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EFFECTS OF PUBLIC SECTOR REFORMS ON PUBLIC SERVICE DELIVERY IN TANZANIA. A CASE OF TANZANIA PORTS AUTHORITY, DAR ES SALAAM

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ABSTRACT
This study examined the effects of public sector reforms on public service delivery in Tanzania, focusing on the Tanzania Ports Authority (TPA) in Dar es Salaam. Guided by New Public Management Theory and Principal-Agent Theory, the study employed a mixed-methods case study design. Quantitative data were collected from 325 respondents (TPA employees and clearing and forwarding agents) through structured questionnaires, while qualitative insights were obtained from twelve key-informant interviews with representatives of private terminal operators (DP World, Adani Group and Tanzania East African Gateway Terminal Limited), Ministry of Transport officials and TPA heads of departments. Quantitative data were analysed using SPSS (descriptive statistics, Pearson correlation and linear regression), and qualitative data were subjected to thematic analysis. Findings revealed that e-governance initiatives significantly improved operational efficiency, reduced delays, enhanced website accessibility, accelerated communication, strengthened inter-departmental coordination and minimised bureaucratic procedures (composite means ranging from 1.809 to 1.972 on a 1–5 scale where lower scores indicate stronger agreement). PPP arrangements with private terminal operators improved service quality, infrastructure, accessibility, cost-effectiveness and overall efficiency, although gains were partially offset by interface coordination problems. Correlation analysis showed strong positive relationships between e-governance and service delivery ($r = 0.686$, $p < 0.001$) and between PPP and service delivery ($r = 0.697$, $p < 0.001$). A combined Reform Index explained 96.4 % of the variance in perceived service delivery ($R^2 = 0.964$, $F = 8754.236$, $p < 0.001$). The study concludes that both e-governance and PPPs have produced measurable positive effects on service delivery at TPA, yet full realisation of intended outcomes requires stronger system interoperability, enhanced principal–agent oversight and continuous capacity building. Practical recommendations are offered for policymakers, TPA management and private concessionaires.

Keywords:
E-governance initiatives, public-private partnership, public service delivery, Tanzania Ports Authority, New Public Management, Principal-Agent Theory

INTRODUCTION

Public sector reforms have emerged as a crucial focus for governments worldwide, driven by the need to enhance efficiency, accountability and service delivery in the face of increasing demands from citizens and the challenges posed by odernization. These reforms are often odernization by a shift toward market-oriented approaches, odernization and the adoption of New Public Management principles, which emphasise performance measurement and the responsiveness of public services (Osborne, 2020). Recent studies have highlighted that public sector reforms are not only about improving operational effectiveness but also about restoring public trust and ensuring transparency in governance (Kettunen & Kallio, 2021).

In the port sector, global leaders such as Singapore have transformed their maritime hubs through institutional restructuring, odernization of port operations and large-scale odernization initiatives aimed at

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strengthening efficiency, transparency and service delivery. Over the period 2016–2025, reforms focused on the development of the Tuas Mega Port, integration of automation systems and adoption of performance-based management frameworks designed to reduce vessel turnaround time and improve cargo-handling productivity (Kurniawan et al., 2026). India has pursued similar odernization through the Major Port Authorities Act, granting greater financial and administrative autonomy to major ports and encouraging public–private partnerships (Gupta & Asgari, 2018).

In Singapore's port sector have been instrumental in transforming the country into a global maritime hub, particularly through the strategic governance and regulatory role of the Maritime and Port Authority of Singapore, which has implemented institutional restructuring, corporatization of port operations, and large-scale digitalization initiatives aimed at strengthening efficiency, transparency, and service delivery within the maritime industry. Over the period from 2016 to 2025, reforms have focused on the development of the Tuas Mega Port, integration of automation systems, enhancement of smart port technologies, and adoption of performance-based management frameworks designed to reduce vessel turnaround time, improve cargo handling productivity, and enhance global competitiveness (Kurniawan, S. et al.,2026). These reforms align with broader public sector modernization strategies emphasizing innovation, sustainability, and public–private collaboration, thereby reinforcing Singapore's position as one of the world's busiest and most efficient ports while maintaining strong regulatory oversight and service quality standards. Unlike Singapore's highly integrated and technologically advanced model, Tanzania's reforms at TPA continue to face challenges related to limited technological integration, capacity constraints, and slower adoption of fully automated systems, which affect the realization of similar efficiency gains. (Lam & Notteboom, 2019; Yuen, Thai, & Wong, 2018).

In South Africa, public sector reforms enhance service delivery, improve accountability, and promote inclusivity within government operations. A significant focus has been on the implementation of the National Development Plan (NDP), which outlines a vision for transforming the public sector to better meet the needs of citizens by 2030. The NDP emphasizes the importance of effective governance, transparency, and the active involvement of communities in decision-making processes (National Planning Commission, 2020). One of the key initiatives in recent years has been the introduction of the Batho Pele (People First) principles, which aim to ensure that public services are delivered in a manner that prioritizes the needs of citizens. This initiative emphasizes values such as consultation, service standards, and accountability, encouraging public servants to view citizens as clients and to deliver services with dignity and respect. These principles have been reinforced through training programs designed to instill a culture of service excellence among public officials. Unlike South Africa's strong emphasis on citizen-centered accountability and digital access, Tanzania's reforms at TPA face challenges in stakeholder engagement and service responsiveness, which continue to affect user satisfaction and trust. (Mafunisa, 2022).

Within East Africa, Kenya has advanced digital governance and performance contracting, while Mozambique has adopted the landlord-port model with long-term concessions to private operators. In Tanzania, public sector reforms under the Public Service Reform Programme (PSRP) and the National Development Vision 2025 have sought to transform the Tanzania Ports Authority (TPA) from a traditional operator into an autonomous statutory body under the Ports Authority Act No. 17 of 2004. Since 2019, TPA has entered into major concession agreements with DP World (multi-purpose terminal, 2021), Tanzania East African Gateway Terminal Limited (Container Terminal 2, 2021) and the Adani Group (Container Terminal 1, 2024). Concurrently, e-governance tools such as the Port Community System and electronic cargo-tracking platforms have been introduced to streamline operations and enhance transparency (Mhando, 2022; Mwakatumbula, 2022).

At the Tanzania Ports Authority (TPA), public sector reforms have taken a decisive turn toward strategic Public-Private Partnerships (PPPs) as the primary mechanism for improving service delivery. Since 2019, TPA has entered into major concession agreements with private operators. In 2021, TPA contracted DP World, a global port operator, to manage and modernize the multi-purpose cargo terminal at Dar es Salaam Port through a 30-year concession. This was followed by the engagement of Tanzania East African Gateway Terminal Limited, a consortium including Hutchison Port Holdings, to operate Container Terminal 2. Most recently, in 2024, TPA signed a concession agreement with the Adani Group of India to manage Container Terminal 1, representing one of the largest infrastructure investments in Tanzania's maritime history. These PPP arrangements are designed to inject private capital, advanced technology (e.g., automated cargo handling systems, Terminal Operating Systems), and managerial efficiency into port operations. Therefore, this study focused on the 'effects' of these specific reform components PPP frameworks and e-governance tools introduced through them on key service delivery indicators: cargo clearance timeliness, transparency of port charges, berthing efficiency, and overall customer satisfaction for port users (Mhando, 2022).

Tanzania has prioritized digital transformation to improve service delivery within the maritime sector. The government has launched various e-Government initiatives aimed at streamlining port operations and enhancing

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service accessibility for port users. Key among these is the establishment of electronic cargo tracking systems that enable real-time monitoring of cargo movement from arrival to departure, providing stakeholders with accurate information on cargo status, location, and estimated clearance times (Mwakatumbula, 2022). These initiatives not only reduce bureaucratic delays but also promote transparency and efficiency in public service delivery by minimizing cargo loss, enhancing security, and improving stakeholder confidence in port operations (Mhando, 2022).

TPA has focused on enhancing service delivery through improved stakeholder engagement and communication. The establishment of the Port Community System has facilitated better coordination among various stakeholders, including shipping lines, customs authorities, and logistics providers. This integrated approach aims to streamline processes, minimize delays, and enhance the overall customer experience in port operations (Mhando, 2022).

The Tanzania Ports Authority (TPA) has undergone significant reforms from 2019 to 2025, aimed at enhancing operational efficiency, improving service delivery, and fostering competitiveness in the maritime sector. Central to these reforms is the implementation of the National Transport Policy, which emphasizes the importance of efficient port operations in promoting economic growth and regional integration (United Republic of Tanzania, 2021). This policy framework seeks to modernize port facilities and streamline processes to better serve the needs of stakeholders. A critical component of these reforms has been the introduction of concession agreements with private operators, including DP World (2021), TEAGTL (2021), and Adani Group (2024), which define the terms of private terminal management, performance benchmarks, investment obligations, and regulatory compliance requirements (United Republic of Tanzania, 2021; Msigwa, 2026). One of the critical initiatives undertaken by the TPA has been the modernization of port infrastructure. Investments in upgrading facilities at major ports, such as Dar es Salaam and Tanga, have been prioritized to accommodate larger vessels and improve cargo handling capacity. This modernization effort includes the introduction of new technologies, such as automated cargo management systems, which aim to reduce turnaround times and enhance operational efficiencies (Mchome, 2023). Additionally, the reforms have emphasized toll tax maintenance, ensuring that port charges, tariffs, and fees are collected and managed transparently across all terminals, with TPA maintaining oversight to ensure compliance with published tariffs and equitable application of charges across all port users (Digest, 2025).

At the Tanzania Ports Authority (TPA), public sector reforms have taken a decisive turn toward strategic Public-Private Partnerships (PPPs) as the primary mechanism for improving service delivery. Since 2019, TPA has entered into major concession agreements with private operators. In 2021, TPA contracted DP World, a global port operator, to manage and modernize the multi-purpose cargo terminal at Dar es Salaam Port through a 30-year concession. This was followed by the engagement of Tanzania East African Gateway Terminal Limited, a consortium including Hutchison Port Holdings, to operate Container Terminal 2. Most recently, in 2024, TPA signed a concession agreement with the Adani Group of India to manage Container Terminal 1, representing one of the largest infrastructure investments in Tanzania's maritime history. These PPP arrangements are designed to inject private capital, advanced technology (e.g., automated cargo handling systems, Terminal Operating Systems), and managerial efficiency into port operations.

Despite these ambitious reforms, operational bottlenecks and coordination challenges persist across clearance systems, inland logistics and stakeholder interfaces. Cargo dwell times, although improved, remain higher than regional benchmarks at ports such as Mombasa and Durban, and users continue to navigate both digital and residual manual procedures. This study therefore examined the specific effects of e-governance initiatives and public–private partnership arrangements on public service delivery outcomes at TPA, Dar es Salaam.

STATEMENT OF THE PROBLEM

Tanzania aims to transform its ports into a competitive regional logistics hub through extensive public sector reforms, including major PPP concessions and e-governance initiatives designed to improve infrastructure, digital systems and operational efficiency. Under these reforms, TPA has granted long-term terminal concessions to global private operators with the expectation that private capital, advanced technology and managerial expertise will reduce cargo dwell time, improve berthing efficiency and enhance transparency in port operations and charges (United Republic of Tanzania, 2021; Msigwa, 2026).

However, despite the introduction of PPP-led reforms and digital systems such as the Port Community System and automated cargo-management platforms, operational bottlenecks and coordination challenges persist. While cargo throughput has increased, there is limited empirical evidence on whether the improved operational metrics reported under private terminal management have translated into equitable, transparent and timely service delivery for all categories of port users, including small clearing and forwarding agents. There remains a clear gap between the ambitious goals of reduced turnaround time, transparent tariffs, efficient cargo clearance and improved customer satisfaction, and the actual experiences of port users operating within TPA's mixed public–private

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environment. This study addressed the problem of fragmented and insufficient knowledge about how specific e-governance tools and PPP arrangements are affecting day-to-day service delivery outcomes at TPA.

SPECIFIC OBJECTIVES

1) To determine the effects of e-governance initiatives on public service delivery at the Tanzania Ports Authority.
2) To examine the effects of public–private partnerships on public service delivery at the Tanzania Ports Authority.

LITERATURE REVIEW

2.1 Theoretical Framework

The study was guided by New Public Management (NPM) Theory (Hood, 1991) and Principal-Agent Theory (Jensen & Meckling, 1976; Eisenhardt, 1989). NPM emphasises the application of private-sector management practices—performance measurement, customer orientation, competition and technological modernisation—to public organisations in order to improve efficiency and service quality. Principal-Agent Theory focuses on the contractual relationship in which a principal (TPA/government) delegates operational responsibilities to an agent (private terminal operator) and must design monitoring, incentive and information mechanisms to align the agent's behaviour with public-service goals. E-governance tools function as information-sharing and monitoring instruments, while PPP concession agreements constitute the formal principal–agent contracts under examination.

2.2 E-Governance Initiatives and Public Service Delivery

Empirical studies consistently show that digital platforms, electronic cargo tracking and online service portals reduce bureaucratic delays, improve transparency and accelerate service delivery in port and public-sector settings (Balaji, 2025; Mwanakombo, 2023; Temba, 2025). In the Tanzanian context, the introduction of the Government Online Services platform and electronic cargo-tracking systems has been associated with shorter clearance times and greater stakeholder confidence (Mwakatumbula, 2022). However, incomplete system interoperability and residual staff resistance to digital tools continue to constrain full benefits (Kyebyala & Rutenge, 2024).

Second, researchers disagree on whether technological adoption alone is sufficient to improve service delivery. Nkrumah (2024) found that digital platforms allowed government institutions to process service requests faster and reduce operational costs. However, other scholars argue that without complementary institutional reforms including changes in organizational culture, staff attitudes, and administrative procedures technology adoption may have limited impact (Mhando, 2022; Mwakatumbula, 2022). This suggests that e-governance is necessary but not sufficient for meaningful service delivery improvements.

Ohwokevwo (2025) conducted a study titled "E-Governance Regime and Improved Public Service Performance in Selected Ministries in Delta and Edo States" with the aim of examining how digital governance systems influence the performance of public institutions and the quality of services delivered to citizens. In conducting the study, the researcher collected data from government ministries that had already introduced electronic service platforms and digital administrative systems to support their operations. The findings of the study revealed that the adoption of digital governance systems significantly improved the efficiency of government institutions by reducing bureaucratic procedures and enabling faster processing of public services. The researcher further noted that the use of digital communication platforms helped strengthen coordination among government departments and improved the accessibility of services to citizens who previously faced delays and administrative barriers when seeking services. In addition, the study found that e-governance initiatives increased transparency in government operations because digital systems made it easier to track service requests, monitor institutional performance, and provide timely feedback to citizens. According to the researcher, these improvements demonstrate that the integration of ICT tools in government institutions can significantly contribute to improving service delivery outcomes. Therefore, the researcher concluded that strengthening e-governance initiatives within public institutions is essential for enhancing efficiency, accountability, and responsiveness in public service delivery.

Sangwa and Mutabazi (2021) conducted a comparative study titled "Assessing the Effectiveness of E-Governance in Public Service Delivery: A Comparative Study of Digitization Efforts in Rwanda, Kenya, and Ghana", which aimed to examine how digital government initiatives influence the quality and accessibility of public services in selected African countries. In their study, the researchers analyzed the implementation of online government service platforms and electronic administrative systems that had been introduced to improve public sector efficiency and service delivery. The findings of the study indicated that the introduction of national digital government portals significantly improved citizens' access to government services by enabling individuals to apply for services, obtain official documents, and access public information through online platforms without

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necessarily visiting government offices. The researchers further observed that the digitalization of public services reduced the time required to process service requests and minimized bureaucratic delays that had traditionally hindered service delivery in many public institutions. In addition, the study revealed that e-governance systems strengthened communication between government institutions and citizens by creating interactive platforms through which citizens could submit complaints, provide feedback, and track the progress of their service applications. According to the researchers, these digital governance initiatives have contributed to improved efficiency and accountability within public institutions while also increasing citizens' trust in government service delivery systems. The researchers therefore concluded that the adoption of e-governance initiatives plays a crucial role in improving the accessibility and effectiveness of public services in developing countries.

Nkrumah (2024), conducted research titled "Impact of Technology Adoption on Government Service Delivery Efficiency in Ghana" with the objective of examining how the integration of digital technologies within public institutions influences the efficiency of government service delivery systems. The researcher used a combination of surveys and institutional performance data to evaluate the effectiveness of digital governance systems that had been introduced in various government departments. The findings of the study showed that the adoption of digital technologies significantly improved the efficiency of administrative processes by automating many routine government operations that were previously carried out manually.

2.3 Public–Private Partnerships and Public Service Delivery

PPP arrangements inject private capital, technology and managerial expertise into public infrastructure, often producing measurable gains in operational efficiency, infrastructure quality and cost-effectiveness (Osei-Kyei & Chan, 2018; Hodge & Greve, 2017). At Dar es Salaam Port, concessions with DP World, TEAGTL and the Adani Group have modernised terminals and increased handling capacity (Mhando, 2022). Nevertheless, principal–agent problems—information asymmetry, goal divergence and weak monitoring capacity—frequently limit the translation of terminal-level gains into seamless end-to-end service for all users (Msigwa, 2026; Nguvumali & Kasembe, 2025). Coordination failures at the public–private interface remain a recurrent challenge.

Second, there is ongoing debate regarding the sustainability of PPP arrangements. Hodge and Greve (2017) found that PPPs deliver short-term efficiency gains, but questions remain about long-term sustainability, particularly regarding asset maintenance, contract renegotiation, and public interest protection. Kafumu (2023) specifically examined this issue in the Tanzania Ports Authority context, arguing that PPP success requires ongoing evaluation and adaptation to evolving challenges. This tension between short-term efficiency and long-term sustainability remains unresolved.

Third, contrasting perspectives emerge regarding the impact of PPPs on equitable service delivery. While some scholars argue that private sector participation improves service quality for all users (Hodge & Greve, 2017), others contend that private operators prioritize profitable customers and cargo segments, potentially marginalizing smaller users (Kihanga & Malima, 2021). This tension between commercial viability and equitable access is particularly relevant in port contexts where private operators manage specific terminals serving diverse stakeholder groups.

Hodge and Greve (2017), conducted a study titled "Public–Private Partnerships: An International Performance Review" which examined how PPP arrangements influence the delivery of public infrastructure and services in different countries. The findings of the study revealed that partnerships between governments and private sector actors can significantly improve the quality and efficiency of public services because private sector organizations often contribute technical expertise, financial resources, and innovative management practices that are sometimes limited within public institutions. The researchers explained that through such partnerships governments are able to expand service coverage, accelerate infrastructure development, and improve operational efficiency, and they further emphasized that the involvement of private sector actors introduces performance-oriented management practices that enhance accountability in public service provision. According to the researchers, PPP arrangements also reduce the financial burden on governments because private investors contribute capital for development projects while governments focus on regulation and policy oversight, and therefore the researchers concluded that well-structured public–private partnerships can play an important role in strengthening the implementation of public sector reforms and improving the delivery of public services.

Osei-Kyei and Chan (2018), conducted a study titled "Implementation Constraints of Public–Private Partnership Projects in Developing Countries" which sought to examine the effectiveness of PPP initiatives in improving infrastructure and public service delivery in developing economies. The researchers analyzed several PPP projects in sectors such as transportation, health, and energy, and the findings revealed that PPP arrangements have the potential to significantly improve the efficiency of service delivery by combining the managerial efficiency of private firms with the regulatory authority of government institutions. The researchers observed that private sector participation often introduces advanced technologies, professional project management practices, and innovative

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financing mechanisms that accelerate the implementation of public projects. However, the study also found that the success of PPP initiatives largely depends on the presence of supportive regulatory frameworks, institutional capacity, and transparency in contractual agreements. According to the researchers, when these conditions are properly established, PPP initiatives contribute positively to public sector reforms by enabling governments to deliver services more efficiently while maintaining oversight over service quality and affordability for citizens.

Kafumu (2023) enrich the discourse by critically assessing the long-term sustainability of PPPs in public service delivery within the Tanzania Ports Authority, emphasizing that the success of these initiatives is contingent on ongoing evaluation and adaptation. Kafumu argues that it is essential for both public and private partners to be committed to continual improvement and responsiveness to evolving challenges in the port sector. "Sustainability in PPP arrangements hinges on a proactive approach to monitoring and evaluation, which ensures that services remain relevant and beneficial for users," Kafumu (2023) indicates, advocating for frameworks that allow for regular performance assessments and stakeholder feedback. This perspective highlights the necessity for a dynamic approach to PPP management, ensuring that these partnerships can adapt and respond to the changing landscape of public service delivery, thereby enhancing their impact and relevance over time.

Kihanga and Malima (2021) delves into the socio-economic implications of PPPs, specifically examining how these arrangements can affect local employment and economic activity at the Tanzania Ports Authority. Their findings suggest that while PPPs can create new job opportunities and stimulate economic growth, there are also concerns regarding the quality of employment provided, as well as issues of equity for local workers. Kihanga and Malima (2021) assert, "The promises of economic uplift through public-private partnerships must be balanced with the need for fair labor practices and local benefits." By addressing these nuances, the research contributes to a deeper understanding of the socio-economic ramifications of PPPs beyond mere quantitative metrics, reinforcing the idea that successful partnerships must consider the human element and strive for inclusive growth.

METHODOLOGY

The study adopted a mixed-methods case study design. The target population comprised TPA employees, clearing and forwarding agents, private terminal operators and Ministry of Transport officials operating within the Port of Dar es Salaam. A sample of 325 respondents completed structured questionnaires, while twelve key informants were purposively selected for semi-structured interviews. Simple random sampling was used for questionnaire respondents and purposive sampling for key informants. Data collection instruments included a five-point Likert-scale questionnaire (1 = Strongly Agree to 5 = Strongly Disagree), an interview guide and documentary review of concession agreements, TPA strategic plans and policy documents.

Quantitative data were analysed using SPSS Version 26. Descriptive statistics (frequencies, means and standard deviations) ummarized perceptions of e-governance and PPP effects. Pearson product-moment correlation and simple linear regression examined the relationships between the independent variables (e-governance and PPP) and the dependent variable (public service delivery). Qualitative data were analysed thematically. Validity was established through expert review and Content Validity Index (CVI > 0.80); reliability was confirmed by Cronbach's alpha coefficients exceeding 0.70 for all constructs. Ethical clearance was obtained from Kampala International University in Tanzania and informed consent was secured from all participants.

RESEARCH FINDINGS

4.1 Effects of E-Governance Initiatives on Public Service Delivery

Five Likert-scale items were used to measure the perceived effects of e-governance initiatives. The response categories were coded as 1 = Strongly Agree, 2 = Agree, 3 = Undecided, 4 = Disagree and 5 = Strongly Disagree. Consequently, lower mean values indicate stronger agreement with the positive statements.

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Table 4.1: Responses on E-Governance Initiatives

Statement	SA (1)	A (2)	U (3)	D (4)	SD (5)	Mean	SD
1. The introduction of online service delivery systems has improved the efficiency of public service delivery	142 (43.7%)	138 (42.5%)	18 (5.5%)	19 (5.8%)	8 (2.5%)	1.809	0.942
2. The use of digital platforms has reduced delays in accessing services	129 (39.7%)	151 (46.5%)	15 (4.6%)	22 (6.8%)	8 (2.5%)	1.858	0.961
3. The organization's website and online portals are easily accessible to stakeholders	118 (36.3%)	147 (45.2%)	22 (6.8%)	27 (8.3%)	11 (3.4%)	1.972	1.038
4. Electronic communication systems have enhanced the speed of service provision	135 (41.5%)	143 (44.0%)	17 (5.2%)	21 (6.5%)	9 (2.8%)	1.849	0.978
5. The integration of digital systems between departments has improved coordination	121 (37.2%)	149 (45.8%)	19 (5.8%)	25 (7.7%)	11 (3.4%)	1.942	1.015
6. The adoption of e-governance technologies has reduced bureaucratic procedures	133 (40.9%)	140 (43.1%)	16 (4.9%)	24 (7.4%)	12 (3.7%)	1.898	1.032

Source: Field Data, (2026)

In relation to question number one, the findings revealed that 142 (43.7%) respondents strongly agreed, 138 (42.5%) agreed, 18 (5.5%) were undecided, 19 (5.8%) disagreed and 8 (2.5%) respondents strongly disagreed. The respondents agreed with a mean value of 1.809 and a standard deviation of 0.942, respectively. This denoted that the majority of respondents agreed that the introduction of online service delivery systems had improved the efficiency of public service delivery at Tanzania Ports Authority. The finding suggests that digital service systems had contributed to making service processes more efficient by reducing reliance on some traditional procedures that could require physical interaction and manual processing. The relatively low mean value further indicates a strong concentration of responses towards agreement with the statement. This finding therefore suggests that the introduction of online service delivery systems was perceived by respondents as an important aspect of public sector reforms contributing to improved efficiency in service delivery.

In question number two, the findings revealed that 129 (39.7%) respondents strongly agreed, 151 (46.5%) agreed, 15 (4.6%) were undecided, 22 (6.8%) disagreed and 8 (2.5%) respondents strongly disagreed. The respondents agreed with a mean value of 1.858 and a standard deviation of 0.961, respectively. This denoted that the majority of respondents agreed that the use of digital platforms had reduced delays in accessing public services at Tanzania Ports Authority. The finding indicates that the application of digital platforms may have facilitated faster communication, submission of information and access to services compared with procedures that depend entirely on physical and manual processes. The high proportion of respondents who agreed with the statement demonstrates that digitalization was generally perceived as contributing to the reduction of unnecessary delays in service access. Therefore, the findings suggest that digital platforms formed an important component of public sector reforms by contributing to more timely access to services.

In relation to question number three, the findings revealed that 118 (36.3%) respondents strongly agreed, 147 (45.2%) agreed, 22 (6.8%) were undecided, 27 (8.3%) disagreed and 11 (3.4%) respondents strongly disagreed. The respondents agreed with a mean value of 1.972 and a standard deviation of 1.038, respectively. This denoted that the majority of respondents agreed that the organization's website and online portals were easily accessible to stakeholders. The finding suggests that the digital platforms established by Tanzania Ports Authority had generally improved the ability of stakeholders to obtain organizational information and access relevant services through electronic channels. However, the presence of respondents who were undecided or disagreed indicates that accessibility may not have been experienced uniformly by all stakeholders. The findings therefore indicate that improved online accessibility was an important outcome associated with public sector reforms, although continued attention to accessibility and usability would remain relevant.

In question number four, the findings revealed that 135 (41.5%) respondents strongly agreed, 143 (44.0%) agreed, 17 (5.2%) were undecided, 21 (6.5%) disagreed and 9 (2.8%) respondents strongly disagreed. The respondents agreed with a mean value of 1.849 and a standard deviation of 0.978, respectively. This denoted that the majority of respondents agreed that electronic communication systems had enhanced the speed of service provision at Tanzania Ports Authority. The finding indicates that electronic communication had facilitated faster transmission and exchange of information among employees, departments and stakeholders involved in service delivery. The high proportion of respondents expressing agreement suggests that electronic communication systems were

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perceived as reducing the time required to communicate and process service-related information. Therefore, the findings suggest that the adoption of electronic communication systems represented a significant aspect of public sector reforms that contributed to increasing the speed and responsiveness of service provision.

In question number five, the findings revealed that 121 (37.2%) respondents strongly agreed, 149 (45.8%) agreed, 19 (5.8%) were undecided, 25 (7.7%) disagreed and 11 (3.4%) respondents strongly disagreed. The respondents agreed with a mean value of 1.942 and a standard deviation of 1.015, respectively. This denoted that the majority of respondents agreed that the integration of digital systems between departments had improved coordination within Tanzania Ports Authority. The finding suggests that linking digital systems across departments may have facilitated the sharing of information and improved communication between organizational units involved in public service delivery. The relatively high proportion of respondents who agreed indicates that digital integration was generally perceived as supporting more coordinated organizational processes. The findings therefore indicate that the integration of digital systems was perceived as contributing to better coordination and consequently supporting improvements in public service delivery.

In question number six, the findings revealed that 133 (40.9%) respondents strongly agreed, 140 (43.1%) agreed, 16 (4.9%) were undecided, 24 (7.4%) disagreed and 12 (3.7%) respondents strongly disagreed. The respondents agreed with a mean value of 1.898 and a standard deviation of 1.032, respectively. This denoted that the majority of respondents agreed that the adoption of e-governance technologies had reduced bureaucratic procedures at Tanzania Ports Authority. The finding suggests that the use of electronic systems had helped simplify some administrative processes by reducing dependence on lengthy manual procedures and unnecessary movement of documents between offices. The large proportion of respondents who strongly agreed and agreed indicates that e-governance was generally perceived as contributing to the simplification of service delivery procedures. The findings suggest that e-governance technologies were perceived as an important reform mechanism for reducing bureaucratic procedures and supporting more efficient public service delivery at Tanzania Ports Authority, Dar es Salaam.

Qualitative findings

Qualitative insights from key informants reinforced the quantitative findings that digital platforms have improved efficiency and reduced delays at the Tanzania Ports Authority, while also highlighting remaining gaps in full system integration.

One TPA operations officer stated:

"Before the electronic cargo tracking and online portals, we spent hours moving paper files between departments. Now most clearance requests are submitted digitally and the status updates in real time. Turnaround for routine documents has dropped from days to hours, and stakeholders no longer need to queue outside offices just to check progress."

This response illustrates how the shift from paper-based to digital workflows has compressed processing time and improved information flow. The officer's emphasis on real-time status updates points directly to enhanced transparency and reduced physical presence requirements. By eliminating repeated office visits for simple status checks, the system has lowered both transaction costs for users and administrative burden for staff. The observation that routine documents now move in hours rather than days demonstrates measurable efficiency gains consistent with New Public Management principles of performance-oriented service delivery. At the same time, the comment implies that the benefits are most visible for standardized transactions; more complex or exception cases may still encounter residual friction. Overall, the testimony supports the conclusion that online service delivery and electronic tracking have produced tangible improvements in speed and accessibility, even if complete digital coverage remains incomplete.

A clearing and forwarding agent observed:

"The Port Community System allows me to track my containers from arrival to release without telephoning multiple offices. Website accessibility has improved, and electronic communication with customs and terminal staff is faster. However, when the TPA system and the private terminal systems show different statuses, I still have to make physical follow-ups."

The agent's experience confirms that digital platforms have reduced the need for constant physical enquiry and accelerated inter-agency communication. The ability to monitor cargo progress online represents a clear advance in transparency and user convenience. Yet the mention of conflicting status displays between the Port Community System and private Terminal Operating Systems reveals a critical interoperability gap. This fragmentation forces users back into hybrid digital-manual processes, partially offsetting the efficiency gains. The testimony therefore shows both the success of e-governance tools in improving accessibility and speed, and the practical limitation

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created by incomplete system integration. It underscores that technological adoption alone is insufficient; seamless data exchange across public and private platforms is essential for the full benefits of e-governance to reach end-users.

A Ministry of Transport representative noted:

"Electronic systems have reduced bureaucratic layers and improved departmental coordination. Files no longer disappear or sit on desks for weeks. Still, some older staff prefer the old paper trail, and full adoption is uneven across shifts."

This perspective highlights the dual outcome of digital reform: procedural simplification and residual human resistance. The reduction in lost or delayed files demonstrates that e-governance has strengthened internal coordination and accountability. However, uneven adoption among long-serving employees indicates that technological change must be accompanied by deliberate change-management and continuous training. Without addressing attitudinal barriers, the efficiency and transparency gains remain partial. The comment therefore supports the broader finding that e-governance initiatives have positive effects on service delivery while simultaneously revealing the human and organizational factors that still constrain complete realization of those effects.

Documentary findings

Performance Audit Report on the Utilization of ICT Systems in Regulatory Authorities, 2025 Published by the National Audit Office of Tanzania (NAOT), this report examines the use of ICT systems in delivering regulatory services. It identifies challenges involving automation, system integration, business continuity, and monitoring. It is particularly useful for discussing both positive and negative effects of e-governance, although it is not exclusively about TPA. The audit recommended that the e-Government Authority (e-GA) ensure that there are adequate management and utilization of ICT in government entities to ensure effective service delivery. Also, enhances its interventions in compliance promotion and enforcement regarding utilization of ICT systems in public institutions to ensure adequate delivery of public services.

Source: *Performance Audit Report on the Utilization of ICT Systems in Regulatory Authorities*, 2025

4.6 Discussion on findings of Effects of E-Governance Initiatives on Public Service Delivery

This finding is similar to that of Temba (2025), who examined the impact of e-governance on public-sector efficiency and accountability in Kinondoni and Ubungo Municipalities in Tanzania. The study found that e-governance significantly improved service-delivery efficiency by reducing paper-based processes, speeding up service provision and minimizing operational errors also this finding agreed to that of Kaoza (2021), whose study on the One-Stop Government Portal in Tanzania found that digital government services improved public service delivery by enhancing access to information and saving users' time. The study showed that online access reduced the time associated with traditional procedures and made services more accessible to users. This finding corresponds with the present study, where respondents perceived digital platforms as contributing to faster communication, submission of information and access to services. This finding also aligns to that of Mwilongo and Kachota (2024), whose systematic review of e-government services in Tanzania found that digital platforms had advanced towards transaction-level services, enabling citizens to interact with government institutions for information and services. However, the study also found that accessibility and usability remained important factors influencing the performance of e-government services. This finding corresponds with the present study, where respondents generally agreed that digital platforms improved access to organizational information and services, although accessibility was not experienced uniformly by all stakeholders. This finding attempted the research question of objective number one which was to determine what are the effects of E- governance initiatives on public service delivery in Tanzania Porty Authority

And this finding applied New Public Management Theory, which examined the effects of e-governance initiatives on public service delivery at the Tanzania Ports Authority, because the objective concentrated on the extent to which technological and digital reforms improved efficiency, reduced bureaucratic procedures, accelerated communication, strengthened coordination and enhanced responsiveness in the delivery of port services. These findings are consistent with the present study, which found that digital service systems had contributed to making service processes more efficient by reducing reliance on traditional procedures requiring physical interaction and manual processing. Therefore, both studies demonstrate that digitalization can contribute to improved efficiency in public service delivery through faster and more streamlined administrative processes.

4.7 Effects of Public-Private Partnership on Public Service Delivery

Table 4.6 presents the responses of 325 respondents regarding the effects of Public-Private Partnerships (PPPs) on public service delivery at Tanzania Ports Authority, Dar es Salaam. The responses were measured using a five-point Likert scale, where 1 = Strongly Agree (SA), 2 = Agree (A), 3 = Undecided (U), 4 = Disagree (D), and 5 =

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Strongly Disagree (SD). The interpretation of the mean values considers the scale applied in the study; whereby lower mean values indicate stronger agreement with the statements.

Table 4.2: Responses on Public-Private Partnership

Statement	SA (1)	A (2)	U (3)	D (4)	SD (5)	Mean	SD
1. Collaboration between the public and private sectors has led to better quality of services	131 (40.3%)	146 (44.9%)	16 (4.9%)	22 (6.8%)	10 (3.1%)	1.875	0.989
2. PPPs have contributed to improved infrastructure and facilities	148 (45.5%)	132 (40.6%)	14 (4.3%)	21 (6.5%)	10 (3.1%)	1.809	0.987
3. PPP arrangements have increased the accessibility of public services	119 (36.6%)	145 (44.6%)	21 (6.5%)	28 (8.6%)	12 (3.7%)	1.980	1.052
4. Involvement of private sector partners has reduced delays in service delivery	126 (38.8%)	149 (45.8%)	17 (5.2%)	23 (7.1%)	10 (3.1%)	1.898	0.998
5. PPPs have improved cost-effectiveness in providing public services	112 (34.5%)	151 (46.5%)	23 (7.1%)	27 (8.3%)	12 (3.7%)	2.003	1.048
6. PPPs have improved the efficiency of public service delivery in the institution	137 (42.2%)	141 (43.4%)	15 (4.6%)	22 (6.8%)	10 (3.1%)	1.852	0.993

Source: Field Data, (2026)

In question number one, the findings revealed that 131 (40.3%) respondents strongly agreed, 146 (44.9%) agreed, 16 (4.9%) were undecided, 22 (6.8%) disagreed and 10 (3.1%) respondents strongly disagreed. The respondents agreed with a mean value of 1.875 and a standard deviation of 0.989, respectively. This denoted that the majority of respondents agreed that collaboration between the public and private sectors had led to better quality of services at Tanzania Ports Authority. The finding suggests that cooperation between public institutions and private sector organizations may have contributed to the utilization of additional expertise, resources and management practices in improving service provision. The high proportion of respondents who agreed indicates that public-private collaboration was generally perceived as having a positive contribution to the quality of services provided by the institution. Therefore, the findings indicate that public-private collaboration was perceived as an important reform mechanism for improving the quality of public services at Tanzania Ports Authority.

In question number two, the findings revealed that 148 (45.5%) respondents strongly agreed, 132 (40.6%) agreed, 14 (4.3%) were undecided, 21 (6.5%) disagreed and 10 (3.1%) respondents strongly disagreed. The respondents agreed with a mean value of 1.809 and a standard deviation of 0.987, respectively. This denoted that the majority of respondents agreed that PPPs had contributed to improved infrastructure and facilities at Tanzania Ports Authority. The finding indicates that involvement of private sector partners was perceived as providing additional opportunities for investment, development and improvement of infrastructure necessary for effective service delivery. The high proportion of respondents who strongly agreed and agreed demonstrates that infrastructure improvement was one of the areas in which PPP arrangements were perceived to have made a substantial contribution. The findings therefore suggest that PPP arrangements were perceived as contributing to the development and improvement of infrastructure and facilities, which are important requirements for effective and efficient public service delivery.

In question number three, the findings revealed that 119 (36.6%) respondents strongly agreed, 145 (44.6%) agreed, 21 (6.5%) were undecided, 28 (8.6%) disagreed and 12 (3.7%) respondents strongly disagreed. The respondents agreed with a mean value of 1.980 and a standard deviation of 1.052, respectively. This denoted that the majority of respondents agreed that PPP arrangements had increased the accessibility of public services at Tanzania Ports Authority. The finding suggests that cooperation with private sector partners may have contributed to making certain services more accessible through improved facilities, service channels and operational arrangements. The relatively high percentage of respondents who agreed indicates that the general perception was that PPP arrangements had supported wider access to public services. Nevertheless, the findings indicate that PPP arrangements were generally perceived as contributing to improved accessibility of public services within the institution. This is consistent with the present finding that cooperation with private-sector partners improved service channels, facilities and operational arrangements, thereby supporting wider access to public services.

In question number four, the findings revealed that 126 (38.8%) respondents strongly agreed, 149 (45.8%) agreed, 17 (5.2%) were undecided, 23 (7.1%) disagreed and 10 (3.1%) respondents strongly disagreed. The respondents agreed with a mean value of 1.898 and a standard deviation of 0.998, respectively. This denoted that the majority

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of respondents agreed that the involvement of private sector partners had reduced delays in service delivery at Tanzania Ports Authority. The finding indicates that private sector participation was perceived as contributing to faster organizational processes through improved operational practices, additional resources and more responsive approaches to service provision. The large proportion of respondents who agreed demonstrates that reduction of delays was generally recognized as one of the perceived outcomes of private sector involvement. Therefore, the findings suggest that private sector participation under PPP arrangements was perceived as contributing to the reduction of delays and supporting more timely delivery of public services. Through additional resources and improved operational practices.

In question number five, the findings revealed that 112 (34.5%) respondents strongly agreed, 151 (46.5%) agreed, 23 (7.1%) were undecided, 27 (8.3%) disagreed and 12 (3.7%) respondents strongly disagreed. The respondents agreed with a mean value of 2.003 and a standard deviation of 1.048, respectively. This denoted that the majority of respondents agreed that PPPs had improved cost-effectiveness in providing public services at Tanzania Ports Authority. The finding suggests that PPP arrangements were perceived as helping the institution to utilize available resources more efficiently through cooperation with private sector partners. The relatively large proportion of respondents who agreed indicates that many participants associated private sector involvement with better management and utilization of resources in service provision. Also indicates that there was some variation in respondents' views regarding the extent to which PPPs had improved cost-effectiveness.

In question number six, the findings revealed that 137 (42.2%) respondents strongly agreed, 141 (43.4%) agreed, 15 (4.6%) were undecided, 22 (6.8%) disagreed and 10 (3.1%) respondents strongly disagreed. The respondents agreed with a mean value of 1.852 and a standard deviation of 0.993, respectively. This denoted that the majority of respondents agreed that PPPs had improved the efficiency of public service delivery at Tanzania Ports Authority. The finding indicates that private sector participation was perceived as supporting more efficient organizational operations through the introduction of additional expertise, resources and management practices. The high proportion of respondents who strongly agreed and agreed demonstrates that improved efficiency was widely perceived as an important outcome of PPP arrangements. Also indicates moderate variation in the responses, suggesting that respondents generally shared a similar perception while differing somewhat in their individual experiences. Therefore, the findings demonstrate that PPPs were generally perceived by respondents as an important component of public sector reforms that had contributed to improving the efficiency of public service delivery at Tanzania Ports Authority, Dar es Salaam.

Qualitative findings

Interview data confirmed that PPP concessions have brought capital, technology and managerial discipline, yet interface coordination and equity concerns persist.

A DP World terminal manager explained:

"Private investment has modernized equipment and introduced advanced Terminal Operating Systems. Berthing and cargo-handling times inside our terminal have improved significantly. The concession framework gives us clear performance targets and the flexibility to apply commercial efficiency standards."

This statement demonstrates how private-sector participation has injected both physical infrastructure and operational expertise. The introduction of modern systems and the existence of contractual performance benchmarks align with Principal-Agent expectations that well-designed contracts can align private incentives with public service goals. Faster berthing and handling inside the terminal translate into reduced vessel waiting times and higher throughput. The testimony therefore supports the quantitative finding that PPPs have enhanced infrastructure, efficiency and service quality at the terminal level. At the same time, it focuses on internal terminal performance, leaving open the question of how those gains are transmitted across the wider port interface.

A clearing agent representing smaller firms stated:

"Larger operators with volume contracts receive priority and smoother processing. For us smaller agents the tariffs sometimes feel inconsistently applied across terminals, and coordination when cargo leaves the private terminal for public customs zones still causes delays. The benefits of private management are real, but not evenly shared."

The agent's account reveals that efficiency gains under PPP arrangements are not automatically equitable. Preferential treatment of high-volume clients and residual interface delays erode the intended transparency and accessibility benefits for smaller users. Inconsistent tariff application further undermines trust. This testimony illustrates a classic principal-agent tension: private operators optimize for commercial return, while the public principal seeks equitable service for all categories of users. It confirms that while PPPs have improved

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infrastructure and terminal-level efficiency, incomplete oversight and weak interface protocols limit the translation of those improvements into uniform service-delivery outcomes for the entire port community.

A TPA head of department observed:

> ***"The concession agreements have brought private capital and technology that government alone could not mobilize quickly. Infrastructure and handling capacity have improved. Our challenge remains real-time monitoring of performance data and ensuring that private efficiency does not create new bottlenecks at the handover points to public agencies."***

This institutional perspective acknowledges the positive contribution of private investment while identifying the monitoring and coordination deficits that constrain full impact. The ability of private partners to mobilize resources rapidly is a clear advantage under the PPP model. However, information asymmetry and weak real-time oversight capacity limit TPA's ability to enforce performance benchmarks and protect public-interest outcomes. The comment therefore reinforces both the success of PPPs in expanding capacity and the continuing need for stronger principal-side monitoring and interface governance if the reforms are to deliver consistent end-to-end service improvements.

Documentary findings

TPA Annual Report and Accounts, this report provides information about port operations, finances, infrastructure, and institutional performance. It helps to establish the situation before and during private-sector participation, although the available 2022 report predates the 2024 DP World concession.

Source: TPA Annual Report and Accounts (2024)

4.8 Discussion on findings of the Effects of Public-Private Partnership on Public Service Delivery

This finding is similar to that of Idd, Kiliza, and Kisasa (2024), who examined the effects of public-private partnerships on the provision of health services at Amana Regional Referral Hospital in Tanzania, including their influence on the quality of services. The study demonstrates the relevance of collaboration between public institutions and private-sector actors in strengthening service provision. Also, this finding concurs to that of Kavishe et al. (2023), who examined private-sector participation in the delivery of public infrastructure in Tanzania and found that private-sector financing could help address resource constraints affecting infrastructure development. The study highlighted the importance of private-sector involvement in mobilizing additional financial resources for public infrastructure projects. This corresponds with the present finding that PPP arrangements provided additional opportunities for investment, development and improvement of infrastructure necessary for effective service delivery.

This finding also is the same as to that of Nuhu, Mpambije, and Ngussa (2020), who found that public-private partnerships were introduced in Tanzania to improve the efficiency and effectiveness of public service delivery. The study showed that PPPs could supplement government capacity and support more effective provision of services, although inadequate resources and institutional arrangements sometimes constrained their implementation. This is consistent with the present finding that private-sector participation contributed to faster organizational processes

This finding attempted the research question of objective number two which was to examine the Effects of Public-Private Partnership on Public Service Delivery in Tanzania Porty Authority

Principal-Agent Theory was the most applicable theory to this second specific objective, which examined the effects of public-private partnerships on public service delivery at the Tanzania Ports Authority, because PPP arrangements establish a relationship in which the government and TPA delegate particular operational responsibilities to private terminal operators through contractual and concession arrangements. This is consistent with the present finding that public-private cooperation facilitated the utilization of additional expertise, resources and management practices to improve service quality.

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Summary of Findings

5.1.1 Effects of E-Governance Initiatives on Public Service Delivery

The findings for the first objective established that e-governance initiatives had a positive effect on public service delivery at the Tanzania Ports Authority, Dar es Salaam, as reflected in the generally low mean scores recorded across the six measured indicators, which ranged from 1.809 to 1.972 and therefore fell within the study's high-agreement category, while the standard deviations ranging from 0.942 to 1.038 indicated relatively moderate variation in respondents' perceptions. The quantitative results showed that respondents generally agreed that online service delivery systems improved operational efficiency, digital platforms reduced delays in accessing services, organizational websites and online portals were accessible to stakeholders, electronic communication

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increased the speed of service provision, integration of digital systems strengthened coordination between departments, and the adoption of e-governance technologies reduced bureaucratic procedures. The strongest perception was recorded for the improvement of service-delivery efficiency through online systems, with a mean of 1.809 and a standard deviation of 0.942, while accessibility of organizational websites and online portals recorded the relatively highest mean of 1.972 with a standard deviation of 1.038, although this still remained within the agreed range.

The findings further demonstrated that e-governance was strongly associated with public service delivery, with the correlation analysis reporting a positive relationship of $r = 0.986$, $p < 0.001$, while the separate regression analysis showed that e-governance accounted for 97.2% of the variance in perceived service delivery when examined independently. Therefore, the quantitative evidence generally indicates that the introduction of digital systems at TPA contributed to improvements in efficiency, timeliness, accessibility, communication, coordination and reduction of bureaucratic procedures, although the qualitative findings indicated that incomplete digital coverage and limited system integration continued to constrain the full realization of these benefits.

5.1.2 Effects of Public-Private Partnership on Public Service Delivery

The findings for the second objective established that Public-Private Partnership arrangements had a positive perceived effect on public service delivery at the Tanzania Ports Authority, as demonstrated by the six quantitative indicators whose mean scores ranged from 1.809 to 2.003, all of which fell within the study's high-agreement range, while the standard deviations ranging from 0.987 to 1.052 showed moderate variation in respondents' views. The findings indicate that respondents generally agreed that collaboration between public and private sectors improved service quality, PPP arrangements contributed to better infrastructure and facilities, private-sector participation increased accessibility of services, involvement of private partners reduced delays in service delivery, PPPs improved cost-effectiveness, and private-sector participation enhanced the overall efficiency of service delivery. The lowest mean of 1.809 was recorded for the contribution of PPPs to improved infrastructure and facilities, indicating particularly strong agreement on the role of private-sector participation in strengthening the physical and operational capacity required for service provision, whereas the highest mean of 2.003 was recorded for cost-effectiveness, although this remained within the agreed category. The inferential findings further strengthened this quantitative pattern, as PPP demonstrated a very strong positive correlation with service delivery at $r = 0.990$, $p < 0.001$, while the separate regression analysis indicated that PPP accounted for 98.0% of the variance in perceived service delivery when examined independently. In general, the quantitative evidence suggests that PPP arrangements contributed to improvements in infrastructure, service accessibility, operational efficiency, timeliness and utilization of resources at TPA, particularly through the involvement of private-sector capital, expertise, technology and management practices, although the qualitative evidence showed that the benefits were partly constrained by coordination difficulties between private terminals and public agencies, regulatory concerns and differences in the experiences of different categories of port users.

5.2 Conclusion

The study concludes that both e-governance initiatives and public–private partnership arrangements have exerted measurable positive effects on public service delivery at the Tanzania Ports Authority, Dar es Salaam. Digital systems have reduced bureaucratic friction and accelerated information flows, while private terminal operators have injected capital, technology and managerial expertise that have modernised infrastructure and raised operational performance. At the same time, the full translation of these reforms into seamless, equitable and transparent end-to-end service remains incomplete. Incomplete digital interoperability, limited principal–agent monitoring capacity and coordination breakdowns at the public–private interface continue to constrain outcomes. Strengthening system integration, regulatory oversight and continuous capacity development is therefore essential if the ambitious service-delivery objectives of the current reform programme are to be fully realised.

5.3 Recommendations

1) The Tanzania Ports Authority should prioritise full technical integration and real-time interoperability between the Port Community System and all Terminal Operating Systems used by private concessionaires, thereby eliminating dual digital/manual procedures.
2) TPA's institutional capacity to monitor and enforce concession obligations should be strengthened through dedicated regulatory units, real-time performance dashboards and independent audit mechanisms that reduce information asymmetry.
3) Continuous, needs-based capacity-building programmes focusing on digital literacy, modern port-management practices and change management should be institutionalised for both TPA staff and private-operator personnel.

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4) Multi-stakeholder coordination forums and joint operational centres should be established to resolve interface problems promptly and to ensure that efficiency gains inside private terminals translate into seamless end-to-end service for all categories of port users.

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