DANUBE • 16(3) • pp. 264–276
DOI: 10.2478/danb-2025-0013

sciendo Danube

Digitalisation of Public Administration Processes in Shaping the Investment Environment of Territorial Communities

Alona Kliuchnyk[1], Nataliia Shyshpanova[2], Vitaliy Sokolik[3], Alla Ostapenko[4], Oleh Kryvko[5]

Abstract

In today's environment, businesses and governments have to be able to quickly adapt to new conditions that are shaped by the development of the latest technologies. Thus, it is vital to ensure their implementation in various institutions, including at the level of territorial communities (TCs). The purpose of this study was to propose options for increasing the investment attractiveness of Ukraine's regions to attract investment in the development of innovative technologies. The main methods employed in this study included analysis, forecasting, and historical. The study concluded that digital transformation plays a key role in the development of the country and its regions. It was shown that one of the main technologies that can be used to improve management efficiency is artificial intelligence. Furthermore, conclusions were drawn about the level of digitalisation of government representatives using the E-Government Development Index and E-Participation Index. The initiative of the Ministry of Digital Transformation to create an index for assessing digitalisation at the level of TCs was also mentioned. The study also offered some recommendations to improve the region's innovation attractiveness, including simplifying interaction between government officials and investors, increasing the availability of data on regional development, and automating the submission of documents. It was concluded that the use of such recommendations would considerably improve the investment environment at the TC level. The findings of this study will be useful for shaping government policy to ensure a better investment climate both at the national and regional levels.

[1] Mykolaiv National Agrarian University, Georgiy Gongadze Str. 9, 54008 Mykolaiv, Ukraine.
E-mail: alonakliuchnyk@outlook.com.
[2] Mykolaiv National Agrarian University, Georgiy Gongadze Str. 9, 54008 Mykolaiv, Ukraine.
E-mail: shyshpan-nata@ukr.net.
[3] Mykolaiv National Agrarian University, Georgiy Gongadze Str. 9, 54008 Mykolaiv, Ukraine.
E-mail: vitaliy.sokolik@hotmail.com.
[4] Mykolaiv National Agrarian University, Georgiy Gongadze Str. 9, 54008 Mykolaiv, Ukraine.
E-mail: a-ostapenko@meta.ua.
[5] Mykolaiv National Agrarian University, Georgiy Gongadze Str. 9, 54008 Mykolaiv, Ukraine.
E-mail: oleh_kryvko@outlook.com.

Keywords

Innovative Technologies, Regional Development, Economy of Ukraine, Innovations, Public Administration

I. Introduction

The ability of individual territories to attract investment is highly dependent on their investment climate, a set of factors (economic, political, legal, and infrastructural) that determine the attractiveness of a particular region for investment. From the standpoint of the state, this necessitates the creation of conditions for individual territories that would provide best possible conditions for investors to invest. One of the key areas is always the one that allows for the creation of added value: in other words, while investments in the extraction of raw materials are also crucial, they are less valuable than those aimed at production. In today's environment, the development of innovative technologies is becoming particularly significant. In any case, all the processes described above to ensure the investment attractiveness of the regions are vital for the country's development. Thus, it is important to explore new opportunities to ensure more effective management of the innovation attractiveness of the country's regions. In this study, the assessment was conducted for Ukraine, which has recently undergone a reform aimed at merging certain regions into territorial communities (TCs) and granting them greater autonomy. This shift highlights the importance of exploring how the latest technologies can be leveraged by TCs to foster a favourable investment environment. While the document emphasizes artificial intelligence as a key tool in this process, incorporating additional examples of innovative technologies could further enrich the discussion. For instance, blockchain offers significant potential to enhance transparency and combat corruption in public administration through immutable transaction records. Similarly, e-governance platforms can streamline interactions between investors and authorities, simplifying processes such as document submission and decision-making.

Many researchers have investigated the specific features of Ukraine's regional development. Likarchuk et al. (2021) studied the mechanisms available in general to improve the principles of public administration. They provided a lot of advice to improve the functioning of TCs but did not pay attention to how to use digitalization tools, such as artificial intelligence, cloud platforms, and e-government systems, which could significantly enhance the efficiency of governance and interaction with citizens and investors. Sodoma et al. (2023) considered TCs from the standpoint of decentralisation. Researchers pointed out the importance of using innovative technologies and developing digitalisation in Ukraine to improve the efficiency of their work. Piskokha (2021) investigated the digital transformation of local self-government in Ukraine. The researcher noted a new vision of how TCs should be digitalised. However, the researcher's study is more theoretical than practical, and therefore it is difficult to formulate advice for the development of state policy in this area. Nikolina et al. (2020) assessed the level of digitalisation of public administration and administration at the level of TCs in Ukraine. They concluded that there is an urgent need

to develop tools for assessing the digitalisation of government at the local level; furthermore, they proposed their own model adapted to the specifics of the level of TCs. Currently, this model requires additional evaluations to conclude on its real adequacy and applicability. Metelenko et al. (2020) also investigated the digitalisation of the system of management of administrative-territorial units in Ukraine. The researchers emphasised the significance of studying foreign practices in this context, as well as increasing the state's attention to this component of the development of TCs. However, the authors did not offer clear advice on reforms to improve the state of digitalisation for local government.

As the analysed studies show, albeit pointing out the role of digitalisation for Ukrainian local authorities, they do not pay attention to ensuring a greater level of investment attractiveness of TCs. Thus, the purpose of this study was to explore how the latest technologies can be used to improve the country's investment climate.

II. Materials and Methods

The study used the values of two indices: E-Government Development Index (EGDI) and E-Participation Index (EPI). The first one is compiled twice a year by the United Nations Department of Economic and Social Affairs (UN DESA) and consists of three sub-indices that characterise the state of the infrastructure of information and communication technologies, human capital, and online public services. The second index is additional and is also based on three components: e-information, e-consultation, and e-decision-making. Index values are ranked from 0 (low) to 1 (high). For a better understanding of Ukraine's place in these rankings, the assessment was carried out together with the world average and the "regional leader"(it could vary, but most often it was Poland). Showing this difference offers a better insight into the country's position in the context of digitalisation in individual countries. The values of all the necessary indicators were taken from the UN E-Government Knowledgebase (2023), a UN database on the level of digitalisation of the public sector. The data from the Index of Digital Transformation of Ukrainian Communities, jointly developed by the Ministry of Digital Transformation, Deloitte, and some other companies or organisations, was also used to regularly assess the state of digitalisation in TCs (Index of digital transformation…, 2023). All calculations and plots were made in Microsoft Excel. The study examined a considerable amount of data, which in a certain way characterises current processes related to the digitalisation of governance processes both in Ukraine as a whole and at the level of TCs. This allowed for an analysis method that was applicable to both quantitative and qualitative data. The historical method made it possible to draw conclusions based on information about the past development of certain components of digitalisation in the country; to consider them in retrospect, based on known information about what results were achieved from its implementation of certain initiatives to strengthen digitalisation processes. The comparison method made it possible to assess the current state of digitalisation of public authorities in the world and in some other countries (the leader of the region) and to conclude on the current state of digitalisation of governance processes at the state level in Ukraine.

The forecasting helped to make assumptions about how the digitalisation of governance in the country will develop in the future and what actions can maximise the efficiency

of internal processes. The tabular method was used to present individual data for easier perception. The study also used the case study method to investigate the functioning of individual components of large systems to evaluate other models. The study also involved a literature review of articles that investigated the specific features of digitalisation of public administration processes in Ukraine both globally and locally. Furthermore, individual documents were also evaluated, such as the aforementioned methodologies for developing the Digital Transformation of Communities Index.

III. Results

In general, digital transformation in local government involves actions related to the improvement and modernisation of processes, including technological and organisational reengineering. These actions are focused on introducing digital connectivity, data transfer, and promoting closer interaction with citizens to meet their needs. As digital technologies begin to play an increasingly significant role, local government officials need to acquire more skills in this area. Thus, the priority areas for the digital transformation of local self-government are the development of digital competencies, the digitalisation of TCs, and the strengthening of digital interaction between government and business. Thus, digital competence includes the ability to confidently use digital technologies and information literacy. Local self-government officials should have basic and advanced skills in this area, depending on their position and needs, to perform their duties most effectively. The strengthening of interaction between the government and business can be described as the use of the latest technologies in cooperation between public and private actors, e.g., more active use of remote communication technologies, electronic identification and digital signatures, and electronic procurement systems.

One of the newest technological developments is artificial intelligence, which can be broadly defined as a branch of computer science focused on designing programs and systems capable of performing tasks that typically require human intelligence. These tasks include data analysis, problem-solving, decision-making, and understanding natural language. In essence, artificial intelligence refers to the simulation of human-like cognitive functions by machines, enabling them to process vast amounts of data, learn from patterns, and adapt their operations to achieve specified goals. The currently existing technological developments cannot think or make decisions on unassisted, but they can already process sizeable amounts of data and provide the information the user needs (Ritter and Pedersen, 2020). In other words, this technology can be actively used for these purposes. In this regard, it is necessary to find methods of its application in the activities of both enterprises and the state. For instance, the use of artificial intelligence can use different data (infrastructure availability, transport routes, environmental factors) in a single model, which will make it possible to simplify the analysis and decision-making process for government officials (Prus and Sikora, 2021; Lee et al., 2023; Charfeddine and Umlai, 2023). Furthermore, it can provide investors with additional information to make decisions about investing in a particular region. The use of natural language processing and automation technologies will facilitate the analysis of legal documentation, risks, and investment conditions. The use of artificial intelligence to interact with potential investors (at least at the initial stage)

can improve communication and provide the necessary information faster and more efficiently, and the use of this technology to analyse investor feedback can help TCs promptly identify problems and adjust their development strategy accordingly. In other words, artificial intelligence can be used as a highly effective data processing mechanism for further decision-making by both government officials in their work and investors when deciding whether to invest in the region. Thus, artificial intelligence should become the principal technology for the digitalisation of administrative and territorial units in the country. Despite the current state of development of artificial intelligence in Ukraine, it is considered a promising technology for the public sector, which suggests the need for its further development.

The reform of uniting Ukraine's regions into TCs is part of a broader process of administrative and territorial reform in Ukraine aimed at creating effective and self-sufficient communities at the local level. TCs are a form of decentralisation of power and distribution of powers among local authorities. It has led to considerable changes in the functioning of Ukrainian regions, both positive and negative. This resulted in the closure of a many schools and hospitals, which the authorities believed no longer made sense given the declining population. Although from the standpoint of the state this allows reducing budget expenditures, it leads to a decrease in the population of rural residents. Other benefits of this reform include the fact that TCs can allocate resources more efficiently, combining them to implement joint projects and solve common problems, encourage people to take part in community life, and make a considerable number of development-related decisions unassisted. However, this reform also has its drawbacks, which are manifested (and were particularly noticeable during the active implementation of the reform) in increased instability at the TC level, dislike by the local population, and the time required for the system to start working effectively. Furthermore, questions corruption-wise, as local leaders now have much more money at their disposal, which increases the probability of using it at their discretion. Considering the specific features of the TC reform, the issue of improving the region's investment climate has clearly become entirely dependent on associations.

To assess Ukraine's position in terms of implementing the principles of digitalisation in public administration, it is worth considering the values of two indices, the essence of which was discussed in greater detail in the Materials and Methods section of this paper. The values of the EGDI index are presented in Table 1.

As Table 1 shows, the level of EGDI in Ukraine is gradually increasing (except for some years, e.g., 2014, when the decline was caused by the outbreak of the war with Russia), which indicates the gradual digitalisation of public administration in the country. In terms of the sub-indices, the values of human capital development gradually declined, albeit at a slow pace, while infrastructure for online public services and human capital increased significantly. They became the main drivers of the index's growth. Compared to the rest of the world, its performance is quite high. Still, Ukraine is not the leader of the subregion (Eastern Europe), but it is not far behind the leading positions, which were most often occupied by Poland. Therefore, it can be concluded that the state of digitalisation

development at the state level in Ukraine is good. Another index worth evaluating is the EPI, the values of which are presented in Table 2.

Table 1: EGDI ranking indicators in Ukraine and comparison with the world and the regional leader in 2003–2022

Year	EGDI	Rank	Human Capital Index	Online Service Index	Telecom-munication Infrastructure Index	World Average	Sub-Region Leader	Ukraine and World Average Difference	Ukraine and Sub-Regional Leader Difference
2022	0.83	46	0.87	0.81	0.73	0.61	0.84	0.22	−0.01
2020	0.71	69	0.86	0.68	0.59	0.6	0.85	0.11	−0.14
2018	0.62	82	0.84	0.57	0.44	0.55	0.8	0.07	−0.18
2016	0.61	62	0.84	0.59	0.4	0.49	0.72	0.12	−0.11
2014	0.5	87	0.86	0.27	0.38	0.47	0.73	0.03	−0.23
2012	0.57	68	0.92	0.42	0.35	0.49	0.73	0.08	−0.17
2010	0.52	54	0.96	0.35	0.25	0.42	0.52	0.1	0
2008	0.57	41	0.95	0.54	0.23	0.43	0.67	0.15	−0.1
2005	0.55	48	0.94	0.58	0.12	0.4	0.65	0.15	−0.11
2004	0.53	45	0.93	0.56	0.11	0.38	0.62	0.15	−0.09
2003	0.46	54	0.92	0.35	0.12	0.36	0.58	0.1	−0.11

Source: compiled by the authors of this study based on data from UN E-Government Knowledgebase (2023)

Table 2: EPI ranking indicators in Ukraine and comparison with the world and the regional leader in 2003–2022

Year	EPI	Rank	World Average	Sub-Region Leader	Ukraine and World Average Difference	Ukraine and Sub-Regional Leader Difference
2022	0.6	57	0.45	0.74	0.16	−0.14
2020	0.81	46	0.57	0.96	0.24	−0.16
2018	0.69	75	0.57	0.92	0.12	−0.24
2016	0.75	32	0.46	0.88	0.28	−0.14
2014	0.43	77	0.39	0.55	0.04	−0.11
2012	0.16	83	0.22	0.66	−0.06	−0.5
2010	0.26	48	0.19	0.31	0.07	−0.06
2008	0.57	14	0.19	0.57	0.38	0*
2005	0.37	28	0.15	0.38	0.21	−0.02
2004	0.34	24	0.14	0.39	0.2	−0.05
2003	0.4	24	0.15	0.4	0.25	0*

Source: compiled by the authors of this study based on data from UN E-Government Knowledgebase (2023)

As Table 2 shows, the EPI scores for Ukraine are also quite high. This is evidenced by both the value of the index and the country's rank among all countries in the world. Furthermore, the country's values were above the global average in all years except 2012. Ukraine was the leader in the region in 2003 and 2008. Notably, the issue of community digitalisation is important at the state level. This can be judged by some of the news that occasionally appears in the information space. For instance, the article "The ministry of digital transformation will annually assess the level of digitalisation of communities" (2023) states that the Ministry of Digital Transformation, together with the Eastern Europe Foundation and Deloitte, plans to launch the Digitalisation Index of Territorial Communities. The index itself consists of five parts: the digital economy in the TC (the ability to ensure the development of the information technology industry and promote the formation of a developed IT ecosystem), the development of digital skills among the population (the development and support of the population in the TC in the field of digitalisation to increase their digital literacy), digital infrastructure (the availability and functioning of infrastructure for the population to spread digitalisation and operate safely), digitalisation of public services (ensuring the provision of TC services through digital channels with a prominent level of convenience, simplicity, and security), and digital transformation of local self-government bodies (supporting the function of direct democracy, creating tools to ensure the internal functioning of local self-government bodies) (Index of digital transformation…, 2023). Authorities believe that the use of such an index will improve the level of digitalisation in TCs and thus achieve a better level of investment attractiveness (The ministry of digital…, 2023). Once the official implementation of this index begins, it will be possible to assess the state of digitalisation in individual communities more accurately.

Thus, TCs can solve a considerable number of problems by introducing digitalisation into their administration processes. Some of them have already been mentioned above, namely, improving interaction with citizens and increasing the efficiency of the functioning of the TC facilities themselves by automating and simplifying certain processes. Even this is already increasing the region's investment attractiveness for investors. Studies demonstrate that automating public services can reduce administrative costs by up to 30%, as observed in digitalized public sectors globally (Goodman and Taylor, 2019). Nevertheless, there are other tools that will be aimed primarily at facilitating interaction with potential depositors. Thus, the creation of digital platforms for submitting documents, obtaining permits, making payments, and other administrative services will simplify the interaction with investors. Currently, Ukraine has Diia, an electronic public service developed by the Ministry of Digital Transformation of Ukraine, which simplifies these processes, but at the state level. If community representatives want to increase their investment attractiveness, they should initiate the creation of a platform that would be able to collect documents related not only to the interaction between potential users (not only investors), but also other parties. This can be either a separate website or an additional feature in Diia (which, however, will be more difficult to implement due to the scale). This also applies to the interaction between local authorities and investors, as mentioned above: some part of it (not the main part) should be carried out using the latest technologies (specialised services). Simplifying the interaction

between the state and businesses is one of the key components of improving investment attractiveness. The payment for services that can be rendered by the public authorities to investors can also be improved, allowing it to be made through various platforms and, among other things, in cryptocurrency (provided the proof it was earned/received legally). According to recent studies on Ukraine's digital transformation, an increase in the country's digitization is expected to have a positive impact on Gross domestic product (GDP). Specifically, for every 1% increase in digitization, Ukraine's GDP could grow by 0.42%. Additionally, if Ukraine joins the EU Digital Single Market, it could experience a 12.1% increase in GDP (Bandura and Staguhn, 2023).

To understand whether to invest in a particular company, an investor must have all the data they need to make a decision. To attract investment, TCs should promote the availability of data on both the development of the territory and its enterprises. The data collection process itself can be automated so that neither companies, nor representatives of individual authorities, nor the public have to provide information to a centralised collection point. However, individual companies may not be willing to disclose information about their operations, and it is also irrational to force them to provide more data than they consider necessary. Therefore, local authorities could be asked to act as a "bridge"between potential investors and businesses: if a decision is made to invest in a particular company based on the available data for the region, they could request additional information through the authorities or provide contacts to reach out to the company's representative for further discussion. Notably, increasing the availability of data is beneficial not only for investors: it would enable more detailed research on the state of individual regions and companies by scientists, which would also have long-term positive effects. Investors' interaction with the public can also be facilitated, e.g., by conducting surveys among the local population to find out the information investors need to implement their future project.

IV. Discussion

Thus, representatives of both state and local authorities can actively use the above recommendations. However, for them to have a positive impact on the level of TCs' digitalisation, they must be implemented with sufficient quality. For this, the relevant authorities should monitor how effectively the implementation of innovative technologies for TCs is ongoing: the Ministry of Digital Transformation should set target indicators for TCs to achieve and encourage them to do so in various ways. However, this will be difficult to implement in the face of a full-scale Russian invasion, and therefore the goals should be realistic. Furthermore, it is essential to ensure that government officials cooperate with businesses and the local population. In other words, local leaders should encourage investors, companies, and citizens to work together to achieve common goals of improving the quality of life in the region. Only under these conditions can significant results be achieved in this area.

However, even with these efforts, digitalization presents its own set of challenges. Data security is a key concern, as the increasing volume of information being transmitted and stored creates vulnerabilities to cyberattacks. To maintain public trust, robust security measures such as encryption and multi-factor authentication are essential. Additionally, the

digital literacy gap remains a significant issue, particularly in regions with lower education levels or limited access to digital technologies. Addressing this requires training programs and awareness campaigns to ensure that all stakeholders can effectively engage with digital tools. Lastly, infrastructure limitations, particularly in rural areas, can restrict access to digital services. To overcome this barrier, investment in digital infrastructure is crucial, ensuring that the benefits of digitalization are accessible to all communities.

Giulio and Vecchi (2023) investigated the specific features of digitalisation implementation in the public sector. Researchers have discussed the significant role of introducing innovative technologies in public sector management processes but note that much depends on the level of political relations between government officials. The study on the digitalisation of governance processes in Ukraine also noted that digitalisation can make considerable progress in improving the efficiency of local governance, although it did not focus on how the interpersonal relations of government officials influence this. Nevertheless, it should be acknowledged that this fact should also affect the effectiveness of the introduction of innovative technologies in local governance processes.

Androniceanu et al. (2022) studied the processes of digitalisation of public administration and their impact on corruption in EU member states. The study emphasised that the digital transformation of public administration in the EU countries is influenced by a range of factors, including technological, economic, administrative, managerial and strategic, educational and political considerations. Apart from increasing efficiency, the digitalisation of public services and governance is a tool for fighting corruption (Addo, 2021). The study proposes to use the Corruption-Digitalisation Correlation Index, which highlights a significant correlation of 89.02%, confirming that increased digitalisation is correlated with improved public administration. This leads to the conclusion that e-government is a strong factor in controlling corruption and competitiveness. The study on the digitalisation of TCs in Ukraine mentions some other benefits that can be derived from the introduction of digital technologies at the state level, but it will be much more difficult for government officials to carry out any corruption schemes in the case of automation of management processes (Nikolina et al., 2020).

Thus, the use of the latest technologies for this purpose is also relevant. Pomaza-Ponomarenko et al. (2020) investigated the mechanisms of governance in the context of digitalisation of all spheres of society. The conclusions of this study showed that modernisation of public policy through digitalisation does not necessarily lead to an improvement in the quality of life of the population. This is influenced by many factors, including the digitalisation of public administration, but it is not the only component of the impact. The relationship between these two values is not straightforward. Furthermore, scientists have noted that the development of digitalisation in the private sector is considerably faster than in the public sector. This means that the private sector and enterprises are the main innovators and early adopters of digital technologies, leaving more opportunities for government to innovate, while society has limited influence on digital development, integration, and governance (Haefner and Sternberg, 2020; Gabryelczyk, 2020; Larsson, 2021). Earlier in the study, despite all the positive aspects of the introduction of digital technologies at the state level, it was not possible to conclude on their negative impact on

community development. However, if there are any negative effects, they are much smaller than the positive ones (Luo, 2022). In this context, the conclusions of the studies differ. A separate study may be required to reach a definitive conclusion on this issue.

Lindgren et al. (2019) addressed the importance of raising awareness of the impact of digitalisation on the interaction between citizens and authorities in the context of public services. The researchers believe that it is essential to provide government officials and the public with information on how digitalisation can improve the general functioning of the public sector and in terms of its interaction with the public specifically. It was also noted above that one of the main advantages of using digital technologies for public authorities is interaction with the population, given the opportunity to better understand their needs and engage them in solving problems critical to the community. However, it is worth remembering that cooperation with businesses and investors is equally important.

Sabirov et al. (2021) investigated ways to improve the investment environment. They emphasised the importance of investment as a crucial driver of economic growth, with a particular focus on tangible investment at the enterprise level to increase the utilisation of fixed assets, production capacity, and labour productivity. The analysis identifies problems with the full use of opportunities to attract foreign investment, including insufficient knowledge and experience of enterprises in foreign markets, and lack of complete information among the parties involved in the investment process. To address these issues, the document proposes a range of measures, including strengthening international measures to promote and assess the investment climate, developing information and communication technologies in providing services to investors, creating favourable conditions for foreign banks and companies, and intensifying joint investment in infrastructure. Furthermore, researchers recommend developing investment infrastructure, such as the stock market and investment funds. The latter initially includes establishing a legal framework for regional accumulation funds, introducing criteria for the distribution of public funds based on the socio-economic development of the region, determining the ratio of public and private financing, setting deadlines for project selection, defining the necessary documents for transferring funds, providing short-term state support, and increasing transparency of information for investors (Edelmann and Mergel, 2021). The benefits of attracting investment to the region have not been described in detail, but they are important for the effective development of the country. Admittedly, these methods of attracting investment are effective, but in today's environment, the extent to which the latest technologies are widespread in the region, including at the level of government, is playing an increasingly significant role. This is what should be given the most attention in achieving the goals of improving the investment environment.

Scupola and Mergel (2022) tried to understand how public authorities use co-production to digitally transform public service delivery and create public value in Denmark. The findings show that co-production has played a crucial role in successful digital transformation at various stages and levels. It included interaction between central, local, and regional governments, private sector actors and non-governmental organisations in the formulation and implementation of digital strategies and policies. Considering this, researchers recommend applying a holistic approach to co-production at all levels, considering opportunities for joint financing and project implementation, and involving stakeholders

in all stages of co-production. Interaction between entrepreneurs, investors, government officials, and local residents is significant for achieving various development goals, including sustainable development, as noted in the study above. Given that enhanced interaction between these representatives is possible, among other things, through the development of innovative technologies, this component should be given special attention by the state authorities, both local and regional.

V. Conclusion

The study examined the process of digital transformation for local self-government in Ukrainian TCs. It was concluded that artificial intelligence is one of the most relevant technologies that should be included as a key component of technical support. Despite current limitations, artificial intelligence can substantially contribute to the analysis of various factors affecting regions, helping authorities make decisions and providing valuable information to potential investors. The real benefits of the reform of uniting districts into TCs were also considered. It was proven to allow for more efficient resource allocation and management. Nevertheless, the reform increases the probability of corruption schemes at the local level, which suggests that more attention should be paid to this by state representatives. The study mentioned certain indices (EGDI and EPI) that assess the use of digital technologies by government representatives. These indices helped to identify some positive trends that point to the gradual digitalisation of public administration. The Ministry of Digital Transformation has also launched an initiative to create its own index to assess the level of digitalisation: it has proposed to create an index to assess digital transformation at the level of local communities.

The study concluded that digitalisation can considerably improve the efficiency of the public administration apparatus. Nevertheless, the benefits of this technology can be used, among other things, to attract more active investment. Thus, TCs can use digital technologies to automate and simplify administrative processes, combined with the creation of digital platforms for submitting documents and obtaining permits, which facilitate smoother interaction with potential investors. Increasing the availability of data through centralised data collection points and involving local authorities as intermediaries between investors and businesses can also increase transparency and make decision-making faster and more efficient. All this, combined with other benefits from the digitalisation of local governance, will significantly improve the investment environment of TCs.

It is relevant for future research to assess the possibilities of ensuring the use of the latest technologies not only at the level of TCs, but also in the country as a whole. Further research could delve into assessing the impact of specific technologies, such as blockchain, AI-driven data analytics, and IoT, on improving governance and investment climates within TCs. Additionally, evaluating the effectiveness of already implemented digital policies, like Ukraine's e-governance platforms or the Digital Transformation Index for Communities, could provide insights into their real-world applicability and areas for improvement. Comparative studies with other countries that have undergone similar reforms may also yield valuable lessons for optimizing Ukraine's digital transformation strategy.

Furthermore, it is worth exploring in greater depth what other options exist to ensure a greater level of investment attractiveness in the country.

References

Addo, A. (2021). Controlling petty corruption in public administrations of developing countries through digitalization: An opportunity theory informed study of Ghana customs. *The Information Society*, 37(2), 99–114. https://doi.org/10.1080/01972243.2020.1870182

Androniceanu, A., Georgescu, I., Kinnunen, J. (2022). Public administration digitalization and corruption in the EU member states. A comparative and correlative research analysis. *Transylvanian Review of Administrative Sciences*, 65, 5–22. https://doi.org/10.24193/tras.65e.1

Bandura, R. Staguhn, J. (2023). *Digital Will Drive Ukraine's Modernization*. Retrieved from https://www.csis.org/analysis/digital-will-drive-ukraines-modernization

Charfeddine, L., Umlai, M. (2023). ICT sector, digitization and environmental sustainability: A systematic review of the literature from 2000 to 2022. *Renewable and Sustainable Energy Reviews*, 184, 113482. https://doi.org/10.1016/j.rser.2023.113482

Edelmann, N., Mergel, I. (2021). Co-production of digital public services in Austrian public administrations. *Administrative Science*, 11(1), 22. https://doi.org/10.3390/admsci1101-0022

Gabryelczyk, R. (2020). Has COVID-19 Accelerated digital transformation? Initial lessons learned for public administrations. *Information Systems Management*, 37(4), 303–309. https://doi.org/10.1080/10580530.2020.1820633

Giulio, M. D., Vecchi, G. (2023). Implementing digitalization in the public sector. Technologies, agency, and governance. *Public Policy and Administration*, 38(2), 133–158. https://doi.org/10.1177/09520767211023283

Goodman, A., Taylor, D. (2019). *How governments can harness the power of automation at scale*. Retrieved from https://www.mckinsey.com/industries/public-sector/our-insights/how-governments-can-harness-the-power-of-automation-at-scale

Haefner, L., Sternberg, R. (2020). Spatial implications of digitization: State of the field and research agenda. *Geography Compass*, 14(12), e12544. https://doi.org/10.1111/gec3.12544

Index of digital transformation of Ukrainian communities. Methodology of measurement. (2023). Retrieved from http://surl.li/jfwey

Larsson, K. K. (2021). Digitization or equality: When government automation covers some, but not all citizens. *Government Information Quarterly*, 38(1), 101547. https://doi.org/10.1016/j.giq.2020.101547

Lee, C. C., He, Z. W., Yuan, Z. (2023). A pathway to sustainable development: Digitization and green productivity. *Energy Economics*, 124, 106772. https://doi.org/10.1016/j.eneco.2023.106772

Likarchuk, N., Andrieieva, O., Kutepova, M., Dzvinchuk, D., Buriak, I. (2021). Improvement of mechanisms of public management of the Ukrainian economy in the context of the COVID-19 pandemic: Foreign experience, Ukrainian realities. *Financial and Credit Activities: Problems of Theory and Practice*, 41(6), 437–447.

Lindgren, I., Madsen, C. Ø., Hofmann, S., Melin, U. (2019). Close encounters of the digital kind: A research agenda for the digitalization of public services. *Government Information Quarterly*, 36(3), 427–436. https://doi.org/10.1016/j.giq.2019.03.002

Luo, Y. (2022). A general framework of digitization risks in international business. *Journal of International Business Studies*, 53, 344–361. https://doi.org/10.1057/s41267-021-004-48-9

Metelenko, N., Khlivna, I., Syta, Y., Hlynskyy, N., Simonenko, A., Sizonenko, S. (2020). Digitalization of the management system of administrative territorial units of Ukraine. *Estudios, de Economia Aplicada*, 38(4), 1–8. https://doi.org/10.25115/eea.v38i4.4051

Nikolina, I. I., Hulivata, I. O., Husak, L. P., Radzihovska, L. M., Nikolina, I. I. (2020). Assessment of digitalization of public management and administration at the level of territorial communities. *Naukovyi Visnyk Natsionalnoho Hirnychoho Universytetu*, 5, 150–156. https://doi.org/10.33271/nvngu/2020-5/150

Piskokha, N. (2021). Digital transformation of local self-government: Defining the concept and directions of formation of digital communities. *Public Administration Aspects*, 9(6), 39–45.

Pomaza-Ponomarenko, A. L., Hren, L. M., Durman, O. L., Bondarchuk, N. V., Vorobets, V. (2020). Management mechanisms in the context of digitization of all spheres of society. *Revista San Gregorio*, 42, 1–9.

Prus, P. Sikora, M. (2021). The impact of transport infrastructure on the sustainable development of the region – Case study. *Agriculture*, 11(4), 279. https://doi.org/10.3390/agriculture11040279

Ritter, T., Pedersen, C. L. (2020). Digitization capability and the digitalization of business models in business-to-business firms: Past, present, and future. *Industrial Marketing Management*, 86, 180–190. https://doi.org/10.1016/j.indmarman.2019.11.019

Sabirov, O. S., Berdiyarov, B. T., Yusupov, A. S., Absalamov, A. T., Berdibekov, A. I. U. (2021). Improving ways to increase the attitude of the investment environment. *Revista Gestão Inovação e Tecnologias*, 11(2), 1961–1975. https://doi.org/10.47059/revistageintec.v11i2.1811

Scupola, A., Mergel, I. (2022). Co-production in digital transformation of public administration and public value creation: The case of Denmark. *Government Information Quarterly*, 39(1), 101650. https://doi.org/10.1016/j.giq.2021.101650

Sodoma, R., Sadura, O., Kudak, K., Kotys, N., Panukhnyk, O., Blishchuk, K. (2023). Territorial communities of Ukraine in the context of decentralization. *Management Theory and Studies for Rural Business and Infrastructure Development*, 45(3), 306–313.

The ministry of digital transformation will annually assess the level of digitalisation of communities. (2023). Retrieved from https://decentralization.gov.ua/news/16894

UN E-Government Knowledgebase. (2023). Retrieved from https://publicadministration.un.org/egovkb/en-us/Data/Country-Information/id/180-Ukraine/dataYear/2008