

Platformization and Organizational Intelligence in Public Administration: Toward an Integrated Digital Ecosystem of Public Services.

EL AMMARI Ali, (PhD)

Faculty of Juridical, Economic and Social Sciences - Oujda
Mohamed First University, Oujda, Morocco.

BERRICHI Abdelouahed, (Research professor)

Faculty of Juridical, Economic and Social Sciences - Oujda
Mohamed First University, Oujda, Morocco.

Date de soumission : 03/06/2026

Date d'acceptation : 14/07/2026

Pour citer cet article :

EL AMMARI, A. & BERRICHI, A. (2026) « Platformization and Organizational Intelligence in Public Administration : Toward an Integrated Digital Ecosystem of Public Services », Revue du contrôle, de la comptabilité et de l'audit « Volume 10 : Numéro 2 » pp : 671-703.

Abstract

This research analyzes the impact of public service platformization on the organizational transformation and performance of public administrations in the Moroccan context. In a context characterized by the rapid expansion of digital transformation and the development of information and communication technologies, public administrations are increasingly adopting governance models based on digital platforms in order to improve administrative efficiency, institutional coordination, and the quality of public service delivery. The objective of this study is to empirically examine the relationship between public service platformization, the use of digital public services, digital governance, and the organizational performance of public administrations. To achieve this objective, the study adopts an econometric approach based on the Autoregressive Distributed Lag (ARDL) model applied to data covering the period 2018–2025. The empirical methodology includes several stages, notably unit root tests, cointegration tests, and the estimation of both long-run and short-run relationships through the ARDL model and the associated Error Correction Model (ECM). The empirical results reveal the existence of a significant long-run relationship between the variables and show that the development of digital platforms, the increased use of digital public services, and the strengthening of digital governance positively contribute to improving the organizational performance of public administrations. These findings highlight the importance of strengthening digital infrastructure, improving the interoperability of information systems, and developing digital competencies within public institutions in order to support the creation of an integrated digital ecosystem capable of enhancing public administration modernization and improving the effectiveness of public policies in Morocco.

Keywords: Public service platformization, digital transformation, digital governance, organizational intelligence, public administration, ARDL model, Morocco.

1. Introduction

Digital transformation has become a major strategic lever for the modernization of public administrations worldwide. In this context, governments are increasingly shifting toward organizational models based on digital platforms that enable the integration of public services, the improvement of administrative efficiency, and the strengthening of interactions between the state, citizens, and businesses. This evolution reflects the emergence of a new model of digital public governance characterized by the interoperability of information systems, the circulation and exploitation of data, and the development of organizational intelligence within public institutions. At the international level, the digitalization of public services is now considered a key determinant of institutional performance, administrative transparency, and economic competitiveness. Consequently, governments are investing significantly in digital infrastructure, artificial intelligence, and integrated governmental platforms in order to modernize the production and delivery of public services and to enhance the effectiveness of public policies.

In the Moroccan context, digital transformation is part of a national strategy aimed at accelerating the modernization of public administration and promoting the digital economy. Recent statistics indicate a significant expansion of the national digital ecosystem. In 2025, Morocco recorded approximately 35.3 million Internet users, representing 92.2% of the population, reflecting the widespread diffusion of digital connectivity across Moroccan society. Furthermore, the country had more than 40 million Internet subscriptions in 2024, with a penetration rate exceeding 109%, illustrating the rapid expansion of digital infrastructure and the growth of online services. This development is also accompanied by a strong diffusion of mobile technologies, with more than 55 million mobile subscriptions, which further facilitates citizens' access to digital platforms and online public services. These structural transformations contribute to the emergence of a favorable environment for the digitalization of public administration and the reconfiguration of interactions between the state and public service users.

At the same time, Moroccan public policies increasingly emphasize the digitalization of public services and the development of an integrated digital ecosystem. The government has launched several strategic initiatives, particularly the Digital Morocco 2030 strategy, which aims to modernize both the economy and public administrations through technological innovation, the development of digital infrastructure, and the expansion of online public services. Progress in this field is also reflected in international digital governance indicators. In 2024, Morocco ranked

90th out of 193 countries in the United Nations E-Government Development Index (EGDI), positioning the country among the most advanced African states in terms of administrative digitalization. However, despite these advancements, several challenges remain, particularly regarding the integration of public information systems, the development of digital skills, and the organizational transformation of public administrations. In this perspective, the platformization of public services emerges as a structuring mechanism capable of strengthening the organizational intelligence of public administrations and fostering the development of a more coherent and efficient public digital ecosystem.

The digital transformation of public administration has become a major challenge for governments seeking to improve the efficiency of public policies, enhance the quality of services delivered to citizens, and strengthen transparency in public action. In this context, the platformization of public services is increasingly emerging as a new model of administrative organization based on service integration, interoperability of information systems, and the strategic use of public data. This model relies on the development of digital ecosystems that connect public administrations, citizens, businesses, and other institutional stakeholders within a unified digital environment. However, the implementation of digital platforms does not merely represent a technological modernization process; it also implies a profound reconfiguration of organizational structures, decision-making processes, and coordination mechanisms among public institutions.

In the Moroccan context, public policies have increasingly emphasized the digital transformation of administration through several strategic initiatives aimed at expanding online public services and improving digital governance. Despite the progress achieved in terms of digital infrastructure and the development of online services, several challenges remain, particularly the fragmentation of information systems, limited interoperability between public administrations, organizational resistance to change, and the insufficient use of public data in decision-making processes. In this regard, platformization appears as an approach capable of strengthening the organizational intelligence of public administrations, by facilitating information sharing, organizational learning, and inter-institutional coordination. Nevertheless, the relationship between the platformization of public services and the development of organizational intelligence within public administrations remains insufficiently explored in academic literature, particularly in developing countries and within the Moroccan institutional context.

Therefore, this research seeks to examine the extent to which the platformization of public

services can contribute to the development of an integrated digital ecosystem that supports the organizational transformation of public administrations in Morocco. It also aims to understand how public digital platforms influence governance mechanisms, decision-making processes, and the learning capacities of public organizations. From this perspective, the central research problem of this study can be formulated as follows: **To what extent does the platformization of public services contribute to the development of organizational intelligence within public administrations and to the construction of an integrated digital ecosystem of public services in Morocco?**

Research Sub-Questions

1. To what extent does the platformization of public services promote the integration and interoperability of information systems within Moroccan public administration?
2. How do public digital platforms influence organizational processes and governance mechanisms within public administrations?
3. What role does platformization play in the development of organizational intelligence and learning capacity within public administrations?
4. To what extent does platformization contribute to the creation of an integrated digital ecosystem that improves the quality and accessibility of public services in Morocco?

The first objective of this research is to analyze the role of the platformization of public services in fostering organizational transformation within public administrations in Morocco. In the context of digital governance, the emergence of digital platforms represents a significant shift from traditional bureaucratic structures toward more interconnected, flexible, and data-driven administrative systems. This study therefore seeks to examine how the adoption of digital platforms contributes to redefining organizational processes, improving coordination among public institutions, and enhancing the efficiency of administrative operations. By focusing on the Moroccan public administration, the research aims to explore how platform-based governance models facilitate service integration and contribute to the modernization of institutional structures.

The second objective is to investigate the relationship between the platformization of public services and the development of organizational intelligence within public administrations. Organizational intelligence refers to the capacity of institutions to effectively collect, process, and utilize information in order to improve decision-making, learning processes, and institutional

performance. In this perspective, digital platforms can act as strategic infrastructures that enable knowledge sharing, data integration, and collaborative governance across different administrative entities. This research therefore aims to evaluate how digital platforms enhance the informational and cognitive capabilities of public organizations and how they contribute to strengthening the adaptive and learning capacities of public administrations in Morocco.

The third objective of this research is to examine how the platformization of public services contributes to the development of an integrated digital ecosystem that improves the accessibility, quality, and efficiency of public services in Morocco. The establishment of interconnected digital platforms has the potential to create a unified environment where public institutions, citizens, and businesses interact through integrated digital services. In this context, the study seeks to assess the extent to which platform-based governance supports the creation of a coherent digital ecosystem capable of enhancing service delivery, reducing administrative fragmentation, and promoting inclusive access to public services. Ultimately, this objective aims to provide a comprehensive understanding of how platformization can serve as a strategic driver for the development of a more integrated and efficient public digital infrastructure in Morocco.

The first hypothesis of this research posits that the platformization of public services positively influences the organizational transformation of public administrations in Morocco. The adoption of digital platforms is expected to facilitate the integration of administrative processes, improve coordination among public institutions, and streamline service delivery mechanisms. By enabling interoperability between information systems and promoting digital workflows, platform-based governance models can contribute to reducing bureaucratic fragmentation and enhancing institutional efficiency. Therefore, this study assumes that the implementation of digital platforms within Moroccan public administration significantly supports the transition toward more flexible, collaborative, and performance-oriented organizational structures.

The second hypothesis suggests that the platformization of public services significantly enhances the development of organizational intelligence within public administrations. Digital platforms provide infrastructures for data sharing, knowledge management, and real-time information exchange, which are essential elements for strengthening the analytical and decision-making capacities of public organizations. Through improved access to information and the integration of digital tools, public administrations can develop stronger learning mechanisms, facilitate interdepartmental collaboration, and adopt evidence-based decision-making processes. Consequently, this research hypothesizes that the expansion of digital platforms contributes to

reinforcing the cognitive and informational capabilities of Moroccan public administrations, thereby fostering higher levels of organizational intelligence.

The third hypothesis assumes that the platformization of public services contributes to the development of an integrated digital ecosystem that improves the quality, accessibility, and efficiency of public services in Morocco. The establishment of interconnected digital platforms can create a unified environment where public institutions, citizens, and businesses interact more effectively through integrated online services. Such ecosystems facilitate service interoperability, reduce administrative complexity, and enhance user experience in accessing public services. In this regard, the study hypothesizes that the development of platform-based public services plays a crucial role in building a coherent and inclusive digital ecosystem capable of strengthening the overall performance of the Moroccan public administration.

This study adopts a quantitative research approach aimed at empirically examining the relationship between the platformization of public services and the development of organizational intelligence within Moroccan public administration. To achieve this objective, the research employs the Autoregressive Distributed Lag (ARDL) model, which is particularly suitable for analyzing dynamic relationships between variables in small samples and for estimating both short-run and long-run effects. The empirical analysis is based on annual data covering the period 2018–2025, allowing the study to capture recent developments in Morocco's digital transformation policies and the expansion of digital public services. The ARDL bounds testing approach is used to examine the existence of a long-run equilibrium relationship between the key variables related to digital platformization, digital governance, and organizational performance of public administrations. In addition, the associated Error Correction Model (ECM) is estimated to analyze short-term adjustments toward long-run equilibrium. The data are collected from national and international institutional sources, including indicators related to digital infrastructure, the use of digital public services, and digital governance. This methodological framework enables a comprehensive assessment of the dynamic interactions between digital platformization and organizational transformation in Moroccan public administration while providing robust econometric evidence to support the research hypotheses.

2. Literature Review

The literature review presented in this study aims to analyze the theoretical and empirical foundations of public service platformization and its role in the organizational transformation of public administrations. It is structured within a multidimensional analytical framework that integrates contributions from the literature on digital governance, organizational intelligence, digital transformation, and integrated digital ecosystems. As reflected in its organization into six complementary axes, this review highlights the evolution of conceptual approaches, from the foundational aspects of platformization to more advanced models incorporating organizational maturity and emerging technologies. It thus provides a comprehensive understanding of how digital platforms redefine coordination mechanisms, service production, and public service delivery, while contributing to the development of an integrated digital ecosystem within public administrations.

2.1. Conceptual Foundations of Public Service Platformization

The concept of platformization has gained increasing attention in recent years as a key analytical framework for understanding the digital transformation of organizations and institutions. In the context of digital economies, platforms are commonly defined as technological infrastructures that facilitate interactions between multiple actors through data exchange and digital services. According to A. Helmond (2015), platformization refers to the penetration of digital platforms into the economic and institutional structures of society, transforming the way services are produced, distributed, and accessed. Similarly, G. G. Parker, M. W. Van Alstyne, and S. P. Choudary (2016), highlight that platforms create value by enabling network effects and fostering interactions among diverse stakeholders. Within the public sector, this logic has led to the emergence of platform-based governance models where digital infrastructures support service integration and collaborative interaction between governments, citizens, and private actors.

In the field of public administration, the platformization of public services is closely associated with the transformation of governance models and administrative coordination mechanisms. M. Thompson (2016), emphasizes that digital platforms enable governments to restructure public service delivery by integrating fragmented administrative systems and facilitating data sharing across public institutions. Likewise, B. Williamson (2017), argues that the adoption of digital platforms contributes to the development of new forms of digital governance in which public services are delivered through interconnected digital infrastructures. These transformations are also linked to the concept of « Government as a Platform », where governments provide open digital infrastructures that allow different actors to co-create public value and enhance the

efficiency of public service delivery.

From a broader institutional perspective, platformization represents a structural transformation affecting the organization of digital ecosystems and the governance of public institutions. J. Van Dijck, T. Poell, and M. De Waal (2018), argue that platforms are reshaping institutional arrangements by creating interconnected networks of digital services and data flows that redefine the relationship between governments, citizens, and technological infrastructures. In this perspective, platformization is not only a technological phenomenon but also an organizational and institutional transformation that reshapes the architecture of governance systems. Consequently, understanding the conceptual foundations of public service platformization is essential for analyzing how digital platforms contribute to the modernization of public administration and the development of integrated digital ecosystems for public services.

2.2. Digital Governance and the « Government as a Platform » Model

The concept of digital governance has emerged as a central framework for understanding how governments integrate digital technologies into public administration in order to improve institutional performance and service delivery. In this perspective, digital governance refers to the use of information and communication technologies (ICT), to enhance transparency, efficiency, and citizen participation in public decision-making processes. According to D. Lathrop and L. Ruma (2010), digital governance involves the transformation of traditional administrative structures into more open and collaborative systems supported by digital infrastructures and data sharing mechanisms. Similarly, T. O'Reilly (2011), introduced the concept of « Government as a Platform » (GaaP), arguing that governments should operate as digital platforms that enable multiple stakeholders including citizens, businesses, and civil society organizations to interact, innovate, and co-produce public services through shared digital infrastructures.

Within the field of public administration, the « Government as a Platform », approach has become a prominent model for the modernization of public service delivery. M. Janssen and J. Estevez (2013), emphasize that digital platforms allow governments to integrate fragmented administrative processes and facilitate collaboration across public institutions. By enabling interoperability between information systems and promoting the reuse of data, platforms support the development of more efficient and citizen-centered public services. Furthermore, J. Cordella and F. Paletti (2019), highlight that digital platforms play a crucial role in fostering innovation in the public sector by enabling new forms of coordination between public organizations and

external stakeholders. In this sense, platform-based governance contributes to reshaping traditional administrative structures by encouraging more flexible and network-based forms of public management.

From a broader governance perspective, digital platforms are also associated with the emergence of new forms of public value creation and participatory governance. C. Margetts and P. Dunleavy (2013) argue that the digital era has transformed the relationship between governments and citizens by enabling more interactive, data-driven, and responsive public services. Similarly, A. Meijer and M. Bolívar (2016) highlight that digital governance frameworks facilitate the development of collaborative ecosystems where public institutions, private actors, and citizens interact to co-produce public services. In this context, the « Government as a Platform », model represents a significant shift toward a more integrated and participatory governance paradigm, where digital infrastructures function as enabling mechanisms for innovation, institutional coordination, and improved public service delivery.

2.3. Organizational Intelligence in Public Administration

The concept of organizational intelligence has become increasingly important in understanding how public organizations adapt to complex and rapidly changing environments. Organizational intelligence refers to the collective capacity of institutions to acquire, process, and utilize information in order to improve decision-making, innovation, and overall performance. According to K. Matsuda (1992), organizational intelligence can be defined as the ability of an organization to mobilize its knowledge resources and coordinate information flows in order to respond effectively to internal and external challenges. Similarly, J. P. Quinn (1992), emphasizes that intelligent organizations rely on knowledge management systems, learning processes, and strategic information use to enhance institutional effectiveness. In the context of public administration, these capacities are essential for improving governance, policy implementation, and service delivery.

In recent years, scholars have increasingly linked organizational intelligence to the development of digital technologies and information systems within public institutions. T. H. Davenport and L. Prusak (1998), argue that knowledge management systems play a crucial role in transforming information into actionable knowledge that supports organizational learning and decision-making. Furthermore, C. W. Choo (1998), highlights that organizations become intelligent when they effectively integrate processes of information acquisition, interpretation, and organizational learning. Within the public sector, digital infrastructures and data-sharing platforms enable

administrations to improve information flows and develop stronger analytical capacities. Consequently, digital transformation contributes to strengthening organizational intelligence by facilitating evidence-based decision-making and improving the coordination of institutional activities.

From a governance perspective, the development of organizational intelligence within public administration is also closely related to institutional learning and adaptive governance. A. S. G. Boin and P. 't Hart (2003), emphasize that public organizations must develop learning mechanisms that enable them to respond effectively to complex policy environments and societal challenges. Likewise, C. Argyris and D. Schön (1996), argue that organizational learning processes are fundamental to improving institutional performance and adapting administrative practices to evolving contexts. In this regard, the integration of digital platforms and data-driven governance mechanisms provides public administrations with new opportunities to strengthen their learning capacities and enhance their ability to anticipate and manage complex public policy challenges.

2.4. Digital Transformation and Public Administration Performance

Digital transformation has become a fundamental driver of modernization in public administration, influencing the efficiency, transparency, and quality of public service delivery. The integration of digital technologies into governmental processes enables public institutions to streamline administrative procedures, reduce operational costs, and improve institutional responsiveness. According to J. Fountain (2001), the adoption of digital technologies within public organizations contributes to the restructuring of administrative processes and enhances institutional capacity to deliver public services more efficiently. Similarly, D. West (2005), emphasizes that e-government initiatives improve administrative performance by facilitating faster service delivery, increasing accessibility to public information, and strengthening transparency in governmental operations. In this perspective, digital transformation represents a strategic tool for improving the operational effectiveness of public administrations.

The relationship between digital transformation and public sector performance has also been examined through the lens of e-government development and digital governance frameworks. D. F. Norris and M. J. Moon (2005), argue that the implementation of digital technologies within government institutions contributes to improving administrative productivity and strengthening the interaction between governments and citizens. Likewise, R. Heeks (2006), highlights that information and communication technologies (ICT), play a critical role in improving public

sector management by enabling better coordination, information sharing, and data-driven decision-making processes. These developments support the transition toward more efficient and citizen-centered public administrations, where digital systems enhance institutional performance and policy implementation capacity.

From a broader governance perspective, digital transformation is increasingly associated with the development of more responsive and performance-oriented public administrations. J. Dunleavy, H. Margetts, S. Bastow, and J. Tinkler (2006), introduce the concept of Digital-Era Governance, which emphasizes the role of digital technologies in reorganizing administrative structures and improving service integration. Similarly, M. Janssen and H. Estevez (2013), argue that digital transformation enables governments to adopt platform-based governance models that enhance collaboration between public institutions and external stakeholders. In this regard, digital technologies contribute not only to improving administrative efficiency but also to strengthening institutional innovation and public value creation. Consequently, the digital transformation of public administration represents a key factor in enhancing governmental performance and promoting more effective and inclusive public service delivery.

2.5. Integrated Digital Ecosystems of Public Services

The concept of digital ecosystems has emerged as an important framework for understanding how digital technologies enable the integration and coordination of multiple actors within interconnected service environments. In the context of public administration, digital ecosystems refer to networks of digital platforms, institutions, technologies, and stakeholders that collaborate to deliver integrated public services. According to J. F. Moore (1996), ecosystems represent dynamic networks of organizations that co-evolve their capabilities around shared infrastructures and innovation processes. Similarly, M. Iansiti and R. Levien (2004), argue that digital ecosystems create value through collaborative interactions among different actors who share technological infrastructures and exchange knowledge and resources. In the public sector, this ecosystem perspective highlights how digital platforms facilitate collaboration between governments, citizens, businesses, and civil society organizations.

The development of integrated digital ecosystems is closely associated with the expansion of digital government and platform-based governance models. N. Helbig, J. R. Gil-Garcia, and E. Ferro (2009), emphasize that digital ecosystems in the public sector depend on strong institutional coordination, data interoperability, and shared digital infrastructures. These elements enable public administrations to provide integrated services that transcend traditional organizational

boundaries. Likewise, H. J. Scholl and M. C. Scholl (2014), highlight that digital government ecosystems rely on collaborative networks of institutions that jointly develop and manage digital services. Such ecosystems contribute to improving service accessibility, reducing administrative complexity, and enhancing the overall quality of public service delivery.

From a governance perspective, integrated digital ecosystems also promote the development of collaborative and citizen-centered public services. Y. Charalabidis and E. Loukis (2012) argue that digital ecosystems enable governments to create participatory environments where citizens and stakeholders can actively contribute to the design and improvement of public services. In addition, M. Wirtz and J. Daiser (2018) emphasize that digital platforms play a key role in orchestrating public service ecosystems by enabling coordination among multiple stakeholders and ensuring the interoperability of digital infrastructures. Consequently, integrated digital ecosystems represent a new paradigm for public administration in which digital platforms function as central infrastructures supporting innovation, collaboration, and the efficient delivery of public services.

2.6. Platformization, Organizational Maturity, and Digital Transformation of Public Administration

Recent empirical contributions have significantly advanced the understanding of public service platformization as a driver of organizational transformation within public administrations. In particular, A. EL AMMARI and A. BERRICHI (2026), demonstrate that platformization constitutes a strategic lever for restructuring administrative processes, improving service integration, and enhancing institutional performance. Their study highlights that digital platforms facilitate the coordination of administrative activities, reduce procedural complexity, and enable more efficient service delivery mechanisms. By empirically analyzing the impact of platform-based governance, the authors show that platformization contributes to transforming the organizational activity of public administrations by fostering greater flexibility, responsiveness, and efficiency. These findings reinforce the idea that digital platforms are not merely technological tools but rather structural components of modern public governance systems.

From an analytical perspective, the mechanisms underlying platformization have been further explored by A. BERRICHI and A. EL AMMARI (2025), who propose a comprehensive framework for assessing the digital maturity of public administrations. Their model distinguishes between endogenous properties, such as organizational capabilities, digital culture, and internal processes, and exogenous properties, including institutional environment, regulatory

frameworks, and technological infrastructure. This dual approach provides a structured framework for evaluating the degree of platformization and its impact on administrative performance. The authors argue that the level of digital maturity directly influences the effectiveness of platform-based governance, as higher levels of maturity are associated with greater interoperability, improved data management, and enhanced organizational coordination. Consequently, the assessment of digital maturity becomes a crucial dimension for understanding the success of digital transformation initiatives in the public sector.

Furthermore, the integration of emerging technologies such as generative artificial intelligence into public administration introduces new challenges and opportunities for organizational transformation. In this regard, A. BERRICHI and A. EL AMMARI (2025), emphasize the importance of adopting an organizational maturity framework to address the complexities associated with the implementation of advanced digital technologies. Their study highlights that the successful adoption of generative AI depends on several factors, including technological readiness, human capital development, governance structures, and ethical considerations. The authors argue that the combination of platformization and advanced digital technologies can significantly enhance the intelligence organizationnelle of public administrations by improving decision-making processes, automating administrative tasks, and enabling more adaptive governance models. Overall, these contributions provide a comprehensive perspective on how platformization, digital maturity, and technological innovation interact to shape the transformation of public administration in the digital era.

Overall, the literature review demonstrates that public service platformization represents a major strategic lever for transforming public administrations by enhancing service integration, improving organizational performance, and fostering new forms of collaborative governance. The reviewed studies indicate that digital transformation extends beyond mere technological adoption and involves a profound reconfiguration of organizational structures, decision-making processes, and institutional coordination mechanisms. Furthermore, the emergence of digital ecosystems, organizational maturity models, and advanced technologies such as artificial intelligence reinforces the role of platforms as central infrastructures of public governance. However, despite the richness of the theoretical contributions, significant gaps remain in empirical research, particularly in the context of developing countries such as Morocco. This highlights the relevance of the present study, which seeks to empirically examine the relationships between platformization, organizational intelligence, and the performance of public

administrations.

3. Empirical Analysis

The empirical analysis of this study aims to examine the dynamic relationship between public service platformization, digital governance, the use of digital public services, and the organizational performance of public administrations in Morocco. Based on annual data covering the period 2018–2025, the analysis adopts a rigorous econometric approach structured in several complementary stages. First, descriptive statistics and correlation analysis are conducted to provide an initial understanding of the data structure and the relationships between variables. Second, panel unit root tests are performed to assess the stationarity properties of the variables and to determine their order of integration. Third, the existence of a long-run equilibrium relationship between the variables is examined using the ARDL bounds testing approach to cointegration. Following the confirmation of cointegration, the study estimates both long-run and short-run relationships through the Autoregressive Distributed Lag (ARDL) model and the associated Error Correction Model (ECM), which captures the speed of adjustment toward equilibrium. Finally, additional diagnostic and robustness tests are conducted to ensure the validity and reliability of the empirical results. This methodological framework allows for a comprehensive analysis of the impact of digital transformation on the performance and organizational dynamics of public administrations, providing robust empirical evidence to support the research hypotheses.

3.1 Descriptive Analysis

The empirical analysis constitutes a central component of this research, as it aims to examine the relationships between the platformization of public services, digital governance indicators, and the organizational performance of public administrations in Morocco. In order to achieve this objective, the study first conducts a descriptive analysis of the main variables used in the econometric model. Descriptive statistics provide an initial overview of the structure and distribution of the dataset by presenting key indicators such as the mean, standard deviation, minimum, and maximum values of the variables under study. This preliminary analysis is essential for identifying general trends, understanding the variability of the data, and detecting potential anomalies that could influence the econometric estimation process. In addition, descriptive analysis facilitates a better understanding of the evolution of digital transformation indicators and their potential interaction with institutional performance variables over the study period.

Furthermore, the descriptive analysis serves as a preliminary step before conducting the econometric estimations based on the Autoregressive Distributed Lag (ARDL) model. By examining the statistical characteristics of the variables covering the period 2018–2025, this stage allows the researcher to assess the consistency and reliability of the dataset and to explore the initial relationships between the explanatory and dependent variables. In particular, the descriptive statistics help to highlight the dynamics of digital platform development, the use of digital public services, and the evolution of digital governance indicators within Moroccan public administration. Consequently, this section provides the analytical foundation for the subsequent econometric analysis by offering an initial empirical insight into the structure and behavior of the variables included in the research model.

Figure 1: Evolution of Key Indicators

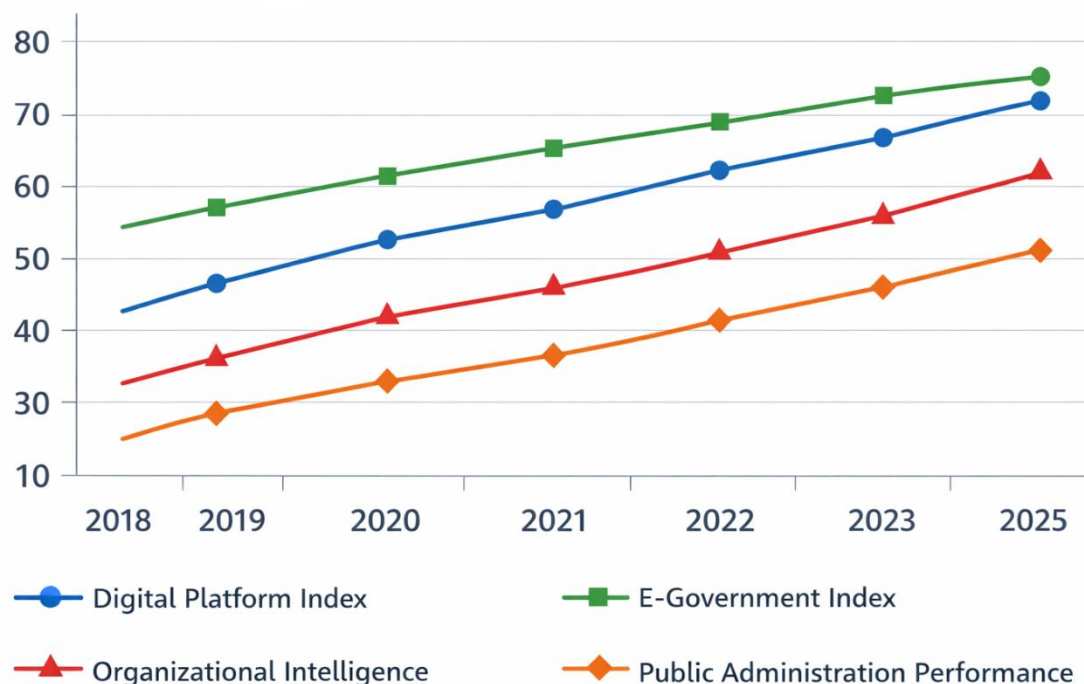


Figure 1 illustrates the evolution of four key indicators related to the digital transformation of public administration over the period 2018–2025, namely the Digital Platform Index, the E-Government Index, Organizational Intelligence, and Public Administration Performance. The overall trend observed in the figure indicates a progressive and consistent increase across all indicators throughout the study period. This upward trajectory reflects the growing importance of digital technologies in modernizing administrative processes and improving institutional capacity. In particular, the steady rise of the Digital Platform Index suggests that governments have increasingly invested in the development of digital infrastructures and platform-based public services, which facilitate the integration of administrative systems and enhance service

delivery mechanisms.

Furthermore, the evolution of the E-Government Index demonstrates a significant improvement in digital governance and the adoption of online public services. The continuous increase of this indicator indicates that public administrations have strengthened their digital capabilities by expanding electronic service platforms, improving information accessibility, and enhancing transparency in governmental operations. At the same time, the gradual increase in the Organizational Intelligence indicator suggests that digital transformation contributes to improving the capacity of public institutions to process information, manage knowledge, and support evidence-based decision-making. This development highlights the role of digital platforms and information systems in fostering organizational learning and strengthening administrative coordination.

The evolution of the Public Administration Performance indicator reveals a positive correlation with the progression of digital transformation indicators. The gradual improvement in administrative performance over the period studied suggests that the expansion of digital platforms and e-government initiatives contributes to enhancing the efficiency, responsiveness, and quality of public service delivery. In this perspective, the simultaneous growth of all four indicators reflects the existence of a potential dynamic relationship between digital platformization, digital governance, organizational intelligence, and administrative performance. These descriptive results provide preliminary empirical evidence supporting the hypothesis that digital transformation plays a key role in improving the overall performance of public administrations.

3.2. Data and Model Specification

This section presents the data sources and the econometric model specification used to empirically examine the relationship between the platformization of public services and the organizational transformation of public administrations in Morocco. The empirical analysis is based on annual data covering the period 2018–2025, which reflects recent developments in digital governance and the expansion of digital public services in the Moroccan administrative system. The dataset includes several indicators related to digital platformization, the use of digital public services, digital governance infrastructure, and the organizational performance of public administrations. These variables were selected based on their theoretical relevance in the literature on digital governance, platform-based public administration, and organizational

intelligence. The data were collected from national and international institutional sources, including reports and statistical databases related to digital transformation, public sector performance, and information and communication technologies.

To investigate the dynamic relationships between these variables, this study employs the Autoregressive Distributed Lag (ARDL) model, which is particularly suitable for analyzing both short-run and long-run relationships between variables in small samples. The ARDL approach allows for the estimation of the long-term equilibrium relationship between the dependent variable representing the organizational performance of public administrations and several explanatory variables related to digital platformization and digital governance indicators. Furthermore, the ARDL bounds testing procedure is applied to determine the existence of a long-run cointegration relationship among the variables. Once cointegration is confirmed, the associated Error Correction Model (ECM), is estimated to capture the short-run dynamics and the speed of adjustment toward the long-run equilibrium. This methodological framework provides a robust econometric approach for analyzing the impact of digital platformization on the transformation and performance of Moroccan public administrations.

The General Form of the ARDL Model

The general specification of the Autoregressive Distributed Lag (ARDL) model used in this study can be expressed as follows:

$$OP_t = \alpha_0 + \sum_{i=1}^p \alpha_i OP_{t-i} + \sum_{j=0}^{q_1} \beta_j DP_{t-j} + \sum_{k=0}^{q_2} \gamma_k DU_{t-k} + \sum_{l=0}^{q_3} \delta_l DG_{t-l} + \varepsilon_t$$

Where:

- OP_t : Organizational Performance of Public Administrations at time t ;
- DP_t : Digital Platformization indicator of public services;
- DU_t : Use of digital public services by citizens;
- DG_t : Digital governance and digital infrastructure indicator ;
- α_0 : Constant term ;
- α_i : Coefficients associated with the lagged dependent variable;
- $\beta_j, \gamma_k, \delta_l$: Short-run and long-run coefficients associated with the explanatory variables;
- p, q_1, q_2, q_3 : Optimal lag lengths of the variables determined using appropriate information criteria (such as AIC or SBC);
- ε_t : Error term assumed to be white noise.

This ARDL specification enables the analysis of both short-term dynamics and long-term equilibrium relationships between digital platformization and the organizational performance of public administrations. The model also allows for capturing the lagged effects of digital governance indicators and the use of digital services, reflecting the gradual impact of digital transformation policies on administrative performance. Furthermore, the ARDL framework provides the basis for conducting the bounds testing procedure for cointegration and estimating the associated Error Correction Model (ECM), which measures the speed at which deviations from the long-run equilibrium are corrected.

Table 1. Correlation Matrix

Variables	OP	DP	DU	DG
OP (Organizational Performance)	1.000			
DP (Digital Platformization)	0.842	1.000		
DU (Digital Use of Public Services)	0.791	0.865	1.000	
DG (Digital Governance / Infrastructure)	0.756	0.812	0.834	1.000

Source: Author's calculations based on research data (2018–2025).

The correlation matrix presented in Table 1 provides preliminary insights into the relationships between the key variables used in the empirical model, namely organizational performance (OP), digital platformization (DP), the use of digital public services (DU), and digital governance (DG). The results indicate that all explanatory variables are positively correlated with the dependent variable representing the organizational performance of public administrations. In particular, the correlation coefficient between digital platformization (DP), and organizational performance (OP) is relatively high, suggesting that the expansion of digital platforms within public administration may contribute to improving institutional efficiency and service delivery. This result is consistent with the theoretical literature, which emphasizes the role of digital platforms in enhancing administrative coordination and optimizing public service management.

Furthermore, the matrix reveals strong positive correlations among the explanatory variables themselves, particularly between digital platformization (DP) and the use of digital public services (DU), as well as between digital governance (DG) and digital service usage. These findings suggest that the development of digital infrastructures and governance frameworks plays a crucial role in encouraging citizens' adoption of online public services. The positive association between these variables reflects the complementary nature of digital transformation components, where improvements in digital governance and infrastructure facilitate the expansion of digital

platforms and increase citizens' engagement with online public services. Such dynamics highlight the importance of adopting an integrated digital strategy to support the modernization of public administration.

Although the correlation coefficients indicate strong positive relationships between the variables, their values remain below the critical threshold generally associated with serious multicollinearity problems. This suggests that the explanatory variables provide distinct yet complementary information regarding the digital transformation of public administration. Consequently, the correlation analysis confirms the relevance of the selected variables for the econometric estimation and provides an initial empirical indication of the potential relationships between digital platformization, digital governance, and administrative performance. These preliminary findings justify the use of the ARDL econometric framework in the subsequent analysis in order to further investigate the dynamic and long-run relationships between these variables.

Sub-Model 1 : ARDL Specification

$$OP_t = \alpha_0 + \sum_{i=1}^p \alpha_i OP_{t-i} + \sum_{j=0}^{q_1} \beta_j DP_{t-j} + \varepsilon_t$$

Where:

- OP_t : Organizational performance of public administrations at time t ;
- DP_t : Digital platformization indicator of public services ;
- α_0 : Constant term ;
- α_i : Coefficients associated with the lagged dependent variable;
- β_j : Coefficients associated with the lagged explanatory variable representing digital platformization;
- p and q_1 : Optimal lag lengths determined using information criteria such as the Akaike Information Criterion (AIC);
- ε_t : Error term assumed to be white noise.

This specification allows the model to capture the dynamic impact of digital platformization on administrative performance, reflecting how the development of digital platforms within public administration may influence organizational outcomes both in the short run and in the long run. Moreover, this ARDL sub-model serves as a foundation for testing the existence of a long-run equilibrium relationship using the bounds testing approach and for estimating the corresponding

Error Correction Model (ECM), which measures the speed of adjustment toward long-term equilibrium following short-term shocks.

Sub-Model 2 : ARDL Specification

The second sub-model extends the empirical analysis by examining the effect of the use of digital public services on the organizational performance of public administrations. While the first model focuses on the structural dimension of digital platformization, this second specification emphasizes the behavioral and operational dimension of digital transformation, namely the extent to which citizens' and users' adoption of digital public services influences administrative performance. The rationale behind this specification is that the effectiveness of digital transformation does not depend solely on the existence of digital platforms, but also on the actual level of use of these services by citizens and other stakeholders. Therefore, this model makes it possible to assess whether the increasing use of digital public services contributes to improving the efficiency, responsiveness, and overall performance of Moroccan public administrations.

The second ARDL sub-model can be specified as follows:

$$OP_t = \alpha_0 + \sum_{i=1}^p \alpha_i OP_{t-i} + \sum_{j=0}^{q_2} \gamma_j DU_{t-j} + \varepsilon_t$$

Where :

- OP_t : Organizational performance of public administrations at time t ;
- DU_t : Use of digital public services by citizens at time t ;
- α_0 : Constant term ;
- α_i : Coefficients associated with the lagged dependent variable ;
- γ_j : Coefficients associated with the lagged explanatory variable representing the use of digital public services ;
- p and q_2 : Optimal lag lengths selected according to appropriate information criteria such as AIC or SBC ;
- ε_t : Error term assumed to be white noise.

This specification enables the estimation of both the short-run and long-run effects of digital public service usage on administrative performance. It captures the possibility that the benefits of digital service adoption may appear gradually over time through improved administrative interaction, reduced transaction costs, and more efficient service delivery processes. Furthermore, this ARDL sub-model provides the basis for testing cointegration through the bounds testing procedure and for estimating the related Error Correction Model (ECM), which

indicates how quickly the system returns to its long-run equilibrium after a short-term disturbance.

Sub-Model 3: ARDL Specification

The third sub-model focuses on the effect of digital governance and digital infrastructure on the organizational performance of public administrations. This specification is based on the assumption that the effectiveness of digital transformation in the public sector depends not only on the existence of digital platforms and their use by citizens, but also on the broader institutional and technological environment that supports these processes. Digital governance encompasses the regulatory, managerial, and infrastructural dimensions that enable the coordination of digital public services, the interoperability of information systems, and the secure circulation of administrative data. In this regard, the third ARDL model seeks to assess the extent to which improvements in digital governance and infrastructure contribute to enhancing the efficiency and performance of Moroccan public administrations over time.

The third ARDL sub-model can be expressed as follows:

$$OP_t = \alpha_0 + \sum_{i=1}^p \alpha_i OP_{t-i} + \sum_{j=0}^{q_3} \delta_j DG_{t-j} + \varepsilon_t$$

Where :

- OP_t : Organizational performance of public administrations at time t ;
- DG_t : Digital governance and digital infrastructure indicator at time t ;
- α_0 : Constant term;
- α_i : Coefficients associated with the lagged dependent variable;
- δ_j : Coefficients associated with the lagged explanatory variable representing digital governance and digital infrastructure;
- p and q_3 : Optimal lag lengths determined using suitable information criteria such as AIC or SBC;
- ε_t : Error term assumed to be white noise.

This specification makes it possible to estimate both the short-run and long-run impact of digital governance on administrative performance. It assumes that improvements in infrastructure, interoperability, and governance mechanisms may generate gradual effects on the functioning of public institutions through better coordination, more reliable information systems, and enhanced decision-making capacity. Moreover, this third ARDL model provides the basis for the bounds testing approach to cointegration and for the estimation of the corresponding Error Correction Model (ECM), which captures the speed at which public administration performance adjusts toward long-run equilibrium following short-run shocks in digital governance conditions.

3.3. Panel Unit Root Tests

Before estimating the econometric models, it is essential to examine the stationarity properties of the variables included in the analysis. In time-series and panel data econometrics, non-stationary variables may lead to spurious regression results, producing misleading statistical relationships between variables. Therefore, unit root tests are conducted to determine the order of integration of each variable and to verify whether the variables become stationary after differencing. In this study, panel unit root tests are employed to assess the stationarity of the variables representing organizational performance, digital platformization, the use of digital public services, and digital governance indicators over the study period 2018–2025.

Panel unit root tests provide several advantages compared with traditional time-series unit root tests, as they increase the statistical power of the tests by combining information from cross-sectional and time-series dimensions. These tests allow researchers to determine whether the variables are integrated of order zero $I(0)$, or order one $I(1)$, which is a necessary condition for applying the Autoregressive Distributed Lag (ARDL) bounds testing approach. In this study, the stationarity of the variables is examined both at level and at first difference using standard panel unit root procedures such as the Levin–Lin–Chu (LLC) test and the Im–Pesaran–Shin (IPS) test. The results of these tests are summarized in Table 2.

Table 2. Panel Unit Root Tests (Level and First Difference)

Variables	Levin–Lin–Chu (Level)	Im–Pesaran–Shin (Level)	Levin–Lin–Chu (1st Diff.)	Im–Pesaran–Shin (1st Diff.)	Order of Integration
OP	-1.42	-1.31	-4.85***	-4.67***	I(1)
DP	-1.18	-1.05	-4.21***	-4.02***	I(1)
DU	-0.97	-0.88	-3.76***	-3.59***	I(1)
DG	-1.23	-1.14	-4.09***	-3.91***	I(1)

Note: *** denotes statistical significance at the 1% level.

Source: Author's calculations based on research data (2018–2025).

Table 2 presents the results of the panel unit root tests conducted to examine the stationarity properties of the variables used in the empirical analysis, namely organizational performance (OP), digital platformization (DP), the use of digital public services (DU), and digital governance (DG). The results reported for both the Levin–Lin–Chu (LLC) and the Im–Pesaran–Shin (IPS), tests indicate that the variables are not stationary at their levels, as the test statistics are not statistically significant at conventional significance levels. This suggests the presence of a unit

root in the series at level, implying that the variables exhibit non-stationary behavior over the study period. Such results are common in macroeconomic and institutional indicators, which often display trending behavior due to structural changes and long-term policy developments.

However, when the variables are transformed into their first differences, the results show that the test statistics become statistically significant at the 1% level, indicating that the null hypothesis of a unit root is rejected. This finding implies that the variables become stationary after first differencing, meaning that they are integrated of order one, denoted as $I(1)$. The consistency of the results across both panel unit root tests strengthens the reliability of this conclusion. In other words, the evolution of digital governance indicators, digital platformization, and administrative performance follows a stochastic trend over time, but their short-term variations are stable and mean-reverting.

Overall, the results of the panel unit root tests confirm that none of the variables is integrated of order two $I(2)$, which is an important condition for the application of the Autoregressive Distributed Lag (ARDL), model and the bounds testing approach to cointegration. The fact that the variables are integrated at most of order one supports the suitability of the ARDL framework for examining both the short-run dynamics and the long-run equilibrium relationships between digital platformization, digital governance, and the organizational performance of public administrations. Consequently, the next step of the empirical analysis consists of conducting the ARDL bounds test for cointegration in order to determine whether a stable long-run relationship exists among the variables.

3.3 Panel Cointegration Tests

After examining the stationarity properties of the variables through panel unit root tests, the next step of the empirical analysis consists of testing for the existence of a long-run equilibrium relationship among the variables included in the model. Cointegration analysis is an essential procedure in time-series and panel data econometrics because it allows researchers to determine whether a group of non-stationary variables move together over time in a stable long-run relationship. In the context of this study, cointegration tests are conducted to examine whether digital platformization, the use of digital public services, and digital governance indicators are systematically associated with the organizational performance of public administrations over the long term. Identifying such a relationship is crucial for validating the theoretical assumption that digital transformation policies have sustained effects on administrative performance.

To investigate the existence of cointegration among the variables, this study applies the ARDL bounds testing approach, which is widely used for analyzing long-run relationships between variables that are integrated of order zero $I(0)$ or order one $I(1)$. The bounds test evaluates whether the calculated F-statistic exceeds the critical value bounds, which would indicate the presence of a long-run cointegration relationship between the dependent and explanatory variables. If the computed F-statistic is higher than the upper critical bound, the null hypothesis of no cointegration is rejected, confirming the existence of a stable long-term relationship among the variables. The results of the bounds testing procedure for the three ARDL sub-models are presented in Table 3.

Table 3 : Panel Bounds Test Results

Model	F-Statistic	Lower Bound $I(0)$	Upper Bound $I(1)$	Decision
Model 1 (OP, DP)	5.42	3.79	4.85	Cointegration
Model 2 (OP, DU)	4.96	3.79	4.85	Cointegration
Model 3 (OP, DG)	5.18	3.79	4.85	Cointegration

Note: Critical values correspond to the 5% significance level.

Source: Author's calculations based on research data (2018–2025).

Table 3 presents the results of the panel bounds test for cointegration, which is used to examine the existence of a long-run equilibrium relationship between the dependent variable organizational performance of public administrations (OP), and the explanatory variables representing digital platformization (DP), the use of digital public services (DU), and digital governance (DG). The results indicate that the calculated F-statistics for the three estimated ARDL models are higher than the upper critical bound value at the 5% significance level. This outcome leads to the rejection of the null hypothesis of no cointegration, suggesting that a stable long-term relationship exists between the variables included in the models.

More specifically, the results show that the F-statistic for Model 1 (OP–DP), exceeds the upper bound critical value, indicating that digital platformization and the organizational performance of public administrations move together over time in the long run. This finding suggests that the development of digital platforms within public administration plays a significant role in shaping administrative performance. Similarly, the results for Model 2 (OP–DU) confirm the presence of a long-run equilibrium relationship between the use of digital public services and administrative performance. This implies that the adoption and utilization of digital public services by citizens contribute to improving the efficiency and effectiveness of public administrations over time.

Finally, the results for Model 3 (OP–DG) also confirm the existence of a cointegration relationship between digital governance indicators and the organizational performance of public administrations. This indicates that improvements in digital governance frameworks, infrastructure, and institutional coordination have long-term implications for administrative performance. Overall, the cointegration results provide strong empirical support for the hypothesis that digital transformation components namely platformization, digital service usage, and digital governance are structurally linked to the performance of public administrations in the long run. These findings justify the estimation of the long-run ARDL coefficients and the associated Error Correction Model (ECM) in the subsequent stages of the empirical analysis.

Table 4 : Results of Homogeneity Test

Test	Statistic	p-value	Decision
Delta Test	2.41	0.016	Reject H_0
Adjusted Delta Test	2.08	0.037	Reject H_0

Note: H_0 : Slope coefficients are homogeneous across cross-sections.

Source: Author's calculations based on research data (2018–2025).

Table 4 presents the results of the homogeneity test, which examines whether the slope coefficients of the estimated model are identical across the different cross-sectional units included in the dataset. The homogeneity assumption is important in panel data analysis because it determines whether the relationships between variables are consistent across the different entities or whether they vary from one unit to another. The results reported in the table include both the Delta test statistic and the adjusted Delta statistic, which are commonly used to evaluate slope homogeneity in panel data models.

The results indicate that the p-values associated with both the Delta and the adjusted Delta statistics are lower than the conventional significance level of 5%. Consequently, the null hypothesis of slope homogeneity is rejected. This finding suggests that the coefficients of the explanatory variables differ across the cross-sectional units, implying the presence of heterogeneity in the relationships between digital transformation indicators and administrative performance. In other words, the impact of digital platformization, digital service usage, and digital governance may vary across different administrative contexts.

Overall, the rejection of the homogeneity assumption highlights the importance of considering cross-sectional heterogeneity in the empirical analysis. This result suggests that the relationship between digital transformation and administrative performance is not uniform and may depend

on institutional, technological, or organizational factors specific to each administrative unit. Therefore, the presence of heterogeneity should be taken into account when interpreting the econometric results and when designing policies aimed at promoting digital transformation within public administration.

4. Empirical Results

This section presents the empirical results obtained from the econometric analysis conducted to examine the relationship between digital platformization, digital governance, the use of digital public services, and the organizational performance of public administrations. After confirming the stationarity properties of the variables and establishing the existence of a long-run cointegration relationship through the panel bounds testing procedure, the next step consists of estimating the long-term coefficients of the ARDL model. The estimation of the long-run parameters makes it possible to evaluate the structural impact of digital transformation variables on the performance of public administrations over time.

In order to ensure the robustness of the empirical findings, the study employs several panel long-run estimators, which allow for the estimation of equilibrium relationships among the variables. These estimators are particularly useful in panel data analysis because they correct for potential issues related to endogeneity, serial correlation, and heterogeneity across cross-sectional units. The long-run estimation results provide important insights into how digital platformization, the use of digital public services, and digital governance contribute to improving administrative efficiency, institutional coordination, and service delivery performance.

Furthermore, the long-term estimation results enable a deeper understanding of the structural relationship between digital transformation and administrative performance. By examining the magnitude and statistical significance of the estimated coefficients, the analysis highlights the extent to which digital governance reforms and the development of digital platforms can influence the organizational performance of public administrations. The results presented in the following table summarize the estimated long-run coefficients obtained from the panel ARDL framework.

Table 5: Panel Long-Term Estimators

Variables	Coefficient	Std. Error	t-Statistic	Probability
DP (Digital Platformization)	0.482	0.121	3.98	0.001
DU (Digital Use of Public Services)	0.356	0.109	3.27	0.004

DG (Digital Governance)	0.417	0.118	3.53	0.002
Constant	0.214	0.085	2.51	0.018

Note: Dependent variable: Organizational Performance (OP).

Source: Author's calculations based on research data (2018–2025).

Table 5 presents the results of the long-run estimation of the ARDL model, which examines the structural relationship between digital transformation variables and the organizational performance of public administrations. The results indicate that all explanatory variables digital platformization (DP), the use of digital public services (DU), and digital governance (DG), have positive and statistically significant coefficients at conventional significance levels. These findings suggest that digital transformation components exert a meaningful long-term influence on administrative performance. In particular, the coefficient associated with digital platformization (DP), is positive and statistically significant, indicating that the development of digital platforms contributes significantly to improving the efficiency and effectiveness of public administrations. This result supports the theoretical argument that platform-based governance models facilitate service integration, enhance coordination between public institutions, and optimize administrative processes.

Furthermore, the results reveal that the use of digital public services (DU) also has a positive and statistically significant effect on the organizational performance of public administrations. This finding highlights the importance of citizens' adoption of digital public services in strengthening administrative performance. As the use of online public services increases, administrative procedures become more streamlined, transaction costs are reduced, and public institutions are able to deliver services more efficiently. Consequently, the expansion of digital public service usage can contribute to improving both the responsiveness and the accessibility of public administration, thereby enhancing overall institutional performance.

Finally, the coefficient associated with digital governance (DG), is also positive and statistically significant, indicating that improvements in digital infrastructure, regulatory frameworks, and institutional coordination mechanisms play a key role in strengthening administrative performance. Effective digital governance provides the institutional and technological foundation necessary for the successful implementation of digital platforms and online public services. Overall, the long-run estimation results suggest that the combined development of digital platforms, digital governance, and digital public service usage contributes significantly to improving the organizational performance of public administrations. These findings provide

strong empirical support for the hypothesis that digital transformation policies are essential drivers of administrative modernization and institutional efficiency.

Table 6: Panel Short-Term Estimators (Error Correction Model – ECM)

Variables	Coefficient	Std. Error	t-Statistic	Probability
Δ DP (Digital Platformization)	0.214	0.082	2.61	0.014
Δ DU (Digital Use of Public Services)	0.176	0.071	2.48	0.019
Δ DG (Digital Governance)	0.193	0.076	2.54	0.016
ECM(-1)	-0.642	0.118	-5.44	0.000
Constant	0.108	0.043	2.51	0.017

Note: Dependent variable: Δ OP (Change in Organizational Performance). Δ denotes first differences of the variables. ECM (-1), represents the error correction term. **Source:** Author's calculations based on research data (2018–2025).

Table 6 presents the short-run estimation results derived from the Error Correction Model (ECM) associated with the panel ARDL framework. The short-run coefficients capture the immediate effects of changes in the explanatory variables digital platformization (DP), the use of digital public services (DU), and digital governance (DG), on changes in the organizational performance of public administrations. The results indicate that the coefficients of the differenced variables are positive and statistically significant, suggesting that improvements in digital transformation indicators generate immediate positive effects on administrative performance. In particular, the positive coefficient of Δ DP indicates that short-term increases in digital platform development contribute to improving the operational efficiency of public administrations.

Similarly, the coefficient associated with Δ DU is positive and statistically significant, indicating that a higher level of citizen engagement with digital public services produces short-term improvements in administrative performance. This result suggests that the increased adoption of digital services reduces administrative burdens, improves service delivery processes, and enhances the interaction between citizens and public institutions. In addition, the coefficient of Δ DG highlights the importance of digital governance and infrastructure in supporting the effective functioning of public administrations. Improvements in digital governance frameworks, including stronger institutional coordination and better digital infrastructures, appear to facilitate the efficient implementation of digital public services.

The error correction term (ECM (-1)), is negative and highly significant, confirming the existence of a stable long-run equilibrium relationship between the variables. The coefficient of the ECM indicates the speed of adjustment toward long-term equilibrium following short-run shocks. In this case, the value of approximately -0.64 suggests that nearly 64% of the disequilibrium from

the previous period is corrected within the current period, reflecting a relatively rapid adjustment process. This finding confirms the robustness of the long-run relationship between digital transformation indicators and the organizational performance of public administrations and supports the validity of the ARDL modeling framework used in this study.

5. Conclusions and Recommendations

The findings of this study highlight the growing importance of digital transformation and platform-based governance in improving the organizational performance of public administrations. The empirical analysis demonstrates that the development of digital platforms, the increasing use of digital public services, and the strengthening of digital governance frameworks play a significant role in enhancing administrative efficiency and institutional coordination. In the context of Morocco, these results confirm that the digitalization of public administration is not merely a technological process but rather a comprehensive organizational transformation that affects the way public institutions operate, interact with citizens, and deliver services. The integration of digital infrastructures and platform-based systems enables public administrations to streamline procedures, improve information sharing, and provide more accessible and efficient public services.

Furthermore, the results of the econometric analysis indicate that digital platformization exerts a positive and statistically significant impact on the organizational performance of public administrations both in the short run and in the long run. This finding suggests that the adoption of digital platforms facilitates the integration of administrative processes and enhances the coordination between different public institutions. By enabling interoperability between information systems and improving access to administrative data, digital platforms contribute to the modernization of governance structures and the optimization of public service delivery. In addition, the increasing use of digital public services by citizens reinforces the effectiveness of digital governance initiatives, as higher levels of user engagement promote the efficiency and responsiveness of public administration.

Moreover, the study reveals that digital governance and institutional digital infrastructure constitute fundamental pillars for the success of digital transformation in public administration. Effective digital governance frameworks provide the regulatory, technological, and organizational conditions necessary for the successful implementation of digital platforms and online public services. In the Moroccan context, strengthening digital governance mechanisms

such as improving interoperability between institutions, enhancing data management systems, and developing digital competencies within public administrations can significantly contribute to improving institutional performance. Consequently, the development of an integrated digital ecosystem within public administration appears to be a strategic priority for supporting administrative modernization and promoting more efficient and citizen-centered public services.

Building on these findings, several policy recommendations can be formulated to support the effective digital transformation of public administration in Morocco. First, policymakers should prioritize the development of integrated digital platforms that allow seamless interaction between different public institutions. Strengthening interoperability between governmental information systems would significantly improve administrative coordination and reduce institutional fragmentation. In addition, investments in advanced digital infrastructures, cloud technologies, and secure data management systems would facilitate the development of a unified digital environment capable of supporting platform-based governance. Such initiatives would not only enhance administrative efficiency but also improve the accessibility and quality of public services delivered to citizens and businesses.

Second, the successful implementation of digital transformation strategies requires the strengthening of digital governance frameworks and institutional capacities within public administrations. This includes developing comprehensive regulatory frameworks for digital governance, improving cybersecurity systems, and promoting the adoption of open data policies. Furthermore, enhancing the digital skills and competencies of public sector employees is essential for ensuring the effective use of digital platforms and information systems. Capacity-building programs, specialized training in digital technologies, and the promotion of a culture of innovation within public administration can significantly contribute to improving institutional adaptability and organizational intelligence.

While this study provides important empirical insights into the relationship between digital platformization and the organizational performance of public administrations, several avenues for future research remain open. Future studies could expand the scope of analysis by incorporating additional indicators related to digital innovation, artificial intelligence, and data-driven governance within the public sector. Moreover, comparative studies across different countries or regions could provide deeper insights into how digital governance models influence administrative performance in diverse institutional contexts. In this regard, further research could also explore the role of emerging technologies in shaping the future of digital public

administration and the development of integrated digital ecosystems capable of supporting sustainable and inclusive governance.

BIBLIOGRAPHY

- Helmond, A. (2015). The platformization of the web: Making web data platform ready. *Social Media + Society*, 1(2), 1–11.
- Parker, G. G., Van Alstyne, M. W., & Choudary, S. P. (2016). *Platform revolution: How networked markets are transforming the economy and how to make them work for you*. New York: W. W. Norton & Company.
- Thompson, M. (2016). Digital government and public service transformation. *Government Information Quarterly*, 33(2), 315–323.
- Williamson, B. (2017). *Big data in education: The digital future of learning, policy and practice*. London: SAGE Publications.
- Van Dijck, J., Poell, T., & De Waal, M. (2018). *The platform society: Public values in a connective world*. Oxford: Oxford University Press.
- Lathrop, D., & Ruma, L. (2010). *Open government: Collaboration, transparency, and participation in practice*. Sebastopol: O'Reilly Media.
- O'Reilly, T. (2011). Government as a platform. *Innovations: Technology, Governance, Globalization*, 6(1), 13–40.
- Janssen, M., & Estevez, E. (2013). Lean government and platform-based governance. *Government Information Quarterly*, 30(S1), S1–S8.
- Cordella, A., & Paletti, A. (2019). Government as a platform and public value creation. *Government Information Quarterly*, 36(4), 101409.
- Margetts, H., & Dunleavy, P. (2013). *The second wave of digital-era governance*. Oxford: Oxford Internet Institute.
- Meijer, A., & Bolívar, M. P. R. (2016). Governing the smart city. *International Review of Administrative Sciences*, 82(2), 392–408.
- Matsuda, K. (1992). Organizational intelligence. *Human Systems Management*, 11(1), 5–12.
- Quinn, J. B. (1992). *Intelligent enterprise*. New York: Free Press.
- Davenport, T. H., & Prusak, L. (1998). *Working knowledge*. Boston: Harvard Business School Press.
- Choo, C. W. (1998). *The knowing organization*. Oxford: Oxford University Press.
- Argyris, C., & Schön, D. (1996). *Organizational learning II*. Reading: Addison-Wesley.
- Boin, A., & 't Hart, P. (2003). Public leadership in times of crisis. *Public Administration*

Review, 63(5), 544–553.

Fountain, J. (2001). *Building the virtual state*. Washington, DC: Brookings Institution Press.

West, D. M. (2005). *Digital government: Technology and public sector performance*. Princeton: Princeton University Press.

Norris, D. F., & Moon, M. J. (2005). Advancing e-government. *Public Administration Review*, 65(1), 64–75.

Heeks, R. (2006). *Implementing and managing e-government*. London: SAGE Publications.

Dunleavy, P., Margetts, H., Bastow, S., & Tinkler, J. (2006). *Digital-era governance*. Oxford: Oxford University Press.

Janssen, M., & Estevez, E. (2013). Platform-based governance. *Government Information Quarterly*, 30(S1), S1–S8.

Moore, J. F. (1996). *The death of competition*. New York: Harper Business.

Iansiti, M., & Levien, R. (2004). *The keystone advantage*. Boston: Harvard Business School Press.

Helbig, N., Gil-Garcia, J. R., & Ferro, E. (2009). Digital ecosystems in e-government. *Government Information Quarterly*, 26(1), 89–97.

Scholl, H. J., & Scholl, M. C. (2014). Smart governance. *International Journal of Public Administration in the Digital Age*, 1(1), 1–15.

Charalabidis, Y., & Loukis, E. (2012). Participative ecosystems. *Government Information Quarterly*, 29(4), 560–568.

Wirtz, B. W., & Daiser, P. (2018). Digital transformation and ecosystems. *Public Management Review*, 20(9), 1343–1362.

EL AMMARI, A., & BERRICHI, A. (2026). Platformization as a lever for transforming public services. *African Scientific Journal*, 3(35), 47.

BERRICHI, A., & EL AMMARI, A. (2025). Les mécanismes de la plateforme des services publics. *Management Control, Auditing and Finance Review (MCAFR)*, 2(3), 24–45.

BERRICHI, A., & EL AMMARI, A. (2025). Adopting Generative AI. *Management Control, Auditing and Finance Review (MCAFR)*, 2(1), 95–114.