Digital Transformation and Internal Communication Efficiency in Tax Administrations: Evidence from a Case Study in the Southern Region of Africa

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Abstract: The structural limitation of internal communication significantly compromises administrative efficiency in public institutions of developing countries. This challenge is particularly sensitive in the tax administration of the southern Africa region, where the rapid and secure flow of information is vital for effective revenue collection and tax management. The adoption of digital platforms constitutes a central vector for modernization, mitigating historical inefficiencies and promoting high standards of transparency and institutional accountability. This study adopts a mixed methodological approach, through questionnaires applied to 407 employees, interviews with managers, and direct observation of communication processes, analyzed both quantitatively and qualitatively. The results reveal significant improvements in communication speed, departmental integration, and information accuracy. However, challenges persist, such as weaknesses in technological infrastructure, resistance to change, and limitations in technical training. It is concluded that digital transformation has already promoted substantial progress, but its full potential requires continuous investments in infrastructure, training, and organizational adaptation.

Keywords: *Digital Transformation; Internal Communication; Public Sector Efficiency; Southern Africa.*

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I. INTRODUCTION

Internal communication plays a strategic role in modern public administrations, directly influencing organizational efficiency, the quality of service delivery, and the capacity to respond to social demands. In the context of this tax administration from the Southern African region under study (hereinafter referred to as XPT), the need to modernize information flows has become even more pressing, considering a scenario historically characterized by manual processes, departmental fragmentation, informational redundancies, and significant delays in the processing of essential data for institutional functioning.

The central problem of this research, therefore, emerges from the recognition that, although XPT has initiated consistent efforts in digital transformation—through the adoption of digital platforms for internal communication—relevant challenges remain that compromise the full effectiveness of this process. Among the main obstacles identified are: limitations in technological infrastructure, deficiencies in employees' digital skills, cultural resistance to organizational change, and asymmetries in access to and full use of technological resources, particularly in peripheral delegations.

Given this scenario, the general objective of this study is to analyse the impact of digital transformation on internal communication at XPT, focusing on the evaluation of the advances achieved, the persistent constraints, and the resulting institutional implications. The hypothesis guiding this investigation establishes that:

The implementation of digital platforms in XPT's internal communication significantly improves the efficiency of informational flows and organizational integration, although limitations persist due to technological infrastructure, staff training, and organizational adaptation.

This work seeks to contribute not only to the theoretical advancement of digital transformation in African tax administrations but also to provide practical inputs for the formulation of robust and sustainable public policies.

The article is structured into five main sections. The Introduction contextualizes the problem and defines the research hypothesis and objectives. The Theoretical Background reviews relevant literature on digital transformation and organizational communication within public administrations, emphasizing African realities. The Methodology details the mixed research design, data collection instruments, and analytical procedures used. The Results, Discussion, and Implications present empirical findings, interpret them in light of the theoretical framework, and discuss their institutional significance. Finally, the Conclusions synthesize the main outcomes, confirm the hypothesis, and propose strategic recommendations for strengthening digital transformation and communication efficiency in tax administrations.

II. THEORETICAL BACKGROUND

➢ *Digital Transformation in Public Administration*

The digital transformation of public administration has become one of the central themes in contemporary governance, reflecting a global shift towards efficiency, transparency, and citizen-centered service delivery. Governments worldwide are adopting digital platforms not only to modernize administrative processes but also to enhance communication, accountability, and trust in public institutions. However, this transformation is complex and multidimensional: it requires more than technological adoption, demanding structural, cultural, and ethical adjustments across institutions. In developing contexts, such as Mozambique, these challenges are particularly pronounced due to infrastructural limitations, regulatory gaps, and social inequalities in digital access. Against this backdrop, the following discussion explores the opportunities and constraints of digital transformation in public administration, highlighting its strategic role, implementation barriers, and implications for institutional trust and governance.

Digital transformation in public administration goes beyond the mere computerization of routines: it implies reconfiguring structures, processes, and competencies towards a management model guided by data and public values. From this perspective, it is a strategic process that requires rethinking communication practices, data governance, and privacy protection mechanisms as essential conditions for institutional trust [1], [2]. In parallel, the consolidation of this movement demands changes in workflows, standardization of procedures, and continuous staff training to reduce informational asymmetries and improve the quality of digital services [3].

In the context of developing countries such as Mozambique, implementation faces structural constraints that limit the scope of reforms: infrastructure shortages, connectivity restrictions, and low maturity in data protection and digital culture undermine policy execution and the effective adoption of public platforms [4], [3]. These barriers affect the fluidity of inter-institutional communication and administrative efficiency, requiring investments in inclusion and digital literacy, as well as clear supervision and enforcement mechanisms to ensure compliance in data processing [3].

On the other hand, when anchored in robust governance and openness practices, digital transformation can enhance transparency, strengthen accountability, and improve state responsiveness. Open data portals, participation channels, and clear communication raise the legitimacy of decisions and citizen trust—provided they are supported by adequate institutional design and continuous evaluation of results [5], [1]. Thus, digitalization assumes an ambivalent character: it offers gains in efficiency and integrity but depends on technical, regulatory, and organizational conditions to fully achieve its potential [2], [5].

In summary, digital transformation in public administration represents a strategic opportunity for modernization and for strengthening trust between the State and citizens. However, its potential benefits can only materialize when accompanied by structural investments, continuous training, and a solid regulatory framework. While it promotes efficiency, transparency, and accountability, this process also exposes ethical and institutional vulnerabilities, particularly regarding privacy, information security, and the regulation of data use.

➢ *Organizational Communication and Digital Platforms*

Organizational communication, when mediated by digital platforms, represents one of the central pillars of digital transformation in public administration. It is a process that goes beyond the instrumental use of technology and takes shape as a strategic dimension, capable of redefining information flows, forms of interaction, and accountability mechanisms within institutions. In this sense, the literature underlines that digital communication enables greater fluidity, efficiency, and transparency, provided it is supported by solid structures of information governance.

In the public sector, organizational communication mediated by digital platforms shifts from unidirectional flows to bidirectional interactions oriented towards transparency and accountability. In this environment, portals, networks, and digital services become infrastructures for public listening, accountability, and co-production of policies, provided they are accompanied by adequate institutional design and continuous evaluation routines [5]. For this potential to materialize, it is crucial to articulate data governance, informational openness, and participation mechanisms that reduce asymmetries and strengthen citizens' trust [6].

From the perspective of communication management, clarity, accessibility, and honesty in communication are essential conditions to legitimize decisions and mitigate perceptions of opacity, especially in contexts of informational vulnerability and inequality of access [7]. In parallel, Oliveira et al. emphasize that the professionalization of institutional communication requires permanent monitoring and evaluation, not only in terms of message reach but also in the quality of the interactions generated [8]. This demonstrates that digital platforms are not limited to channels of dissemination but constitute socio-technical devices whose effectiveness depends on the integration of institutional arrangements, technical skills, and a public culture of openness and innovation.

In summary, the literature indicates that organizational communication mediated by digital platforms is a vector of modernization in public administration, promoting efficiency, transparency, and citizen participation. However, its positive impacts only materialize when anchored in robust governance policies, continuous professional training, and monitoring and evaluation mechanisms. Without these conditions, such platforms risk reproducing institutional weaknesses, but when properly implemented, they consolidate as strategic instruments of trust and social legitimacy.

III. METHODOLOGY

This study adopts a mixed methodological approach, integrating quantitative and qualitative techniques, following the principles defended by Creswell [9] on the methodological complementarity required in complex organizational studies. The choice of this approach is justified by the multifaceted nature of the phenomenon under investigation, involving both objective metrics, such as communication efficiency and departmental integration, and employees' subjective perceptions regarding informational clarity, technological difficulties, and organizational adaptation [10], [2].

Data collection was conducted through three complementary techniques taking into account ethical considerations, the study strictly adhered to the principles of research integrity and confidentiality. All participants were informed about the objectives and procedures of the research, providing their consent voluntarily before participating. Data were anonymized to ensure the protection of personal and institutional identities, and the information collected was used exclusively for academic purposes. First, unstructured interviews were carried out with middle and senior managers, including decision-makers from the areas of communication, technology, and human resource management [11]. This approach allowed interviewees, in a natural and non-rigid manner, without structured questions, to openly reflect their views on digital transformation in internal communication and its challenges within the tax administration.

Second, a structured questionnaire was applied to 407 employees of the tax administration, covering staff from different functional categories and geographical units [12]. This sample made it possible to capture the institutional perception both in central administration and in provincial delegations. Finally, direct observation of internal communication processes was carried out across multiple units, aiming to empirically validate the results obtained from the formal instruments and to understand the real dynamics of using digital platforms in daily organizational practice [13].

Regarding data analysis, the questionnaires were processed using descriptive statistical techniques—relative frequencies, means, and percentages—which enabled the identification of response patterns and the quantification of the main indicators of communication performance [14]. Qualitative data, resulting from interviews and observations, were subjected to thematic content analysis, allowing for deeper interpretations of cultural barriers, technological constraints, and organizational change challenges [15].

The theoretical framework of this research is anchored in contemporary literature on digital transformation in public administration, with emphasis on the works of Morais and Silva [16], who address critical success factors in the management of digital change in public institutions, and Almeida et al. [10], who analyze the specific challenges of digitalization in African public administrations. The analytical model is also supported by the contributions of Renovato et al. [2] on institutional digital communication and Wuersch & Adams [11] on the digitalization of tax administrations in developing countries.

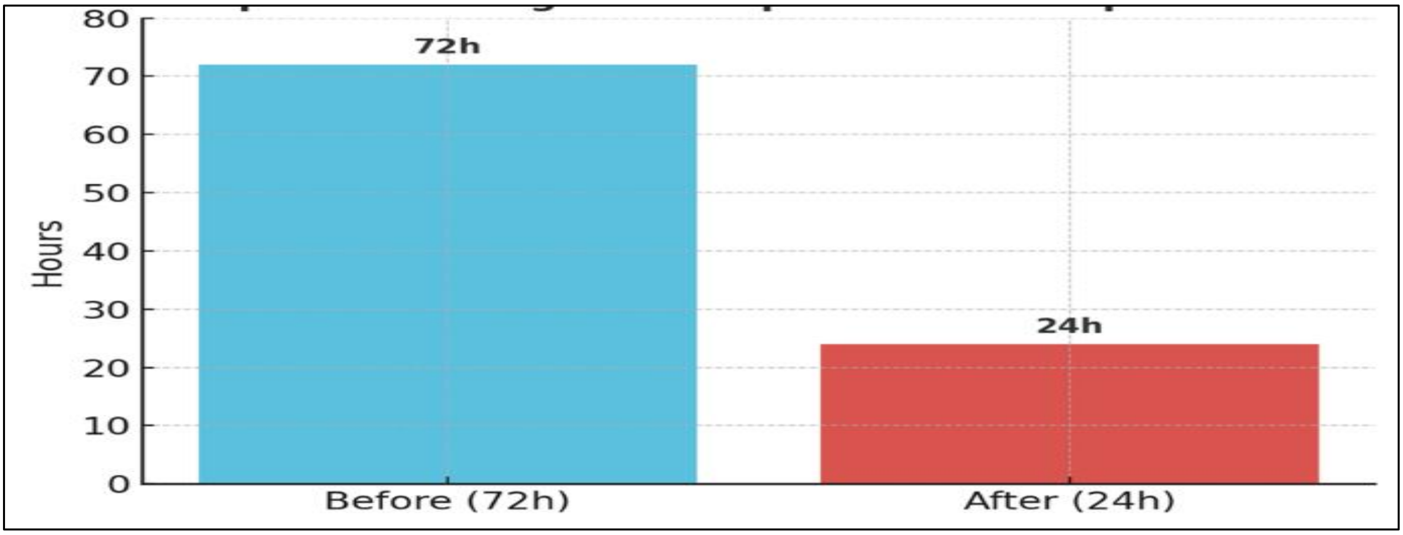
The methodological innovation of this study lies in its ability to simultaneously combine objective performance indicators—such as response times and levels of informational integration—with qualitative assessments of internal perceptions about organizational digital maturity [9], [14]. This triangulation makes it possible to capture the real complexity of the impacts of digital transformation on internal communication in the tax administration, providing a robust empirical contribution applicable to the formulation of digital public policies tailored to the institutional reality of Africa.

IV. RESULTS, DISCUSSION, AND IMPLICATIONS

The rigorous analysis of the data collected from the 407 surveyed employees fully confirms the proposed hypothesis. The adoption of digital platforms has substantially transformed the dynamics of internal communication at XPT, providing measurable gains in efficiency, integration, and informational consistency, while at the same time highlighting persistent structural vulnerabilities.

- *Efficiency in Communication Speed*

The results indicate that 72% of respondents reported a drastic reduction in the average time for interdepartmental responses, which decreased from 72 hours to 24 hours following the digitalization of informational flows, as illustrated in Graph 1.

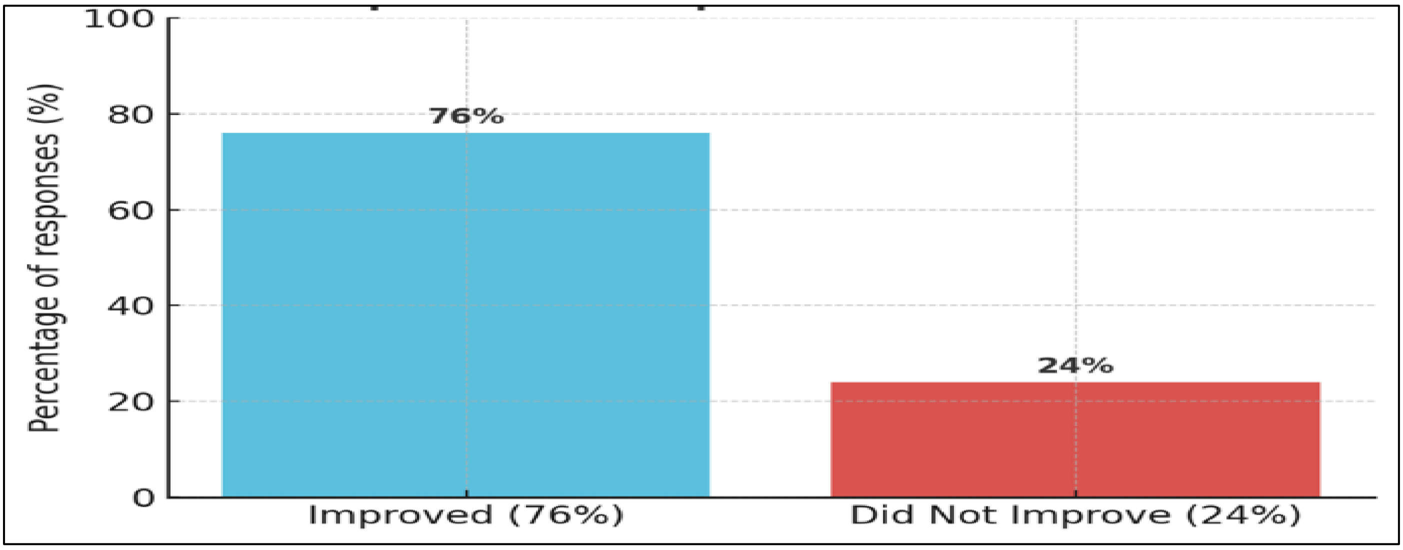


Graph 1 Average Interdepartmental Response Time
Source: Empirical Data from the Field Research Conducted at XPT, 2025.

This gain in speed not only accelerated internal processes but also increased predictability and the institution's responsiveness to taxpayers and external partners. It can be explained by the automation of workflows, which eliminated manual handling and physical circulation of documents; the real-time sharing of information, allowing employees immediate access to updated data and reducing redundant communication; the standardization of procedures through unified digital channels and templates, minimizing inconsistencies; and the greater traceability and monitoring of communication flows, which enhanced accountability and encouraged faster responses. In addition, improved interdepartmental integration reduced organizational silos and made direct communication more fluid, decreasing the dependency on hierarchical approvals for routine matters.

- *Interdepartmental Integration*

In the domain of institutional collaboration, 76% of participants reported a concrete strengthening of interdepartmental interactions, overcoming former informational silos and enabling more integrated communication flows among the various areas of the Tax Authority, as illustrated in Graph 2.

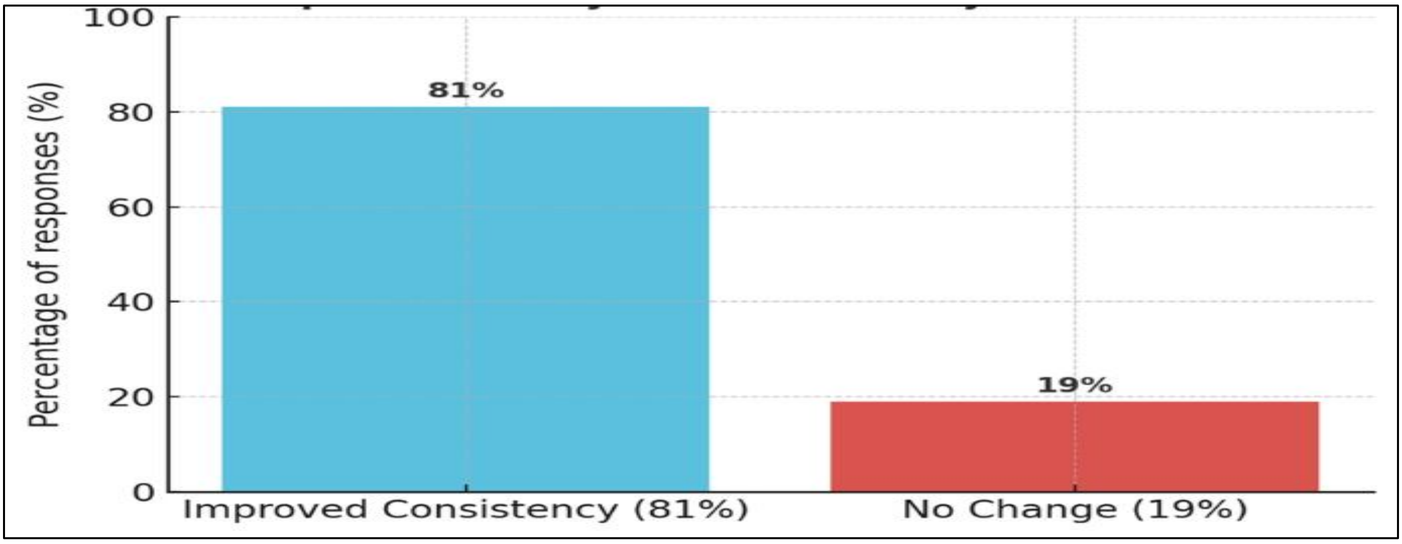


Graph 2 Interdepartmental Collaboration
Source: Empirical Data from the Field Research Conducted at XPT, 2025.

This result shows that digital transformation has favored the horizontal circulation of information and a better articulation in dealing with complex tax processes. In addition, the adoption of integrated platforms has reduced duplication of tasks and improved coordination between technical and administrative units, ensuring that different departments work with the same datasets and reference indicators. The creation of shared digital repositories has facilitated joint problem-solving and accelerated the resolution of cross-cutting issues that previously depended on lengthy exchanges of physical documents. Furthermore, the increased transparency of interdepartmental communications has strengthened institutional trust, making interactions less bureaucratic and more focused on results. Together, these factors demonstrate that digital platforms have transformed interdepartmental collaboration from a fragmented and sequential process into a more cooperative and simultaneous dynamic, thereby enhancing organizational efficiency and responsiveness.

➢ *Consistency and Reliability of Information*

The clarity and standardization of information shared internally also evolved considerably. A total of 81% of respondents acknowledged that the use of digital platforms brought greater accuracy and reduced redundancies, contradictions, and previously frequent divergent interpretations, as illustrated in Graph 3.

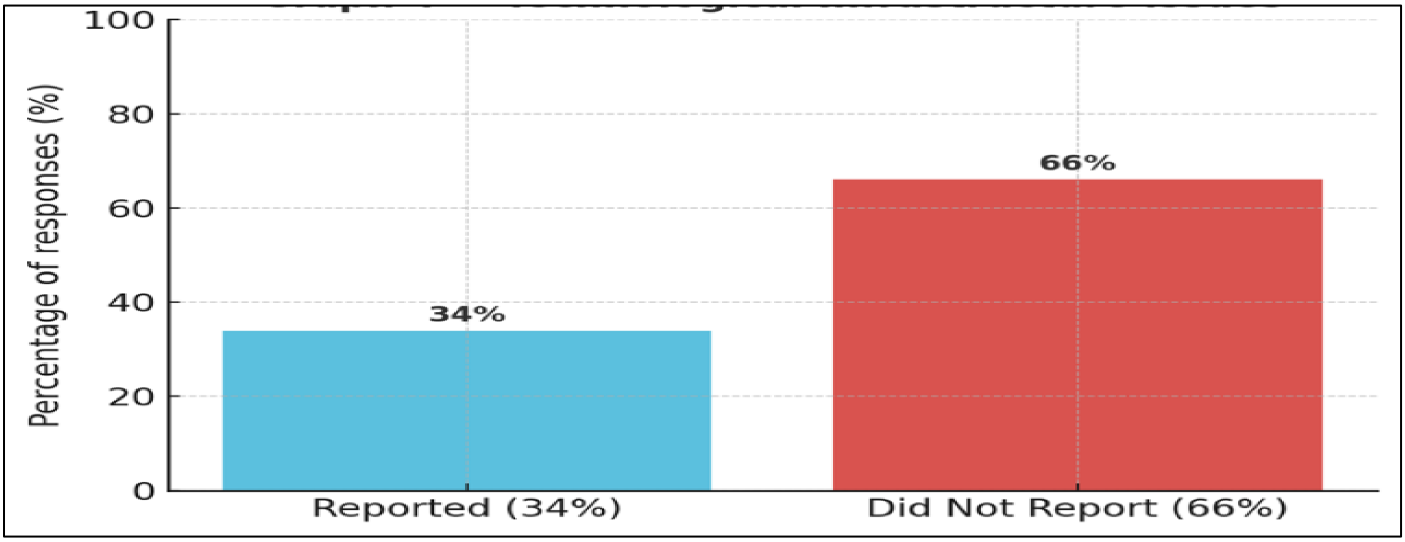


Graph 3 Clarity and Consistency of Information
Source: Empirical Data from the Field Research Conducted at XPT, 2025.

The centralization and automation of informational procedures strengthen decision-making quality and the reliability of strategic fiscal data production. This process also significantly reduces errors and unnecessary rework by minimizing duplications and inconsistencies. As a result, administrative processes become more streamlined, freeing resources for strategic tasks while ensuring greater transparency and traceability in internal operations, which facilitates audits, compliance checks, and accountability. Moreover, by providing uniform and accurate information across all institutional levels, digital transformation enhances organizational cohesion and fosters greater internal trust, enabling faster and more informed decisions and reinforcing the institution's credibility with taxpayers and external partners.

➢ *Persistence of Technological Weaknesses*

Despite the progress achieved, limitations remain. 34% of respondents reported difficulties related to technological infrastructure, particularly in peripheral branches, where connectivity still suffers from regular failures and operational instabilities. As illustrated in Graph 4.

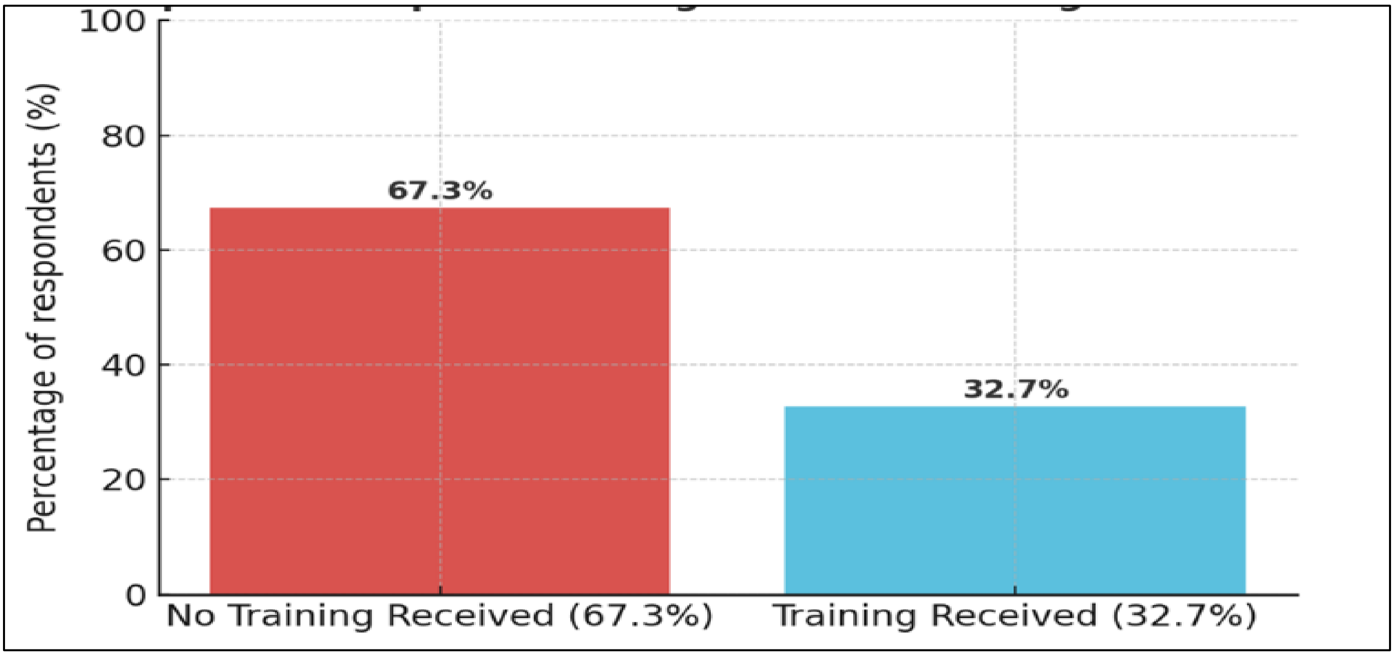


Graph 4 Technological Infrastructure Issues
Source: Empirical Data from the Field Research Conducted at XPT, 2025.

This evidence highlights the urgent need for continuous investment in technological infrastructure and the expansion of network coverage in decentralized areas. These limitations also reveal structural disparities between central and peripheral units, which risk deepening institutional asymmetries and undermining the uniform implementation of digital reforms. Connectivity gaps not only slow communication and decision-making but also perpetuate inequalities in service delivery and taxpayer support. Moreover, recurring technological failures tend to reduce employees' confidence in digital platforms, fostering resistance to adoption and encouraging fallback to manual processes as contingency measures. To address these weaknesses, it is essential to strengthen investment in resilient infrastructure, expand technical support mechanisms, and ensure adequate training, thereby guaranteeing that digital transformation effectively reaches all organizational levels sustainably.

➢ *Digital Skills and Capacity-Building*

The availability of adequate training for the use of digital platforms remains a critical challenge. A total of 67.3% of respondents reported not receiving any training, as illustrated in Graph 5.



Graph 5 Adequate Training for the use of Digital Platforms
Source: Empirical Data from the Field Research Conducted at XPT, 2025.

This result highlights a significant gap in digital skills across the institution, suggesting that many employees are not fully prepared to explore the functionalities of the platforms introduced. The lack of systematic training limits the potential benefits of digital transformation, reinforces disparities between employees, and increases the likelihood of underutilization of available tools. At the same time, it underscores the urgent need for continuous and structured capacity-building programs as a prerequisite for strengthening institutional digital maturity and ensuring sustainable modernization.

➢ *Theoretical and Practical Implications*

The findings of this research contribute to the international debate on digital transformation in tax administration within African contexts by empirically demonstrating:

- The role of digital platforms in communication efficiency.
- The direct impacts on departmental integration and decision-making quality.
- The persistent vulnerabilities demand strategic public policies.

On a practical level, the study provides concrete inputs to XPT managers and policymakers to guide sustained investments in:

- Resilient technological infrastructure.
- Regular and scalable digital training programs.
- Management of organizational cultural change.
- Strengthening of governance and information security mechanisms.

Additionally, the research opens room for new avenues of investigation, namely the ethical use of artificial intelligence in tax administration and the automation of fiscal decision-making processes.

V. CONCLUSIONS

The present investigation fully validated the proposed hypothesis, empirically demonstrating that the adoption of digital platforms in XPT's internal communication promoted significant gains in efficiency, organizational integration, and informational quality—elements that are essential for institutional modernization.

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➢ *The Results Confirm that:*

* There was a substantial reduction in interdepartmental response time (from 72h to 24h).
* There was a strengthening of departmental integration and collaborative information flows.
* There was greater standardization and consistency of information, raising the quality of data shared and used in fiscal decision-making.

However, the study also shows that the success of digitalization does not automatically eliminate underlying challenges. The main vulnerabilities persist in the areas of:

* Deficient technological infrastructure, particularly in peripheral tax units.
* Insufficient digital capacity among a considerable proportion of staff.
* Cultural resistance to organizational change.

Therefore, the results obtained not only enrich the theoretical debate on digital transformation in Southern African tax administrations but also provide concrete and applicable inputs for the formulation of solid and sustainable public policies.

To consolidate progress and ensure long-term sustainability, strategic and integrated interventions are recommended, including:

* The continuous modernization of technological infrastructure and connectivity, homogeneously and inclusively across the entire national territory.
* Permanent and scalable digital training programs, with special attention to both operational and managerial competencies.
* The development of an innovative organizational culture open to digital transformation.
* The continuous strengthening of information security systems and data governance ensures integrity and confidentiality.

The coordinated implementation of these measures will allow XPT to consolidate itself as a modern public administration, fiscally efficient, transparent, and fully aligned with international standards of responsible digital governance. These advances will benefit not only the State's fiscal performance but also strengthen the relationship of trust with taxpayers and the Southern African country society.

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