

Integrative Digital Governance: The Role of Public Administration in Promoting Sustainable Development amid Post-Pandemic Technological Innovations

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Abstract. *Our study intends to find out how integrative digital governance in public administration can support sustainable development. The Covid-19 pandemic's effects and current technology developments presented the chance. Mainly qualitative analysis, which included case study analysis and a review of the specialized literature, made up the research approach. Using this approach, we want to find potential approaches to include digital transformation into public administration. Our initial assumption was that the digitalization of public administration might make it easier to accomplish goals related to global development.*

Based on the findings of our study, we can declare that digitisation of public administration has a great potential to boost effectiveness, openness and civic engagement. Technologies would make participation easier and guarantee equal access for all citizens. All the same, our study emphasizes how complicated digitalization is. This covers the possible hazards connected to digital technology included into systems of public administration. We underline as recommendations the need of implementing a cooperation strategy that includes several activity sectors and degrees of digital governance. Our study has certain limitations mostly because we chose a limited number of case studies. This reality, we think, may affect the general applicability of the obtained results. We advise considering these restrictions in case our study is replicated. Furthermore, we think that the rate at which technology is developing now calls for a constant assessment of the outcomes that are attained by incorporating post-pandemic technological advancements into digital governance. Our study adds value by advancing our understanding of sustainable development in the digital era and by drawing attention to the challenges public administration has in embracing and leveraging digital developments.

Keywords: Integrative Digital Governance, Public Administration, Sustainable Development, Post-Pandemic Technological Innovations.

Introduction

Unexpected difficulties as well as opportunities for public administration have been brought about by the Covid-19 health crisis worldwide. These reverberated in terms of sustainable development as well. Present developments have shown how digital technologies have evolved remarkably. People and organisations can now more easily adopt digitisation thanks to increased efficiency brought about by the broad use of these technologies. Within this framework, I got the chance to research the current e-government initiatives. First, we looked over research on integrative digital governance. Digital revolution and public administration are combined in this idea. Our goal was to comprehend how this idea might support sustainable development following the epidemic and strengthen public administration at the same time. Our investigation concentrated on potential advantages of digitising administrative procedures in order to support the attainment of sustainable development objectives. At the rate that technology is developing, governments everywhere are probably going to adjust and advance. The study of digital governance so becomes pertinent to the present circumstances and helpful.

We began our study on the basis that digital governance might facilitate a partial reform of public administration by enabling the enhancement of operational effectiveness, openness, civic engagement, and, in turn, social inclusion. With this adjustment, the government might be able to take part in sustainable development. By use of a qualitative methodology, we investigated the expectations, experiences, and perceptions of stakeholders in public administration. The present knowledge of digital governance in the framework of sustainable development has been enhanced by our analysis of the case studies and literature. We emphasized the benefits as well as the drawbacks of using digital technologies in public administration.

Literature review

Digital governance in public administration with direct and immediate influences in the field of sustainable development has been the subject of many discussions and academic studies. In our previous works (Burlacu et al. 2023) we supported the idea of providing equal and inclusive services, emphasising the importance of sociocultural sustainability in public services. These ideas are also found in one form or another in the research done by Meijer and Bolívar (2016). Moreover, a suite of current works examines the transformative potential of digital technology on public governance (Burlacu, Rădulescu, Bălu and Dobre, 2023; Meijer and Bolívar, 2016).

Rădulescu et al. (2023) studied sustainable development from the perspective of public administration practices. Such research is also found in other current works such as Gil-Garcia, Helbig, and Ojo (2014), which examine the broader consequences of digital governance.

According to the results obtained by Mergel, Edelmann and Haug (2019), digital governance is essential for achieving the UN Sustainable Development Goals. In another paper (Burlacu et al., 2022), in which we focused on the sustainable development of the Romanian public administration, he reinforced this point of view. Similar conclusions can be found in the studies of Mergel, Edelmann, & Haug, (2019) or Burlacu, Pârgaru, Iacob, & Gombos, (2022).

Two years ago (Burlacu, Stoica, Giucă, and Sterie, 2022) we examined the socio-economic effects of rural population migration and obtained a distinct perspective on the wider societal impact of public administration policies. This investigation is similar to that made by Dunleavy and Margetts (2015) on how digital technologies affect transparency and efficiency in the public sector.

Bannister and Connolly (2015) argue for the unquestioning adoption of digital tools in public administration. Alpopi et al. (2022) analyze Romania's progress in achieving Sustainable Development Goal 11. In the research carried out by Negescu et al. (2021) or Burlacu et al. (2021) on the digitisation of public administration during the COVID-19 pandemic and public administration resilience, the results reflect the rapid changes and challenges faced by public administrations around the world. According to Janowski's (2015) study, digital governance is vital for sustainable development in the 21st century and understanding the wider effects of digital transformation on public administration would require taking this perspective into account. Our study (Burlacu, 2021) advances knowledge about digital governance and its impact on public sector reforms by concentrating on the trends and problems that might arise in the field of collaborative innovation in governance. Criado, Sandoval-Almazan and Gil-Garcia (2013) argue that it would be essential for stakeholders to be involved in digital governance and encourage the participation of different groups in digitization processes to guarantee equity and equal opportunities. These conclusions would support our findings from 2022 (Burlacu et al., 2022a) in which we had conclude that some projects financed through the Administrative Capacity Operational Program would have the same objective. As Criado, Sandoval-Almazan and Gil-Garcia (2013) but also Burlacu, Lădaru, Călin and Chiriță (2022) pointed out, digital governance initiatives are increasingly common throughout the world.

But Reddick and Frank (2017) discuss how the digital divide affects guaranteeing fair access to government services. Their study adds to earlier studies and emphasizes how crucial more comprehensive digital governance plans are to satisfy the needs of all people, especially those living in underprivileged areas.

We see from this thorough review of the literature that the need of digital governance in modernizing public administration and advancing sustainable development objectives is becoming more widely acknowledged. These research allow us to justify the need of thorough and well-structured worldwide plans for public administration digitisation. In this sense, digitization can be applied as a tool for social and economic advancement, particularly in the always changing post-pandemic period.

Methodology

In this research, we used a qualitative method to investigate the impact of digital governance on public administration. This approach was the best one to improve a thorough grasp of the experiences, views, and expectations of the parties concerned, thus we selected it. Examining multiple case studies and the specialized literature was how the data was gathered. The case studies underwent a detailed analysis of the procedures used by public administrations that have adopted digital governance projects. The availability of data and relevance of these administrations to the research topic determined their selection. Using theme analysis, the literature review sought to recognize and understand new patterns. To get meanings and conclusions, relevant themes had to be categorized and combined. Our study employed source triangulation to ensure the validity and correctness of the results by enabling us to compare and confirm data obtained from different sources..

Results and Discussions

The findings of the study provided us with a number of viewpoints on how integrated digital governance might increase public administration efficiency, such:

Worldwide, public administrations' operational effectiveness and transparency have been much enhanced by the adoption of digital governance. Using digital tools has made processes easier to follow, got over administrative roadblocks, and made information distribution better, which has improved accountability and openness.

The obtained results indicate that the tools of digital governance have given people more chances to participate in civic activities. Public interest debates are now more easily accessible to citizens thanks to digital platforms.

In this way, participation in decision-making procedures was encouraged and easier access to public services was provided, thus strengthening democracy.

The application of digital governance presented certain difficulties. Digital governance has certain well acknowledged benefits, but there are also some significant challenges to its application. These include technical and/or functional restrictions in the digital infrastructure, disparities in citizens' unrestricted access to digital resources, and resistance to change or reluctance to accept change among public administration staff. The importance of continuous lifelong learning and capacity building to ensure the most effective adoption and use of digital technologies emerged unequivocally.

Analyzing the obtained results emphasizes how crucial it is to implement digital governance by enacting relevant laws and coherent policies in the field of digitization.

We suggest that the regulatory framework establish a safe, responsible, and responsible digital environment by primarily taking data privacy, cyber security, and a number of ethical issues into account.

Our study emphasizes the need of social inclusion in digital governance for it to successfully support sustainable development. This would mean making sure that, free from prejudice, digital efforts are available to all spheres of activity and the entire population. This would entail promoting the creation of fair digital public services, so including vulnerable and marginalized groups.

Effective application of digital governance would also need the deliberate integration of digital technologies into the broader public administration framework. This would need coordinating digital projects with the general goals and objectives of public sector institutions.

At the same time, it would ensure their harmonization with conventional methods of governance.

The primary aspects of digital governance in public administration as derived from the literature review are enumerated in Table 1. These characteristics back the contribution of digital governance to sustainable development in public administration's post-pandemic resilience. The table is meant to make it easier to comprehend each finding, which is derived from concepts that surfaced during the study of the specialized literature.

Table 1. Overview of Digital Governance in Public Administration: Synthesis of key literature

Author(s)	Key Ideas	Keywords	Findings
Meijer & Bolívar (2016)	Transformative potential of digital technology in public governance.	Digital Transformation, Public Governance	Digitalization reshapes governance structures for better inclusivity and efficiency.
Burlacu et al. (2023)	Sociocultural sustainability and equitable inclusive service delivery.	Inclusivity, Socio-Cultural Sustainability	The focus on inclusive service delivery improves sociocultural aspects of sustainability.

Author(s)	Key Ideas	Keywords	Findings
Dunleavy & Margetts (2015)	Impact of digital technologies on public sector efficiency and transparency.	Efficiency, Transparency, Public Sector	Digital tools streamline administrative processes and improve accountability.
Criado, Sandoval-Almazan, & Gil-Garcia (2013)	Importance of civic engagement and participation in digital governance.	Civic Engagement, Digital Platforms	Increased public participation through digital platforms strengthens democracy.
Bannister & Connolly (2015)	Challenges and risks in digitalisation: privacy, security, digital divide.	Digital Divide, Privacy, Security	Need for robust regulatory frameworks to address digitalisation challenges.
Mergel, Edelmann & Haug (2019)	Digital Governance's Role in achieving Sustainable Development Goals.	Sustainable Development Goals, Resource Management	Digital tools aid in the effective implementation of sustainable development goals.
Reddick & Frank (2017)	Implications of the digital divide for equitable access to government services.	Equitable Access, Government Services	Addressing the digital divide is critical for equitable access to digital governance.
Negescu et al. (2021)	Acceleration and resilience of digitalisation in public administration after COVID-19.	Resilience, COVID-19, Adaptation	The pandemic highlights the need for digitalisation for resilience to governance.
Burlacu (2021)	Emerging Trends and Challenges in IT Governance in Public Administration.	IT Governance, Emerging Trends	The emerging of new challenges in IT governance requires ongoing adaptation.
Rădulescu et al. (2023)	Strategic and holistic approach in integrating digital technologies.	Strategic Integration, Holistic Approach	Effective digital integration needs alignment with broader organisational goals.

Source: Authors' own research.

The review of the literature concentrated on digital governance in public administration in the framework of sustainable development. Our results can be divided into the subsequent groups:

1. Transformative potential: Previous research, including that of Meijer & Bolívar (2016) and Burlacu et al. (2023), found that digitization has the potential to change public governance. We thus observe that it can make governance more transparent, efficient and inclusive than the simple use of technology.

2. Improving efficiency and transparency: Studies by Dunleavy and Margetts (2015) showed that the public sector has become more efficient and transparent thanks to digital technologies. In these studies, we note that digital tools have partly simplified the administrative procedures. This has made government more effective and responsible.

3. Improved public involvement: Research by Criado, Sandoval-Almazan and Gil-Garcia (2013) demonstrated that public involvement has increased largely due to digital governance. Better citizen-government communication was found to have resulted from digital platforms. Therefore, we find that democracy and the provision of public services of general interest have been improved.

4. Challenges of digitization: Bannister & Connolly (2015) and Reddick & Frank (2017) identified several challenges of digitization such as citizens' unequal access to technology, privacy concerns of authorities and security threats. We consider that in this context a regulatory system adapted to the new realities may be necessary

5. Contribution to sustainable development goals: Studies by Mergel, Edelmann and Haug (2019) and by Burlacu et al. (2022) showed how digital governance can contribute to the achievement of sustainable development goals. We thus discover that digital tools support resource management, policy execution, and sustainable governance.

6. Involvement of interested parties and inclusion: Some studies claim that for equitable and sustainable development it would be essential to involve interested parties as well as ensure social inclusion in digitization. All facets of society, including marginalized groups, can participate in this way.

7. Digitization accelerated by COVID-19: Research by Negescu et al. (2021) showed that the COVID-19 pandemic accelerated the need for digital transformation in public administration. Discover the undeniable importance of adaptation and resilience in the dynamic post-pandemic era.

The strategic method of adopting digital technologies: The studies of Burlacu (2021) and Rădulescu et al. (2023) pointed out that a strategic approach is essential for the adoption of digital technologies in public administration. We therefore think it crucial that digital initiatives support current governance methods and are in line with the objectives of the organization.

The key ideas about digital governance in public administration are visually summarized in a bar chart found in Figure 1. Each bar indicates the frequency with which certain topics were addressed by stakeholders.

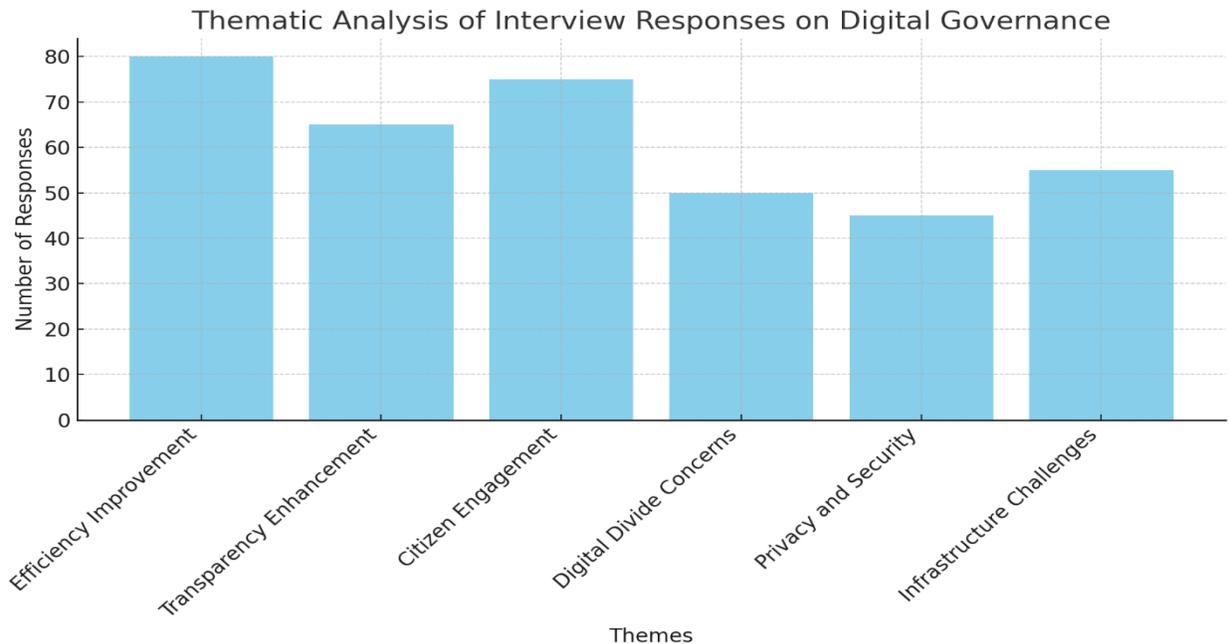


Figure 1. Stakeholder Perspectives on Digital Governance Initiatives

Source: Authors' own research.

As the bar chart indicates, stakeholders think that the top priorities in digital governance would be "Improving efficiency" and "Involvement of citizens". "Improving transparency" is also indicated to be significant. On the other hand, "Digital Divide Concerns" and "Privacy and Security" are critical areas that would require immediate attention to mitigate the risks associated with digital governance.

Conclusions

We investigated integrative digital governance in public administration, emphasizing its capacity to raise citizen participation in democracy and, on the one hand, to improve the effectiveness of the government.

Some basic things are revealed to us by the research results:

The first would be that, although having several benefits, implementing integrative digital governance in public administration is frequently fraught with difficulties. Among these are concerns to security, privacy, and the possibility of citizens' digital divides growing.

These challenges can be overcome if digital governance is managed with caution and digitisation is not a goal. We recommend that every study of the digital transformation of public administration be approached from the perspective of both the benefits and the associated risks.

A second essential aspect is given by the fact that the research results give us some essential suggestions to continue. It is recommended of public administrations to have or put into practice plans to guarantee that integrative digital governance is linked to social development and technical breakthroughs. It would be required to create and recurrently update policies in the field in order to lower the risks connected with the adoption of new digital technologies, particularly with relation to the risks connected with the security and confidentiality of personal data. Moreover, funding digitization specialists' and user staff's training is crucial to provide public administration staff members the abilities they need to use digital tools safely and successfully.

The digital divide would be another important factor that our study revealed. This part has to be given particular attention to guaranteeing citizens' access to digital services. This is crucial to prevent the divide between people who have access to electronic services and those who are not growing.

Lastly, more study would be needed to monitor how well integrative digital governance is implemented over time. Following this advice will help public administration to fully utilize integrative digital governance. Pointing out the limits of our study is equally crucial, though. The emphasis we put on the analysis of specific studies and on the review of the scientific literature available in (prestigious, by the way) indexed in international databases could limit the generalization of the findings. Furthermore, the quick development of digital technology nowadays can imply that the study's scope will be soon outgrown, which means that current research has to stay current.

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