E-democracy in the context of the information society: prospects, challenges and opportunities

Електронна демократія в контексті інформаційного суспільства: перспективи, виклики та можливості

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Abstract

Many factors mark contemporary political processes. The peculiarities of the political system and regime largely determine them. The type of political process, which is characterized by social and political activity of persons and social groups, is democratic. The establishment of such a regime is characterized by gradual steps to introduce democratic principles into the political system, societal institutions, culture, and lifestyle. Such a peaceful transition to a democratic regime can be called democratization. In contemporary public policy, representatives of governing structures seek ways to develop forms of societal participation in decision-making processes. Meanwhile, interested groups, in turn, strive to enhance the quality and legitimacy of the policies enacted. Electronic democracy tools are not a reincarnation of former means of political

Анотація

Сучасні політичні процеси визначаються багатьма факторами. Особливості політичного устрою і режиму значною мірою визначають їх. Типом політичного процесу, який характеризується соціально-політичною активністю осіб і соціальних груп, є демократичний. Встановлення такого режиму характеризується поступовими кроками щодо впровадження демократичних засад у політичну систему, суспільні інститути, культуру та спосіб життя. Такий мирний перехід до демократичного режиму можна назвати демократизацією. У сучасній публічній політиці представники владних структур шукають шляхи розвитку форм участі суспільства в процесах прийняття рішень. Тим часом зацікавлені групи, у свою чергу, прагнуть підвищити якість і легітимність прийнятої політики. Інструменти електронної

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communication. In such cases, it concerns democratization and the neoliberal ideology within civil society. In the virtual environment, electronic participation addresses the issue of societal involvement in political processes and the role of innovations as a whole. Political participation can be seen as a tool for democratization and authoritarian control, including influencing the electorate. The study aims to determine the role of e-democracy in contemporary post-industrial society and the degree of its practical technological implementation. The paper describes the content and role of e-democracy in post-industrial society. The authors analyzed the impact of information and communication technologies on the processes of electronic democratization. It has been shown that an active application of information technologies in everyday social life to form electronic democracy has led to both positive societal trends and negative social consequences.

Keywords: netocracy, e-democracy, e-government, information society, digitalization.

демократії не є реінкарнацією колишніх засобів політичної комунікації. У таких випадках йдеться про демократизацію та неоліберальну ідеологію в громадянському суспільстві. У віртуальному середовищі електронна участь вирішує питання участі суспільства в політичних процесах і ролі інновацій в цілому. Політичну участь можна розглядати як інструмент демократизації та авторитарного контролю, зокрема впливу на електорат. Мета дослідження – визначити роль електронної демократії в сучасному постіндустріальному суспільстві та ступінь її практичної технологічної реалізації. У статті описано зміст і роль електронної демократії в постіндустріальному суспільстві. Автори проаналізували вплив інформаційно-комунікаційних технологій на процеси електронної демократизації. Показано, що активне застосування інформаційних технологій у повсякденному суспільному житті для формування електронної демократії призвело як до позитивних суспільних тенденцій, так і до негативних соціальних наслідків.

Ключові слова: нетократія, електронна демократія, електронний уряд, інформаційне суспільство, цифровізація.

Introduction

In the XXI century, the active utilization of digital technologies has continued across various sectors of the economy. An essential factor for economic growth is the quality of public governance, which has a direct impact on economic development. Government policy must create favorable conditions for economic development by effectively providing public services and protecting citizens and businesses. A more transparent and flexible regulatory system implemented by the government stimulates competition and fosters the development of innovative potential within the country.

The use of digital technologies in public administration has led to the emergence of electronic democracy and e-government. The challenges of the modern era demand solutions to various issues caused by political and social changes, which have posed a crisis for democracy in its classical model. Several theoretical concepts have been formed to overcome this challenge. These concepts formulate the peculiarities of post-industrial society's development based on information and communication technologies. First, these

concepts include the theory of post-industrialism, the idea of "informationalism," and the theory of transitology.

For the first time, Bell (1976) proposed the theory of post-industrial society to understand the essence of the information sphere within a community. It has emerged as the primary factor in transitioning to a new form of democracy. The principles he outlined for the functioning of the information society remain relevant today. Toffler's (1984; 1990) wave theory also emphasized the role of information and communication technologies in transforming modern society's politics, economics, and culture. The concept of "informational capitalism" by Castells (2000) is based on a large amount of empirical material representing the information development of many countries. A broad evidence base allowed the author to formulate a thesis on the emergence of an information-based development mode. This model is closely linked to the spread of global information networks. Castells highlighted the problems of the existing liberal model of democracy. Furthermore, he suggested that the hierarchical system of governance should be

replaced by a decentralized and networked one. According to him, the proposed changes should be implemented by developing local self-government based on building horizontal links between citizens and authorities and intensifying the introduction of e-communications.

Huntington's (1991) theory of democratization waves complement the concept of the "information society." This theory accounts for the main factors such as globalization, informatization, and democratization, as well as their impact on the democracy level.

E-democracy is a phenomenon generated by the rapid development of information and communication technologies. At the same time, it is an advanced system of democratic political decision-making procedures with the broadest possible participation of civil society. It includes opportunities to combine elements of direct and representative democracy flexibly. The latter was not technically possible before.

Literature review

The mid-70s of the XX century marked the digital revolution. At that time, the famous Japanese sociologist Masuda (1980) predicted that the development of information society institutions in the post-industrial era was inevitable. However, initially, it was unknown which social structures would shape the direction of sustainable development.

Not all efforts to create electronic democracy necessarily strengthen liberal democratic politics. They can also be directed toward legitimizing illiberal political practices through electronic democracy. Technologies do not mean value-neutral artifacts. They are rather social practices where values and meaning become central elements (Johnson, 2007). In terms of axiology, contemporary information society is paradoxical. On the one hand, it promotes individualism as a social standard and encourages people to pursue prosperity and selfishness. On the other hand, the government seeks to foster patriotism, compassion, and positive political responsibility in people's political and legal consciousness.

Digital technologies have not led to a greater democratization of life in post-industrial society. The British scholars Moss and Coleman (2014) note that, along with some success stories, e-democracy experiments "have been disappointing, especially when compared to the ambitious rhetoric that surrounded the strategy of using the Internet to support democracy."

The success of e-democracy projects, therefore, is possible only under two conditions: first, by focusing on the protection of human rights, and second, by focusing on sustainable development. Digital technologies of electronic democracy are differently accessible to social groups and classes. The issue of the digital gap concerns more than just the availability of information infrastructure. It also reflects differences in cultural capital between political and social institutions. As a result of digital inequality, many hypotheses and assumptions have been formed around e-democracy. They cannot be verified on a general level and are taken as axioms within social structures with similar cultural capital.

In this context, a study by South Korean scholars on the impact of the Internet on democracy is quite illustrative. It shows that despite the global network's diversity, newspaper readers use online resources, preferring to read them "offline" (Hong & Kim, 2018). American society has a slightly different habit of believing in the "basic human freedoms" that U.S. President Franklin Delano Roosevelt hoped to instill worldwide. However, for Americans, these values were closely linked to the abstract concept of "technological progress" (Lieberman, 2015). Lindner and Aichholzer (2020) analyzed the extent to which Web 2.0 and social media can support the basic democratic functions of public communication, namely public critique, legitimation, and integration, examining the impact of social media use on the quality of discussion, political activism, and political behaviour.

Currently, scientific studies into the categories of the "information society," "electronic democracy," and "e-government" are ongoing. In particular, this means building a digital state and, accordingly, a digital democracy. For example, if a state becomes transparent to society (e-government), it creates opportunities for more involvement of the latter in the political process. This, with a high level of civil society activity, will lead to greater democratization and the emergence of new forms of political participation of citizens (e-democracy).

Aims

The risks of e-democracy and its development opportunities require further study and analysis, even though many studies define this concept. As

of today, there are only a few such studies since most of its authors consider only general aspects of e-democracy. They analyze the content of the "digital democracy" concept in light of modern society's digitalization.

This study aims to determine the role of e-democracy in the modern post-industrial society and the extent of its practical technological implementation.

Achieving this aim is only possible after solving the following tasks:

− to study the content of the "e-democracy" theoretical concept;
− to learn the difference between e-democracy and e-government and to describe the latter;
− to forecast the prospects of e-democracy in the context of a controversial society's development.

Methods

Such general scientific approaches as comparative analysis, system analysis, and dialectical method form the methodological and

theoretical basis of this study. When analyzing the phenomenon of e-democracy, the authors relied on the theories of democracy, information society, and communication theory.

The dialectical method was used as the basis for considering the theoretical foundations that reflect the formation of a post-industrial society. The comparative analysis was used to consider approaches for classifying models of e-government development. The system analysis method was used to interpret the risks of e-democracy.

Figure 1 presents the research plan in a generalized form. Given that e-democracy is global, 181 countries in North America, Europe, Africa, South America and Asia were chosen as the object of the study. This approach will make it possible to comprehensively study the outlined issues, in particular, to assess the readiness of governments to implement artificial intelligence in the provision of public services. The main indicators for analysis are 39 indicators in 10 dimensions, which make up 3 pillars: government, technology sector, data and infrastructure.
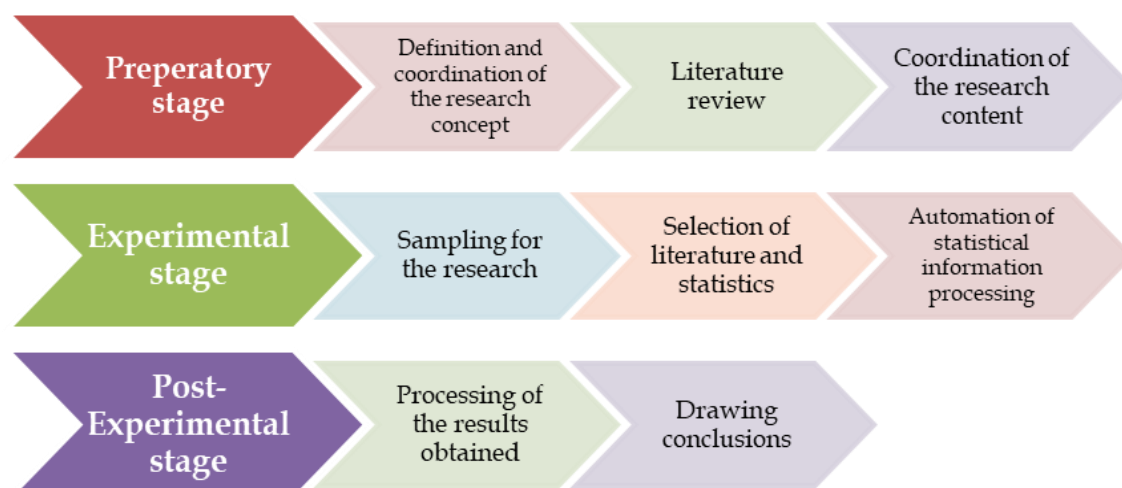

Figure 1. Design of the research abstract.
Source: calculated and built by the authors.

Results

The definition of "electronic democracy" ("e-democracy," "virtual democracy") can be seen as a form of social relations. Within these relations, citizens and organizations are involved in state-building and public administration processes. They are also involved in local self-government through the widespread use of information and communication technologies. This concept is defined alongside the following

ones: e-economy, e-commerce, e-services, e-culture, e-education, and e-medicine.

In fact, the content of the term "e-democracy" includes:

− Electronic form of receiving state and municipal services.
− Interagency electronic interaction of public authorities using information technologies.
− Providing citizens with additional opportunities for participation and rule-

making activities using information technologies (public discussion of draft laws and bylaws).
–   Participation in the development of solutions and informing the authorities about the problems and shortcomings of governance at all levels of state power (including "e-government").

Mistrust can be overcome by empowering each citizen in the socio-political sphere by using information technologies. Currently, there is widespread "participatory democracy," where public authorities use the virtual space to adhere to principles of openness, transparency, and accountability. They also use this space to enhance the efficiency of their work and for open communication with the public in general, as well as with each citizen individually.

An essential milestone within the political framework of electronic democracy is the Recommendations of the Council of Europe's Committee of Ministers to member states on electronic democracy (e-democracy). These Recommendations consist of 12 guidelines on electronic democracy issues, establishing its fundamental principles, as well as directions and standards for its development (in the Annex). Electronic democracy aims to support democratic institutions and processes of democratization in society. Its role also lies in complementing traditional processes and interactions to preserve democratic, human, and cultural values in society.

While implementing fundamental freedoms, the concept of participatory democracy places high demands on the authorities and voters. They are obliged to discuss issues and come to a consensus with their opponents. Electronic democracy is divided into sectors: e-parliament, e-legislation, e-voting, e-justice, e-mediation, e-ecology, e-elections, e-referendum, e-consultations, e-petitions, e-political campaigns, and e-surveys.

Therefore, electronic democracy involves the participation of citizens at all levels of public governance (from state authorities and local self-government to grassroots self-organization) through information and communication means and technologies. At the same time, e-democracy cannot be seen as a separate policy outside the policy of democratization as such. In other words, the existence of electronic democracy is only possible in the presence of democracy.

E-democracy is based on the following components:

–   active presentation of comprehensive, balanced, unbiased information to outline the range and content of social problems, alternatives, opportunities, and decisions in public policy;
–   understanding of citizenship, which clearly defines the signs of its establishment;
–   participation of citizens and involvement of persons and stakeholder groups (including the business community) in solving social problems;
–   empowerment – providing citizens with the necessary resources and powers to participate in public policy;
–   discussions.

Informatization and digitization play a significant role in ensuring democracy where it exists and creating conditions for a digital dictatorship when access restrictions are applied and digital control tools are established without the goals of democratic transformation. Therefore, electronic democracy is an integral part of the information society, and we understand it as the practice of democracy supported by digital media in political communication and participation. Electronic participation encompasses all forms of political engagement using digital media, including official institutional mechanisms and informal public participation. Advocates of participatory democracy emphasize the intrinsic value of political involvement and its significant role in the social integration of liberal societies.

The sphere of electronic democracy is quite broad, ranging from more passive forms of engagement (social media or online monitoring for information on societal events, ensuring accessibility and transparency of decision-making processes and essential documents) to more active and cooperative modes (engaging citizens in decision-making through online voting procedures, as well as online spaces for public consultations, debates on critical political issues, and collaborative drafting of political documents).

Many researchers point out that electronic democracy is more advanced than its classical form. In the context of electronic democracy, citizens establish forms of self-control and interaction that become more significant than citizenship in territorially delimited states. The internet and associated information and communication technologies (ICTs) provide an unlimited, time- and territory-neutral platform where anyone can express their democratic views.

The following factors limit the conditions for the effectiveness of electronic democracy:

1. The level of trust citizens have in the state. Mechanisms of electronic democracy require the highest level of trust in the owners of electronic algorithms. Any doubts about the honesty and functionality of these algorithms will lead to a reluctance to participate in the processes and, consequently, to further manipulation and falsifications.

2. A high level of transparency in democratic procedures and the activities of political leaders is required. The state should have a special information policy based on the principles of openness and accessibility, providing citizens with information about the activities of public authorities and the people who represent them.

3. The highest level of motivation of the political class to consider and support this form of decision-making.

4. Peaceful times, as war conditions significantly limit democracy, including electronic ones.

The development of digital technologies brings openness and freedom. However, it gradually becomes a fertile ground for authoritarian regimes. The phenomenon of digital authoritarianism emerges, not so much based on mass violence but on manipulating information with the use of artificial intelligence elements. Therefore, institutions such as a responsible government, parliament, elected president, and an independent judiciary are essential. Only under such conditions can the Internet and other information tools/technologies play a significant role in shaping the democratization of political participation.

Democratic models should be characterized not by the direction of political communication (top-down or bottom-up democracy), cyber-optimism, or cyber-pessimism. Instead, they should focus on citizens rather than institutions that digitally instrumentalize their processes to legitimize their procedures. The key element of e-democracy is e-government, which is being formed evolutionarily through the transformation of the functions of providing administrative services to the population. The legitimacy of e-government is ensured by an actual increase in the effectiveness of public administration, the improvement in the quality of services provided by the state, and the implementation of solid social policies. Electronic democracy differs from e-government since it is broader than the digital administration of public services.

The practical application of digital technologies for providing government services in different countries worldwide has led to the formation of various e-government models, each with its own distinctions. Factors influencing the formation of these models include:

– differences in goals;
– the specificity of traditional public administration, cultural, socio-economic, and political specifics of countries,
– the level of dissemination and use of information and communication technologies in the country,
– financial capabilities, etc.

Based on these features, Anglo-American, European, and Asian models can be distinguished.

The ratings of the United Nations (UN), the International Telecommunication Union (ITU), the World Economic Forum (WEF), and the World Bank (WB) are used to determine the level of information and communication technologies development and maturity of e-government tools in different world countries. Let us consider the United Nations' E-Government Development Index (EGDI). It is compiled once every two years, assessing the level of e-government development in 193 UN member countries. This rating comprises assessments of three aspects, namely:

– electronic services and services provided by public authorities;
– information and communication infrastructure;
– the development of human potential.

The COVID-19 pandemic has served as a kind of litmus test for governments worldwide. It has compelled governments to reevaluate the state's role and has forced them to develop digital solutions to ensure the continuity of public service delivery and societal stability. The pandemic often pushed them beyond existing policies and regulations. This extraordinary event has tested governments for their agility, flexibility, and digital resilience. It helped to open up new opportunities to strengthen multi-level governance in regional and local jurisdictions, as well as expand communicative relationships for all segments of society, ensuring that no one is left behind in the hybrid digital society.

According to the United Nations (2022) data, the global average EGDI has slightly increased from 0.5988 in 2020 to 0.6102 in 2022, mainly due to progress in strengthening telecommunications infrastructure. Europe remains the leader in e-government development (EGDI 0.8305), followed by Asia (0.6493), America (0.6438), Oceania (0.5081), and Africa (0.4054). A comprehensive digital transformation in the public sector has yet to occur. Besides, in most countries, health, education, and social protection remain the top priorities for e-government in online services. The most significant increase was in the number of countries that offer services for users to apply for social protection programs and benefits. These programs include maternity benefits, child benefits, pensions, and housing and food allowances.

Furthermore, the United Nations reports that an increasing number of countries are strengthening their institutional and legal frameworks for e-government development (national e-government or digital government strategy, cybersecurity legislation, personal data protection, national data policy, open government data, and e-participation, as well as online platforms). However, the pandemic has exacerbated the digital gap. Currently, over 3 billion people live in countries with EGDI values below the global average. Most of these countries are concentrated in Africa, Asia, and Oceania. Only 4 out of 54 African countries have EGDI values above the world average (0.6102). Meanwhile, other countries have EGDI values that are sometimes significantly lower.

At the same time, it should be noted that the 15 countries with the highest (VH) rating class in the group with very high EGDI are the leading countries in the 2022 survey. Their values range from 0.8943 to 0.9717 (Denmark, Finland, Republic of Korea, New Zealand, Sweden, Iceland, Australia, Estonia, the Netherlands, the United States, the United Kingdom, Singapore, the United Arab Emirates, Japan, and Malta). These countries share their experiences about the following aspects:

- Inclusion of citizens' voices in policy-making, with specific e-participation measures for vulnerable groups.
- Empowerment of their citizens through investments in digital literacy and competencies.
- How the promotion of inclusive practices by setting standards for how government and public, private, and voluntary sector partners

should maximize the accessibility of digital services.

Despite significant advances in e-government over the past two decades, inclusive design has generally yet to be given sufficient attention. Those groups that have been the easiest to reach have generally benefited the most from the marked progress in e-government. At the same time, many of the poorest and most vulnerable groups have been left behind.

The signing of the "Charter of the Global Information Society" in Okinawa on July 22, 2000, by leaders of the "Group of Eight" (G8) countries played an important role in disseminating the ideas and concepts of e-government on an international scale. This document recognized the state's leading role in developing and implementing information and communication technologies in the political sphere. Therefore, the national governments of the signatory states have committed themselves to making efforts toward creating an information-driven society in their country. Moreover, e-government is a key telecommunications structure of the information society.

There are several approaches to classifying models of e-government development. The first approach, the evolutionary one, is based on the assumption of gradual e-government development. The most popular evolutionary model is the classification proposed by the United Nations, which includes the following stages. Other versions of evolutionary e-government models are generally similar in criteria and development steps. Despite its popularity, the drawbacks of this approach include linearity of development and the universalization of the concept.

The second approach, the geographical one, is based on the assumption that "e-government" develops under specific historical, cultural, and socio-political conditions. For example, there are two main models, namely:

- Western (USA, Canada), which places great emphasis on the development of mechanisms for democratic citizen participation.
- Eastern (Singapore), where the focus is on the development of intra-agency interactions and the provision of services to businesses and the population.

Continental European, Anglo-American, Asian, and other models are also distinguished.

The Government AI Readiness Index is used to define the readiness of governments for artificial intelligence globally. Over 180 countries were analyzed based on 39 indicators. Table 1 shows that according to the Government's AI Readiness Index, the United States has the highest rating as of 2022.

The development of "e-government" is influenced by specific factors of the regional environment.

The third approach, a combined one, involves the following three models:

1) The model of public demand (initiative comes from "bottom-up," a marketing approach to service delivery, e.g., the USA).
2) The model of administrative demand (initiative comes "top-down," with a primary focus on internal bureaucratic processes and combating corruption, strengthening "feedback," e.g., China).
3) The "chasing the leader" model (the lack of public and internal demand, inconsistency in innovation implementation, its symbolic nature).

Table 1.
The Government AI Readiness Index

Country	Global Position	Total Score	Government Pillar	Technology Sector Pillar	Data and Infrastructure Pillar
United States of America	1	85.72	86.21	81.67	89.28
Singapore	2	84.12	89.68	68.50	94.17
United Kingdom	3	78.54	81.81	65.57	88.24
Finland	4	77.59	87.80	58.71	86.27
Canada	5	77.39	84.11	64.41	83.65

Source: (Government AI Readiness Index, 2022).

At the same time, it is worth noting that these variants contain a generalized classification based on the source and nature of the request to implement e-government, but there is no block related to e-citizenship. Not only is there an untapped potential for more online activity when it comes to elections (among EU member states, online voting is only possible in Estonia), but also for public administration services (Grazian & Nahr, 2020).

This gap is partially addressed by the classification proposed by Chadwick & May (2003). This classification is based on the interactions between the state and society. The authors identify three types of e-government development:

1) Managerial, in which the citizen is a client of the "service state," with a primary focus on providing government services.
2) Consultative, where the state interacts with citizens through "feedback mechanisms."
3) Participatory, where e-government is an expression of deliberative democracy and networked governance.

In an attempt to integrate these approaches, researchers assume that the criteria for modeling e-government should directly reflect its structure. In other words, there are internal (e-administration) and external (e-service, e-participation) components. In the first case, it involves the level of penetration of information and communication technologies into the system of public administration. Meanwhile, the second case concerns the status of citizen participation in the functioning of "e-government."

From this perspective, the following classification of models of interactive communication between government authorities and citizens emerges:

1) Administrative-Managerial. Here, more attention is paid to internal informatization. With a relatively high level of participation, the provision of government services through information and communication technologies is possible. A managerial-"service" model is a borderline between administrative and consultative.
2) Consultative-Participatory. It is marked by a high level of ICT channel development for interacting with citizens in decision-making.

3) Limited Participation. In this model, opportunities for citizen participation exist, but due to a low level of e-administration, its potential is limited, and administrative delays and barriers persist.

4) Limited and Imitative. According to the UN, such models can include the initial and extended stages of presence, the "chasing the leader" model.

In this case, e-government is limited either by a low degree of informatization or by the "pretended" nature of the innovation. The most significant issues that hinder the achievement of the highest possible results of e-government and the provision of public services to the population via electronic means include:

− the issue of popularizing the use of services for the provision of state and municipal services digitally;
− the lack of funding for the implementation of the state policy on the provision of public e-services;
− the challenge of "digital inequality" as a barrier to achieving effective and prompt provision of digital services to the public;
− a rather complicated mechanism for the provision of electronic services in terms of legal and regulatory framework and administrative regulations.

Instead, new issues which threaten the existence of e-democracy in the future have emerged.

In today's society, any citizen should be able to implement basic skills in the use of information and communication technologies. While fewer obstacles exist for the younger generation, people of retirement age may face serious difficulties. For example, many older people need help to acquire the skills to work on the Internet or simply with a computer.

Every citizen should have access to information and communication technologies that enable electronic democracy. This access can include personal computers, public access terminals, or something else.

Let us focus on the issues of citizens' equality in this area, primarily the issues of access to the Internet. The constitutional principle of citizens' equality and the duty of public authorities to provide access to legal information to all citizens of the country in the mechanisms of its implementation have a specific set of goal-oriented norms.

Ensuring equal opportunities for using the information and telecommunication network, the Internet, to access open information involves not only the material availability and free access to it but also the ability to use a computer, software, and possession of specific knowledge in this field. Undoubtedly, the presence of these factors in all country residents is a program for the future. However, its implementation is being actualized in connection with the creation of forms of citizens' participation in solving topical issues of state and public life based on the information and telecommunications system of the Internet.

However, it is quite evident that nowadays, the distribution of new technologies' users is uneven. The highest density of such users resides in large cities. Another uneven pattern is in the informatization of local authorities, especially local self-government. Thus, although the forms of public participation in carrying out public administration are enshrined, there are no open mechanisms for their implementation.

The information society has created a new type of social inequality - digital inequality. The concept of the "digital divide" or "digital gap" embodies the limitations in the use of the Internet, television, and mobile communication due to the lack of access to modern means of communication. When it comes to the information world, data should be seen as one of the main resources for balanced human development. Moreover, all people should have access to it. Acquisition of knowledge and information is becoming a value and a new criterion that divides society (as well as societies of different countries) into social groups and classes that are unequal to each other.

Digital inequality manifests itself at different levels of the social hierarchy: between states, between cities and rural settlements, between young and older people, the healthy ones, and persons with specific disabilities. It is caused by generational and age-specific features of socialism in the level of network technologies development ("digital migrants" and "digital natives") (Carr, Hoechsmann & Thésée, 2018).

Other features that cause digital inequality include:

− regional differences in the economy digitalization;
− growth of Internet infrastructure;
− online inclusion of authorities and civil society;

– the digital culture of citizens;
– people with disabilities.

In the authors' opinion, the establishment of a single form of exercising a particular type of personal rights limits the exercise of citizens' rights due to the lack of opportunities to use this procedure. It would be advisable to establish additional procedures for sending an expression of will, notification, request, etc. (which contain the necessary data) to the website owners for further data entry into the electronic resource. Alternatively, public authorities should be obliged to organize free access and provide organizational and technical assistance for those wishing to register.

Another issue is related to the unified identification and authentication of citizens, as well as the protection and security of personal data when using information technologies. In this case, it is necessary to create a legislative and regulatory framework aimed directly at solving the problem. Attention should be paid to "electronic attacks" and massive "information dumping" during e-democracy procedures. During the discussion of an important issue, "spam" messages are thrown, and as a result, quarrels occur between participants in discussions and members of online communities. Hence, new technologies offer significant opportunities for manipulating public consciousness, including:

– digital disinformation, fakes, computerized propaganda;
– manipulation of preferences using big data and microtargeting;
– Internet trolling, etc.

Innovations in informatization pose a risk to the state, as they can be used not only for e-democracy but also for anti-state terrorist activities. This circumstance raises doubts about the democratic nature of the emerging information society. In this case, the only way to solve the problem is to involve moderators and controllers who will monitor the atmosphere in this network community and "block" unwanted guests when necessary. Besides, in the context of global informatization, active work should be done to develop preventive measures against external interference.

There is a shortage of specialists in the field of electronic democracy and Internet communications among government officials at both regional and municipal levels. In this case, it is proposed to develop and conduct an examination of specialized educational programs, taking into account national standards and local peculiarities (considering the specifics of each region separately).

It is suggested to enhance the mechanisms of public administration with the active implementation of the electronic democracy system. In this case, it is proposed to create unified tools for public control over the performance of government and municipal officials. It should be based on electronic democracy systems. Such systems should be open resources where citizens can evaluate the performance of specific government officials. In this case, the higher management must respond to the feedback received.

The active introduction of new information technologies into our daily lives can significantly strengthen public control over the government. The state can more easily disseminate information intended for society and manipulate public opinion by using information and communication technologies (for example, through advertising, movies, television shows, computer games, etc.).

At the end of the XX century, a new type of political elite emerged - the information elite or netocracy. This elite controls the sources and channels of information transmission, as well as the technologies for its processing. The power over the rest of the participants in a given society (country, state, or community) is ensured by full access to reliable information and the ability to manipulate it. Such an information and financial oligarchy determines the direction of the prevailing volume of data and financial flows globally.

The concept of netocracy was presented by Bard and Soderqvist (2002) in their book "Netocracy: The New Power Elite and Life After Capitalism." In this book, the authors argued for a forecast of changes in the form of societal governance due to the growing influence of information. The emergence of this concept is symptomatic because the permanent transformation of social relations through the impact of mass media is a global trend of the new century.

The authors use the term "netocracy" to describe a new ruling class that dominates the networked society, replacing the bourgeoisie. Netocrats control access to networks and rely on exclusive use of prestigious networks. In their work, Bard and Soderqvist (2002) use the term "virtual world," but the content is more about the

networked society. The book's authors repeatedly refer readers to online communication experience but do not directly link the concept of "netocracy" to cyberspace specificity.

Netocrats regulate access to more significant networks, leaving the possibility of their exclusive use. It distinguishes netocrats from those who seek profit. By providing access, netocrats invest, and preserving access to exclusive networks guarantees their power.

Finally, information technologies can significantly exacerbate the dangerous gap between the poor and the rich. They transform it into the so-called confrontation between the "information-rich" and the "information-poor."

In this case, it is about the democracy of the global information society. Thus, the potential of information and communication technologies can be used both for the benefit of democracy and against it.

Creating an effective electronic democracy system requires the implementation of appropriate legal norms regulating the use of information and communication technologies while ensuring that all participants in electronic interaction have the relevant rights and responsibilities.

Electronic democracy allows citizens to participate in the work of government institutions. Meanwhile, the latter can respond more quickly and sensitively to the needs of society. This concept includes using an electronic platform for political information in civil society.

One of the legal challenges in using electronic mechanisms in democracy implementation is the insufficiently fixed legal status of the virtual space. There is also a need for more legal regulation of campaigning activities and electronic voting in the election and referendum processes carried out via the Internet.

Today, the problems of material, organizational, technical support, and educational barriers, as well as the issue of psychological preparation of citizens, are relevant for applying electronic mechanisms and achievements of the scientific and technological process in implementing democracy.

There are also risks associated with the implementation of electronic democracy itself, such as:

- Delay in administrative reform.
- Deterioration of the socio-economic situation of the population.
- Lack of political consensus on the priority of electronic democracy.
- Reduced citizen engagement at the national level and limited opportunities for implementing electronic democracy projects.
- Inadequate strategy preparation.
- Disparity in the implementation process of electronic democracy projects at regional and local levels, as well as at the national level.
- Limited budget resources and international aid.

The development of digital technologies brings both openness and freedom but gradually becomes a nurturing environment for authoritarian regimes. The phenomenon of digital authoritarianism is emerging. It is based less on mass violence than on manipulating information by applying elements of artificial intelligence.

From the citizens' perspective, as the main subjects of electronic democracy, there are expectations that ICT (Information and Communication Technologies) can improve democratic processes, particularly citizen participation in shaping public policies. However, there are significant social, economic, and technical barriers to the implementation of electronic democracy, including:

- A lack of information and knowledge about the essence and possibilities of electronic democracy among Internet users.
- Insufficient government utilization of interaction based on social networks, which are currently popular among internet users.
- Limited participation opportunities in electronic democracy for people with inclusive needs and residents with a low level of digital literacy.

In addition, we should not forget about such problems as the danger of manipulating voting data caused by insufficient security and the threat of digital division between those who have information and those who have not. Another issue is the oppression of the principle of electoral democracy and the influence of extremist groups on voters, particularly among young voters. In this way, the formation of e-democracy directly depends on the degree of citizens' participation and their number in the governance process, on their needs, motives,

interests, and the possibility of moving to forms of direct democracy.

A key tool of e-democracy is political crowdsourcing. Crowdsourcing is a term that combines the concepts of "crowd" and "outsourcing." It involves a large group of people coming up with an idea or a solution to a problem. Some companies use this process to rely on the knowledge and opinions of a wide range of Internet users, as well as to create better products and marketing plans or solve other problems. In contrast to outsourcing, which essentially means "hiring," crowdsourcing aims to engage people. Typically, these people are not financially interested in a collaborative and open-ended creative process.

Crowdsourcing projects are developed primarily based on social networks. By their nature, these networks provide quick and widespread participation in any business. However, the main disadvantage of such projects is often their advantage - an unorganized and unprofessional community of people. Yet, this drawback is hardly decisive, as the primary goal of crowdsourcing is to get feedback from as many people as possible, not just from experts. It is worth recognizing that the main success of such projects for the state in identifying public opinion is ensured by the activity and personal interest of the population.

At present, the development of the electronic democracy system is utilizing Web 2.0 technology. It allows users to interact, organize themselves, exchange, and further process information (blogs, social networks, citizen journalism, etc.). The Web 2.0 technology platform is being replaced by a third one, the Web 3.0 (Semantic Web). This platform allows average users to participate in the creation of information content alongside experts and become experts.

In some academic sources, synonyms for electronic democracy also include the following concepts:

– "Network democracy" (broad participation of civil society in the decision-making process via the Internet).
– "Democracy 3.0" (using the Web 3.0 platform).
– "Wiki-democracy" (the principle of citizens working together on decisions, similar to Wikipedia, and general voting on all contentious issues, as in direct democracy).

– The "Liquid democracy" (participants can take part in decision-making).

Blockchain technology continues to be actively researched and applied in e-democracy. One of the promising areas of this technology application is the development of transparent e-voting and decision-making systems on its basis. Blockchain is considered to be a pivotal technology in the development of the Estonian e-state due to its undeniable advantages and potential. From a technical perspective, blockchain technology improves the efficiency, security, and transparency of data transmission.

Data transparency aims to ensure equality of public access to information while ensuring clarity, consistency, and reliability of the data provided. In the context of democratic countries, transparency and accountability often take precedence over data protection. However, prioritizing privacy while ensuring transparency requires sophisticated security protocols. Therefore, it complicates the working process.

Discussion

Citizens' access to information through the use of ICT and their ability to analyze it and make decisions is a process of shaping democratic public opinion. It creates virtual communities that can overcome the hierarchy of real power. In Ukrainian studies, scholars focus on information and communication technologies and study their impact on the process of e-democracy.

There are other views on the formation of e-democracy. For instance, some foreign experts believe that e-democracy technologies are basically unviable because they are based on the ideology of technological determinism. Other scientists focus their attention on the extraordinary capabilities of information technologies. These capabilities make it possible to target the user's personality, allowing for highly fine-tuned public opinion processing.

In disputes, the supporters of different opinions do not consider the fact that ICT is basically an "ambiguous technology" that can both help solve many of the problems existing in society and create new ones." In other words, when discussing the impact of ICT on electronic democratization, it is necessary to consider that the active integration of information technologies into everyday social life carries positive societal trends and negative social consequences.

The spread of new information technologies and their incorporation into public life create technological prerequisites for the development of civil society by ensuring the realization of citizens' rights and duties through free and prompt access to informational resources to advance electronic democracy.

The arguments in favor of electronic democracy are quite evident. However, upon closer examination, they do not withstand criticism. The hypothesis that the Internet can automatically ensure the democratization of authoritarian regimes has not been confirmed (Thornton, 2001). German researchers Keohane & Nye (1998) have confirmed that "authoritarian states face great difficulties in attempting to control their citizens' access to the global network." Nevertheless, an authoritarian country like China effectively circumvents democratization by using administrative and technical means through the application of the Internet (Chase & Mulvenon, 2002).

Furthermore, the assertion regarding reducing the role of socio-political organizations in civil society is also unsubstantiated. On the contrary, in democratic countries, there is a well-developed network of civil society intermediaries (including political parties, civil organizations, media outlets, and other civil society structures) that are interested in increasing their influence. They actively use the Internet during elections, political communication, and in their daily activities.

We agree with the opinion of Davis (1999), who noted that "traditional stakeholder groups will remain major players in political life during the Internet era." The importance of political intermediaries will remain the same in the face of a tremendous increase in the amount of political information. They will become authoritative experts whose opinions are respected by the public (Davis, 1999).

The same is confirmed by the German political scientist Jarren. He emphasizes that communities formed on a virtual basis cannot be a solid basis for social interaction. People perceive information and its analysis differently and depend heavily on the social context. Thus, the process of receiving information is both individual and social. People want to form a community and seek mutual understanding during political communication.

For this reason, they have to limit their aspirations for individualization, including self-organization. Therefore, the state has to shape the socialization of its citizens. According to Jarren & Donges (2006), Internet communications can support effective interaction in real organizations. However, transitioning from a virtual community to a real one is tricky.

Therefore, online communities are not enough to create communicative democracies.

From institutionalism's perspective, the very idea of creating "e-democracy" as a form of direct democracy based on new information technologies has been criticized quite reasonably. In particular, the American professor Sclove (1995) noted that since all technologies are social structures like social institutions, it is advisable to consider their impact on the democratic form of the political system. Local communities hosting discussions on socially essential issues become the basis of democracy. In fact, the active political role of the vast majority of citizens defines participation in democracy. However, the political activity of citizens is currently declining.

1) Thus, the concepts of "e-democracy" contain significant contradictions and are subject to justified criticism. E-democracy has a great potential for development in democratic countries, but it also carries certain risks for states. For this reason, the concept of "e-government" dominates, and it is currently the basis for reforms in the field of public administration based on electronic communications.

Conclusions

The implementation of information and communication technologies in the public sector occurs in various directions. It appears both within public authorities and in the sphere of interaction among public policy actors. It is expedient to distinguish three directions: e-government, e-services, and e-participation. From the perspective of electronic democracy, establishing e-government is paramount. It provides public access to state-critical information, thereby contributing to government transparency and creating a system of public oversight over its activities via the Internet.

However, there are several practical challenges and discrepancies between the theoretical model and actual political practice. In this way, we can identify the following risks related to the practical implementation of e-democracy principles:

1) Information technologies disrupt established mechanisms of societal relations, which may lead to increased tension and chaos in the political system.

2) New technologies provide extensive opportunities for the dissemination of various forms of destructive and extremist information, as well as manipulation of public opinion.

3) The presence of information inequality can exclude a significant portion of the population from the process of making political decisions.

4) The development of information technologies can transform real political participation into a virtual simulation, reducing society's influence on government.

5) The issue of protecting information from unauthorized access remains unresolved, which is crucial for developing electronic democracy. Reliable data protection is a mandatory requirement for the functioning of government structures.

Therefore, regardless of the level of technological development, the democratic potential of electronic technologies depends on the presence of the political will to implement it.

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