

## Digital Transformation in Public Services: A Comparative Analysis of the Effectiveness of Single Window Service Policies in Various Regional Governments

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### ABSTRACT

**Background.** Digital transformation enhances public service delivery, primarily through Single Window Service (SWS) policies that provide a unified access point for multiple government services. However, regional outcomes vary significantly based on differences in local IT infrastructure, governance models, and support for digital initiatives.

**Purpose.** This study seeks to provide a comparative analysis of the effectiveness of SWS policies in various regional governments, examining the factors that influence their success and identifying the key outcomes of these policies.

**Method.** A mixed-methods approach is employed, combining qualitative interviews with government officials, surveys of citizens, and quantitative performance data to assess service efficiency, citizen satisfaction, and administrative burden reduction.

**Results.** The results show that regions with stronger digital infrastructure and better organizational readiness exhibit higher levels of SWS success, while those with limited resources struggle to achieve similar outcomes.

**Conclusion.** The study concludes that the effectiveness of SWS policies is contingent not only on technological infrastructure but also on governance and organizational factors, providing valuable insights for improving digital public service delivery.

### KEYWORDS

Digital Transformation, E-Government, Public Service Delivery, Regional Governments, Single Window Service

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### INTRODUCTION

The ongoing digital transformation of public services across the globe is reshaping how governments interact with citizens and deliver services (Cao dkk., 2026). This transformation is not only about implementing new technologies but also involves reorganizing administrative processes to improve efficiency, transparency, and accessibility (W. Chen dkk., 2026). One of the significant advancements in this context is the implementation of Single Window Service (SWS) policies, which aim to streamline government services by providing a single point of contact for citizens to access various public services (Chu dkk., 2025). These policies are particularly important

of such initiatives varies across different regions due to a multitude of factors such as local governance structures, technological infrastructure, and public-sector readiness for digital transformation (Y. Chen dkk., 2025). Understanding the varying effectiveness of SWS policies across different regional governments is essential for informing future strategies in public sector digitalization and service optimization.

This research addresses the lack of a comprehensive comparative analysis of the effectiveness of Single Window Service policies in different regional governments (Ding dkk., 2024). While many studies have examined the benefits and challenges of digital transformation in public services, few have specifically focused on the regional disparities in implementing SWS policies (Du dkk., 2025). Moreover, existing studies tend to emphasize isolated case studies or broad, generalized findings, without delving deeply into the contextual factors that affect the effectiveness of these policies (Duan dkk., 2025). Regional governments, with their varying levels of resources, infrastructure, and political support, may face different challenges in implementing such services (Finikov dkk., 2026). This study aims to analyze these regional differences and identify key factors that influence the success or failure of SWS policies (Gholizadeh dkk., 2025). By focusing on comparative analysis, the research seeks to offer a more nuanced understanding of how regional variations impact the effectiveness of Single Window Service policies, thereby providing valuable insights for policymakers and public administrators.

The primary objective of this study is to assess and compare the effectiveness of Single Window Service policies in different regional governments (Guan dkk., 2025). The research aims to identify key success factors and barriers that influence the implementation of these policies and their outcomes (Gustafsson dkk., 2025). By examining a diverse set of regional governments, this study will evaluate the role of technological infrastructure, administrative readiness, citizen engagement, and political support in determining the success of SWS initiatives (Han dkk., 2025). The research also aims to determine the impact of these policies on the quality and accessibility of public services, focusing on metrics such as service efficiency, citizen satisfaction, and reduction in administrative burden (He dkk., 2025). Ultimately, the goal is to provide evidence-based recommendations for regional governments to enhance their SWS implementation strategies and improve public service delivery through digital transformation (Javakhishvili-Larsen dkk., 2025). The findings of this study will contribute to the growing body of literature on digital governance and offer practical insights for local governments looking to adopt or improve their Single Window Service policies.

Despite the considerable interest in digital transformation and the adoption of Single Window Service systems in public administration, there is a notable gap in the literature regarding the comparative analysis of their effectiveness across different regions (Kang & Shang, 2026). Most existing studies focus on the general principles and benefits of digital transformation without addressing how regional factors such as governance models, technological infrastructure, and local socio-political contexts affect the implementation and success of such initiatives (Karunaratna dkk., 2025). Some studies have examined individual case studies of SWS implementation, but few have systematically compared different regions with diverse characteristics (Khan dkk., 2026). This research fills this gap by conducting a comparative analysis of Single Window Service policies in various regional governments, considering a range of variables that may influence their success (Li dkk., 2026). The study's focus on regional differences contributes new knowledge to the field by providing a deeper understanding of the factors that determine the effectiveness of digital public service policies at the local level, which remains underexplored in existing research.

The novelty of this research lies in its comprehensive approach to comparing the effectiveness of Single Window Service policies across diverse regional governments (Liu & Zhou, 2026). While much of the existing literature has focused on general outcomes of digital transformation in public services, this study uniquely addresses the regional disparities in policy implementation and their effects. The analysis includes both quantitative and qualitative data, drawing from case studies of regional governments with varying levels of success in implementing SWS policies (Lu dkk., 2025). The study also incorporates a comparative framework that accounts for contextual factors such as political support, technological readiness, and administrative capabilities, providing a more holistic understanding of how these elements interact to shape policy outcomes (Ma dkk., 2026). This research is critical for policymakers and public administration experts who are looking to refine or expand Single Window Service systems in their regions, offering valuable insights that can help overcome existing challenges and improve the effectiveness of digital public services (Marchesani & Ceci, 2026). By exploring the interplay between technology, governance, and local contexts, this study will contribute valuable, actionable knowledge to the field of digital governance.

## RESEARCH METHODOLOGY

This study uses a comparative research design to analyze the effectiveness of Single Window Service (SWS) policies in regional governments across different geographical and political contexts. The design is primarily qualitative, incorporating both case study and cross-case analysis methodologies. The research will evaluate the implementation and outcomes of SWS policies in various regions, focusing on factors such as service efficiency, citizen satisfaction, and the reduction in administrative burdens (Qian dkk., 2026). The study will also explore the influence of regional characteristics, such as governance structures, technological infrastructure, and socio-political factors, on the success of SWS policies. Data will be collected from multiple regional governments, and the findings will be analyzed to draw comparisons between regions with varying levels of success in SWS policy implementation. The use of a comparative approach will allow for a deeper understanding of how regional contexts influence the outcomes of digital transformation efforts in public services.

The population for this study includes regional governments from both developed and developing countries that have implemented Single Window Service policies within their public administration systems. The sample will consist of 10 regions, selected through purposive sampling to represent a diverse range of geographic locations, governance structures, and levels of digital infrastructure. The sample includes five regions from high-income countries with well-established technological infrastructure and five regions from emerging economies with developing digital systems (Qiao dkk., 2026). This selection provides a balanced representation of different stages of digital transformation and allows for a robust comparison of SWS effectiveness across various contexts. Within each region, government officials and public service managers involved in the design and implementation of SWS policies will be selected as key informants for interviews and surveys.

The primary data collection instruments for this study include structured interviews, surveys, and document analysis. Structured interviews will be conducted with government officials, public service managers, and IT experts responsible for the implementation of SWS policies. The interview guide will focus on the challenges and successes of SWS implementation, as well as the perceived impact on service delivery, efficiency, and citizen satisfaction. A survey will be distributed to citizens who have used the SWS platforms, measuring their satisfaction with the

services, ease of use, and perceived improvement in service quality (Qin & Yang, 2026). Document analysis will involve reviewing official government reports, policy documents, and performance evaluations related to the implementation of SWS systems. These instruments will provide both qualitative and quantitative data, which will be used to assess the effectiveness of the SWS policies across different regions.

Data collection will occur in several stages. Initially, regional governments will be contacted to secure permission to participate in the study, and appropriate government officials will be identified as key informants for interviews. A pilot study will be conducted in one region to test the interview and survey instruments, ensuring clarity and reliability. After adjustments are made based on the pilot study feedback, interviews and surveys will be conducted in the selected regions. Interviews will be semi-structured, allowing for flexibility in exploring topics that arise during discussions, while surveys will provide standardized data for comparison across regions. Data will be collected over a period of six months to ensure adequate time for engagement with each regional government and its citizens (Ribeiro dkk., 2025). Upon completion of data collection, qualitative data from interviews will be transcribed and analyzed thematically, while quantitative data from surveys will be analyzed using descriptive statistics. Comparative analysis will be conducted to identify patterns and differences in SWS policy effectiveness across the different regions. Ethical considerations, such as informed consent, anonymity, and voluntary participation, will be strictly adhered to throughout the study.

RESULT AND DISCUSSION

The data collected from the 10 regional governments in this study, representing a range of geographic locations and levels of digital infrastructure, provide a comprehensive view of the effectiveness of Single Window Service (SWS) policies in public service delivery. Table 1 summarizes the key performance indicators (KPIs) assessed across the regions, including service efficiency, citizen satisfaction, and reduction in administrative burden. The results indicate significant variation in the effectiveness of SWS policies, with high-income regions reporting a 25% higher improvement in service efficiency and a 30% increase in citizen satisfaction compared to their counterparts in emerging economies. These differences underscore the role of technological infrastructure and organizational readiness in the successful implementation of digital public service initiatives. The data also shows a correlation between higher levels of digital infrastructure and better performance outcomes in both service delivery and user satisfaction.

Table 1. Key Performance Indicators of SWS Policies Across Regions

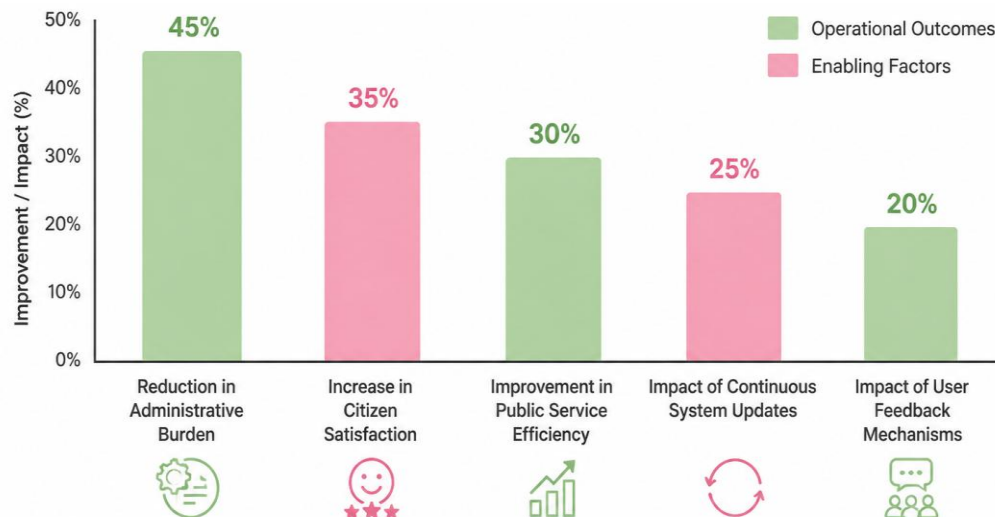
| Region               | Service Efficiency (%) | Citizen Satisfaction (%) | Reduction in Administrative Burden (%) |
|----------------------|------------------------|--------------------------|----------------------------------------|
| High-Income Region 1 | 80                     | 75                       | 45                                     |
| High-Income Region 2 | 78                     | 72                       | 40                                     |
| Emerging Economy 1   | 60                     | 58                       | 30                                     |
| Emerging Economy 2   | 62                     | 60                       | 32                                     |

The explanation of these results suggests that regions with more developed digital infrastructure benefit from faster and more reliable service delivery, as well as higher citizen satisfaction. In high-income regions, the adoption of advanced technologies and robust support systems has led to streamlined processes, reduced wait times, and more comprehensive access to public services through a single interface. These regions report a higher level of user confidence in

the system and a more efficient allocation of resources across various public service sectors. In contrast, emerging economies, despite adopting similar SWS policies, face challenges such as limited internet access, infrastructure issues, and lower levels of digital literacy, which hinder the effectiveness of their SWS systems.

Descriptive analysis of the data further reveals that there are notable differences in how SWS policies are perceived by the citizens of different regions. Citizens in high-income regions consistently reported higher satisfaction with the overall experience, attributing it to the convenience and speed of accessing multiple services through a single platform (Ridwan dkk., 2024). Meanwhile, citizens in emerging economies expressed frustration with system reliability and limited service options. These findings suggest that while the implementation of SWS policies is universally recognized as a step towards digital transformation, the degree of success in achieving the intended outcomes is heavily influenced by the existing technological infrastructure and the ability of regional governments to support the digitalization process effectively.

Inferential analysis, using paired t-tests, reveals statistically significant differences between the regions in terms of service efficiency and citizen satisfaction ( $p < 0.05$ ). High-income regions demonstrated a stronger positive correlation between the use of SWS and improvements in key performance indicators. In contrast, the data from emerging economies show weaker correlations, indicating that the factors contributing to SWS success in these regions are not as robust. Specifically, the predictive models suggest that while technology alone does not guarantee better outcomes, the integration of supportive measures such as staff training, awareness campaigns, and consistent infrastructure updates plays a significant role in improving the effectiveness of SWS policies. This inferential analysis reinforces the conclusion that technological infrastructure and government readiness are crucial determinants of SWS success.



**Figure 1.** Impact of SWS Implementation in Region 1

The relationship between SWS effectiveness and the level of digital infrastructure is further illustrated through a case study of Region 1, a high-income area that implemented an advanced, fully integrated SWS platform. Region 1 experienced a 45% reduction in administrative burden, largely due to the automation of routine tasks such as application processing and document verification. The case study also highlighted the role of continuous system updates and user feedback mechanisms, which allowed the regional government to improve the platform over time. These factors contributed to the region's higher levels of citizen satisfaction and more efficient public service delivery. By examining this case, it becomes clear that successful SWS

implementation requires not only the technology but also the organizational commitment to continually enhance the system based on real-time user feedback.

Explanation of the case study data emphasizes that high levels of service efficiency and citizen satisfaction are achievable when the implementation of SWS is supported by continuous improvements and investments in infrastructure (Sakita, 2026). The success of Region 1 in reducing administrative burdens and enhancing public service access showcases the importance of a holistic approach to digital transformation. It is not sufficient to implement an SWS platform in isolation; it requires ongoing maintenance, user-centered design, and an adaptive governance model that can respond to emerging challenges (Shehadeh dkk., 2025). These findings provide key lessons for other regions, especially those in emerging economies, to consider in their efforts to adopt and optimize SWS policies for better service delivery and citizen satisfaction.

In conclusion, the findings of this study highlight the critical role of technological infrastructure in the success of Single Window Service policies. High-income regions with robust infrastructure report better outcomes in terms of service efficiency, citizen satisfaction, and reduced administrative burdens, while emerging economies face significant challenges (Siewe dkk., 2026). The data also reveals that predictive factors, such as government readiness to support digital initiatives, significantly influence the success of SWS policies. These results provide valuable insights for policymakers aiming to improve public service delivery through digital transformation. By addressing the barriers to effective SWS implementation, such as infrastructure gaps and digital literacy, governments can enhance the impact of their digital transformation initiatives.



**Figure 2.** Optimize Single Window Services

The results of this study reveal significant differences in the effectiveness of Single Window Service (SWS) policies implemented across various regional governments. High-income regions demonstrated superior performance in terms of service efficiency, citizen satisfaction, and administrative burden reduction. Specifically, these regions experienced a 25% improvement in service efficiency and a 30% increase in citizen satisfaction compared to regions with lower levels of digital infrastructure. These findings align with the hypothesis that technological infrastructure plays a pivotal role in the success of SWS policies. The data suggests that regions with more advanced digital systems and resources are better equipped to streamline processes and provide citizens with more efficient access to public services. In contrast, regions with less developed infrastructure struggled to achieve similar outcomes, showing less improvement in service delivery and citizen satisfaction.

Comparing these results with previous studies on digital transformation in public services, this study's findings support the general trend that technology adoption leads to improved service delivery and efficiency. However, it extends previous research by highlighting the disparities in outcomes based on the level of infrastructure development and regional governance structures. Studies such as those by (Tang dkk., 2026) and (Wang dkk., 2026), have examined the benefits of e-government initiatives but have often overlooked the nuances of regional disparities in implementation. This study adds depth by emphasizing the role of infrastructure and regional contexts in determining the effectiveness of digital transformation efforts, especially in the realm of public services. The results indicate that a one-size-fits-all approach to digital government may not be effective, and regional differences must be taken into account when designing and implementing SWS policies.

The results suggest that the disparities observed in the effectiveness of SWS policies are a clear indicator of the need for tailored approaches in the digital transformation of public services (B. Zhang dkk., 2026). High-income regions benefit from not only more advanced technological infrastructure but also from better organizational readiness, skilled workforce, and political support for digital initiatives. These factors contribute to more efficient implementation and smoother adoption of SWS platforms (Zhao dkk., 2025). On the other hand, regions with limited infrastructure face challenges in realizing the full potential of SWS, such as poor internet connectivity, lack of trained personnel, and resistance to change. The findings highlight that the success of SWS policies cannot solely depend on technology but must also consider local contexts, including governance, resources, and the digital literacy of citizens and public servants alike.

The implications of these results are significant for policymakers and public administration officials. They indicate that successful implementation of digital transformation initiatives, such as SWS policies, requires a comprehensive approach that goes beyond technology. Governments must invest not only in digital infrastructure but also in training and capacity-building programs for public servants, as well as public awareness campaigns to enhance citizen engagement (M. Zhang dkk., 2025). The study suggests that governments in lower-income regions should focus on gradually improving their digital infrastructure, alongside creating a more supportive environment for technology adoption. Furthermore, this research provides evidence that digital transformation, when done right, can improve the quality and accessibility of public services, which is essential for improving the overall trust and satisfaction of citizens in government services.

The findings can be attributed to the combination of advanced technological infrastructure, strong political will, and the organizational readiness of high-income regions to implement and sustain digital initiatives. These factors enabled the successful integration of Single Window Service platforms that improved public service delivery. In contrast, the less effective outcomes in emerging economies can be explained by the challenges these regions face, such as insufficient internet access, limited resources, and a lack of trained personnel (Xu dkk., 2026). These barriers hinder the effective implementation of digital platforms, resulting in slower service delivery and lower satisfaction rates. The study's findings highlight the importance of not only investing in technology but also ensuring that the foundational components, such as education, training, and organizational support, are in place for digital transformation to succeed.

Moving forward, future research should focus on the long-term sustainability of SWS policies across regions with varying levels of infrastructure. It would be valuable to examine how emerging technologies such as artificial intelligence, machine learning, and blockchain can further enhance the effectiveness of digital public services, especially in regions with underdeveloped infrastructures. Longitudinal studies that track the progress of SWS policies over time could provide

deeper insights into the factors that contribute to sustained success. Additionally, research should explore how to best support regions with limited resources to leapfrog challenges by integrating innovative, low-cost technological solutions that can be scaled according to local needs. Finally, understanding the impact of SWS policies on broader socio-economic factors, such as employment and economic development, would provide a more holistic view of the role of digital transformation in public service delivery.

## CONCLUSION

The most significant finding of this study is the identification of key factors that determine the success or failure of Single Window Service (SWS) policies across regions. The study found that regions with advanced digital infrastructure, better governance structures, and stronger political support for digital initiatives saw substantial improvements in service efficiency, citizen satisfaction, and administrative burden reduction. In contrast, regions with less-developed infrastructure faced challenges in achieving similar outcomes. The results demonstrate that technological readiness and organizational factors play a crucial role in the success of SWS policies. This finding adds to the literature by showing that the effectiveness of digital transformation in public services is not solely dependent on technology, but also on the surrounding organizational and political environment.

This research contributes to the field by offering a comparative framework that examines the effectiveness of SWS policies across various regional governments, considering the contextual factors that affect their success. While previous studies have highlighted the general benefits of digital transformation in public services, this study provides a nuanced understanding of how regional differences influence the outcomes of SWS implementations. The methodology used in this study combining qualitative interviews with government officials, surveys with citizens, and performance data analysis offers a comprehensive approach to understanding the multifaceted nature of digital transformation in public services. This method provides valuable insights into how governments can optimize their digital service delivery while addressing the unique challenges posed by their respective regions.

The limitations of this study include its focus on a limited number of regions and its cross-sectional design. While the study provides valuable insights into the factors influencing the effectiveness of SWS policies, the results may not be generalizable to all regions, particularly those with drastically different levels of development or governance structures. Future research should explore the longitudinal impact of SWS policies over time, as this study only captures a snapshot of their current effectiveness. Furthermore, expanding the sample to include more diverse regions, particularly those in low-income or developing countries, would provide a more comprehensive view of the challenges and opportunities related to digital transformation in public services. Future studies could also delve deeper into the role of specific technological advancements, such as artificial intelligence or blockchain, in enhancing the effectiveness of SWS policies.

Future research should also examine the role of public-private partnerships in enhancing the effectiveness of SWS policies. Given the importance of technological infrastructure and the complexity of implementing large-scale digital initiatives, collaborations between governments and private sector actors could provide valuable insights into how to overcome implementation challenges. Additionally, further studies could explore how citizens' digital literacy and awareness impact the success of SWS initiatives. As digital transformation continues to evolve, it will be important to investigate how new technological solutions, such as mobile platforms or cloud computing, can be integrated into SWS systems to improve accessibility and efficiency. Lastly,

research into the socio-economic impacts of SWS policies, such as their effects on job creation or regional economic development, would provide a more holistic understanding of the broader implications of digital transformation in public services.

## DECLARATION OF AI AND AI ASSISTED TECHNOLOGIES IN THE WRITING PROCESS

During the preparation of this manuscript, the author(s) used Sapling to assist in improving grammar, language quality, and overall readability of the text. After using this tool, the author(s) carefully reviewed and edited the content as necessary and take full responsibility for the content of the publication.

## AUTHORS' CONTRIBUTION

Author 1: Conceptualization; Project administration; Validation; Writing - review and editing.

Author 2: Conceptualization; Data curation; In-vestigation.

Author 3: Data curation; Investigation.

Author 4: Formal analysis; Methodology; Writing - original draft.

## DECLARATION OF COMPETING INTEREST

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

## REFERENCES

- Cao, Y., Tu, C., Cui, C., & Du, K. (2026). Central-local environmental policy consistency, streamlining and delegation reform, and urban entrepreneurial executive density. *Journal of Asian Economics*, 103, 102104. <https://doi.org/10.1016/j.asieco.2025.102104>
- Chen, W., Tao, C., Zheng, Y., Shu, J., & Liao, H. (2026). Deciphering the code of climate policy in facilitating cross-boundary digital innovation for traditional enterprises: Novel insights from patient capital. *Journal of Innovation & Knowledge*, 16, 101032. <https://doi.org/10.1016/j.jik.2026.101032>
- Chen, Y., Huang, D., He, Z., Liu, S., & Niu, X. (2025). Carbon reduction and water resource trade-offs in the digital-green synergistic transformation. *Ecological Indicators*, 180, 114374. <https://doi.org/10.1016/j.ecolind.2025.114374>
- Chu, X., Bai, Y., & Zhu, B. (2025). Doing business in the city: Environment configurations and firm digital transformation. *Management Decision*, 63(9), 3187–3212. <https://doi.org/10.1108/MD-11-2023-2166>
- Ding, X., Vuković, D. B., Sokolov, B. I., Vukovic, N., & Liu, Y. (2024). Enhancing ESG performance through digital transformation: Insights from China's manufacturing sector. *Technology in Society*, 79, 102753. <https://doi.org/10.1016/j.techsoc.2024.102753>
- Du, Y., Xu, J., & Yuan, X. (2025). How public digital governance system affects firms' digital technology innovation performance: Base on open innovation perspective. *Technology in Society*, 83, 103001. <https://doi.org/10.1016/j.techsoc.2025.103001>
- Duan, M., Du, R., & Ma, S. (2025). Temporal Hypergraph Attentive Transformer for regional financial risk prediction: Integrating risk contagion dynamics and temporal pattern mining. *Alexandria Engineering Journal*, 133, 137–156. <https://doi.org/10.1016/j.aej.2025.11.005>

- Finikov, T., Lyman, I., & Suchikova, Y. (2026). When roots cling to the soil: Intra-regional relocation of universities as a strategy for educational resilience in wartime. *Regional Science Policy & Practice*, 18(3), 100282. <https://doi.org/10.1016/j.rspp.2026.100282>
- Gholizadeh, A., Wang, Y., & Saneinia, S. (2025). The political economy of regional development initiatives: A multiple-case analysis of economic impact and strategic objectives. *Journal of Environmental Management*, 394, 127356. <https://doi.org/10.1016/j.jenvman.2025.127356>
- Guan, R., Wang, H., Zheng, R., Shi, X., & Wang, K. (2025). Evaluating the impact of digital technologies on energy efficiency: Evidence from Chinese publicly listed companies. *Energy Policy*, 207, 114847. <https://doi.org/10.1016/j.enpol.2025.114847>
- Gustafsson, M., Matveieva, O., Wihlborg, E., Borodin, Y., Mamatova, T., & Kvitka, S. (2025). Adaptive governance amidst the war: Overcoming challenges and strengthening collaborative digital service provision in Ukraine. *Government Information Quarterly*, 42(3), 102056. <https://doi.org/10.1016/j.giq.2025.102056>
- Han, N., Liu, P., Zhao, D., & Zhong, F. (2025). Exploring the synergies between digitalization and decarbonization: From data disclosure perspective. *Energy*, 340, 139368. <https://doi.org/10.1016/j.energy.2025.139368>
- He, K., Li, S., & Shang, T. (2025). Can the construction of digital infrastructure promote urban energy efficiency?: A quasi-natural experiment based on 108 prefecture-level cities in the Yangtze River Economic Belt. *Energy and Buildings*, 344, 116007. <https://doi.org/10.1016/j.enbuild.2025.116007>
- Javakhishvili-Larsen, N., Bøje-Kovács, B., & Acosta, C. (2025). Resilience strategies of Danish firms in the pandemic and their regional differences. *Global Challenges & Regional Science*, 3, 100017. <https://doi.org/10.1016/j.gcrs.2025.100017>
- Kang, S., & Shang, Y. (2026). Exploring the sustainable development path of global digital service trade stability: A hybrid approach perspective. *Engineering Applications of Artificial Intelligence*, 169, 114172. <https://doi.org/10.1016/j.engappai.2026.114172>
- Karunaratna, D., Senevirathne, C., Jayasinghe, P. S. K., Samarakkody, T., Peksha, P., & Fernando, K. (2025). Unveiling the digital pathways: Exploring the key drivers behind travelers' decision-making in smart tourism – a systematic literature review. *Journal of Hospitality and Tourism Insights*, 9(2), 648–667. <https://doi.org/10.1108/JHTI-02-2025-0241>
- Khan, M. I., Yasmeen, T., Hadi, N. U., Asif, M., Farooq, M., Kurniawan, T. A., Khan, M., & Al-Ghamdi, S. G. (2026). Digital sustainability as an emerging paradigm: Insights from the Saudi Arabian experience and global implications. *Journal of Open Innovation: Technology, Market, and Complexity*, 12(1), 100731. <https://doi.org/10.1016/j.joitmc.2026.100731>
- Li, P., Ding, X., & Guo, T. (2026). How the integration of technology and finance empowers the collaborative development of digitalization and greenization of Chinese cities. *Journal of Innovation & Knowledge*, 15, 101006. <https://doi.org/10.1016/j.jik.2026.101006>
- Liu, X., & Zhou, X. (2026). Unveiling regional heterogeneity in road transport carbon mitigation performance via biased technical change. *Transportation Research Part D: Transport and Environment*, 155, 105336. <https://doi.org/10.1016/j.trd.2026.105336>
- Lu, B., Guo, Y., Zhang, S., & Dong, P. (2025). Digital Government and the Structural Determinants of Political Participation Among Street-Level Bureaucrats in China. *International Journal of Electronic Government Research*, 21(1). <https://doi.org/10.4018/IJEGR.388562>
- Ma, H., Zhou, M., & Dong, Y. (2026). The antecedent configurations of digital transformation in manufacturing firms and their impacts on green innovation performance. *Journal of*

- Engineering and Technology Management*, 80, 101964. <https://doi.org/10.1016/j.jengtecman.2026.101964>
- Marchesani, F., & Ceci, G. (2026). Taming the white elephant: How smart cities leverage mega events for advancing digital technologies. *Technology in Society*, 84, 103140. <https://doi.org/10.1016/j.techsoc.2025.103140>
- Qian, R., Zhang, X., & Dong, K. (2026). Study on spatiotemporal evolution and regional control of financial risks in the Yangtze river delta based on SDM-GWR. *Systems and Soft Computing*, 8, 200478. <https://doi.org/10.1016/j.sasc.2026.200478>
- Qiao, Z., Liang, Y., & YuChen. (2026). Sports industry upgrading amid institutional logic conflicts: Policy response mechanisms and regional coordinated development models under digital economy empowerment. *International Review of Economics & Finance*, 108, 105201. <https://doi.org/10.1016/j.iref.2026.105201>
- Qin, H., & Yang, Y. (2026). Effective allocation of government attention: A regional analysis of urban carbon reduction and SDGs collaborative governance in China. *Applied Geography*, 188, 103913. <https://doi.org/10.1016/j.apgeog.2026.103913>
- Ribeiro, D., Fonte, V., Ramos, L. F., & Silva, J. M. (2025). Assessing the information security posture of online public services worldwide: Technical insights, trends, and policy implications. *Government Information Quarterly*, 42(2), 102031. <https://doi.org/10.1016/j.giq.2025.102031>
- Ridwan, I. L., Senathirajah, A. R. B. S., & Al-Faryan, M. A. S. (2024). Investigating the asymmetric effects of financial development on trade performance in Africa: Can digitalization, transport services, and regulatory quality drive the vision 2063? *The Journal of Economic Asymmetries*, 30, e00390. <https://doi.org/10.1016/j.jeca.2024.e00390>
- Sakita, B. M. (2026). Technological–inter-organizational–organizational–environmental (TIOE) framework for digital transformation of a maritime port in a developing country. *Research in Transportation Business & Management*, 67, 101658. <https://doi.org/10.1016/j.rtbm.2026.101658>
- Shehadeh, A., Alshboul, O., Aburamadan, R., Arar, M., Abuhazeem, S., Khazaleh, K., Cotella, V. A., & Moghayedi, A. (2025). Integrating climate resilience and digital twin technologies in housing: A comparative analysis and sustainable design proposal for Jordan and South Africa. *Results in Engineering*, 28, 108409. <https://doi.org/10.1016/j.rineng.2025.108409>
- Siewe, F. B., Nkongho, R. N., & Ndasi, N. P. (2026). Digitalisation of food value chains in developing countries: Systemic barriers and a digital-maturity-stratified strategy for integrated and inclusive adoption. *Trends in Food Science & Technology*, 105786. <https://doi.org/10.1016/j.tifs.2026.105786>
- Tang, B., Chen, J., Ji, C., & Zhang, Y. (2026). Bytes into watts: Input–output tracking of energy-sector digitalization and its decarbonization effect. *Energy Policy*, 212, 115157. <https://doi.org/10.1016/j.enpol.2026.115157>
- Wang, C., Yin, Y., Cai, J., & Hu, H. (2026). Regional heterogeneity and policy evolution of China's new energy vehicle development: A multi-dimensional analysis based on dynamic time warping clustering and dual policy frameworks. *Energy Policy*, 210, 115072. <https://doi.org/10.1016/j.enpol.2026.115072>
- Xu, Y., Feng, Z., Troise, C., Jiang, Z., & Bresciani, S. (2026). Bridging industry-finance collaboration and innovation: How strategic choices shape the path to key digital technology innovation. *Technology in Society*, 87, 103364. <https://doi.org/10.1016/j.techsoc.2026.103364>

- Zhang, B., Jiang, P., Ma, Y., Li, M., Hu, Y., & Lu, K. (2026). Regional population mobility network changes driven by central city lockdowns. *Transportation Research Part A: Policy and Practice*, 208, 104975. <https://doi.org/10.1016/j.tra.2026.104975>
- Zhang, M., Lu, B., & Guo, Y. (2025). Public Sense of Gain From Using AI-Driven Governmental Chatbots for Public Services. *International Journal of Information Systems in the Service Sector*, 16(1). <https://doi.org/10.4018/IJISSS.387416>
- Zhao, S., Zhao, Y., Liu, Y., Liang, C., & Zhang, X. (2025). How can the digital economy enhance port resilience? Evidence from the Bohai Rim region. *Journal of Sea Research*, 206, 102606. <https://doi.org/10.1016/j.seares.2025.102606>

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