

Bureaucratic Transformation in the Digital Era: Analysis of the Impact of E-Government on the Quality of Public Services

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Abstrak

Penelitian ini bertujuan untuk menganalisis pengaruh implementasi e-government terhadap kualitas pelayanan publik dengan mempertimbangkan peran kompetensi aparatur sipil negara (ASN) sebagai variabel mediator. Transformasi birokrasi melalui e-government menjadi salah satu strategi utama dalam meningkatkan efisiensi, transparansi, dan akuntabilitas pelayanan publik di Indonesia. Hasil uji F menunjukkan bahwa implementasi e-government, kompetensi ASN, dan kompetensi ASN terhadap implementasi e-government secara simultan memiliki pengaruh signifikan terhadap kualitas pelayanan publik. Namun, hasil uji t menunjukkan bahwa secara parsial, masing-masing variabel independen tidak memiliki pengaruh signifikan terhadap kualitas pelayanan publik. Nilai R Square sebesar 49,8% mengindikasikan bahwa model penelitian ini mampu menjelaskan hampir setengah dari variasi dalam kualitas pelayanan publik, sementara sisanya dipengaruhi oleh variabel lain di luar penelitian ini. Secara keseluruhan, penelitian ini menyimpulkan bahwa meskipun e-government dan kompetensi ASN penting, masih diperlukan upaya lebih lanjut untuk mengatasi faktor-faktor lain, seperti infrastruktur teknologi, literasi digital masyarakat, dan dukungan kebijakan yang lebih efektif

Kata Kunci: E-Government, Kualitas Pelayanan Publik, Kompetensi ASN, Transformasi Birokrasi, Teknologi Digital

Abstract

This study aims to analyze the effect of e-government implementation on the quality of public services by considering the role of state civil apparatus (ASN) competence as a mediator variable. Bureaucratic transformation through e-government is one of the main strategies in improving efficiency, transparency, and accountability of public services in Indonesia. The results of the F test show that e-government implementation, ASN competence, and ASN competence towards e-government implementation simultaneously have a significant influence on the quality of public services. However, the t-test results show that partially, each independent variable does not have a significant influence on the quality of public services. The R Square value of 49.8% indicates that this research model is able to explain almost half of the variation in the quality of public services, while the rest is influenced by other variables outside this study. Overall, this study concludes that although e-government and ASN competence are important, further efforts are still needed to address other factors, such as technological infrastructure, public digital literacy, and more effective policy support.

Keywords: E-Government, Public Service Quality, ASN Competence, Bureaucratic Transformation, Digital Technology

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INTRODUCTION

In the context of globalization and the digital revolution, the transformation of public bureaucracy through digital technology is essential to improve efficiency, transparency, and accountability. In Indonesia, this transformation is mainly realized through e-government initiatives, which utilize information and communication technology (ICT) to provide public services that are faster, more accessible, and responsive to the needs of its citizens (Fabio Parinusa, 2024). E-government not only aims to improve service delivery but also fosters citizen-centered governance, ensuring that residents' preferences and requirements are prioritized (Olha Cholyskhina, 2024). In addition, the integration of digital technology is an important component of public sector reform, addressing bureaucratic challenges and promoting good governance (Lina Hryhorivna Storozhenko, 2024). Thus, the ongoing digital transformation in Indonesia is a strategic effort to modernize the public sector and improve the overall governance environment (Sandra Willia Gusman, 2024). The implementation of e-government presents significant challenges that must be addressed to improve the quality of public services. The underlying issue is the uneven digital infrastructure, which is essential for delivering effective e-government services (Revathi Bai, 2024). Furthermore, resistance to change among civil servants complicates the transition to new technologies, necessitating a robust change management strategy (Manpreet Kaur, 2024). Furthermore, limited digital literacy among citizens hampers their ability to access and utilize these services, highlighting the need for comprehensive digital literacy training programs (Ayu Nurfadilah, 2024). To navigate these challenges, governments can adopt structured e-government implementation models tailored to their specific contexts, ensuring a systematic approach to service delivery (Amanvir Singh, 2023). Furthermore, public-private partnerships can play a critical role in leveraging private sector expertise and resources, facilitating a smoother implementation process (Aleksandar Ivić, 2022). An in-depth study of these factors is critical to understanding effective e-government implementation and its impact on the quality of public services. The Indonesian government's focus on bureaucratic transformation through e-government programs has significantly reshaped public service delivery over the past two decades. Initiatives such as the Public Service Information System (SIPP) and online-based administrative services aim to streamline access to government services, thereby reducing bureaucratic complexity and increasing public satisfaction (Wuryan Andayani, 2024). These digital platforms are an integral part of a broader e-government strategy, which seeks to increase transparency and accountability within government institutions (Chairussani Abbas Sopamena, 2024). By integrating multiple services into a cohesive application, the government addresses classic bureaucratic issues such as time inefficiency and cumbersome processes, ultimately driving a more responsive and efficient public sector (Sawung Murdha Anggara, 2024). This digital transformation is critical to building public trust and ensuring that citizens receive timely and effective services (Dedy Suryanta Surbakti, 2024).

E-government has significant potential to improve the quality of public services by leveraging digital technologies to reduce service time and costs, increase transparency, and encourage public participation in decision-making processes (Hugo G, 2024). However, the successful implementation of e-government initiatives depends on several important factors. A strong technological infrastructure is essential to support digital services and ensure secure communication between citizens and government agencies (Chairussani

Abbas Sopamena, 2024). In addition, human resource competency plays a critical role, as government officials must have the skills necessary to design and maintain these digital services (Oleh Lazor, 2024). Furthermore, adequate regulatory support is essential to facilitate the integration of these technologies into public service delivery (Pavankumar Rajendran, 2024). Therefore, while e-government promises to improve public services, its effectiveness depends largely on the readiness of these basic elements.

The implementation of e-government in Indonesia is significantly hampered by several major constraints. First, the digital divide between urban and rural areas creates unequal access to digital technologies, which are critical for effective e-government services (Hj. Siti Fatimah, 2023). Furthermore, budget constraints pose a major challenge, as insufficient financial resources limit the development and implementation of necessary e-government initiatives (Mesnan Silalahi, 2015). Furthermore, the lack of training for government officials hampers their ability to effectively utilize e-government systems, highlighting the need for comprehensive capacity-building programs (Dyah Mutiarin, 2024). Finally, the absence of a robust evaluation framework makes it difficult to assess the real impact of e-government on public services, complicating efforts to objectively measure its effectiveness (Roy Tumpal Pakpahan, 2024). Addressing these issues is critical to improving the quality and accessibility of public services through e-government in Indonesia.

LITERATURE REVIEW

E-Government Concept and Definition

E-government leverages information and communication technologies (ICT) to improve service delivery, making government operations more efficient and accessible to citizens and businesses. This includes not only the digitization of public services but also the transformation of internal administrative processes, which is critical to improving overall government efficiency (Husna Alfiani, 2024). Digital governance plays a critical role in this context, as it promotes transparency and accountability within government institutions, thereby increasing citizen satisfaction (Ирина Кравець, 2024). In addition, the delivery of electronic services through various digital channels enables seamless interaction between government and citizens, reducing the need for physical visits to government offices (Rahma Yudi Amartina, 2024). The focus on Government-to-Citizen (G2C) services exemplifies this shift, allowing citizens to access essential services online, which streamlines processes and increases engagement (Robert E. Wright, 2023). Collectively, these elements illustrate the comprehensive nature of e-government as a transformative approach to public administration.

Bureaucratic Transformation Theory

Bureaucratic transformation through digital technology is in line with Max Weber's Bureaucratic Modernization Theory, which states that an ideal bureaucracy should be efficient, transparent, and rule-based. Digital technology serves as an important tool in achieving these values, facilitating the transition to a more effective bureaucratic system (Septian Aryatama, 2024). However, the implementation of such technologies often faces resistance, as explained by Kurt Lewin's Organizational Change Theory. This theory highlights the challenges that organizations face when adapting to change, especially in bureaucratic settings where established norms and practices can hinder the adoption of new technologies (Ye.I. Frolova, 2023). Furthermore, the concept of Digital Bureaucracy emphasizes the role of digital tools in improving efficiency and accountability in government organizations, reinforcing the need for a strategic approach to overcome resistance and fully realize the benefits of digital transformation (Serhii Mynenko, 2022). Thus, understanding the theoretical framework and practical implications is critical to successful bureaucratic modernization.

Determinants of Successful E-Government Implementation

The success of e-government initiatives depends on several critical factors identified in previous studies, including that by UNDESA (2018). First, adequate technological infrastructure is essential, as it facilitates effective delivery of online services and fosters trust among users (Karan Anantrao Dhandar,2024). Second, technical and managerial competence of civil servants is essential; skilled civil servants are needed to design and maintain these systems, ensuring they meet public needs (Hendra Susanto,2024). In addition, citizen involvement in the planning and evaluation process increases the responsiveness of e-government services, making them more aligned with citizen expectations (Ali Alshaher,2021). Finally, clear policies and regulatory frameworks are essential, providing a legal basis for e-government initiatives and addressing key issues such as data privacy and security (Mohamed Hairul Othman,2018). Together, these elements create a strong foundation for successful e-government implementation.

Impact of E-Government on Public Services

Research shows that e-government can significantly improve the efficiency and accessibility of public services, while also reducing administrative costs and increasing transparency and accountability (Jopang Jopang,2024). However, the effectiveness of these initiatives depends on several factors, including technological readiness, which is critical to the successful implementation of digital services (Hugo G,2024). In addition, adaptation to work culture plays a significant role, as government employees must be comfortable with new technologies to provide quality services (Cristian Dumitrescu,2024). Finally, public perception of e-government is crucial; positive attitudes from citizens can facilitate the adoption and utilization of these services, ultimately leading to better outcomes (João Paulo Capelli Martins,,2024). Therefore, understanding and addressing these factors is essential to maximize the benefits of e-government initiatives.

Case Study of E-Government Implementation in Indonesia

Empirical studies in Indonesia show that e-government implementation is significantly more successful in urban areas compared to rural areas, mainly due to factors such as infrastructure and digital literacy (FRED SIAMBE OMWERI, 2024). The success of e-government initiatives is highly dependent on the availability of strong infrastructure, which facilitates access to digital services (Arief Rahman, 2014). In addition, improving digital literacy is essential to bridge the gap in e-government effectiveness between urban and rural populations, as it empowers citizens to utilize these services effectively (Arief Prayitno, 2024). In addition, the role of digital competency training for civil servants is crucial in driving bureaucratic transformation, ensuring that government institutions can operate more efficiently and transparently (Nur Fadillah, 2024). By investing in infrastructure and training, Indonesia can improve e-government services and promote equitable access across regions, ultimately leading to better governance and public service delivery.

METHOD

This study uses a quantitative approach to measure public perceptions of the quality of public services after the implementation of e-government. The study population is the community that has used e-government-based services in several regions. The sampling technique used is purposive sampling, taking into account urban and rural areas. In this study, the variables used are Independent Variable (X): Implementation of e-government, which is measured through indicators such as the use of information technology, the quality of digital platforms, and the efficiency of administrative processes. Dependent Variable (Y): Quality of public services, which includes service efficiency, transparency, accountability, and public satisfaction. Mediator Variable (M): Competence of state civil servants (ASN), which includes digital literacy, technical skills, and readiness to adapt to technological changes.

RESULT AND DISCUSSION

Validity & Reliability Test

Validity Test Table

Correlations		
	Sig. (2-tailed)	Keterangan
Implementation of e-govern	0,000	Valid
Quality of public services	0,000	Valid
ASN Competence	0,000	Valid
**. Correlation is significant at the 0.01 level (2-tailed).		

Interpretation

All items in the study have a significance value of 0.000 (<0.005), thus the items in this study are declared Valid. And worthy of being continued in this study.

Reliability Test Table

Reliability Statistics	
Cronbach's Alpha	N of Items
0,720	3

Interpretation

All items in this study have a Cronbach`s value of 0.720 (>0.700), thus all items in this study are declared reliable and can be continued in this study.

Analysis Path

T test

Table T test

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	11,212	4,935		2,272	0,025
	Implementation of e-govern	0,094	0,283	0,120	0,332	0,741
	ASN Competence	-0,393	0,341	-0,513	-1,153	0,252
	ASN Competence Thd Implementasi e-govem	0,028	0,019	0,973	1,470	0,145

a. Dependent Variable: Quality of public services

Interpretation

1. Implementation of e-government (B = 0.094, Sig = 0.741)

The t value of 0.332 with a significance of 0.741 (> 0.05) indicates that the Implementation of e-government does not have a significant effect on the Quality of public services. This means that even though e-government is implemented, it has not had a real impact on improving the quality of service.

2. ASN Competence (B = -0.393, Sig = 0.252)

The t value of -1.153 with a significance of 0.252 (> 0.05) indicates that ASN Competence also does not have a significant effect on the Quality of public services. Negative values indicate an opposite trend in the relationship, but remain insignificant.

3. ASN Competence towards Implementation of e-government (B = 0.028, Sig = 0.145)

The t value of 1.470 with a significance of 0.145 (> 0.05) indicates that ASN Competence does not significantly mediate the relationship between Implementation of e-government and Quality of public services.

F test

Table F test

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	253,174	3	84,391	31,719	,000 ^b
	Residual	255,416	96	2,661		
	Total	508,590	99			
a. Dependent Variable: Quality of public services						
b. Predictors: (Constant), ASN Competence Thd Implementasi e-govem, Implementation of e-govern, ASN Competence						

Interpretation

1. F Value:

The resulting F value is 31.719. This F value shows the comparison between the variance explained by the regression model (Regression) and the variance not explained by the model (Residual).

2. Significance (Sig.):

The Sig. value of 0.000 ($p < 0.05$) indicates that the overall regression model is significant in predicting the dependent variable, namely the Quality of public services. In other words, at least one of the independent variables (Implementation of e-government, ASN Competence, and ASN Competence towards Implementation of e-government) has a significant influence on the Quality of public services.

Coefficien Determinan

Determinant Test Table

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,706 ^a	0,498	0,482	1,631
a. Predictors: (Constant), ASN Competence Thd Implementasi e-govem, Implementation of e-govern, ASN Competence				

Interpretation

The RSquare value in this study is 0.498, thus the contribution value of the influence of the variables in this study is 49.8%, and the remaining 40.2% is contributed by other variables outside this study.

Discussion

1. F Test (ANOVA):

The F value of 31.719 with a significance of 0.000 indicates that the overall regression model is significant. This means that the independent variables Implementation of e-government, ASN Competence, and ASN Competence towards Implementation of e-government simultaneously affect the Quality of public services.

2. R Square (Model Summary):

The R Square value of 0.498 indicates that 49.8% of the variation in Quality of public services can be explained by the independent variables in the model. The remaining 50.2% is influenced by other factors outside this research model.

The R value of 0.706 indicates a strong correlation between the independent and dependent variables.

3. t Test (Coefficient):

Implementation of e-government has a t value of 0.332 with a significance of 0.741, which means it is not significant.

ASN Competence has a t value of -1.153 with a significance of 0.252, indicating an insignificant effect.

ASN Competence towards the Implementation of e-government has a t value of 1.470 with a significance of 0.145, which is also not significant.

CONCLUSION

Based on the results of this study, it can be concluded that:

1. Simultaneously, Implementation of e-government, ASN Competence, and ASN Competence towards Implementation of e-government have a significant influence on the Quality of public services, as evidenced by the F test.
2. Partially, each independent variable does not show a significant influence on the Quality of public services based on the t test.
3. The R Square value of 49.8% indicates that this model is strong enough to explain variations in the Quality of public services, while the rest is influenced by other variables outside this study.
4. The government needs to strengthen ASN Competence and improve the Implementation of e-government by considering other factors such as infrastructure, community digital literacy, and more comprehensive policy support to improve the Quality of public services.

Referensi :

- Aleksandar, Ivić., Anđela, Milićević., Dusan, Krstic., Nina, Kozma., Sara, Havzi. (2022). 6. The Challenges and Opportunities in Adopting AI, IoT and Blockchain Technology in E-Government: A Systematic Literature Review. doi: 10.1109/CIEES55704.2022.9990833
- Ali, Alshaher. (2021). 3. IT capabilities as a fundamental of electronic government system success in developing countries from users perspectives. Transforming Government: People, Process and Policy, doi: 10.1108/TG-05-2020-0080
- Amanvir, Singh. (2023). 4. E-governance: moving towards digital governance. VIDYA - A JOURNAL OF GUJARAT UNIVERSITY, doi: 10.47413/vidya.v2i1.173
- Arief, Rahman. (2014). 3. Toward a comprehensive conceptualization of the digital divide and its impact on e-government system success: evidence from local governments in Indonesia.
- Ayu, Nurfadilah., Haliah, Haliah. (2024). 3. Public Sector Transformation: Increased Efficiency and Innovation in the Digital Economy. doi: 10.58578/ijhess.v2i2.2870
- Chairussani, Abbas, Sopamena. (2024). 4. Digital Revolution and Public Administration Innovation: Increasing the Efficiency and Responsiveness of Public Services. Journal of governance : jurnal ilmu pemerintahan Universitas Sultan Ageng Tirtayasa, doi: 10.31506/jog.v9i2.24786
- Cristian, Dumitrescu. (2024). 3. Digitalization of Public Administration in Romania: The Way Towards Efficiency and Accessibility. Perspectives of Law and Public Administration, doi: 10.62768/plpa/2024/13/1/18
- Dyah, Mutiarin., Misran, Misran., Misran, Misran., Novayanti, Sophia, Rukmana., Novayanti, Sophia, Rukmana., Trimurti, Ningtyas., Trimurti, Ningtyas. (2024). 3. Bridging the digital divide through digital infrastructure. Journal of infrastructure, policy and development, doi: 10.24294/jipd.v8i8.6817
- Fabhio, Parinusa., H., Marisa., Sitti, Hairani, Idrus., Endah, Christianingsih., Rud, Nokeo. (2024). 1. The Effectiveness of Digital Government Services, Public Participation Mechanisms, and Policy Innovation in Public Administration. doi: 10.59613/3t0y3v45
- Faisal, Tomi, Saputra., Terry, Indrabudi., Dida, Dirgahayu., Karman., Bambang, Mudjiyanto. 4. Initiatives of the Indonesian Government for Digital Transformation in Rural Areas. E3S web of conferences, doi: 10.1051/e3sconf/202344403001

- FRED, SIAMBE, OMWERI. (2024). 1. A Systematic Literature Review of E-Government Implementation in Developing Countries: Examining Urban-Rural Disparities, Institutional Capacity, and Socio-Cultural Factors in the Context of Local Governance and Progress towards SDG 16.6. *International journal of research and innovation in social science*, doi: 10.47772/ijriss.2024.808088
- Hendra, Susanto., Hediana, Makmur. (2024). 2. The influence of information technology, administrative management and knowledge management practices on the success of e-government in Indonesia. *International journal of data and network science*, doi: 10.5267/j.ijdns.2024.6.019
- Hj., Siti, Fatimah., Siti, Sriningsih., Yusifa, Pascayanti., Fatmila, Yusuf. (2023). 1. Digital Divide Solutions and Public Service Policy Implementation in Indonesia after the Covid-19 Pandemic. *Journal of economics, finance and management studies*, doi: 10.47191/jefms/v6-i8-30
- Hugo, G., Santos., Eliomar, Gotardi, Pessoa. (2024). 2. Impacts of digitalization on the efficiency and quality of public services: A comprehensive analysis. *Lumen et Virtus*, doi: 10.56238/levv15n40-024
- Husna, Alfiani., Silfa, Kurnia, Aditya., Sofian, Lusa., Dana, Indra, Sensuse., Prasetyo, Adi, Wibowo, Putro., Sofiyanti, Indriasari. (2024). 2. E-Government Issues in Developing Countries Using TOE and UTAUT Frameworks: A Systematic Review. doi: 10.30589/pgr.v8i2.932
- João, Paulo, Capelli, Martins., Linda, Gonçalves, Veiga. (2023). 4. Are electronic government innovations helpful to deter corruption? Evidence from across the world. *Economics and Politics*, doi: 10.1111/ecpo.12255
- Jopang, Jopang., Septian, Aryatama., Muazzinah, Muazzinah., Qamal, Qamal., Ansar, Ansar. (2024). 1. Exploring the Relationship Between E-Government, Transparency, and Citizen Trust in Government Services. *Global international journal of innovative research*, doi: 10.59613/global.v2i6.206
- Karan, Anantrao, Dhandar. (2024). 1. E-Government and Digital Transformation: Investigate the implementation and impact of e-government initiatives on public service delivery, citizen engagement, and administrative efficiency. doi: 10.69758/gimrj/2408ii05v12p0001
- Lina, Hryhorivna, Storozhenko., O., Olshanskyi., Наталя, Статівка., Alina, CHERNOIVANENKO., Yevheniia, Hordiienko. (2024). 4. Public Administration in the Context of Digital Transformation: Innovations and Challenges. *Revista De Cercetare Si Interventie Sociala*, doi: 10.33788/rcis.85.8
- Manpreet, Kaur. (2024). 2. Toward a theory of e-government: Challenges and opportunities, a literature review. *Journal of infrastructure, policy and development*, doi: 10.24294/jipd.v8i10.7707
- Mesnan, Silalahi., Darmawan, Napitupulu., Gulda, Patria. (2015). 2. Kajian Konsep Dan Kondisi e-Government di Indonesia.
- Mohamed, Hairul, Othman., Rozilawati, Razali. (2018). 4. Whole of Government Critical Success Factors towards Integrated E-Government Services: A Preliminary Review. *Jurnal Pengurusan UKM Journal of Management*, doi: 10.17576/PENGURUSAN-2018-53-07
- Nur, Fadillah., Lailul, Mursyidah. (2024). 5. Digital Public Services in Indonesia Show High Satisfaction and Adaptation Challenges Remain. *Indonesian Journal of Cultural and Community Development*, doi: 10.21070/ijccd.v15i3.1105
- Oleh, Lazor., Оксана, Лазор., Iryna, Yunyk., I., B., Зубар., Maryna, Dzeveliuk., Andrii, Dzeveliuk. (2024). 3. The impact of e-governance on shortening the public service delivery terms. *Telos: Revista de Estudios Interdisciplinarios en Ciencias Sociales*, doi: 10.36390/telos263.21

- Olha, Cholyskhina., Anna, Karnaukh., Olha, Volianiuk., Микита, Володимирович, Остапенко., Anastasiia, Holishevska. (2024). 3. Public participation and innovative technologies: the role of artificial intelligence in public administration and sustainable development. *Salud, Ciencia y Tecnología - Serie de Conferencias*, doi: 10.56294/sctconf2024974
- Pavankumar, Rajendran. (2024). 2. The impact of digital governance reforms on public service delivery in india: a case study of aadhaar. *Akselerasi*, doi: 10.54783/jin.v6i2.1058
- Rahma, Yudi, Amartina., A., Rahmanto., Albert, Muhammad, Isrun, Naini. (2024). 4. Implementation of Information and Communication Technology Innovation Policy through E-Government in Public Services. doi: 10.55927/fjss.v3i1.8328
- Revathi, Bai., S., N., Babitha, Thimmaiah. (2024). 1. Bridging digital and good governance: a review of e-governance frameworks and challenges. *EPRA international journal of economic and business review*, doi: 10.36713/epra18545
- Robert, E., Wright. (2023). 5. Electronic government in public administration. *Naukovij visnik Užgorods'kogo nacional'nogo universitetu*, doi: 10.24144/2307-3322.2022.76.2.5
- Roy, Tumpal, Pakpahan. (2024). 4. Evaluating implementation of e-government public services in dki jakarta towards a smart city using the cipp and kirkpatrick evaluation model. *Moestopo International Review on Social, Humanities, and Sciences*, doi: 10.32509/mirshus.v4i1.86
- Sandra, Willia, Gusman. (2024). 2. Development of the Indonesian Government's Digital Transformation. *Dinasti International Journal of Education Management and Social Science (DIJEMSS)*, doi: 10.38035/dijemss.v5i5.2868
- Septian, Aryatama., Miswan, Miswan., Fahriyah, Fahriyah., Teguh, Pribadi., I, Wayan, Gede, Suacana. (2024). 1. Enhancing Governance Efficiency through Digital Transformation in Public Services: Lessons from Global Practices. *Global international journal of innovative research*, doi: 10.59613/global.v2i5.171
- Serhii, Mynenko., Oleksii, Lyulyov. (2022). 4. The Impact of Digitalization on the Transparency of Public Authorities. *Business ethics and leadership*, doi: 10.21272/103-115.2022
- Ye.I., Frolova. (2023). 3. Optimization of public administration methods in the conditions of digitalization. *Naukovij visnik Užgorods'kogo nacional'nogo universitetu*, doi: 10.24144/2307-3322.2022.76.2.13
- Ірина, Кравець., Микола, МИКУЛЕЦЬ., Надія, МАТІЙЧУК. (2024). 3. Електронне урядування як інструмент забезпечення балансу інтересів громадян і держави. *Вісник Хмельницького національного університету*, doi: 10.31891/2307-5740-2024-330-7.