Behind the Curtain of Digital Division: Analysing Infrastructural Hurdles to Effective PEPMIS Use in Tanzania's Remote Regions

Gwamaka Emmanuel Elias

Public Administration and leadership management (PALM); Tanzania Public Service College (TPSC), P. O. Box 2574, Dar es Salaam, Tanzania.

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ABSTRACT

The digital transformation of public administration relies on information systems to strengthen accountability, monitor employee performance and improve administrative efficiency. In Tanzania, the Public Employees Performance Management Information System (PEPMIS) supports digital management of public servants' performance. However, its effectiveness depends on users' reliable and affordable access to infrastructure. This article analyses infrastructural barriers affecting PEPMIS utilisation among public servants in remote areas of Tanzania. It draws on analysis of qualitative findings from 85 public servants in Songwe, Katavi, Simiyu and Njombe regions. The study adopted an interpretivist philosophy and a cross-sectional qualitative design, employing purposive sampling and semi-structured interviews. Findings were organised thematically. The analysis examines four interrelated barriers: unreliable and geographically uneven internet connectivity; inadequate or faulty information and communication technology (ICT) equipment; mobile data costs; and travel to locations with reliable internet access. Connectivity constraints interrupt system access and may expose employees to missed reporting deadlines. Shortages of functional equipment and inconsistent institutional internet subscriptions shift the burden of access to employees. Some employees travel to better-connected locations, incurring additional time and transport costs. These conditions constitute a digital inclusion challenge and an institutional readiness problem, rather than merely individual difficulties in using technology. The article recommends investment in rural connectivity, maintained ICT equipment, institutionally funded internet access, offline system functionality and context-sensitive performance reporting arrangements. It contributes to digital government discussions by demonstrating how infrastructural inequalities constrain the intended benefits of digital performance management in remote public institutions.

Keywords: PEPMIS; Digital Divide; Digital Government; Internet Connectivity; ICT Infrastructure; Rural Public Servants; Tanzania.

INTRODUCTION

Digital transformation has become an important component of contemporary public administration. Governments increasingly adopt digital platforms to improve administrative processes, strengthen accountability, facilitate information management and support evidence-based decision-making. Within human resource management, digital performance management systems are intended to support the setting of objectives, monitoring of work progress, documentation of achievements and provision of feedback. Their potential benefits, however, depend not only on software design but also on the availability of infrastructure and institutional support required for consistent use.

The adoption of digital government systems has consequently raised questions about digital inclusion. Access to a digital platform is not determined simply by whether an employee has an account or whether a system is formally available. Effective access also requires reliable network connectivity, appropriate devices, affordable data and a working environment in which the technology can be used when required. Alabdail et al. (2023) highlight the importance of contextual conditions in shaping technology adoption in rural regions. Ahiaku et al.

(2025) similarly draw attention to unequal access to technology in rural settings. These concerns are particularly relevant where public institutions are geographically dispersed and operate with unequal levels of infrastructure.

In Tanzania, the introduction of the Public Employees Performance Management Information System (PEPMIS) represents part of the broader movement towards digitising public-sector performance management. PEPMIS replaced the paper-based Open Performance Review and Appraisal System (OPRAS) and is intended to support the management of employee performance through a centralised digital platform. The system provides a mechanism through which public servants can record performance-related information and participate in performance monitoring processes. Its effectiveness, however, is contingent upon the practical ability of employees to access and use the platform in their respective work environments.

The infrastructural conditions of remote public institutions raise particular concerns for PEPMIS implementation. Public servants working in remote locations may encounter unstable network coverage, limited access to functional computers or tablets, difficulties in financing mobile data and long distances to locations where internet access is available. These conditions may constrain the regular completion of performance records even where employees are willing to comply with system requirements. Chohan and Hu (2020) emphasise digital inclusion in e-government, while the DeLone and McLean Information Systems Success Model identifies system quality, service quality and use as interrelated dimensions relevant to information-system success (DeLone & McLean, 2003).

The problem is therefore not simply whether PEPMIS is technically available at national level, but whether public servants in remote institutions have the practical infrastructure needed to use it consistently. When the system depends on continuous internet access but users work in locations with unreliable connectivity, the formal requirement to update performance information may become difficult to fulfil. Likewise, where public offices lack functional equipment or stable internet subscriptions, employees may have to rely on personal devices and funds. Such arrangements transfer part of the cost of digital government from institutions to individual public servants.

The general objective of this article is to analyse infrastructural barriers affecting effective utilisation of PEPMIS among public servants in remote regions of Tanzania. Specifically, it examines how internet connectivity constraints affect system access; assesses the implications of inadequate ICT equipment; analyses the effects of internet affordability and geographical accessibility; and considers the implications of these barriers for performance reporting and public-sector performance management. The article contributes to digital-government scholarship by foregrounding the relationship between infrastructural inequality and the practical implementation of digital performance management in remote public institutions.

LITERATURE REVIEW

Digital government depends on a combination of technological platforms, network infrastructure, devices, organisational arrangements and user capabilities. A digital system may be well designed at the central level but remain difficult to use where the infrastructure supporting access is weak. Digital-government implementation is therefore not exclusively a software or administrative reform; it is also an infrastructural undertaking. Alabdail et al. (2023) identify infrastructure and contextual conditions among the factors shaping adoption of smart technologies in rural regions. For public-sector systems, implementation strategies need to account for differences in connectivity, equipment and institutional resources across locations.

Digital inclusion extends beyond the nominal availability of digital services. It concerns whether individuals and institutions can access and use those services meaningfully, reliably and affordably. Chohan and Hu (2020) link digital inclusion in e-government with the development of users' digital competencies. However, meaningful inclusion also depends on material access to devices, network infrastructure and affordable connectivity (Doloi, 2025; Mwansa et al., 2025; Valentín-Sívico et al., 2023). Training cannot compensate for the absence of a functioning computer or a usable internet connection.

Internet connectivity is a basic operational requirement for many centralised online government systems. Unstable network coverage can interrupt log-in processes, delay data entry and prevent the submission of information within prescribed periods. In remote settings, connectivity may vary between districts and between nearby workplaces depending on terrain, distance from network infrastructure and service availability. Such variation makes access uncertain and can require employees to identify particular locations or times when the system is usable.

From an information-systems perspective, system quality includes the reliability and performance characteristics that enable users to interact with a platform. DeLone and McLean (2003) explain information-system success through interconnected dimensions including system quality, information quality, service quality, use, user satisfaction and net benefits. Although network connectivity may be external to the software, it directly shapes the user's experience of system availability and responsiveness.

Access to suitable devices is another important condition for digital-system utilisation. Public servants require appropriate computers, tablets or compatible mobile devices to enter, review and submit performance information. Where institutions do not provide sufficient equipment, or where supplied equipment is unreliable, employees may be compelled to use personal devices. This creates unequal conditions because employees differ in their ability to own and maintain suitable equipment. Ahiaku et al. (2025) discuss the challenge of technology access in rural settings.

Institutional readiness involves more than the formal introduction of a digital platform. It includes budgeting for equipment, maintenance and replacement, and ensuring that employees can access the system using devices appropriate to the tasks required. Where these arrangements are absent, responsibility for digital access may be transferred from the institution to the employee.

Even where a network signal is available, the cost of internet access can constrain regular system use. Employees who depend on personal mobile-data bundles may face recurring expenses, particularly when performance information must be entered or updated frequently. The problem becomes more pronounced when office internet subscriptions are interrupted or institutional routers are not consistently funded. In such circumstances, nominal availability of PEPMIS does not necessarily translate into affordable access.

The transfer of connectivity costs to employees raises an institutional equity concern. Employees are expected to comply with digital reporting requirements, yet the resources required to meet those requirements may not be provided by their workplaces. The ability to use the system may consequently depend partly on personal financial capacity.

The geographical distribution of connectivity infrastructure can create additional barriers for employees in remote workplaces. Where internet access is unavailable at the workplace, users may travel to a nearby town, trading centre or other location with a stronger signal. Such journeys introduce additional time and, in some cases, transport costs into an administrative task that is intended to be completed digitally. Evidence from underserved rural communities shows that broadband availability and actual internet use remain important dimensions of rural digital inclusion (Valentín-Sívico et al., 2023; Doloi, 2025). The rural digital divide therefore includes spatial inequalities in the quality and practical accessibility of digital infrastructure.

This article is informed by the DeLone and McLean Information Systems Success Model, originally proposed in 1992 and updated in 2003. The updated model identifies system quality, information quality and service quality as important dimensions associated with system use, user satisfaction and net benefits (DeLone & McLean, 2003). The model is relevant because the effectiveness of PEPMIS cannot be assessed solely by its formal introduction or technical functions; it must also be considered in relation to the conditions that enable employees to use it.

For this analysis, infrastructural barriers are considered enabling or constraining conditions that shape users' practical experience of system quality and use. Unstable connectivity affects availability and responsiveness; inadequate equipment limits the means through which users interact with the platform; unaffordable data

constrains access; and geographical isolation increases the effort required to connect. The model is used as an interpretive lens rather than a quantitative causal framework. The qualitative evidence does not permit statistical estimation of the effect of each infrastructural factor.

The reviewed literature establishes that rural technology adoption is influenced by infrastructure, devices, affordability and user support. However, the practical implications of these conditions for digital employee-performance reporting in remote Tanzanian public institutions require further empirical attention. This article addresses the concern by focusing specifically on the infrastructural themes reported by public servants using PEPMIS. Its contribution lies in bringing together connectivity, equipment, affordability and geographical access as interrelated dimensions of digital inclusion in public-sector performance management.

The Tanzanian context makes the relationship between digital access and institutional practice particularly important. Research on mobile-phone use in rural Tanzanian communities highlights the role of mobile technologies in accessing and using socio-economic information (Mwantimwa, 2018). Nevertheless, mobile access should not automatically be equated with reliable access to complex administrative platforms. Device capability, data affordability, network quality and the nature of the task all shape whether a mobile connection is sufficient for official system use.

The implications extend to employee performance management. Digital transformation has changed the design and operation of performance-management systems, but the expected gains depend on the alignment of technology, organisational processes and employees' working conditions (Cosa & Torelli, 2024; Mthuli, 2024). Research reviewing performance management in public-sector organisations likewise shows that digital and managerial reforms need to be understood in their organisational context (Roy et al., 2023).

Taken together, the literature suggests that digital inclusion in public administration requires attention to connectivity, devices, affordability and the spatial distribution of infrastructure. The DeLone and McLean Information Systems Success Model provides the principal interpretive lens for this article. The model identifies system quality, information quality and service quality as dimensions associated with system use, user satisfaction and net benefits (DeLone & McLean, 2003). Infrastructure is treated here as an enabling condition shaping practical access to PEPMIS. The model is used interpretively; the qualitative evidence does not support statistical estimation of causal effects.

METHODOLOGY

This article adopts a qualitative approach informed by an interpretivist philosophy and a cross-sectional research design to examine infrastructural barriers affecting PEPMIS utilisation among public servants in remote areas of Tanzania. The study covers eight purposively selected districts across Songwe, Katavi, Simiyu and Njombe regions. The study population comprises 85 public servants, including 33 primary school teachers, 12 secondary school teachers, 25 health practitioners and 15 ward and village executive officers. Participants were purposively selected based on their responsibility for using PEPMIS and their relevant experiences with the system. Data were obtained through semi-structured interviews, which provided insights into employees' experiences and the infrastructural challenges encountered when accessing and using the system.

The analysis employed thematic analysis to examine four key dimensions of infrastructural barriers: unreliable and geographically uneven internet connectivity, inadequate ICT equipment, high mobile data costs and geographical accessibility of reliable internet services. These themes were examined in relation to their implications for system accessibility, consistency of use and timely performance reporting. The analysis also considered how infrastructural constraints affect employees' time, personal financial resources and ability to fulfil performance management requirements. Participant accounts and anonymised quotations were used to support the interpretation of findings.

Research quality was considered through the principles of credibility, transferability, dependability and confirmability. These were supported through triangulation of participants' accounts with relevant PEPMIS performance information, systematic documentation of analytical procedures and the use of direct quotations to

link interpretations to the evidence. Ethical considerations included voluntary participation, confidentiality and anonymity. No personal employee identifiers were used in presenting the findings. Institutional ethics approval details and authorisation for the use of participant data and quotations should be confirmed and provided in the final manuscript in accordance with the target journal's requirements.

4. Results and Analysis

This section presents the infrastructure-related findings on PEPMIS. The analysis is organised around four themes: internet connectivity, ICT equipment, the cost of mobile data and geographical accessibility of reliable internet. Together, these themes show that access to PEPMIS in remote public institutions is shaped by the availability, reliability and affordability of the infrastructure required to use the system.

4.1 Poor and Unstable Internet Connectivity

Unreliable internet connectivity emerged as a prominent infrastructural barrier. Participants explained that network coverage varied across locations, sometimes within the same locality. Consequently, employees had to identify specific places where the signal was sufficiently strong to access PEPMIS. One participant explained:

"There are places where the network is available and others where it is not. Because of that, we have particular locations where we know we are more likely to access PEPMIS successfully, and those are the places we go to whenever we need to work on it." (R15)

The reported experiences also indicate that poor connectivity affected the ability to complete performance reporting within the required period. A participant working in a peripheral area stated:

"Internet connectivity is a major problem in this area. As you can see, we are working in a very peripheral area. Sometimes we are given a specific period within which to complete and submit our information in PEPMIS, and when the network is not there, that period can pass while we are still struggling to get in the system." (R5)

Another participant associated the problem with the remoteness of the work location and the limited coverage of available network providers. The report further indicates that connectivity was particularly weak in some valley and peripheral areas, while access could improve during evening or night hours. These accounts suggest that connectivity was not simply slow; it was geographically uneven and temporally unpredictable. Such uncertainty made it difficult for employees to plan system use around official reporting schedules.

The evidence points to a mismatch between a centralised online reporting requirement and the network conditions in some remote workplaces. Where the connection is unreliable, employees may be unable to access the platform when performance information is ready to be entered. The reported risk of passing submission deadlines is an important administrative implication, although the qualitative evidence does not quantify the frequency of missed deadlines across all employees.

4.2 Inadequate or Faulty ICT Equipment

A second infrastructural barrier concerned the availability and condition of ICT equipment. Participants reported that some workplaces lacked sufficient computers, tablets or other suitable devices for accessing PEPMIS. In other cases, devices had been supplied but were described as poor quality or became faulty after a short period. One participant explained:

"The government has not provided sufficient equipment. At one point we were given tablets, but they were of poor quality and became faulty after a short period… The office lacks computer or digital equipment. As a result, I have to rely on my own mobile phone to access PEPMIS and complete the required entries." (R56)

This account illustrates how the absence of adequate institutional equipment shifts responsibility for access to individual employees. Reliance on personal mobile phones or computers may allow some employees to continue using the system, but it does not resolve the underlying institutional resource gap. It may also create unequal

conditions because employees may not own devices with the same capacity, reliability or suitability for entering detailed performance information.

The findings highlight the importance of equipment provision and maintenance as part of digital-system implementation. Supplying devices without ensuring their quality, functionality and replacement arrangements may not provide sustainable access. For PEPMIS to be used consistently, public institutions require appropriate equipment that is available when employees need to complete performance-management tasks.

4.3 High Cost of Mobile Data and Unfunded Connectivity

The third theme concerns the affordability of internet access. Participants described situations in which office routers were available but internet subscriptions were not consistently maintained because institutions could not always meet the cost. Employees were consequently required to make their own arrangements to obtain connectivity. One respondent stated:

"There are times when you need to access the system but do not have enough data to connect to the internet. We have an office router, but sometimes the office is unable to pay for the internet service, so each individual has to make their own arrangements." (R2)

Another participant described the recurring personal expenditure associated with updating performance progress:

"We have to keep using our own money to buy data bundles every time we need to work on the system. Sometimes we spend TZS 2,000, sometimes TZS 5,000, or even more to buy data bundles so that we can update our performance progress in PEPMIS." (R15)

The report further indicates that connectivity was particularly weak in some valley and peripheral areas, while access could improve during evening or night hours. These accounts suggest that connectivity was not simply slow; it was geographically uneven and temporally unpredictable. Such uncertainty made it difficult for employees to plan system use around official reporting schedules. The four regions covered by the study should not, however, be understood as geographically or infrastructurally uniform. Differences in local topography, settlement patterns, distance from network infrastructure and the distribution of service providers may shape connectivity conditions between and within regions. The present study identifies variation in participants' reported locations and experiences, but it was not designed to compare regional connectivity systematically; therefore, no region-specific ranking or causal geographical explanation is claimed.

The financial burden of access is therefore partly transferred to employees. This has implications for equity and institutional responsibility. PEPMIS is a mandatory work-related platform, yet the evidence suggests that some users have to finance the internet access needed to fulfil system requirements.

4.4 Travelling to Locations with Reliable Internet

The fourth theme concerns the geographical distance between some workplaces and locations with usable internet connectivity. When the network was unavailable at their workplaces, some public servants travelled to areas with stronger coverage or to internet cafés in nearby towns. One participant described the response to prolonged network unavailability:

"We have that belief… but when the network is unavailable for three to five days, my colleagues and I ride motorcycles to areas with reliable internet coverage or visit an internet café in town to update our performance information in the system…" (R20)

This account shows that access to PEPMIS could require additional movement beyond the employee's normal workplace. The report indicates that such journeys involved extra time and, in some cases, transport costs. Rather than completing performance reporting as part of routine work at the duty station, employees had to seek connectivity elsewhere.

The need to travel illustrates the spatial dimension of the digital divide. The system may be centrally available, but the practical cost of reaching a reliable connection varies according to the location of the employee. Geographical accessibility is therefore an important part of effective digital access and should be considered when performance-reporting expectations are applied across different work environments.

4.5 Summary of the Infrastructure-Related Findings

Across the four themes, the findings reveal mutually reinforcing constraints. Poor connectivity limits when and where PEPMIS can be accessed; inadequate equipment restricts the devices available for system interaction; data costs make connectivity dependent on employees' financial resources; and geographical isolation may require travel to obtain a usable connection. These barriers are interconnected rather than independent. An employee without a functioning office device may depend on a personal phone, but still be unable to complete an entry if the network is unavailable or data bundles are unaffordable. Where these constraints occur together, employees may lose time locating a device, securing data or travelling to a connected location before they can enter and submit performance information. The cumulative effect is a reduced opportunity to complete reporting within prescribed timelines and an increased risk of missed administrative deadlines. This is a risk identified in participants' accounts, rather than a quantified estimate of missed submissions.

The evidence indicates that the practical ability to use PEPMIS is shaped by the infrastructure available at the employee's workplace and by the employee's capacity to compensate when institutional provision is inadequate. Although the sample included primary and secondary school teachers, health practitioners, and ward and village executive officers, the findings are presented thematically rather than as a systematic comparison of professional groups. The available analysis therefore does not establish whether particular occupational groups experienced equipment shortages, data costs or connectivity barriers more severely than others. These findings provide the basis for the discussion that follows.

DISCUSSION OF FINDINGS

5.1 Connectivity Constraints and the Quality of System Use

The findings show that unstable and geographically uneven connectivity is a central constraint on PEPMIS use in the remote settings represented in the study. Participants did not describe a uniform absence of network coverage; rather, they reported variation between locations and times. Intermittent connectivity can make system access unpredictable even where some network coverage exists. Employees may have to identify a suitable location or wait for a period when the signal improves before completing a required task.

The finding can be interpreted through the system-quality dimension of the DeLone and McLean model. System use depends partly on whether users can access the platform and complete tasks without repeated interruption (DeLone & McLean, 2003). Although connectivity problems may originate outside the PEPMIS software, they shape the actual quality of the user experience. A platform that is formally operational but practically inaccessible at a user's duty station cannot provide equal opportunities for timely use.

The reported possibility of missing reporting deadlines is particularly significant for performance management. Digital systems are expected to make performance documentation more timely and traceable. However, where network access is unreliable, a delay in submission may reflect infrastructural conditions rather than unwillingness to perform assigned duties. System-use expectations should therefore be interpreted alongside the connectivity conditions of the relevant workplace.

5.2 Equipment Deficits and Unequal Institutional Readiness

The reported shortage of functional computers and tablets indicates that the introduction of PEPMIS was not accompanied by consistently adequate equipment in all workplaces represented in the study. Reliance on personal phones and computers is an adaptive response, but it also reveals a transfer of institutional responsibility

to employees. Ahiaku et al. (2025) similarly draw attention to the challenge of access to appropriate technology in rural settings.

Equipment provision should be understood as a continuing responsibility rather than a one-off distribution exercise. Devices require maintenance, technical support and replacement when faulty. Without such arrangements, initial provision may not translate into sustained access. Related evidence on technology integration in rural educational settings also identifies equipment and infrastructure as necessary conditions for sustained digital use (Mustafa et al., 2024; Sithole & Mbukanma, 2024). The findings point to a need to assess institutional readiness not only by whether equipment has ever been supplied, but by whether suitable and functional devices are available when performance-management tasks must be completed.

The reliance on personal devices also raises questions about fairness, privacy and data protection. The study documents employees' use of personal phones and computers, but it did not collect sufficient empirical evidence on device ownership and management, password practices, access controls, encryption, data storage, or institutional security protocols. It is therefore not possible to determine whether, or to what extent, the reported use of personal devices exposed PEPMIS information to security risks. This is a specific limitation of the study: the security implications are recognised as an important governance concern, but they were not independently assessed. Future research should examine how unmanaged personal endpoints are governed and whether institutional practices align with applicable public-sector information security and data-protection requirements.

5.3 Data Affordability and the Transfer of Public-Sector Costs

The findings on mobile-data costs reveal a recurring financial dimension of digital inclusion. Employees reported purchasing their own bundles and contributing to shared router subscriptions when institutional funding was unavailable. These accounts show that internet access is not only a question of network coverage; it is also a question of whether users can afford to connect when required.

This finding extends the discussion of digital inclusion by showing how the costs of a mandated digital process can be shifted to individual employees. The formal responsibility to update performance records rests with public servants, yet the means of accessing the system may not always be financed by their institutions. Where personal financial capacity determines whether an employee can connect, a common performance-management system may produce unequal practical conditions.

The issue is also relevant to the net-benefits dimension of the DeLone and McLean model. The benefits of digital performance management may be weakened where employees incur recurring personal costs simply to access the platform. Research on digital performance management underscores the need to align digital tools with organisational processes and employee working conditions (Cosa & Torelli, 2024; Mthuli, 2024). Institutional provision of internet subscriptions and transparent budgeting for recurrent connectivity expenses are therefore important components of effective system implementation.

5.4 Geographical Access and the Unequal Burden of Compliance

The need to travel to places with reliable internet demonstrates that the digital divide has a spatial dimension. Employees working in remote locations may face additional time and transport costs before performing a task that employees in better-connected locations can complete at their workplaces. This difference matters because performance-management systems generally establish common reporting requirements, while the conditions for meeting those requirements may differ substantially.

The findings suggest that uniform digital reporting expectations can have unequal implications when the infrastructure needed for compliance is unevenly distributed. A context-sensitive approach does not imply abandoning performance accountability. Rather, it requires institutions to recognise that the timeliness of digital reporting may be affected by factors beyond the employee's direct control. Reporting procedures should provide appropriate support and reasonable arrangements where connectivity limitations are documented.

5.5 Interdependence of Infrastructure Barriers

An important contribution of the findings is that the four infrastructural barriers operate cumulatively. Unreliable connectivity, equipment shortages, data affordability and geographical distance can reinforce one another. The absence of a functional office computer may require an employee to use a personal phone; if the office router is not funded, the employee must purchase data; and if local network coverage is weak, the employee may have to travel to another location. The burden of system use is therefore not explained by a single isolated obstacle.

Providing devices alone will not resolve the problem if internet access remains unreliable or unaffordable. Expanding network coverage may also be insufficient if offices lack functional equipment or funds to maintain subscriptions. Interventions should consequently address infrastructure as a connected package involving connectivity, devices, recurrent operating costs and geographical access. The analysis also indicates an area requiring further investigation. Although participants came from education, health and local government administration, the thematic presentation does not permit firm conclusions about how the burdens differ by profession or department. The practical implications may vary according to work routines, institutional budgets and the availability of shared ICT resources, but such variation needs to be examined rather than presumed.

CONCLUSION

This article analysed infrastructural barriers affecting effective utilisation of PEPMIS among public servants working in remote regions of Tanzania. Drawing on a focused analysis of qualitative findings from 85 public servants in eight districts across Songwe, Katavi, Simiyu and Njombe regions, the article identified four interrelated barriers: poor and unstable internet connectivity, inadequate or faulty ICT equipment, the cost of mobile data and the need to travel to locations with reliable internet.

The findings indicate that access to PEPMIS is shaped by the practical infrastructure available to employees at their duty stations. Unreliable connectivity makes access unpredictable and may place employees at risk of missing reporting deadlines. Inadequate equipment encourages reliance on personal devices, while inconsistent institutional internet subscriptions transfer recurring data costs to employees. Where connectivity is unavailable locally, some employees travel to other locations, incurring additional time and transport costs.

The article concludes that effective digital performance management requires more than the deployment of a centralised online platform. It requires equitable access to reliable connectivity, functional equipment and affordable internet services across public institutions. The findings also demonstrate the importance of considering the geographical and operational realities of remote workplaces when setting expectations for digital performance reporting. The study has two related analytical limitations. First, although it covers four regions, it does not provide a systematic comparison of regional topography or network performance. Second, although several professional groups were represented, the thematic analysis does not disaggregate the severity of barriers by occupation or department. Accordingly, the findings should be interpreted as cross-cutting experiences reported by participants, not as evidence that one region or professional group was more disadvantaged than another.

RECOMMENDATIONS

First, the President’s Office responsible for public service management, in collaboration with relevant government ICT institutions and telecommunications stakeholders, should prioritise reliable network connectivity in remote public-service locations. Connectivity assessments should identify underserved workplaces and guide targeted investment in network infrastructure and access points.

Second, public institutions should be equipped with adequate and functional computers, tablets and other appropriate devices for PEPMIS use. Equipment provision should be accompanied by maintenance, repair and replacement arrangements so that devices remain operational beyond the initial distribution period. Institutions should also establish clear procedures for secure system access where temporary use of personal devices is unavoidable.

Third, institutional budgets should provide for recurring internet subscriptions and data costs required for official PEPMIS activities. Public servants should not routinely be expected to finance mandatory system access from personal funds. Offices using routers should have clear responsibility for subscription renewal and monitoring of service continuity.

Fourth, PEPMIS should be strengthened to support offline or low-connectivity functionality where technically and operationally feasible. Users should be able to prepare and save performance information during periods without connectivity and synchronise records when a connection becomes available. The system should also be optimised to minimise data consumption and function effectively on commonly available devices.

Fifth, performance-reporting procedures should recognise documented infrastructure constraints in remote locations. Supervisors and institutional managers should distinguish between unwillingness to comply and delays arising from unavailable connectivity or equipment. Reasonable reporting arrangements and support mechanisms should be established without undermining accountability.

Finally, future research should compare PEPMIS utilisation in remote, rural, peri-urban and urban institutions. Comparative institutional ethnographies involving education and health departments, as well as local government offices, would be particularly useful for examining how departmental budgets, procurement practices and institutional support arrangements mediate employees' out-of-pocket expenditure on data and access to functional devices. Further studies could also disaggregate experiences by professional group, compare local geographical and connectivity conditions across regions, examine the financial costs borne by employees, assess the relationship between connectivity interruptions and reporting delays, and investigate the extent to which offline functionality improves system access. Dedicated empirical work on personal-device security, privacy practices and institutional endpoint-management protocols is also needed.

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