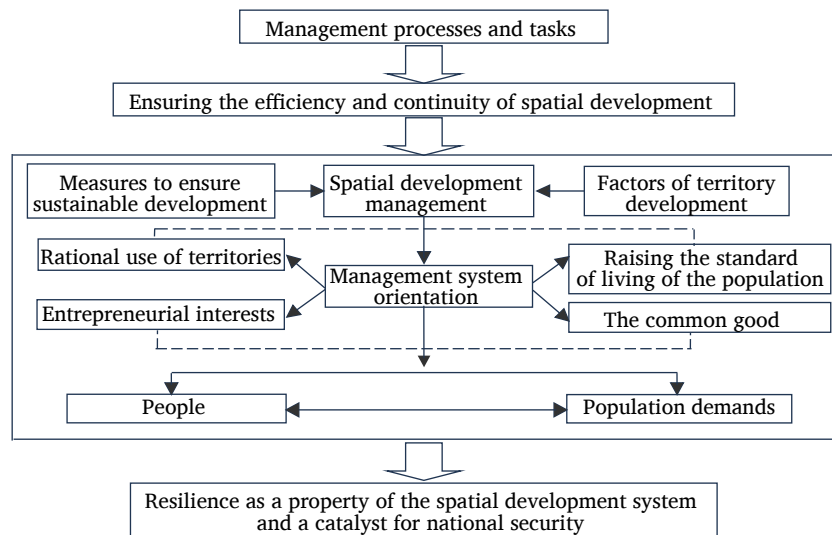


Figure 1. Conceptual model of spatial development management at the current stage

Source: compiled by the authors

Based on the measures to ensure sustainable development and given the factors of territory development, management processes and tasks as components of the model are designed to secure the efficiency and continuity of spatial development while directing the management system to the rational use of territories, satisfaction of entrepreneurial interests, raising the standard of living of the population and guaranteeing the common good in the process of territory development as a whole.

A significant role in the process of interaction of the components of this model is assigned to resilience, which A. Masten *et al.* (2021) view as “the ability of the system to anticipate, adapt, and reorganize itself in adversity

in such a way as to promote and maintain its successful functioning”. Namely, “the resilience of a spatial development system characterizes its ability to successfully adapt to challenges that threaten its functioning, survival, or development” (Ungar, 2018). In the conditions of active hostilities and martial law on the territory of Ukraine, the resilience of communities is one of the main factors of national security of the state and its civilizational subjectivity. After all, the ability of territories to adapt to new, often unfavourable conditions determines their further level of functioning, and it is effective management that should become the engine of sustainable spatial development. The problems of spatial development and its



management are the subject of numerous studies and discussions among scientists who share different approaches to their analysis. Their works outline several conceptual approaches to spatial development management with their advantages and disadvantages.

Modern concepts, such as sustainable development and “smart cities”, have received significant support among the scholars who work on spatial management issues. Scholars, including R. Florida (2002), consider these approaches as contributing not only to economic growth but also to ensuring environmental sustainability and social justice. They place the focus on the use of the latest technologies and innovations in the process of territory management. The directions for the development of spatial planning of territorial communities in modern conditions, proposed by T. Lytvynenko & T. Pavlenko (2023), are a compelling addition to the approaches mentioned above and help better understand challenges faced by managers-regionalists.

Other studies focus on the concept of inclusive spatial development, which includes the involvement of all social groups in the process of territory management. Scholars such as A. Sen (1999) and others emphasize the importance of ensuring equal access to resources and opportunities for all residents regardless of their social or economic status. A.S. Gustafsson *et al.* (2018) deepen these theses, emphasizing the integration of environmental sustainability into strategic spatial planning and the importance of managing these processes. N. Pavlikha *et al.* (2021) examine the security aspects of sustainable development of regions and territorial communities of Ukraine based on inclusive growth. These studies make it possible to comprehend the uniqueness and objective necessity of effective spatial development management in current conditions.

Sustainable development in the context of regionalistics. This direction is presented by numerous scientists, in particular, such as V. Miklovda & H. Horvat (2021), who examine spatial development of regions in the context of Ukraine’s European integration and economic security of the state, and M.S. Zabedyuk (2021), who delves deeper into this issue studying the peculiarities of endogenous factors of regional development. Their publications give an insight into the way regions are managed nowadays.

A critical approach to spatial development. Some scientists express a critical approach to traditional spatial development models by emphasizing the need to consider modern trends in society development. For instance, I. Storonianska & I. Zalutskyi (2022) study the institutional and legal framework for regulating spatial development in Ukraine, thus focusing on the need to take into account innovative approaches to managing spatial development of regions, spatial planning in the context of decentralization and sustainable development management. They call for a rethinking of existing models and the creation of new approaches that would better meet modern challenges due to the need to unify institutional approaches and legal support for spatial development.

Management of spatial development in crisis conditions. At present, society faces significant challenges caused by uncertainty, turbulence, globalization changes, pandemic moods, and war. S. Khrustovskiy & Y. Slobodyanyuk (2022), who examine the peculiarities of spatial planning of territorial development of communities, including legal aspects, during and after the war, note that this influences processes taking place both at the state level and the level of individual regions and requires specific management approaches as such.

The discussions of scientists testify that there exist different points of view on the problems spatial development and its management face. Every approach has its strengths and weaknesses, as well as the potential for further development. In modern conditions, it is crucial to integrate these approaches to create comprehensive models of spatial development that would take into account economic, social, and environmental aspects. As scientific discussions in this area continue, this indicates the need for further research and development of conceptual foundations of spatial management.

Given different approaches to understanding the concept under study, it can be argued that the closest and most acceptable for us is a critical approach to spatial development, which takes into account current trends and makes it possible to consider the challenges and realities of today’s turbulent society. Following this, the author’s interpretation of spatial development management is given, which should be considered as a complex process that covers the activities of management entities in planning, organizing, coordinating, and controlling the use of resources and infrastructure to ensure the sustainable development of complex systems. The activities are oriented at coordinating resource connections and flows to formulate priority strategies to balance these systems. In other words, the essence of spatial development management is the integration of various aspects – economic, social, environmental, and cultural – to achieve a balance between the conservation of natural resources and the satisfaction of population needs in certain territories.

■ Conclusions

The balanced development of the country is inextricably linked with the socio-economic development of its territories and communities. The success of spatial development relies upon efficient managerial actions in this area. The peculiarities of spatial development management depend on a different level of territory development, the unique features of each community – its geographic location, history, production structure, specialization, the state of labour potential, and other factors, as well as on the consequences of the impact of military aggression in modern conditions. Consideration of these peculiarities made it possible to present the authors’ interpretation of this concept in the article. Authors stress that the implementation of strategically significant measures aimed at countering possible national security threats, such as the spread of territorial

areas of poverty, an increase in the number of unpromising settlements, a weakening of social and economic functions of settlements, slow socio-economic development, limited use of resources, insufficient concentration of capital, etc., should be the priority of the modern spatial development policy. Therefore, spatial development management should be directed to strengthening the socio-economic potential of territories through the efficient unification of territorial communities and active support for their self-organization.

The article substantiates conceptual approaches to spatial development management, which provide for ensuring the efficiency and continuity of spatial development based on the measures for ensuring sustainable development and taking into account the factors of territory development, security aspects, and the ability of the system to adapt to new conditions of existence based on the proposed model. It consists of regional factors of territory development and measures that are necessary for ensuring sustainable development to improve the well-being of the population

and preserve its interests. The management system should also be oriented to the rational use of territories and the provision of business, social, environmental demands, etc., focusing particular attention on the ability of territories to adapt to modern conditions as it has a direct impact on territory development. The need for management to consider the resilience of its system to ensure an appropriate level of national security in the state is a crucial aspect of the presented model.

Further research will focus on the investigation of the specificity of spatial development management in the European Union countries aimed at studying and using the advanced experience of developed countries in Ukrainian realities.

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■ Conflict of Interest

None.

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Концептуальні підходи до менеджменту просторового розвитку в сучасних умовах

Ористлава Сидорчук

Доктор економічних наук, професор
Національний університет «Львівська політехніка»
79013, вул. Степана Бандери, 12, м. Львів, Україна
<https://orcid.org/0000-0002-7078-1557>

Максим Сидорчук

Магістр просторового менеджменту
Гданський університет
80309, вул. Яна Базинського, 8, м. Гданськ, Польща
<https://orcid.org/0009-0001-1184-5004>

■ **Анотація.** Управління просторовим розвитком Української держави в умовах війни набуває критичної важливості для забезпечення безпеки, підтримки економічної стабільності та відновлення постраждалих регіонів. Війна призводить до руйнування інфраструктури, значних змін у розподілі населення та економічної активності, що потребує оперативного й ефективного планування для мінімізації негативних наслідків. Саме тому метою статті є розгляд і обґрунтування концептуальних підходів до менеджменту просторового розвитку в сучасних умовах. Під час роботи був використаний комплексний науковий підхід для вивчення й аналізу нормативно-правових актів і наукових джерел з цього питання, зокрема методи теоретичного узагальнення, абстрагування, моделювання, системний та графічний методи. У статті подано авторське визначення управління просторовим розвитком, під яким слід розуміти діяльність суб'єктів управління, спрямовану на зміну зв'язків і потоків ресурсів з метою забезпечення збалансованого розвитку складних систем. Відмічено, що центром спрямування просторового менеджменту є люди та їхні потреби. Визначено основні фактори, що характеризують просторовий розвиток українських територій, та надано характеристику кожному з них. Проаналізовано основні загрози національній безпеці в контексті неефективного управління просторовим розвитком. У статті пропонується концептуальна схема організації просторового менеджменту з виділенням функціональних елементів і зв'язків між ними. Особливий акцент зроблено на стійкості громад як властивості системи та важливого чинникові національної безпеки. Подано оцінку основних типів стійкості, відповідно до яких має будуватися управління просторовим розвитком. Практична цінність дослідження полягає в можливості використання розробленої концептуальної моделі для організації ефективного управління просторовим розвитком з урахуванням економічної доцільності господарської діяльності на певній території, соціально-економічних відносин між населеними пунктами, екологічних вимог до умов життя

■ **Ключові слова:** управління регіонами; територіальні громади; держава; регіональний розвиток; модель організації просторового менеджменту; резильєнтність



Regulation of artificial intelligence in Ukraine in the framework of harmonisation of legislation with EU legal norms

Mykhailo Yanyshivskiy*

Postgraduate Student
Lviv Polytechnic National University
79013, 12 Stepan Bandera Str., Lviv, Ukraine
<https://orcid.org/0000-0002-8788-6339>

■ **Abstract.** Due to the rapid development of artificial intelligence (AI) technologies, the massive spread of generative models such as ChatGPT, and the growing risks of their use, the issue of legislative regulation in this area has become relevant. The adoption of the Artificial Intelligence Act by the European Parliament in March 2024 marked the emergence of the world's first specialised law on the development and use of AI technologies. The purpose of the current study was to analyse the legal regulation of this field in Ukraine and the prospects for its harmonisation with European Union (EU) legislation in the framework of integration into the EU. During the study, the author used logical, comparative legal, systemic, and formal legal methods of scientific knowledge. The current state and prerequisites for legislative regulation of artificial intelligence in Ukraine and the EU were investigated. The author analyses the relationship between ethics, policy, and law in the field of AI at the national and international levels. It was found that Ukraine does not have specialised legislation on AI, however an approach is being taken to gradually implement EU regulation in this area. The article analyses the current legislation on AI regulation in Ukraine. It analyses the potential legal consequences of granting legal personality to AI, liability for its actions taken with AI, protection of data created and processed by AI, considering the General Data Protection Regulation and the possibilities of their adaptation. It also discusses aspects of extending copyright to objects created by AI, with recommendations for their legal regulation. The author summarises the key provisions of the EU Artificial Intelligence Act and assesses its potential impact on the legal framework of Ukraine. The results of this study can be used to further improve Ukraine's legislative framework in the field of AI regulation to harmonise with the approaches of the EU. It can also be used as a basis for scientific developments and practical recommendations for the settlement of legal issues related to the development and use of artificial intelligence technologies

■ **Keywords:** public policy; legal regulation; European integration; European Union law; Artificial Intelligence Act

■ Introduction

The legal regulation of artificial intelligence (AI) is facing challenges due to the rapid development of AI technologies and their impact on society. Ukraine needs a comprehensive and effective state policy in the field of AI, and legal regulation is one of the key elements of its implementation. It should be in line with the approaches of the European Union (EU) and at the same time stimulate the development of innovations in all spheres of life, including public ones. This is especially important in the context of martial

law and post-war reconstruction. The development of an effective regulatory mechanism will help ensure the safe introduction and use of AI in Ukraine, stimulating technological development and innovation. This issue has been the subject of research by many scholars.

Considering general issues of legal relations in the field of AI, O. Paramonova & I. Varava (2023) emphasise the absence of a single concept of legal regulation and the need for an interdisciplinary approach involving lawyers,

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engineers, futurists, and philosophers. The authors consider various models of legal personality for AI, including as an autonomous agent. O.V. Kuzmenko *et al.* (2024) analyse the legal regulation of the introduction and use of AI, proposing the adaptation of existing civil liability mechanisms and the development of new approaches that take into account the unique features of AI technologies. Several scholars analyse certain legal phenomena related to AI. In particular, N. Stefanyshyn & T. Skhab-Buchynska (2023) consider AI as an object of civil legal relations, emphasising that Ukrainian society is not ready to accept AI as a subject of legal relations, and emphasise the need to impose liability for damage caused by AI on the owner. O. Doroshenko & L. Tarasenko (2023) focus on the legal status of non-original objects generated by a computer program, defining the subjects of property rights and the scope of such rights. The authors propose to improve the legal regulation, in particular, with regard to the ownership of property rights to a non-original object and the extension of the *sui generis* legal regime to photographs. However, they do not analyse how these issues relate to the EU experience in the context of harmonisation of Ukrainian legislation with the European one.

A substantial part of the research concerns the problem of AI regulation in specific areas of life. A. Klochko *et al.* (2023) study the introduction of AI in the banking sector of Ukraine, emphasising the strategic role of these technologies in the recovery of the banking system after the war and the need to adapt biometric identification technologies to the provisions of the EU AI law. O.O. Khorvatova (2023) studies the impact of AI on insurance, emphasising that the introduction of AI will change most aspects of insurance, including the calculation of the cost of an insurance policy and the transition to a continuous insurance cycle. It also emphasises the role of insurance brokers and the need to adapt their activities to new technological conditions, but does not focus on harmonisation with European legislation.

The studies conducted before 2022 provide an important basis for understanding the evolution of approaches to regulating AI, and focus mainly on the problems of granting it legal personality. M. Stefanchuk *et al.* (2021) emphasise the dynamism and innovative approaches to understanding legal personality through the development of robotics. They underscore the necessity of granting AI the status of a civil law subject and ensuring timely legal regulation. O. Radutnyi (2018) proposes to recognise AI as an “electronic person” in criminal law and to provide for a relevant section in the Criminal Code of Ukraine, considering the possibility of creating AI that exceeds human intelligence. K. Tokarieva & N. Savliiva (2021) examine the legal regulation of AI in Ukraine, emphasising the need to improve data protection legislation and grant AI the status of a legal entity with legal liability. The authors also analyse the experience of EU countries in implementing a legal framework for AI regulation.

The analysis of sources has revealed that the issue of harmonisation of Ukrainian legislation with EU law in the field of AI remains insufficiently covered. The purpose of the article is to study the current aspects of AI regulation,

as well as to analyse the public regulation strategy and determine the framework for future legal regulation of the AI sphere with a view to harmonising Ukrainian legislation with EU law.

Materials and Methods

The following methods of scientific cognition were used during the study: logical, comparative legal, systemic and formal legal. In particular, the logical method made it possible to analyse the content of AI-related concepts and categories, to identify their correlations and interrelations. The comparative legal method was used to study and compare approaches to AI regulation in different jurisdictions, including Ukraine, the EU, and other countries. The systemic method made it possible to consider AI as a complex phenomenon in its interconnection with ethical, political and legal aspects. The formal legal method was used to analyse current Ukrainian legislation and draft EU regulations in the field of AI regulation. The choice of methods was determined by the purpose and objectives of the study, as well as the specifics of the subject – AI as a complex interdisciplinary phenomenon.

The factual material of the study consisted of:

1. Policy documents of international organisations:
 - Draft text of the Recommendation on the Ethics of Artificial Intelligence (2021);
 - Recommendation of the Council on Artificial Intelligence (2024).
2. EU policy documents:
 - Coordinated Plan on Artificial Intelligence 2021 Review (European Commission, 2021a);
 - Artificial Intelligence for Europe (European Commission, 2018);
 - Fostering a European Approach to Artificial Intelligence (European Commission, 2021b);
 - Ethics Guidelines for Trustworthy AI (2019);
 - White Paper on Artificial Intelligence: A European Approach to Excellence and Trust (European Commission, 2020b);
 - Report on the Safety and Liability Implications of AI, the Internet of Things and Robotics (European Commission, 2020a).
3. Draft EU regulations:
 - Artificial Intelligence Act (European Parliament and Council, 2024);
 - AI Liability Directive (European Parliament and Council, 2022).
4. Applicable EU regulations:
 - General Data Protection Regulation (European Parliament and Council, 2016).
5. The current legislation of Ukraine:
 - Law of Ukraine No. 2974-IX (2020);
 - Concept for the Development of Artificial Intelligence in Ukraine (Order of the Cabinet..., 2020).
6. Political documents of Ukraine:
 - Roadmap for the Regulation of Artificial Intelligence in Ukraine (Ministry of Digital Transformation of Ukraine, 2023).

The study identified the main concepts and categories related to AI, its classification and current state of development. The study analysed the correlation between ethics, policy, and regulation of artificial intelligence, and considered relevant initiatives at the international, regional and national levels. Finally, the article analyses the adopted regulatory documents governing the development and use of artificial intelligence in Ukraine and the EU.

■ Results and Discussion

The concept of artificial intelligence. The concept of artificial intelligence encompasses a wide range of different technologies and approaches, and it is such a dynamic field that its technologies, approaches, and boundaries are constantly changing and evolving. Approaches that were previously considered part of AI, such as expert systems or rule-based programming, have been pitted against more modern machine learning and deep learning techniques. So, the term “artificial intelligence” is more of an umbrella concept that encompasses different technologies and approaches, and its definition may depend on the specific context or application. This is because AI has emerged as a field of knowledge based on various disciplines and combines the achievements and methods of philosophy, mathematics, economics, neuroscience, psychology, computer engineering, management theory, and linguistics (Russell & Norvig, 2021).

The most comprehensive English-language encyclopaedia, Encyclopædia Britannica, defines AI as the ability of a digital computer or computer-controlled robot to perform tasks normally associated with intelligent beings (Copeland, 2024). Instead, the Artificial Intelligence Act, adopted by the European Parliament in March 2024, introduces the term “AI system” and defines it as a machine system that is designed to operate with varying levels of autonomy and that can, for explicit or implicit purposes, generate outputs such as predictions, recommendations, or decisions that affect physical or virtual environments. Both the encyclopaedic and legislative definitions do not refer to specific AI technologies and offer a technology-neutral approach. In the Artificial Intelligence Act, the European legislator justifies this by ensuring legal certainty, stability, international harmonisation of legal norms, flexibility, and adaptability of legislation to new technological advances (European Parliament and Council, 2024). An analysis of various sources shows that these are manifestations of a global trend toward broad definitions of AI systems based on certain characteristics of the systems to be regulated. As opposed to narrow definitions that consider only systems developed by methods and techniques included in certain closed lists as AI (Castán, 2024).

When considering the category of AI, it is also important to provide a traditional classification that distinguishes three types of AI: weak AI, strong AI, and artificial superintelligence. Weak AI (“Narrow AI”) is a system focused on solving one or more specific tasks usually performed by humans. This includes most modern applications such as recommendation systems, voice recognition, machine translation, etc. Strong AI (“Artificial General Intelligence”, AGI)

is a hypothetical system capable of solving any intellectual task at or above the level of a human. AGI would have to demonstrate human-like intelligence and self-awareness, not limited to narrow areas of application. The creation of AGI remains a theoretical goal. Artificial Superintelligence (ASI) is also a hypothetical form of AI that would significantly surpass human intellectual capabilities in all areas. ASI implies the presence of consciousness, subjective experience, and abilities beyond the reach of the biological human mind. This category of AI is the subject of science fiction and philosophical reflections (Stefanchuk *et al.*, 2021).

The state of the art and generative AI. The early 2020s saw a major leap in the development of generative AI systems. Computer programs have emerged that can generate text, images, audio, program code, or other data using generative models, mostly in response to user prompts or requests (prompts). Generative AI models learn the patterns and structure of the input training data and then generate new data with similar characteristics (Kalota, 2024). Generative AI includes large language models for chatbots, for example: ChatGPT, Claude, Perplexity, Gemini, Copilot, systems for generating images from text descriptions, such as DALL-E (integrated with ChatGPT 4.0), Stable Diffusion, Midjourney, Leonardo, as well as video content generators from text queries (Sora).

Correlation of AI ethics, policy, and regulation. According to the International Association of Privacy Professionals, as of the beginning of 2024, most countries in the world have no legal regulation of AI (Global AI law..., 2024). Therefore, an understanding of AI ethics and AI policy allows to correctly interpret existing regulation or proposals for it, predict possible regulatory changes, and consider ethical, political, and legal trends when developing or using AI technologies. The interconnection of ethics, policy, and regulation is illustrated in Figure 1.

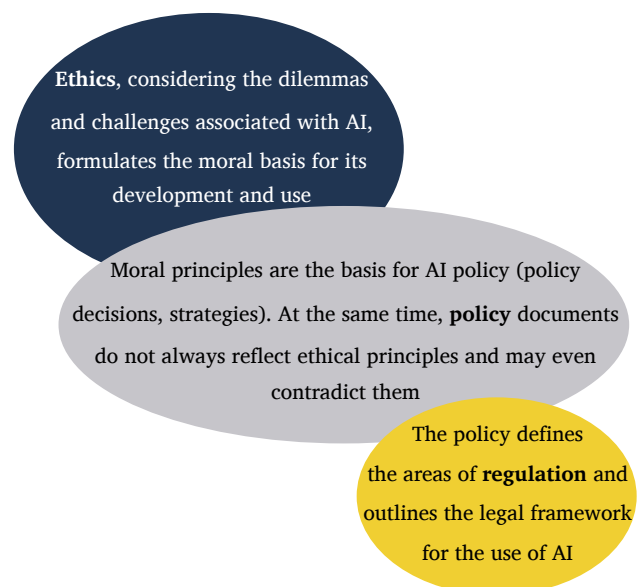


Figure 1. The relationship between ethics of AI policy and regulation

Source: author's development

Ethics of AI. Ethics is a set of moral principles that help humans distinguish between right and wrong. Accordingly, AI ethics is an interdisciplinary field that examines how to optimise the beneficial impact of AI while mitigating risks and adverse outcomes. AI ethics encompasses a series of moral dilemmas, challenges, and recommendations aimed at ensuring that the development and application of AI is done responsibly and for the benefit of society. One of the first to start a discussion on AI ethics was the American science fiction writer I. Asimov, who formulated the “Three Laws of Robotics” in his short story collection *I, Robot*:

“1. A robot cannot harm a person or, through its inaction, allow a person to be harmed.

2. A robot must obey human orders, provided that these orders do not contradict the First Law.

3. A robot must take care of its own safety as long as it does not contradict the First and Second Laws” (Asimov, 1987).

The current scientific discourse on the ethical issues of AI identifies several problems that are relevant now and will arise in the future. First and foremost, it is about privacy protection, which concerns the control over personal data and the right to secrecy. Another important aspect is the potential for behavioural manipulation, which includes the use of algorithms to influence people’s choices and decisions, undermining the autonomy and rationality of personal choice. Ethical issues are also raised by the opacity of AI actions, which arises from the inability to understand how the system came to a certain result. AI bias arises from the use of data that may contain systematic errors. The direct interaction between humans and AI also has an ethical dimension, especially when dealing with robotics, when the deceptive appearance or behaviour of robots can lead to unjustified trust. A separate issue is the operation of autonomous systems, which raise questions of responsibility and control by humans. In addition, the use of AI will have a significant impact on employment through the automation of processes in both manufacturing and intellectual spheres, reducing the number of jobs in some sectors and creating new opportunities in others (Müller, 2020).

Policy on the use of artificial intelligence. In contrast to ethical guidelines and codes, policies are more binding and strategic in nature (though not normative). They often contain specific objectives, goals, and initiatives for governments, industry, and other stakeholders, and are aimed at building a favourable regulatory environment, stimulating research and innovation, attracting investment, and developing human capital. Thus, policy documents are tools for strategic planning and coordination of AI development efforts. For example, national AI strategies have been developed in the United States of America (USA), Canada, China, India, Japan, and other countries (Global AI law..., 2024). The main goals of national AI policies around the world are to create an AI market, counteract monopolies, engage in strategic cooperation for research and development, create ethical and reliable AI, educate AI specialists, and expand the use of AI in practice (Kalota, 2024).

AI policy is also being actively developed at the international level. In particular, policy documents have been developed by such international organisations as UNESCO (2021), which emphasises the importance of human rights protection, transparency, and inclusiveness throughout the AI lifecycle, and OECD (2019), which defines five main principles: promoting inclusive growth, respect for laws and human rights, transparency, safety, and responsibility. Both documents emphasise the need to comply with ethical norms and laws, but UNESCO focuses more on the protection of human rights and diversity, while the OECD emphasises the principles ensuring the reliability and responsible use of AI technologies. EU policy documents deserve special attention. In particular, the Coordinated Plan on Artificial Intelligence (European Commission, 2021a) proposes joint actions to achieve the EU’s global leadership in the field of trustworthy AI. Its key elements: legality, ethics, and reliability – are defined by the Ethics Guidelines for Trustworthy AI (2019). Artificial Intelligence for Europe (European Commission, 2018) emphasises the importance of AI as a strategic technology and calls for coordination of plans of EU member states, attraction of investments, and support of research in this area. The European approach to the further development of AI is declared in two documents (European Commission, 2020b; 2021), the first of which focuses on promoting “excellence and trust” in technology and creating a regulatory framework for building a “trust ecosystem” in the field of AI. The second focuses on ensuring competitiveness and responsibility for the use of these technologies. In 2020, the European Commission published a report on the impact of AI, the Internet of Things and robotics on product safety and liability (European Commission, 2020a), which analyses the current legal framework and emphasises the need to ensure that consumers of technological innovations are protected on an equal footing with consumers of traditional products, which will help to increase confidence in new digital technologies and investment stability. These policy documents declare the EU’s strategic approach to the development and application of AI for the coming decades, which is primarily human-centric and focuses on investment, innovation, education, and universal access to the latest technologies. They define the main principles of AI reliability and security requirements for its further development and implementation. They also emphasise the need to intensify efforts in the field of investment and to constantly update and improve the legislative framework governing activities in the digital sector (Yanyshivskiy & Yanyshivskiy, 2023).

AI policy in Ukraine. Ukraine is actively integrating into international efforts to develop AI policy. It is a member of the Council of Europe’s AI Committee and participates in the OECD’s AI Governance Working Group. In November 2023, during the AI Security Summit in the UK, Ukraine signed The Bletchley Declaration (2023), joining international cooperation in AI security research, according to which participating states should work



together to overcome AI risks and promote its safe design, development, and use in both the public and private sectors (Shadska, 2024).

Ukraine also has its own national AI strategy: in 2020, the Cabinet of Ministers of Ukraine approved the Concept for the Development of Artificial Intelligence in Ukraine (Order of the Cabinet..., 2020). Its implementation is envisaged for the period until 2030. The document defines the following priority areas: strengthening Ukraine's position in the global AI market and in international rankings (AI Readiness Index, AI Index, etc.); active participation in the activities of international organisations to develop strategies, regulate and standardise AI; widespread implementation of AI technologies in education, economy, public administration, cybersecurity, defence and other areas to ensure Ukraine's competitiveness; ensuring access to data and its use to develop AI-based solutions in the production of goods and services; promoting research in the field of AI and improving its quality; training qualified personnel in the field of AI technologies; protecting the information space and ensuring cybersecurity of AI systems; using AI to improve the security of society, in particular in the resocialisation of convicts; harmonising AI legislation with international standards.

Legal regulation of AI in the world. Different countries are actively working on the development of approaches to AI regulation, however, as of early 2024, there is not a single country that has adopted a specialised law. At the same time, some jurisdictions are already working on a specialised AI law. A common first step towards regulation in many jurisdictions is to launch a national ethics strategy or policy, rather than introduce legislation outright. This method emphasises a cautious approach to maintain a balance between innovation and regulation of potential risks (Global AI law..., 2024).

Often states also resort to targeted regulation of specific cases of AI use. For example, in China, a law on AI generative services came into force in September 2023, according to which all providers offering text, image, audio, and video generation services must undergo a security assessment and obtain administrative permits. They are obliged to ensure the protection of users' rights, prevent dependence on AI, and avoid potential abuse by unscrupulous individuals (Smirnov, 2023).

Legal regulation of AI in the European Union (EU). In March 2024 the European Parliament adopted the official text, and in May 2024, the EU Council unanimously approved the Artificial Intelligence Act (European Parliament and Council, 2024), which brought the world's first specialised AI law closer to entering into force after the official publication of the text of the regulation in the Official Journal of the European Union. This document establishes the rules for the functioning of the EU internal market, considering all aspects of the use of AI systems. It divides AI systems into four risk groups depending on the level of potential threats to users and society, namely: unacceptable risk, high risk, limited risk, and minimal risk.

The unacceptable risk group includes systems that pose a direct threat to security, life and human rights. They should be banned. These include: social assessment systems and remote biometric identification systems that operate in real time for law enforcement purposes and are used for monitoring in public places. Exceptions to the lawful use of such systems are cases related to terrorist threats, child abduction, and the search for persons sentenced to more than 3 years in prison.

High-risk AI systems are those used in critical infrastructure, education, employment, key public and private services, law enforcement and judicial authorities, and migration services. Therefore, they are subject to increased security requirements for their use. In particular, such systems must be risk-assessed and have ways to mitigate them, have high data quality and transparency, and be subject to human control.

Limited and minimal risk AI systems only need to meet the requirement of transparency: users must understand that they are interacting with an intelligent machine, not a human. Most of these systems, as well as those without risk, have no legal restrictions on their use.

In order to implement the decisions made, according to the said AI Act, a special EU Council on AI should be established, consisting of representatives of all member states. The Council will be responsible for market regulation and imposing fines for violations of the requirements.

The European Commission has also drafted the AI Liability Directive (European Parliament and Council, 2022), which proposes to introduce the principle of strict liability for operators of high-risk AI systems. It means that they will be liable for any damage caused by their AI systems, regardless of fault. Instead, for systems with limited or low risk, the traditional fault-based liability regime will apply.

The EU aims to become a global leader in the field of AI regulation, so the AI Act has an impact not only on countries that aspire to join the EU, but also on the whole world, similar to the impact of the General Data Protection Regulation (GDPR) on privacy regulation (European Parliament and Council, 2016). At the same time, EU law is not comprehensive, and this should be taken into account when implementing it into Ukrainian law. In particular, the principle of subsidiarity, according to Article 5 of the Treaty on European Union, puts national interests and competences first (Consolidated version..., 2012). In addition, there are significant restrictions on EU law in areas such as criminal law, national security, public order and law enforcement (Pagallo, 2024).

AI regulation in Ukraine. As of the beginning of 2024, Ukraine had no law regulating AI issues and no initiatives to develop such a law, due to the focus on the entry into force of the Artificial Intelligence Act in the EU, the provisions of which will be implemented in Ukrainian legislation. In October 2023 the Ministry of Digital Transformation presented the Roadmap for the Regulation of Artificial Intelligence in Ukraine (Ministry of Digital Transformation of Ukraine, 2023). This document provides for a

comprehensive approach to supporting the development of the digital economy and protecting the rights of citizens. It aims, among other things, to increase the competitiveness of Ukrainian business internationally; build Ukraine's brand as an advanced digital nation; protect human rights in the face of AI-related challenges; create an effective mechanism for co-regulation and self-regulation in the field of AI; and ensure Ukraine's integration into the European market through the implementation of EU standards.

The Roadmap envisages the use of the so-called "bottom-up approach", which means the gradual introduction of regulatory mechanisms, from the development of extra-legislative initiatives to the drafting of relevant legislation, when the industry is ready for such changes and the existing mechanisms for protecting the rights and freedoms of citizens are insufficient. The purpose of this approach is to find a balance between supporting innovation and AI development, on the one hand, and ensuring an adequate level of protection of human rights and the interests of society, on the other. In addition, the implementation of this approach will help Ukraine prepare for the future implementation of the EU AI Act, which is one of the key conditions for European integration in the digital sphere (Ministry of Digital Transformation of Ukraine, 2023). As part of the implementation of the Roadmap for the Regulation of Artificial Intelligence in Ukraine, the launch of a regulatory sandbox for AI development companies was announced. This is a controlled environment where companies can develop their products from the initial stage, taking into account the requirements of the Artificial Intelligence Act. Here, they can receive expert advice at all stages of their product development, which will allow them to prepare for entering the EU markets. Participation in this sandbox is voluntary and companies can join it at their own discretion (Centre for Democracy and Rule of Law, 2023).

Although there is no specialised regulation of AI in Ukraine, it is important to analyse how the existing legislation addresses the main issues of development and use of AI technologies. These key aspects include: legal personality of AI systems, liability for their actions and decisions, copyright for works created with the help of AI, and protection of personal data used for training and operation of AI models.

AI personhood. Analysis of the current legislation shows that AI is considered exclusively as an object of civil legal relations, not as a subject. It can be an entity, a subject of property rights that can be sold, purchased, donated, or otherwise alienated. Alternatively, AI can be considered an object of intellectual property rights, created as a result of human creative endeavour. As noted by O. Paramonova & I. Varava (2023), accepting AI as a subject of legal relations would contradict the fundamental principles of civil law and the concept of law in general, as such an idea calls into question the uniqueness of human mental abilities and their exclusive right to self-determination.

However, according to O. Radutnyi (2018), AI should be granted legal personality by analogy with the way a legal entity acquired legal personality. Interesting in this

context is the European Parliament resolution of 16 February 2017 with recommendations to the Commission on Civil Law Rules on Robotics (2015/2103(INL) (Civil Law Rules on Robotics, 2018), which, among other things, called on the European Commission to consider the creation of a special legal status for robots in the long term. The resolution proposes that at least the most advanced autonomous robots could be recognised as electronic persons liable for compensation for damage, as well as in cases where such robots make independent decisions or otherwise interact independently with third parties.

AI liability. Related to AI personhood is the problem of legal liability of AI, as it gives rise to various risks that do not depend on the scope of application. In particular, N. Shyshka (2023) identifies: **security risks** (including physical security of people and material assets, in particular as a result of failures, accidents, or misuse of technology), **risks to fundamental rights** (privacy violations, discrimination, and inequality that may arise from biased algorithms, misuse of data or interference with freedom of expression) and **general challenges** (opacity, complexity, partially autonomous and unpredictable behaviour of AI systems).

According to N. Stefanyshyn & T. Skhab-Buchynska (2023), under current legislation, the owner of an AI system is liable for the damage caused by it on the same grounds as for activities related to a source of increased danger. In other words, the owner or developer of an AI system is equated to the owner of a source of increased danger and must be held liable for any damage caused, regardless of fault. Also, to the interaction with AI, K. Tokarieva & N. Savliiva (2021) propose to apply consumer protection legislation to interaction with AI. That is, the manufacturer will be liable for any malfunctions, and the user of the product will be liable for the behaviour that caused the damage. And the concept of updating the Civil Code of Ukraine envisages supplementing Chapter 82 on special torts with provisions on compensation for damage caused by software, robotics and AI (Shyshka, 2023). On the other hand, O. Radutnyi (2018) proposes to supplement the Criminal Code of Ukraine with a section on "Measures of a criminal law nature in relation to electronic persons (personalities)".

Copyright and AI. The emergence and active use of generative AI systems has raised many questions in the field of copyright application. In particular, there were numerous lawsuits filed by representatives of the film industry and literature against OpenAI, who accused it of using works to train the ChatGPT model. In February 2024, a US court partially dismissed a lawsuit against OpenAI filed by authors who claimed that ChatGPT illegally used their works for training purposes. The court ruled that the authors failed to prove economic damage and did not provide specific examples of ChatGPT source code that resembled their works. At the same time, unfair competition claims related to obtaining permission to use copyrighted works for commercial purposes remain under consideration by the court (Pequeño, 2024).



The question of copyright ownership of “works” generated by users using AI is also important. In this case, the original creative contribution is recognised for the human user, not the AI model itself, which is used as a tool. But in such cases, it is also worth referring to the user agreements with such services. According to the Europe Terms of Use (2024), the developer of the ChatGPT system, OpenAI, has no copyright claims to the content generated by users using the model. That is, all content created by users belongs to them as their copyright.

There is no specialised regulation in the EU on copyright protection for AI-generated works. However, the general approach is based on the fact that copyright applies exclusively to original works created by a human being, not a machine or algorithm. According to the decision of the Court of Justice of the European Union in the case C-5/08 Infopaq International A/S v. Danske Dagbaldes Forening, copyright protects only works that are “the author’s own intellectual contribution” (Court of Justice of the European Union, 2009). Therefore, objects created with the help of AI can be subject to copyright protection only if there is a significant creative participation of a person in their creation (Barbashyn, 2023).

In Ukraine, at the end of 2022, the Law of Ukraine No. 2974-IX “On Copyright and Related Rights” (2020) was amended and introduced such a category as a **non-original object generated by a computer program**. This is an object that differs in novelty (not originality, as this is inherent in objects created by humans) from existing similar objects (including copyright objects) and was created without the direct participation of an individual. In other words, objects created by individuals using computer technology are not considered non-original objects generated by a computer program, as concluded by O. Doroshenko & L. Tarasenko (2023). The subjects of property right to such a non-original object are the owners of computer programs, legitimate users of the computer program (under a licence agreement), or the issue of rights is established by agreement. The scope of property rights to such an object is equivalent to the author’s property rights, while no personal non-property rights arise. The rights arise as a result of the fact of generating this object and begin to operate from the moment of its generation. The term of the rights is 25 years.

The law also emphasises the observance of property rights of third parties. This includes both other non-original objects generated by a computer program and copyrighted works. There is no law enforcement practice, but it should be assumed that any legal disputes that arise will require proper evidence, and some circumstances will have to be proved in court by providing a forensic expert opinion on intellectual property or computer-technical issues (Doroshenko & Tarasenko, 2023).

Personal data protection. Due to data security concerns, many large corporations have banned employees from using generative AI such as ChatGPT (Mok, 2023), which is a clear indication of the risks of protecting sensitive data in AI systems in general. In the EU, this issue is regulated by

the provisions of the General Data Protection Regulation (GDPR) (Regulation (EU)..., 2016). And due to their extra-territorial effect and Ukraine’s obligations under the Association Agreement with the EU, Ukraine must also ensure the protection of personal data in accordance with these European standards, as AI systems often process personal data themselves (Shadska, 2024). The GDPR establishes rules for the lawful, fair and transparent use of data, requires data accuracy, limits storage periods, and ensures data protection. The *GDPR* also regulates automated decision-making and profiling, providing rights to human intervention and appeal against decisions based on automated processing, which often relates to AI systems (Yanyshivskiy & Yanyshivskiy, 2023).

There have been several high-profile cases in the EU where AI system operators have been prosecuted for violating the GDPR. In particular, Clearview AI, a facial recognition software company, was fined in 5 EU countries for the illegal use of personal information without the lawful consent of users and a legitimate interest for such collection, which is a serious violation of the GDPR (Barbashyn, 2023). Another well-known precedent is the suspension of ChatGPT in Italy in March 2023, although a month later, after the company took measures to increase the visibility of its privacy policy and user opt-out form, the service resumed its work. And in January 2024, the Italian regulator again ruled that ChatGPT violated the GDPR and massively collected personal data of users to train the model (Walker, 2023).

In view of the above, the issue of legal regulation of the development and use of AI systems is not fully resolved in Europe and Ukraine in particular. The analysis of regulatory documents and facts from judicial practice shows that there is an urgent need to create a specialised legal framework for the AI sector. This conclusion is confirmed by the research of Ukrainian scholars O. Paramonova & I. Varava (2023), who focus on determining the possible legal status of AI, but consider political rather than legal documents, such as the Recommendation of the Council on Artificial Intelligence (2019) and the European Parliament resolution of 16 February 2017 (Civil Law Rules on Robotics, 2018). They ignore the EU legal framework, which Ukraine should be guided by, which differs from the approach of the author of this article, which provides for harmonisation with European legislation. At the same time, these scholars emphasise the importance of an interdisciplinary approach, involving lawyers, engineers, futurists and philosophers, which is consistent with the current conclusion that this area is difficult to regulate. The study by V. Teremetskyi (2024) is the most consistent with the conclusions drawn in this article regarding the EU regulatory orientation, emphasising the need to build mechanisms for the implementation and adaptation of Ukrainian legislation. However, in contrast to the current analysis, the author uses the outdated text of the Artificial Intelligence Act of 2021, which does not consider the latest amendments adopted by the European Parliament.

This article only briefly analyses the current legal regulation of the issues of personality, liability, copyright, and data protection. Some Ukrainian researchers consider these aspects in detail. In particular, N. Shyshka (2023) focuses on the development of regulations and the adaptation of old ones, without considering EU law as the main reference point for Ukraine. The author proposes to define clear principles of liability and compensation, engage experts to assess risks, implement educational programmes to train AI specialists, and intensify international cooperation and ongoing dialogue between all stakeholders. The difference between the results of this study and the current one is the emphasis on a wide range of measures aimed at preventing risks and ensuring law and order in the context of AI use, without considering the need for harmonisation with European legislation.

V. Saman *et al.* (2024) analyse the regulation of AI in labour relations, comparing approaches to AI regulation in countries such as Germany, Finland, and Poland. They emphasise the involvement of labour councils in the process of AI implementation and stress the need to legislate labour rights of employees and adapt legislation to the challenges of AI. The paper also highlights Ukraine's obligations to the EU and the need to implement the provisions of European regulations into national legislation, which coincides with the approach outlined in the current study and confirms the importance of regulating specific aspects of AI.

The analysis of the results of research in the field of AI regulation after 2022 shows that only a few researchers are trying to find out the general trends and guidelines for legal regulation in the field of AI in Ukraine, while others are actively studying various aspects of AI legal regulation, including subjectivity, liability, copyright and data protection, as well as the use of AI in specific areas such as banking, labour relations and insurance. However, the main problem and, at the same time, the difference from the current study is that only a few authors sufficiently emphasise the need to harmonise national legislation with EU legal regulations and official Ukrainian policy, which is key to ensuring the effective and safe implementation of AI technologies in Ukraine.

Thus, the issue of AI regulation is of considerable interest to scholars, who, on the one hand, are trying to investigate how new legal relations related to the development and use of AI should be regulated by the current legislation. The analysis of the legal framework shows that Ukraine, like most countries in the world, does not yet have specialised AI legislation, but there are trends towards the development of such regulations. Given the rapid development of AI technologies, ensuring legal certainty and adaptability of legislation is critical for the implementation of a comprehensive public policy in the field of AI, including the creation of favourable conditions for innovation and protection of citizens' rights. For Ukraine, it is especially important to focus on the Artificial Intelligence Act and its

implementation practices in the EU as a factor in Ukraine's successful accession to the EU.

■ Conclusions

As of the beginning of 2024 Ukraine has no systematic legal framework for AI, except for certain aspects related to copyright, including the introduction of such a category as "non-original object generated by a computer program".

The official strategy of the Ukrainian state for AI regulation, as reflected in the Roadmap for the Regulation of Artificial Intelligence in Ukraine approved by the Ministry of Digital Transformation of Ukraine, is to focus on the specifics of EU regulation, in particular the Artificial Intelligence Act and the AI Liability Directive, and gradually implement it. Such a strategy is fully justified given Ukraine's aspirations to join the EU and its commitment to implement EU legislation, and it is also designed to provide the necessary conditions for Ukrainian businesses to be competitive in the European market.

The current state of legal regulation of AI in Ukraine reflects the global trend towards the development and implementation of new legislative initiatives that consider the rapid development of technology. The main aspects that require attention are the issues of legal personality of AI, liability for actions and decisions of AI systems, copyright for works created with the help of AI, and personal data protection. An important step in this direction is the adoption of national strategies and policies based on international experience and best practices.

Ethical and policy issues related to AI also play a significant role in shaping the information legal framework. The relationship between ethical principles, policy decisions, and legal norms is key to understanding and implementing AI regulation. Ethical principles form the basis for policy, which in turn determines the direction of legal regulation. Thus, ethical, political, and legal aspects should be integrated into a single strategy for AI development in Ukraine. These approaches will ensure an adequate level of human rights protection, promote innovation and AI development, and ensure legal certainty and adaptability of legislation to new technological developments.

In further research, it is essential to analyse the content and potential implications of the Artificial Intelligence Act, in particular, how it will be interpreted by regulators and courts in the event of its rapid entry into force. Understanding the reaction of European regulators and judicial practice is important to assess the impact of this document on the legal system and AI practices in Ukraine as a future EU member.

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■ Conflict of Interest

None.

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Регулювання штучного інтелекту в Україні в рамках гармонізації законодавства з правовими нормами ЄС

Михайло Янишівський

Аспірант

Національний університет «Львівська політехніка»

79013, вул. Степана Бандери, 12, м. Львів, Україна

<https://orcid.org/0000-0002-8788-6339>

■ **Анотація.** У зв'язку з бурхливим розвитком технологій штучного інтелекту, масовим поширенням генеративних моделей, таких як ChatGPT, і зростанням ризиків їх використання актуальним стало питання законодавчого регулювання в цій сфері. Прийняття Європейським парламентом у березні 2024 року Акта про штучний інтелект ознаменувало появу першого у світі спеціалізованого закону щодо розробки та використання технологій штучного інтелекту. Метою поточного дослідження був аналіз правового регулювання цієї галузі в Україні та перспектив його гармонізації з європейським законодавством у рамках інтеграції до Європейського Союзу. Під час роботи були використані логічний, порівняльно-правовий, системний та формально-юридичний методи наукового пізнання. Було досліджено сучасний стан і передумови законодавчого регулювання штучного інтелекту в Україні та Європейському Союзі. Було проаналізовано співвідношення етики, політики та права у сфері штучного інтелекту на національному та міжнародному рівнях. Було встановлено, що в Україні відсутнє спеціалізоване законодавство щодо штучного інтелекту, проте запроваджується підхід до поступової імплементації регулювання Європейського Союзу в цій сфері. Було проаналізовано чинне законодавство на предмет регулювання ШІ в Україні, а також потенційні правові наслідки надання правосуб'єктності штучному інтелекту та відповідальність за його дії, захист даних, створених та оброблених ШІ, з урахуванням норм Загального регламенту захисту даних (GDPR) та можливостей їх адаптації, а також аспекти поширення авторського права на об'єкти, створені ШІ, із запропонованими рекомендаціями щодо їх правового регулювання. Було узагальнено ключові положення Акта про штучний інтелект ЄС та оцінено його потенційний вплив на правове поле України. Результати цього дослідження можуть бути використані для подальшого вдосконалення законодавчої бази України у сфері регулювання штучного інтелекту з метою гармонізації з підходами Європейського Союзу, а також як основа для наукових розробок і практичних рекомендацій щодо врегулювання правових питань, пов'язаних із розвитком та використанням технологій штучного інтелекту.

■ **Ключові слова:** державна політика; правове регулювання; європейська інтеграція; право Європейського Союзу; Акт про штучний інтелект

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Desktop Publishing:
K. Pylypenko

Address for contacts:
Lviv Polytechnic National University
79013, 12 Bandera Str., Lviv, Ukraine
Tel.: + 380322582282
E-mail: info@d-governance.com.ua
<https://d-governance.com.ua/>