

# The Public Policy Implementation Mechanisms in the Context of Digitalization

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## ABSTRACT

The tightening of the globalization and eurointegration processes make it necessary to reformat the influence of the state on society and require the involvement of effective measures, forms, methods, tools, levers and incentives for the implementation of public policy. In such conditions the problem of the influence of digital technologies on the mechanisms of implementation of public policy, which become an integral component of the activities of public authorities, becomes relevant. This paper aims to deepen the research on the theoretical foundations and practical suggestions of the research on the mechanism of public policy implementation under the conditions of digitalization. Another important aspect is assessment of the digitalization impact on public administration. The methodological basis of the study consists of general scientific and special methods of economic analysis, namely: analysis and synthesis; analogy and comparison; generalization and systematization; graphical and tabular methods; grouping and cluster analysis based on the k-means method. Regarding the results of the study of the mechanisms of state public policy implementation under digitalization and the evaluation of the degree of its impact on public administration, it was found that in Central and Eastern European countries there are three groups characterized by common features: countries with a relatively high level of ensuring public administration efficiency and significant digitalization indicators (Czech Republic, Estonia, Latvia and Lithuania); countries with an average level of public administration efficiency and sufficiently high indicators of digitalization (Hungary, Poland, Slovakia, Georgia, Romania) and countries with a low level of public administration efficiency and low indicators of digitalization (Ukraine, Belarus, Azerbaijan, Armenia and Moldova). It was defined that the most common tools of digitalization of public policy processes in the countries of the analyzed group are digital workplace, blockchain, artificial digital intelligence of typical management decisions, smart-service, cloud-service, portal-service and network-service.

## HIGHLIGHTS

- ① The tightening of the globalization and eurointegration processes make it necessary to reformat the influence of the state on society and require the involvement of effective measures, forms, methods, tools, levers and incentives for the implementation of public policy.
- ② This paper aims to deepen the research on the theoretical foundations and practical suggestions of the research on the mechanism of public policy implementation under the conditions of digitalization.

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- ① It was defined that the most common tools of digitalization of public policy processes in the countries of the analyzed group are digital workplace, blockchain, artificial digital intelligence of typical management decisions, smart-service, cloud-service, portal-service and network-service.

**Keywords:** Public authority, public governance, digitalization of public administration, organizational and legal mechanisms, public policy

Ensuring the democratic development of the country requires active bilateral cooperation between state authorities and the public. The interaction mechanisms between the state and society constitute the basis for the formation of the national public policy implementation mechanism. Effective interaction between public authorities and the public requires adherence to the following principles: (1) public activity; (2) partnership; (3) openness and responsibility; (4) political independence; (5) prevention of corruption; (6) sustainable development; (7) complexity and (8) implementation of social initiatives. With the rapid development of information and communication technologies, the issue of their involvement in the activities of public authorities and the mechanism for the implementation of public policy of the state becomes more relevant. Digitalization processes create a solid foundation for the socio-economic unity of the state and the provision of services in electronic form to the population. In addition, they contribute to the development of e-democracy tools, which ensures open, transparent and diverse communication between public authorities and the public, simplifies the procedure of public access to administrative services and minimizes the manifestations of corruption.

## Literature Review

Intensification of the pace of development of digital technologies and their prevalence in the socio-political and socio-economic spheres (according to 2020 digitalization contributes to the annual growth of nominal GDP in highly developed countries in the range of 7-20%, in particular: in the UK (12.4%), in Sweden, Korea, Ireland, Israel and Estonia (20%), the average value of G20 countries 5.3% (Vovk, 2020) necessitates innovative research areas of political phenomena and processes and involvement of digital technologies in public authorities. The level of digitalization of political processes in different countries depends significantly on the population's access to Internet resources, the activity rate of

which in 2022 is 63% of the world population (Johnson, 2022), and the leaders, according to the Digital Evolution Index, are Norway, Sweden, Switzerland, Denmark, Finland, Singapore, South Korea, UK, Hong Kong and the United States. The countries of Central and Eastern Europe are characterized by a lower rate of development and have a number of problems ensuring the effective public policy implementation and the introduction of innovative digital technologies in the public authority mechanism. It is obvious that digitalization is an integral component of all state processes, including political ones, and urges the need to update the tools and mechanisms of public policy implementation.

Saharova *et al.* (2022) argues that the main function of public policy of the state is the communication of public authorities of different levels with the public and political institutions, which in modern conditions is carried out with the help of effective mechanisms of digitalization of political processes, which are constantly modernizing and improving.

In turn, Maniam, A. (2020) notes that the intensification of digital technology development requires their approbation in the public administration sector, as a result of which the public policy of the state is significantly influenced and implemented in innovative ways through the transition of public services to convenient online services. In this context, Giulio & Vecchi (2021) persuade that digital transformation changes the structure and strategies of public administration significantly, thereby contributing to the implementation efficiency of public policies. However, established processes and traditions have brought a number of obstacles to the digitalization of the political system, resulting in conflict situations and negative feedback.

Homoliako (2020) believes that the national public policy is the policy of public authorities. It is based on clearly defined mechanisms of public coordination of the main interests of the subjects of public policy and is directed to the achievement of goals identified as a priority in the meaning in

society. Upon that, the scientist notes that the public policy implementation mechanisms are an integral part of the public administration system, which stipulate a set of principles, functions, tools, forms, methods and ways of ensuring the development of civil society aimed at solving problems of a political nature.

Pomaza-Ponomarenko *et al.* (2020), studying the public policy implementation mechanisms, concluded that digitalization processes simplify the procedure of applying to public authorities, and the use of innovative technologies leads to the modernization of public policy mechanisms. Moreover, Kvashina *et al.* (2021) persuade that the formation of the public policy implementation mechanisms in modern conditions occurs through the prism of the formation of the Digital Society system and provides with the public service delivery to the society using online resources, while ensuring the establishment of interaction between public authorities and the public. Hanna (2018) argues that it is the innovative development of digital technology, which influences public administration in the state, modernizing it, and not vice versa.

In some European countries, particularly in Germany, the formation of mechanisms for the implementation of public policy takes place in the context of the public sector reformation (Mergel (2021)). In Italy, the implementation of public policies of the state takes into account the mechanisms of its sustainability in the process of digitalization of the Italian public sector, which leads to significant changes in the structure of public authorities and increased coordination between central and regional authorities (Giulio & Vecchi (2022)).

Undoubtedly, innovative digital technologies are the driving force behind the modernization of public policy, and the effectiveness of its implementation depends on the quality of the mechanisms (Gallego & Kurer (2022)). Byrkovych *et al.* (2019) argue that the mechanism of the effective public policy implementation is based on the implementation of electronic document management system and is impossible without extensive use of innovative tools of electronic management and electronic form of interaction between the public administration entities. At the same time, scientists believe that the implementation of public policy mechanisms should

include the strategic development and widespread use of digital technology.

Polovyi (2021) directs his own scientific views towards the research of the problems of modernization of public administration in the conditions of digital society development. He managed to realize that digitalization has a significant impact on the public policy implementation mechanisms, adjusts the mechanism of performing tasks and achieving goals, taking into account the interests of the society. Razumei & Razumei (2020) complement his views based on identifying the transformation of public management in the system of digital governance. On this basis, the possibility of digitalization of public policy implementation processes using tools such as: (1) digital workplace; (2) blockchain; (3) artificial digital intelligence of typical management decisions; (3) smart-service; (4) cloud-service; (5) portal-service; (6) network-service is obtained.

At the same time, as Rusynyuk (2019) notes, the mechanism of implementation of public policy of the state should include such features of its implementation as ensuring publicity and informational openness of the activities of public authorities, prompt information about the process of preparation and decision-making, improvement of normative and legal regulation of public consultation procedures. ensuring the implementation of public control, monitoring and public expertise, the establishment of an effective social dialogue.

## Research Objectives

This paper aims to deepen the research of theoretical foundations and practical recommendations for the scrutiny of the public policy implementation mechanisms of the state under conditions of digitalization and assessment of the digitalization impact degree on public administration.

## MATERIALS AND METHODS

The methodological framework of the research consists of general scientific and adhoc methods of economic analysis, namely: analysis and synthesis to determine the essence of the state public policy and the features of its implementation in conditions of digitalization; analogy and comparison to conduct analytical assessments of the state and trends of public policy, as well as to evaluate the

impact of digitalization on public administration; generalization and systematization in forming hypotheses and formulating conclusions and research results; graphical and table for visualization of the results of the study; grouping and the k-means clustering to unite the countries of Central and Eastern Europe according to the Governance Research Indicator Country Snapshot and the Multidimensional Index of Digitization.

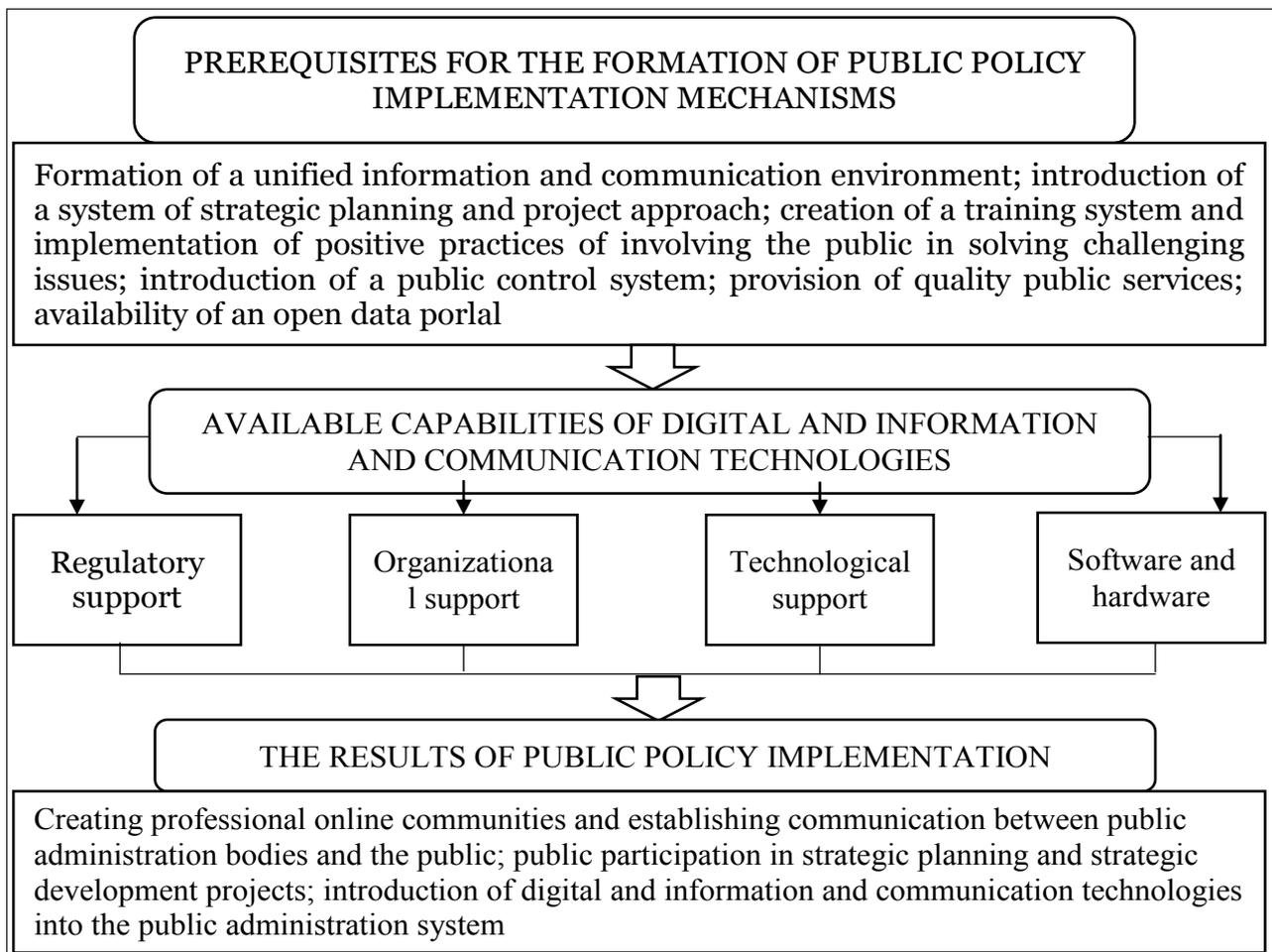
The countries of Central and Eastern Europe (Azerbaijan, Belarus, Armenia, Georgia, Estonia, Latvia, Lithuania, Moldova, Poland, Romania, Slovakia, Hungary, Ukraine and the Czech Republic) were chosen for the study.

The informational background for the study are the 2018-2021 reports: Worldwide Governance Indicators by Governance Research Indicator Country Snapshot; DiGiX Update: A Multidimensional Index of Digitization by Multidimensional Index of Digitization.

### Results of the Study

The formation of national public policy implementation mechanisms amidst the digitalization aims to make the most effective use of modern digital and information and communication technology. It also simplifies the process of interaction between governmental authorities and the public. The dominant opinion in scientific discourse is that the implementation mechanism of public policy under the condition of digitalization depends on the potential of digital and information and communication technology, thus resulting in the formation of the direction of regulatory, organizational, technological and software and hardware support. In Fig. 1 we suggest reflecting the formation model of public policy implementation mechanism.

The effectiveness of the formation of public policy implementation mechanisms indicates the coherent



Source: Author's development.

Fig. 1: Formation model of the public policy implementation mechanism

interaction of all public administration entities. At the same time another problem is conducting its empirical assessments, which can be carried out by assessing such parameters of public administration as: (1) the right to vote and accountability in the state; (2) political stability and absence of violence; (3) government effectiveness; (4) quality of legislation in the state; (5) the rule of law; (6) control of corruption. We consider it reasonable to detail the research of the outlined parameters of public administration in the countries of Central and Eastern Europe in 2018-2020 using the technology of k-means clustering and grouping the countries of the analyzed bunch according to the Integral Public Administration Indicator Country Snapshot (Table 1). The obtained results allowed to discern the general peculiarities of the public policies implementation in the countries of Central and Eastern Europe and their differences.

As the data systematized in the table shows, there are three groups of countries in Central and Eastern Europe: countries with high levels of public administration, countries with mediocre levels of public administration, and countries with low levels of public administration. The first group in 2018 included countries such as Hungary, Poland, the Czech Republic, Slovakia, Estonia, Latvia, and

Lithuania, which are characterized by high rates of voting rights and accountability in the state, relative political stability and absence of violence, government effectiveness, quality of legislation in the state, the rule of law, and control of corruption compared to other countries in the group under review. Throughout 2019-2020, Hungary, Poland, and Slovakia weakened in the second cluster. Hungary, Poland, and Slovakia weakened the level of public administration and moved down to the second cluster, where Armenia, Georgia, and Romania were in 2018. The Czech Republic, Estonia, Latvia, and Lithuania were firmly entrenched in the first cluster while the analysis was being held. In 2019 and 2020, the trends changed somewhat, and Armenia left the second cluster and moved into the third, where Ukraine, Belarus, Azerbaijan, and Moldova were consistent. It was determined that the countries of the third cluster, position low values for all the analyzed indicators, indicating the presence of significant problems in the implementation of public policy. These issues can be solved through the involvement of digital technology.

At the same time, the analysis of the dynamics of the Multidimensional Index of Digitization in the countries of Central and Eastern Europe in 2018-2021 (Fig. 2) shows the level of digitalization of the

**Table 1:** Grouping of Central and Eastern European countries by Governance Research Indicator Country Snapshot in 2018–2020.

Governance Research Indicator Country Snapshot					
2018		2019		2020	
Country	Cluster number	Country	Cluster number	Country	Cluster number
Hungary		Czech Republic		Czech Republic	
Poland		Estonia	1	Estonia	1
Czech Republic		Latvia		Latvia	
Slovakia	1	Lithuania		Lithuania	
Estonia		Hungary		Hungary	
Latvia		Poland		Poland	
Lithuania		Slovakia	2	Slovakia	2
Armenia		Georgia		Georgia	
Georgia	2	Romania		Romania	
Romania		Ukraine		Ukraine	
Belarus		Belarus		Belarus	
Ukraine		Azerbaijan	3	Azerbaijan	3
Azerbaijan	3	Armenia		Armenia	
Moldova		Moldova		Moldova	

Compiled from the data: *Worldwide Governance Indicators, 2018–2020.*



Compiled from the data: DiGiX Update: A Multidimensional Index of Digitization, 2018, 2020–2021; DiGiX 2019: Tracking Digital Evolution.

**Fig. 2:** Dynamics of the Multidimensional Index of Digitization in Central and Eastern European countries in 2018–2021

states. In addition, it proves that the countries with a higher level of development have significantly higher indexes and widely apply digital technologies in public administration and in the implementation of public policy.

The results of the conducted research give grounds to state that the highest values of the digitization index in the analyzed period are recorded in Estonia (MID: 0.78-0.83), Czech Republic (MID: 0.61-0.64) and Lithuania (MID: 0.63)-0.66), and the lowest - in Ukraine (MID: 0.42-0.48) and Moldova (MID: 0.42-0.48). Note that Belarus did not participate in the studies conducted during the entire period under analysis and, accordingly, no calculation of the multidimensional digitization index was performed.

At the same time, in-depth research in this direction using the same cluster analysis allows to group Central and Eastern European countries according to the multidimensional index of digitization, the results of which are systematized in Table 2.

As demonstrated in the table, the countries of Central and Eastern Europe are divided into three groups. The first group includes the Czech Republic, Estonia and Lithuania, which have a positive experience in the implementation of public policy with the use of digital technologies in 2018-

2019. The second group involves Hungary, Poland, Slovakia, Azerbaijan, Georgia, Romania and Latvia, where rather high indices of the multidimensional digitization index are recorded, although there are certain issues regarding the effectiveness of public policy implementation. The third group includes Ukraine, Armenia and Moldova, which have the lowest indices of the multidimensional digitization index, and the states have significant problems in ensuring the effectiveness of the implementation of public policy. As for 2020, the situation is somewhat different. Only Estonia entered the first cluster, while the Czech Republic and Lithuania moved down to the second cluster, where Poland, Azerbaijan, Romania and Latvia were. The third cluster included Hungary, Ukraine, Slovakia, Moldova and Georgia.

Thus, it can be argued that countries with higher rates of public administration recorded higher values of the multidimensional index of digitization, indicating a higher level of formation of public policy implementation mechanisms.

## DISCUSSION

The research results on the theoretical foundations and practical suggestions for the formation of public policy implementation mechanisms of the

**Table 2:** Grouping of Central and Eastern European countries by the Multidimensional Index of Digitization in 2018–2020

Multidimensional Index of Digitization					
2018		2019		2020	
Country	Cluster number	Country	Cluster number	Country	Cluster number
Czech Republic		Czech Republic		Estonia	1
Estonia	1	Estonia	1	Poland	
Lithuania		Lithuania		Czech Republic	
Hungary		Hungary		Azerbaijan	
Poland		Poland		Armenia	2
Slovakia		Slovakia		Romania	
Azerbaijan	2	Azerbaijan	2	Latvia	
Georgia		Georgia		Lithuania	
Romania		Romania		Hungary	
Latvia		Latvia		Ukraine	
Ukraine		Ukraine		Slovakia	3
Armenia	3	Armenia	3	Moldova	
Moldova		Moldova		Georgia	

Compiled from the data: DiGiX Update: A Multidimensional Index of Digitization, 2018, 2020–2021; DiGiX 2019: Tracking Digital Evolution.

state under the conditions of digitalization and evaluation of the digitalization impact degree on public administration allow us to argue that the countries of Central and Eastern Europe were divided into three groups. These groups have common features of formation of public policy implementation mechanisms.

**Group 1:** Countries with a relatively high level of government efficiency and significant digitalization indicators (the Czech Republic, Estonia, Latvia and Lithuania), where the right of citizens to vote in public elections is implemented at a sufficiently high level, political stability is ensured, government works effectively, quality legislation is implemented, the rule of law is implemented, interaction of public authorities with the public is established and the effective anticorruption efforts are observed.

**Group 2:** Countries with an average level of public administration efficiency and sufficiently high indicators of digitalization (Hungary, Poland, Slovakia, Georgia, Romania). In these countries, the current legislation regulates high standards of lawmaking activity, the citizens' suffrage is exercised and political stability is ensured, the government works effectively, the interaction of public authorities with the public is based on transparency and compliance with the law, and an effective mechanism to fight corruption is developed. However, there are significant problems

in the implementation of the right to vote by citizens, in some cases there is falsification of election results, political stability is slow, and there are high-profile corruption scandals.

**Group 3:** Countries with a low level of ensuring of public administration efficiency and low indicators of digitalization (Ukraine, Belarus, Azerbaijan, Armenia and Moldova). These countries are characterized by significant destabilizing changes in the system of public administration. Institutional sustainability of public administration there is not properly ensured. Furthermore, there are significant problems in ensuring political stability and interaction of public authorities with the public. At the same time, the incompleteness of the processes of transformational change in Eastern European countries and their desire to integrate into the European socio-economic and socio-political space necessitates the improvement of mechanisms for implementing public policy and increasing the interaction of public authorities with the public.

## CONCLUSION

Consequently, the conducted studies of the theoretical foundations and practical recommendations for the scientific substantiation of the mechanisms of implementation of public policy in the conditions of digitalization allow us to state that the mechanisms of implementation of public policy in the conditions

