Int. j. adv. multidisc. res. stud. 2026; 6(1):237-250

Received: 18-11-2025
Accepted: 28-12-2025

International Journal of Advanced Multidisciplinary Research and Studies

ISSN: 2583-049X

Examining Effectiveness of e-Governance Platforms for Service Delivery in Public Institutions: A Case Study of the Ministry of Lands Online Land Records Portal

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Abstract

The study assesses the Effectiveness of Leadership Styles in Enhancing Employee Performance: A Case Study of Ndola City Council. It looks at the relationship between different leadership styles and employee performance in a public sector institution. The study's goal is to determine the prevalent leadership styles used by managers at Ndola City Council and assess how these styles affect employee motivation, productivity, commitment, and overall organizational efficiency. Data were obtained using both quantitative and qualitative methods, including structured questionnaires and interviews with employees and department leaders.

The study examined important leadership styles, such as transformational, transactional, and laissez-faire, and evaluated their impact on employee morale and performance outcomes. The findings found that transformational leadership was the most effective in boosting teamwork, innovation, and job happiness, whereas transactional leadership helped with short-term task completion but hindered creativity. Laissez-faire leadership, on the other hand, was linked to lower levels of accountability and performance. The study shows that leadership style has a significant impact on employee performance and organizational effectiveness. It advises that the Ndola City Council use more participatory and transformational leadership approaches to increase staff engagement, improve service delivery, and boost overall institutional performance.

Keywords: Leadership Styles, Employee Performance, Transformational Leadership, Transactional Leadership, Ndola City Council, and Organizational Success

1. Introduction

Research has helped explain the tangible and intangible organisational factors influencing e-Government projects (Ahmad *et al*.). These include: the organisational readiness in terms of business strategic planning; technical infrastructure; management systems and structures; top management; and quality of human resources (Ahmad *et al*.). Each of these can either impede or promote the e-governance project performance (Bjorck, 2017). A bureaucratic organisation with a conservative culture raises the issue of resistance to change from innovation (Ahmad *et al*). Therefore, transformation and re-engineering of government processes and activities must be embraced for successful government (Basu, 2014). Many studies attribute government failure to a variety of reasons, including: lack of executive and top managers' commitment; employees' resistance to change; lack of skills and training programs; lack of awareness and conceptual understanding; old and inflexible management systems (Karlson *et al*., 2012).

The success of e-government initiatives will also depend upon the developed legal and regulatory framework for their operations (Ruhode, E. (2018) [26]. In general, the UN found out that institutional and organisational weaknesses in the design of policies, the organization of programs and stakeholder coordination jeopardise the long-term development of e-government practices. E-government has several meanings. One narrow definition focuses only on Internet applications inside government. However, the narrow definition sometimes is expanded to include the use of the Internet in restructuring government-citizen interactions and related political relationships (Farelo & Morris, 2016). A broader definition looks at e-government as the use of ICT to strengthen government performance in areas such as more effective and more efficient provision of services, opening

new channels for people to access
Government and official information, and making government more accountable to its citizens. Kumar and Best (2006) defined e-Government as the use of information and communication technologies (ICTs) in the public sector to improve its operations and delivery of services. Government organizations have public functions that are of general interest to citizens and businesses. While exercising their tasks like research, policy making, policy execution, democratic control, Globally, e-governance has transformed the way in which the public delivers its services to citizens. The United Nations E-Government Development Index measures e-government development worldwide, considering factors like online service delivery, telecommunication infrastructure, and human capital in e-government development (C. J.& Driessen, P. J. (2019). Regional Perspective, in Africa, e-government initiatives have seemingly improved on public service delivery to the general public, transparency, and accountability. However, challenges like infrastructure, lack of digital literacy, and inadequate institutional capacity hinder effective implementation and efficiency in its service delivery, especially in countries with low technological advancements and middle-class income countries. Regional guidelines, frameworks and cooperation help to address the challenges faced by many countries in the sub-Saharan region and promote e-government development. (Alabdallat, W. I. M, 2020) [30].
In Zambia, e-governance initiatives have been implemented to enhance service delivery, particularly in public institutions such as local authorities, decentralised districts offices and at the national level to help enhance service delivery to the general public. The government has enacted the Electronic Governance (Act of 2021), which provides for the establishment of the Electronic Government Division. Some institutions like the Ministry of Lands have websites and social media pages to disseminate information and engage citizens and procured platforms which is used for public procurement. Community Information Centres (CICs) provide access to digital services and promote digital literacy about the services being offered to the public.

1.1 Statement of the Problem
In Zambia, just like in other developing nations, many e-Governance initiatives fail or do not achieve their goals due to some key organizational factors. The motive for adoption of e-government, often linked to achieving good governance. However, e-government alone may not lead to the expected benefits in developing countries, emphasizing the need for political and social changes alongside technological implementation. (Van Veenstra, A.F., 2020) The Zambian government, through the lands department and other institutions, has faced some challenges in establishing e-governance for service delivery over the last decade. Some of the key problems includes, insufficient budgetary allocation for e-government programs and project, inadequate ICT infrastructure, including unstable internet connectivity and intermittent power supply like the current load shedding which is affecting most government buildings and operation which in turn hinders e-governance implementation, Shortage of skilled IT personnel and inadequate ICT skills among government officials as many are not trained to operate the incoming technological machinery and it tends to slow the operations, Limited awareness and sensitization about e-government operates to the general public and its benefits among citizens and government officials, another problem which is faced with effectiveness of e-governance is the resistance to change from manual to e-services, requiring considerable work to address. Weak institutional arrangements and legal frameworks, including a lack of legislation to enforce interoperability, lead to limited access to digital services, particularly in rural areas, exacerbating existing social and economic inequalities. (Teddy. V. PHD. & Mwape, G. (2023) [29], the study seeks to examine the effectiveness of e-governance platforms for service delivery in public institutions, the case study ministry of lands record portal.

1.2 Objectives of the Study
The objectives of this study are:
1. To assess the effects of system reliability on service delivery effectiveness in the Ministry of Lands' e-governance platform
2. To examine the effects of user digital literacy on platform adoption rates
3. To analyse the relationship between data transparency and public trust in land administration

1.3 Research Questions
The research questions guiding this study are:
1. What are the effects of system reliability on service delivery effectiveness in the Ministry of Lands' E-governance platform?
2. What are the effects of user digital literacy on platform adoption rate?
3. What is the relationship between data transparency and public trust in land administration?

2. Literature Review
This chapter reviews some selected studies on the effects of the farmer input support program on the agricultural output from the global, regional levels, as well as Zambian perspectives. Thus, the literature review is organized and presented in five (5) strands. The first strand assesses the effects of system reliability on service delivery effectiveness in the Ministry of Lands' e-governance platform. The second strand examines the effects of user digital literacy on platform adoption rates. The third strand analyses the relationship between data transparency and public trust in land administration. The fourth strand brings out the personal critique of literature, and the last strand presents the literature gaps.

2.1 To assess the effects of system reliability on service delivery effectiveness in the Ministry of Lands' e-governance platform
Globally, governments assess system reliability using a mix of technical measurements and user-centric indicators. Technical metrics include uptime percentage, mean time between failures (MTBF), mean time to repair (MTTR), transaction success rate, and response time (Kim & Lee 2011). For example, the US Government Digital Service (GDS) requires a minimum uptime of 99.9% for all government digital services to assure consumers' ongoing access (US GDS, 2020). Japan's e-government architecture has a similar criterion, which is supplemented by real-time monitoring dashboards that track service performance across ministries (OECD, 2020).

In contrast, user-centric indicators examine perceived reliability, the degree to which users believe the system consistently operates as expected (Carter & Bélanger, 2005). This perception is typically assessed through citizen surveys and satisfaction studies. For example, the European Union's Digital Economy and Society Index (DESI) measures reliability based on user feedback on system timeliness, transaction completion rates, and data correctness. Combining technical and perceptual indicators leads to a more comprehensive knowledge of reliability and its impact on service delivery.

Despite advances, sustaining reliability is still a global concern. Heeks (2018) highlights numerous issues that contribute to system unreliability in e-government programs, including limited technical capacity, fiscal constraints, cyber risks, and inadequate maintenance. In underdeveloped countries, inadequate electrical supplies and intermittent internet connectivity can exacerbate these issues. Ndou (2004) observed that in many low- and middle-income countries, e-government programs fail or underperform due to a lack of contingency planning and system redundancy.

Another key problem is system integration. Governments frequently use many digital systems built independently across departments, resulting in data silos and incompatible designs. This fragmentation reduces reliability because data synchronization issues and cross-platform incompatibilities cause system downtime or incorrect service outputs (Al-Khouri, 2013). According to Margetts and Dunleavy (2013), interoperability and integration are critical for achieving reliability in digital governance. Without common standards and protocols, systems are subject to operational failures and variable performance.

Cybersecurity is also directly linked to reliability. Frequent cyberattacks, such as distributed denial of service (DDoS) incidents, have the potential to bring down entire government portals. According to the OECD (2020), security breaches or attempted intrusions accounted for 60% of all e-government outages in 2019. As a result, system dependability and cybersecurity must be controlled together to assure continuous service delivery.

Estonia is one of the most effective instances of dependable e-governance worldwide. Through its X-Road infrastructure, the Estonian government has interconnected all major public and private databases, ensuring that citizens can access services such as property registration, tax payment, and health records at any time (Margetts & Dunleavy, 2013). The system's architecture includes redundancy and real-time backup mechanisms, ensuring nearly 100% uptime. As a result, Estonia has one of the world's highest levels of citizen satisfaction, with more than 90% of the public routinely using e-services (OECD, 2020).

Singapore's Smart Nation initiative emphasizes proactive system monitoring and reliability assurance. The government's Integrated Government Service Platform (IGSP) includes predictive maintenance algorithms that identify potential failures before they occur. This approach ensures that the e-government portal operates at 99.98% uptime, resulting in consistently high service delivery efficiency (Al-Khouri, 2013). The system's reliability has significantly reduced administrative burden, with most transactions now completed online within minutes.

The UK Government Digital Service (GDS) enforces a Digital Service Standard that mandates reliability testing before any public-facing service is deployed. The system must demonstrate stable performance under peak load and maintain at least 99.5% uptime (US GDS, 2020). Continuous user feedback is also used to assess perceived reliability. These standards have improved citizen satisfaction and reduced service backlogs across critical platforms such as tax filings and passport applications.

Global research demonstrates a direct correlation between system reliability and citizen trust in digital services. Carter and Bélanger (2005) discovered that trust mediates the association between system quality (including dependability) and intention to use e-government services. In essence, reliable systems foster trust, which in turn promotes adoption. Shareef *et al*. (2011) reinforced this finding by showing that system reliability significantly influences users' perceptions of security and accuracy, two core elements of trust in digital transactions.

The relationship between reliability and adoption also shows through habit formation. Users who consistently experience reliable systems are more inclined to adopt them into everyday habits, leading to continued usage. Conversely, even a few instances of system failure might undermine trust and discourage future participation (Weerakkody *et al*., 2016). For governments, ensuring reliability is therefore not simply a technical necessity but a strategic imperative for citizen involvement and long-term success of digital reforms.

Global best practices highlight a number of ways for improving e-governance system stability. The World Bank (2021) recommends adopting Service-Level Agreements (SLAs) that define uptime, maintenance schedules, and response times between governments and ICT vendors. Furthermore, cloud-based hosting and disaster recovery sites are becoming increasingly popular for ensuring continuity amid system failures or natural catastrophes. Countries such as Canada and Japan have implemented real-time performance dashboards that enable citizens and administrators to monitor system status, increasing transparency and accountability (OECD, 2020).

Another important lesson is about capacity building. The International Telecommunication Union (ITU, 2019) highlights the importance of experienced ICT people in managing, maintaining, and updating e-governance infrastructure for long-term system stability. Regular training, system audits, and predictive maintenance protocols help to reduce downtime and performance degradation.

Furthermore, data standardisation and interoperability frameworks increase reliability by ensuring that information is exchanged seamlessly between government departments. The European Interoperability Framework (EIF) acts as a model, supporting common data structures, open standards, and shared service infrastructures to reduce duplication and promote stable operations (European Commission, 2021). Adopting similar frameworks in developing contexts could improve system reliability and service delivery effectiveness.

In Sub-Saharan Africa (SSA), e-government is viewed as a viable way to improve public service delivery, transparency, corruption, and accessibility. However, the implementation of e-governance programs has faced challenges that impact system dependability and service efficacy. Research indicates that many e-government platforms in SSA have poor usability, limited accessibility, and unreliable technical performance. A study of 279 e-

government websites from 31 SSA nations showed an average usability score of 36.2%. Many sites had broken links, poor load times, and accessibility issues.

Such usability challenges frequently reflect underlying reliability issues, such as system availability, error rates, and infrastructure restrictions.

According to another analysis, access to power, infrastructure reliability, and government efficacy are more important drivers of e-governance advancement in Africa than GDP per capita. A research study determined that "government effectiveness and access to electricity are the key drivers of e-government development in African countries".

This demonstrates that system reliability (which is dependent on solid infrastructure) is essential for good service delivery.

A study of e-government studies in Africa found that many projects fail owing to technological issues, inadequate alignment with local contexts, and insufficient institutional capability. After a decade of e-government research in Africa, Burke (2012) found "uneven distribution" of system quality, particularly reliability, among countries.

Collectively, these findings position system reliability as a critical impediment to realizing the projected benefits of digital public services, rather than a peripheral concern.

2.2 To examine the effects of user digital literacy on platform adoption rates

Global empirical evidence consistently demonstrates a beneficial association between digital literacy and platform adoption. Large-scale surveys in the United States and Western Europe have found that people with higher levels of digital literacy are more likely to use e-government, e-learning, and e-commerce services (van Deursen & van Dijk, 2019). For example, Hargittai (2019) discovered that digital literacy predicts both the intensity and diversity of online activities, with more proficient users participating in more complicated digital interactions including online banking and e-health consultations.

Similarly, in East Asia, where digital change has been rapid, digital literacy has been proven to influence not only adoption rates but also long-term platform usage. In South Korea, Park and Kim (2021) found that digital literacy had a substantial impact on perceived utility and trust in e-government systems, leading to increased utilization. Japan and Singapore had similar findings, with significant national spending in digital education associated with increased usage of e-commerce and e-learning platforms (OECD, 2025).

A global meta-analysis conducted by Deschênes, Kim, and Park (2024) indicated that digital literacy accounts for nearly 38% of the variation in platform adoption rates, making it one of the strongest individual-level predictors. The study found that literacy had the greatest impact on platforms that require user-generated inputs or decisions, such as online tax filing systems or e-payment gateways. Furthermore, digital literacy influences consumers' perceptions of data privacy and online trust, which are becoming increasingly important in determining digital platform adoption in the post-pandemic age (Lee *et al*., 2025).

The COVID-19 pandemic has boosted worldwide digital adoption, putting digital literacy at the forefront of research and policy discussions. During the crisis, individuals and institutions with better digital capabilities adapted faster to online platforms for work, learning, and social engagement (UNESCO, 2022). According to World Bank (2023) research, digital literacy is critical to the success of remote learning and digital employment transitions in high-income nations. Populations with limited digital literacy, particularly older ones, had difficulty accessing key services like telemedicine and digital banking (Ng, 2021).

Furthermore, the epidemic highlighted disparities in digital preparation. National digital literacy programs, such as those in Canada and the United Kingdom, have played an important role in promoting platform adoption among vulnerable populations. The pandemic's global evidence demonstrates that digital literacy is not simply a predictor of adoption, but also a resilience characteristic that dictates how cultures respond to technological upheavals.

Digital literacy is multifaceted, including technical, cognitive, social, and ethical abilities (Eshet-Alkalai, 2018). Each dimension has a unique influence on adoption. Technical abilities, such as operating devices and utilizing software, influence perceived usability (Davis, 1989), whereas cognitive skills, such as information appraisal and problem solving, influence perceived usefulness (Hargittai, 2019). Trust and readiness to reveal personal data on platforms are influenced by social and ethical elements, such as online communication and digital privacy awareness (Ng, 2012).

Global studies have revealed that customers with excellent ethical literacy (knowing data security and privacy rights) are more confidence in using digital financial services, which leads to increased use of fintech platforms (Lee *et al*., 2025). Similarly, in higher education, cognitive digital literacy abilities predict both adoption and satisfaction with learning management systems (Alamri & Watson, 2022). To achieve the best adoption outcomes, comprehensive digital literacy development must address all four dimensions.

Policymakers have promoted digital literacy as a foundation for digital inclusion and platform adoption. The OECD (2025) highlights that digital literacy is an essential life skill for economic engagement. Many nations have implemented national digital literacy frameworks, such as the European Union's Digital Competence Framework (DigComp 2.2), which standardizes the skills needed for effective digital participation (Vuorikari *et al*., 2022). Similarly, UNESCO (2022) has pushed member nations to incorporate digital literacy into education systems, noting that skill development has a direct impact on the adoption rates of e-government and e-learning platforms.

Global partnerships in developing economies, such as the World Bank Digital Economy for Africa Initiative and UNDP's Digital Readiness Framework, demonstrate that investments in digital literacy increase returns on digital infrastructure investments by encouraging demand-side adoption (World Bank, 2023). These efforts demonstrate that addressing digital literacy gaps is both a social equality issue and an economic growth strategy.

Despite tremendous advances, differences in digital literacy remain a major impediment to fair platform usage. Globally, digital literacy rates vary by age, education level, gender, and income. Older adults and low-income communities have consistently lower literacy levels, resulting in decreased adoption rates (Hargittai, 2019; van Dijk, 2020). Gender disparities persist, especially in developing countries where

women have limited access to digital training (UNESCO, 2022).

Furthermore, the "second-level digital divide," or the difference in digital skills and meaningful usage, has supplanted the old access barrier (van Deursen and Helsper, 2020). This disparity suggests that even when gadgets and connectivity are widely available, literacy disparities continue to limit platform usage. As a result, global plans must look beyond infrastructure to include digital education, continuous assistance, and inclusive design.

While global research consistently confirms the favorable impact of digital literacy on adoption, significant gaps remain. First, most studies are cross-sectional, which limits causal inference (Lee *et al*., 2025). Few research use longitudinal or experimental approaches to assess how changes in digital literacy influence platform use. Second, the bulk of worldwide research focus on cognitive and technical literacy, sometimes overlooking the social and ethical dimensions required for long-term adoption (Ng, 2012). Third, the relationship between institutional trust and digital literacy is understudied, especially in cross-cultural contexts. Finally, as artificial intelligence and algorithmic systems become more prevalent, new dimensions of "algorithmic literacy" and "data literacy" emerge, shaping future platform adoption dynamics (UNESCO, 2024).

Globally, digital literacy has progressed from a supplementary ability to an important predictor of technology adoption and engagement in the digital economy. According to empirical studies, individuals with better literacy are more likely to regard digital platforms as beneficial, easy to use, and trustworthy, resulting in higher adoption rates (Deschênes *et al*., 2024; Lee *et al*., 2025). However, literacy differences continue, resulting in new types of digital inequality even in technologically sophisticated countries. The research demonstrates that digital literacy is an economic and social necessity that governments, educational institutions, and private-sector actors must emphasize to encourage inclusive digital adoption around the world.

The digital transformation strategy has gained traction across Africa, with governments, corporations, and development organizations investing in digital platforms to improve service delivery, increase financial inclusion, and raise economic productivity (World Bank, 2022). However, despite this momentum, platform adoption rates across sectors such as mobile banking, e-commerce, and e-government are inconsistent and uneven among demographics and regions (UNCTAD, 2023).

User digital literacy, which encompasses users' ability to effectively use digital tools, analyze online content, and connect with technology-based services, is a significant determinant of these differences (Kiptum & Ombati, 2021). Digital literacy not only boosts consumers' confidence in adopting platforms, but it also influences perceived usefulness and ease of use, two key elements in the Technology Acceptance Model (Davis, 1989). In Africa, where education, infrastructure, and socioeconomic issues collide, digital literacy has emerged as a key factor driving digital platform adoption.

Digital literacy in Africa is very varied, reflecting differences in education systems, ICT regulations, and infrastructure availability (Isaacs, 2021). According to the African Union Digital Transformation Strategy (2020-2030), digital literacy is critical to ensuring that African citizens can meaningfully engage in the digital economy. Kenya, South Africa, and Nigeria have made significant progress in incorporating digital skills training into educational curriculum and community activities (Mothobi & Gillwald, 2020). Nonetheless, major disparities exist between urban and rural communities, as well as between men and women, posing challenges to equitable platform adoption (Gillwald & Mothobi, 2019).

Empirical research suggests that digital literacy is positively correlated with platform adoption rates in numerous African nations. For example, Osei and Boateng (2020) discovered that in Ghana, digital literacy was substantially associated with users' usage of mobile money systems. Similarly, Kariuki and Mwaura (2021) found that digital skills had a direct impact on Kenyan residents' use of e-government services, with higher levels of literacy resulting in higher adoption rates. The findings are consistent with the Unified Theory of Acceptance and Use of Technology (UTAUT), which highlights the importance of supporting factors such as digital competence and information access in shaping behavioral intention and actual technology use (Venkatesh *et al*., 2003).

2.3 To analyse the relationship between data transparency and public trust in land administration

Land administration systems that record, manage, and transfer land rights are crucial for economic development, social fairness, and environmental sustainability (World Bank, 2019). Data transparency refers to the accessibility, accuracy, and usability of land-related information, which is a crucial aspect of government. Similarly, public trust in land institutions reflects residents' judgments of these institutions' fairness, accountability, and dependability. The core point of this paper is that worldwide data openness in land administration is inextricably connected to levels of public trust, with gains in transparency fostering greater trust and opaque systems breeding mistrust, conflict, and inefficiency.

Several major themes emerge from the global literature: the role of transparency in strengthening land governance; technological innovations (digitisation, geoportals, blockchain) as facilitators of openness; the relationship between transparency, corruption, and economic outcomes; and limitations in evidence, particularly in measuring trust and establishing causality. This review examines each of these subject areas, synthesising empirical findings, theoretical frameworks, and policy consequences.

Institutions such as the World Bank and the Global Land Tool Network (GLTN) emphasize that transparency is a critical component of sustainable land governance. The World Bank's "Land Administration Reform" policy paper emphasizes the need of openness in ensuring access, reducing conflicts, and improving service delivery (World Bank, 2019). Land administration agencies that publish crucial information, such as ownership rights, transaction records, fee structures, and cadastral maps, enable previously excluded population segments to participate and monitor the system more effectively (World Bank, 2019).

The Principal-Agent paradigm proposes that citizens cede land administration responsibility to the state (agent). Transparent data decreases knowledge asymmetry and agents' discretionary authority, minimizing the danger of misuse and improving accountability (Kaufmann, 2018). In the land context, this means that when property rights,

transactions, and valuations are accessible and verifiable, residents may participate more securely in markets and hold institutions accountable.

"Legitimacy" is another fundamental notion in public administration. Legitimacy refers to the belief that institutions work in the public interest and follow fair procedures (Tyler, 2006). Transparency aids this by allowing public scrutiny: Land records that are transparent and accessible demonstrate that the institution is neither concealing facts nor favouring insiders.

A significant body of global research focuses on how technology improves transparency in land administration. Digitizing land records from paper to electronic registers has been widely implemented (Lemmen, van Oosterom & Bennett, 2021). Advantages include speedier processing, more accuracy, less reliance on clerical judgment, and public access portals.

Geoportals (web-based systems that display parcel borders, ownership, zoning, and transaction histories) have gained popularity. According to the FIG/GLTN conference papers, geoportals allow citizens, researchers, and oversight authorities to examine land data, boosting transparency and facilitating dispute detection (Bayer & Meggiolaro, 2022). These systems support "open land data" - land-specific open data sets made available for public use, aligning with the broader open-government data movement (OpenGovLand, 2020).

Blockchain technology has been offered as a way to secure and verify land records. According to Ameyaw (2020), blockchain improves transparency in land administration by creating a distributed ledger in which each transaction is visible and immutable. While encouraging, empirical evidence is still in its early stages: Lemmen *et al*. (2021) warn that technology alone will not result in increased trust unless institutional reforms are implemented alongside it.

Empirical case studies yield varied results: in some jurisdictions, digitisation greatly decreased registration time and increased submissions, whilst in others, uptake was limited due to infrastructure, regulatory frameworks, or public access hurdles (Kizito & Ochieng, 2021). Thus, while technology promotes openness, its success is dependent on context, inclusiveness, and process design.

A large body of global literature links transparency in land administration to less corruption, more efficient land markets, and better economic outcomes, all of which influence public trust. The World Bank's Land Governance Assessment Framework highlights opacity in land institutions as a significant barrier to investment, tenure security, and public trust (World Bank, 2021).

Empirical cross-country research indicate that nations with stronger land-governance metrics (transparency, involvement, and accountability) have lower levels of corruption and more active land markets (Deininger *et al*., 2020). For example, in Latin America, measures requiring open registries and public disclosure of land allocations resulted in fewer illicit allocations and increased citizen satisfaction (FAO, 2018).

Transparency International (2019) found that open land management and accessible records and procedures lead to increased trust in the system. This sense of justice and legitimacy is an essential component of trust (Mishler & Rose, 2005). When land-related information is buried behind discretionary processes, citizens may perceive favoritism, rent-seeking, or bias. This undermines trust and reduces willingness to engage effectively in land markets.

Research on public trust in land management is limited compared to other public-sector sectors. However, governance literature can provide valuable insights. Trust is commonly characterized as citizens' readiness to rely on institutions to operate competently and fairly (Levi & Stoker, 2000). In land administration, this translates into trust in title accuracy, fairness of allocation or adjudication, and clarity of procedures.

Under certain settings, empirical data suggests that increased transparency leads to higher trust. For example, survey research in Europe and North America discovered that respondents who viewed land registration services to be more open and accessible also had higher levels of trust in those institutions (Smith & Malone, 2019). In developing nations, studies show that visible and accessible cadastral data, public fee schedules, and publicly posted allocation decisions relate to lower perceptions of land corruption and better reported confidence (Jones *et al*., 2020).

However, the literature warns that the association is complicated. Transparency alone may not result in trust if other institutional aspects are lacking. For example, if the records are public but unverified, or if citizens cannot evaluate the data, transparency may have little effect. Kizito and Ochieng (2021) discovered that in several African pilot initiatives, even though data was technically accessible, citizens saw the systems as skewed due to the legacy reputation of land organisations. Transparency must be combined with capacity growth, outreach, and visible rule enforcement.

Much research demonstrates links between transparency measures and outcomes like reduced corruption or increased trust, but few use strong experimental or quasi-experimental designs to establish causality. As Lemmen *et al*. (2021) point out, conflicting institutional improvements frequently accompany transparency initiatives, making it impossible to identify the influence of open data alone.

There is no widely accepted set of indicators for transparency in land administration (Jones *et al*., 2020). Some studies focus on digital record availability, while others concentrate on fee disclosure or user happiness. Similarly, "public trust" is measured in a variety of ways, including polls of satisfaction, perceptions of justice, and actual usage behaviour. The heterogeneity affects the meta-analysis of results.

The efficiency of transparency measures is strongly dependent on local context. Publishing data without considering factors like digital gap, literacy, gender, and socioeconomic status may leave vulnerable populations behind (OpenGovLand, 2020). Transparency improvements without addressing institutional flaws, such as weak rule of law, inadequate resources, or overlapping mandates, may not increase confidence (Kizito & Ochieng, 2021).

While many studies focus on digitisation or blockchain, it is becoming increasingly clear that technology is a tool, not a solution in and of itself. Transparency platforms may fall short if users lack understanding of data access, interpretation, and action, and institutions do not prioritise responsiveness and accountability (Ameyaw, 2020).

Land administration in Africa is distinguished by complicated tenure systems, which include statutory, customary, and communal landholding agreements. These diverse systems pose unique governance issues, influencing both transparency and public trust. Transparency in African

land administration refers to the clarity, accessibility, and openness of data on land ownership, allocation, transactions, and management processes. Public trust refers to citizens' confidence in land institutions to act fairly, defend rights, and handle problems.

The regional literature underlines the need of transparency in combating corruption, providing fair access to land, and building confidence between citizens and authorities (African Union [AU], 2018; GLTN, 2020). However, institutional complexity, resource constraints, informality, and lax enforcement frequently undermine the effectiveness of transparency initiatives (World Bank, 2020). This analysis explores African research, case studies, and policy papers to better understand the link between transparency and public trust in land administration.

African land systems are intrinsically complex due to the presence of both statutory and customary tenure systems (Amanor, 2012; UN-Habitat, 2020). Customary systems frequently lack formal documentation but have great social legitimacy, whereas statutory systems are usually codified but occasionally distant from local realities. This duality presents issues for transparency: legal records may not represent actual land usage or ownership in customary regions, and the processes for recognizing customary rights are sometimes opaque (Amanor, 2012; AU, 2018).

Institutional capacity in land administration is another obstacle. Many countries lack the technical infrastructure, human resources, and financial resources to develop transparent, digital processes. Overlapping mandates among local governments, national land ministries, and customary authorities lead to anomalies in data administration and reporting (World Bank, 2020). As a result, residents frequently see land management systems as fragmented and untrustworthy, undermining public trust (Transparency International, 2019).

Digitization and ICT-based solutions have been actively supported in African land governance to increase transparency. Geoportals, electronic land registries, and mobile platforms for transaction recording are among the projects under consideration (GLTN, 2020; Lemmen *et al*., 2021). For example, in Kenya, the ArdhiSasa platform provides a consolidated electronic registry of land parcels and transaction records, making it easier for the public to access land information (Republic of Kenya, 2021). Similarly, Ghana's Land Administration Project (LAP) digitized land records and implemented web-based access, which increased openness and reduced procedural delays (Ameyaw, 2020).

Citizens may verify ownership, monitor allocations, and report inconsistencies under these technology-driven initiatives, which boosts confidence. However, studies warn that infrastructural shortages, digital illiteracy, and low knowledge restrict the impact of digital transparency (Kizito & Ochieng, 2021). The risk of "digital exclusion" is especially acute for excluded groups, including rural communities, women, and the impoverished.

Corruption in African land administration is a well-known issue. The abuse of discretionary power in allocation, registration, and valuation weakens public trust (Transparency International, 2019). Transparency has been cited as a critical mitigating factor: open data, participatory decision-making, and easily available grievance channels decrease potential for rent-seeking and arbitrary judgments (World Bank, 2020; AU, 2018).

For example, in Uganda, pilot projects that combined public disclosure of land allocation decisions with citizen feedback channels reduced disputes and enhanced local land offices' perceived legitimacy (World Bank, 2020). Similarly, in Zambia and Malawi, community mapping programs that recorded customary rights and made the data publicly available increased trust in land governance (GLTN, 2020; Ameyaw, 2020).

3. Methodology

This chapter outlines the research design and methodology used in the study. The study aims to investigate the maize floor price policy and its effects on the mealie meal price.

3.1 Research Design

The basic research design employed in this study is a mixed method of qualitative and quantitative approaches. The type and source of data will be determined by the objectives of the study. The choice of this design is because it enriches the data collection process, analysis, and presentation. Descriptive research emerges following creative exploration and serves to organize the findings to fit them with explanations, and then test or validate those explanations (Krathwohl, 1993). Quantitative and qualitative study approaches will be used. The chi-square test and linear regression analysis will be used to establish the relationship between the quantity/quality of inputs, timelines of input, access to extension services, and the agricultural output. The researcher used a survey and field research to gather quantitative and qualitative data, respectively.

3.2 Sampling Technique

For this study, the researcher will employ simple random sampling techniques:

3.3 Target Population

Population is the universe of units from which the sample is to be selected. According to Babbie (1992), a study population is the aggregation of elements from which the sample elements are actually selected. This researcher targets a population of traders and residents in the country.

3.4 Data Collection Method

The main instrument for data collection is a structured questionnaire with both closed and open-ended questions. They will be administered to the respondents at their business premises. The researcher used structured self-administered questionnaires covering all the variables in the study. In these questionnaires, a five-point Likert scale was used to ease data processing and analysis. The scale was marked 1-4, where 1 represents very effective and 4 represents ineffective.

The data to be obtained will mainly be sourced through the use of questionnaires. 50 questionnaires will be self-administered with open-ended and closed-ended questions. The proper guild will be offered to ensure an accurate supply of information.

3.5 Triangulation

Triangulation is a research technique used to validate by comparing the results from multiple sources or methods (Denzin, 1978). In this study, triangulation was used to compare the results from the qualitative and quantitative phases. The qualitative phase involved semi-structured

interviews, while the quantitative phase involved a questionnaire survey. By comparing the results from both phases, the study aimed to increase the validity and reliability of the findings (Bryman, 2006). Triangulation also helped to identify patterns and themes that emerged from both phases, providing a more comprehensive understanding of the research topic (Creswell, 2014).

3.6 Data Analysis

Descriptive statistics and inferential statistics will be used to analyze the data (Kumar, 2019). Descriptive statistics will be used to summarize and describe the data, including frequencies, percentages, means, and standard deviations (Creswell, 2014). Inferential statistics will be used to test hypotheses and make inferences about the population, including correlation analysis and regression analysis (Kumar, 2019). The data analysis will be done using statistical software, which is a common practice in social science research (Bryman, 2016).

3.7 Ethical Considerations

The study will adhere to ethical guidelines, ensuring confidentiality, anonymity, and informed consent from participants (Bryman, 2016). Participants will be assured of the confidentiality of their responses.

3.8 Limitations

According to Beins (2003), limitations are factors which a researcher foresees as restrictions, problems and such other elements which might affect the attainment of objectivity and validity of the research findings. The following are some of our limitations of the study:

Financial constraints: funding to conduct the research was a challenge in that this research was self-funded, and there were a lot of costs to be incurred, such as transport, printing of questionnaires, binding and others.

4. Presentation of Research Findings and Discussion of Results

4.1 Overview

This chapter examines, interprets, and presents the findings that were obtained from the completed questionnaires that were collected and later analysed. The first section of this chapter presents the demographic findings, presents the qualitative results of this study, and the last section presents the discussion of findings.

4.2 Presentation of results on background characteristics of the respondents

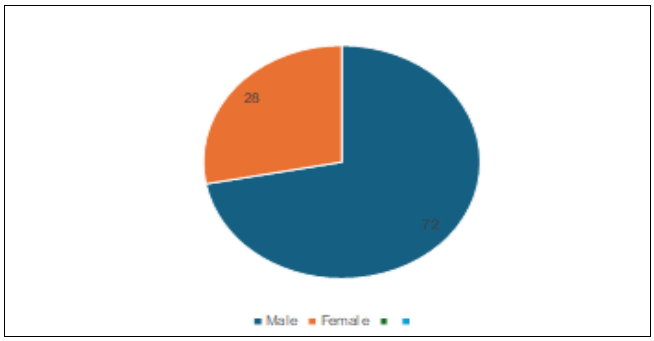

Fig 4.2.1: Sex

The figure above provides demographic information about the participant's gender. The data shows that of all 100 participants, 72, which represents 80% were male, while 29 were female, which represents 20% the indicating that the study had a male population participation.

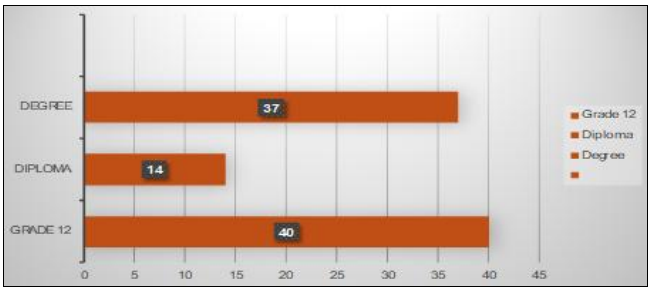

Fig 4.2.2: Level of Education

The education status of the participants shows that 40 have a grade 12 certificate, 37 have Degrees, 14 have diplomas, while just a fraction of the participants did not have any of the above. The table also showed that most of the participants were able to understand the questionnaire and able to respond accordingly due to their literacy level.

City Council has a workforce that is relatively new. The study found that most employees have been at the Ndola city council for less than 3 years.

4.3 Presentation of results based on objective 1: To assess the effects of system reliability on service delivery effectiveness in the Ministry of Lands' e-governance platform

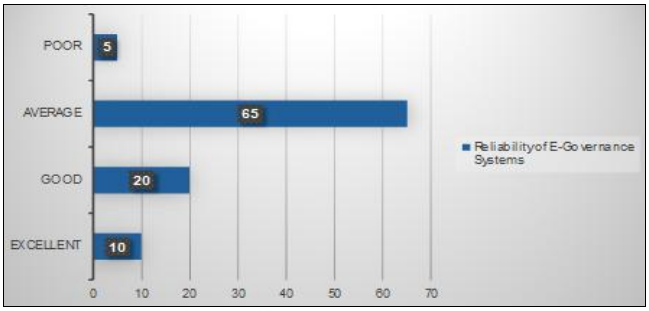

Fig 4.3.1: Reliability of E-Governance systems

The figure above status of the participants shows that 65 respondents stated that the system reliability is average, while 20 respondents stated that the system reliability is good. The other group which represented the 10, claimed the system reliability is excellent, and only about 05 of the participants responded that the system reliability was poor.

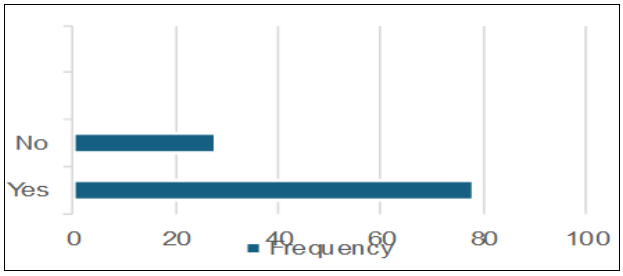

Fig 4.3.2: Experience any difficulties using the e-governance system

The figure presents data on the experience of any difficulties using e-governance. The findings reveal a complex interplay of opinions, with a significant portion of respondents holding positive views on the practice. The majority responded that they face difficulties using the e-governance system due to its complexity, while 28 of the respondents responded no, meaning they do not face any challenges using the e-governance system.

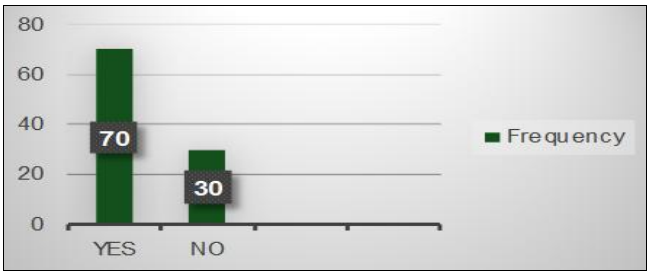

Fig 4.3.3: Has there been an improvement in service delivery since the introduction of e-governance

The dynamics of citizen engagement are positive, as evidenced by the coefficients among the respondents. The ratio from the obtained correlation indicates an improved reliability of system engagement and reduced public service delivery bureaucratic systems. The majority, which was 70, responded yes that there has been improvement in service delivery, while only 30 of the respondents ticked no. The results show a significant positive correlation between these two responses.

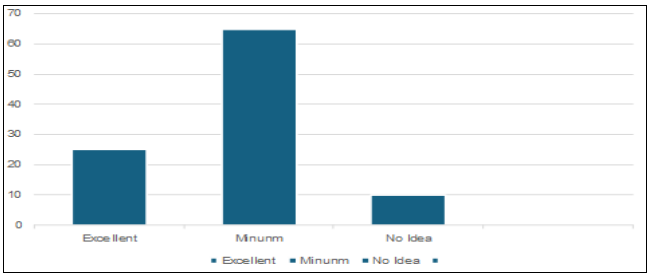

Fig 4.3.4: Extent to which the system impacts the efficiency of service delivery at the Ministry of Lands

From the table above, impact status of the participants showed that 65 of the respondents, which represents 65% said it has minimal impact on the efficiency, while 25% of the respondents said it has excellent impact the efficiency of service delivery at the Ministry of Lands and just a fraction of the participants of 10% did not have any idea of the above.

4.4 To examine the effects of user digital literacy on platform adoption rates

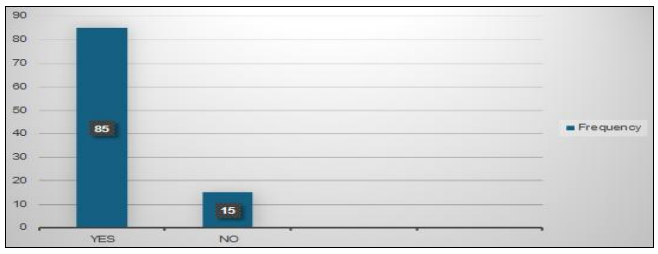

Fig 4.4.1: Do you receive any support or training to use the e-governance system

The data above revealed the surveyed individuals about the support for digital users of e-governance. The findings reveal several key insights, including that 85% of the respondents agreed to receive support for the digital user platform, while 15 15% of the respondents disagreed with receiving any support using the digital platform.

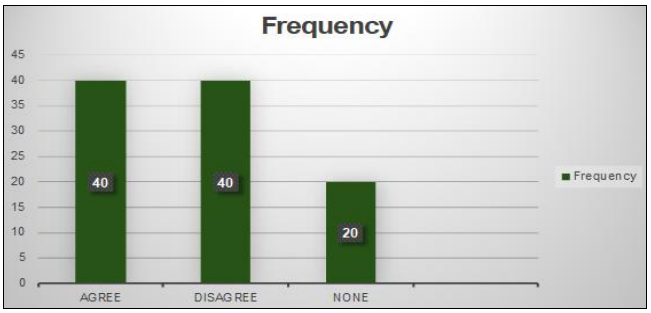

Fig 4.4.2: Do you think digital literacy plays a crucial role in the adoption rate

The figure above shows that literacy level plays a crucial role in adoption rates. The findings reveal a comparison, but equal responses from respondents of opinions, with a small portion of respondents holding no views on the practice. 40% of the respondents ticked agree as it plays a very important role in the adoption rate. Also, 40% of the respondents disagreed that it doesn't plays any role in adoption, as it can be adopted with or without digital literacy.

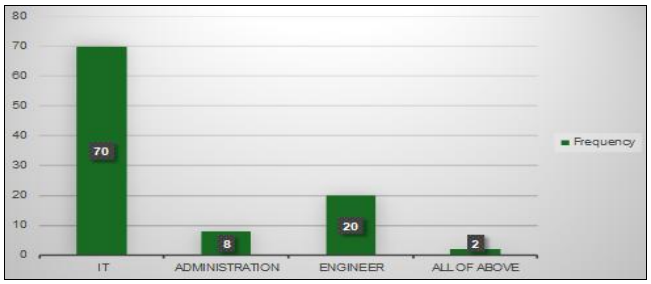

Fig 4.4.3: What are the crucial skills required for effective platform adoption

The figure above 4.3.3 shows a complex of opinions, with a significant portion of respondents with different views on the crucial skills required for effective platform adoption, of which the breakdown was as follows. 70% indicated that IT is a major requirement skill for adoption of e-governance, while 20% suggested that engineering is also a crucial skill required to implement the program. Both administration and all the above had 08% and 02% of the respondents.

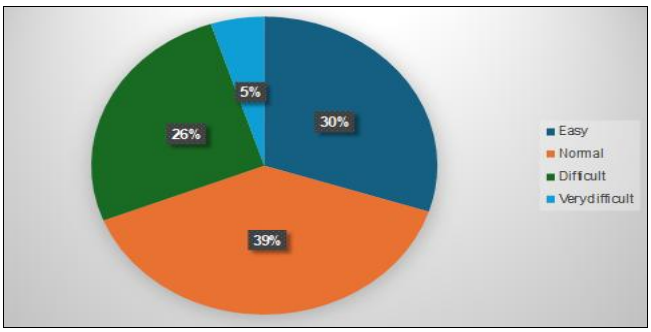

Fig 4.4.4: How easy or difficult was it for you to adopt the platform

The results of the survey reveal a mixed bag of experiences among respondents. On one hand, 30% of the respondents found it easy to adapt the platform, indicating a positive experience and suggesting that the platform's onboarding process was intuitive and user friendly for a significant portion of users. On the other hand, 26% found it difficult, and 5% found it very difficult, indicating that nearly a third of the users faced some level of difficulty, which could be a cause for concern and may require further investigation to identify the root cause of these challenges.

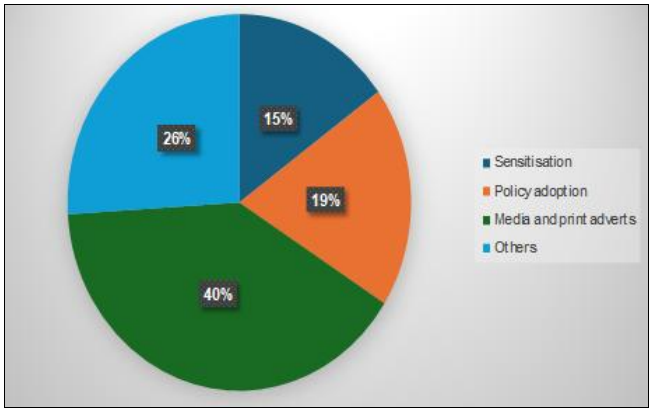

Fig 4.4.5: Strategies to improve digital literacy and increase platform adoption rates

The results highlight varying strategies to boost digital literacy and platform adoption. Media and print adverts were the top choice, with 40% of respondents believing that increasing awareness through advertising is key. Policy adoption and sensitization were also seen as important, with 19% and 15% of respondents respectively backing these approaches. Meanwhile, 26% suggested alternative strategies, potentially including platforms' user experience. Overall, the findings suggest that a multi-faceted approach could be the way forward, with a strong emphasis on raising awareness and visibility.

4.5 To analyse the relationship between data transparency and public trust in land administration

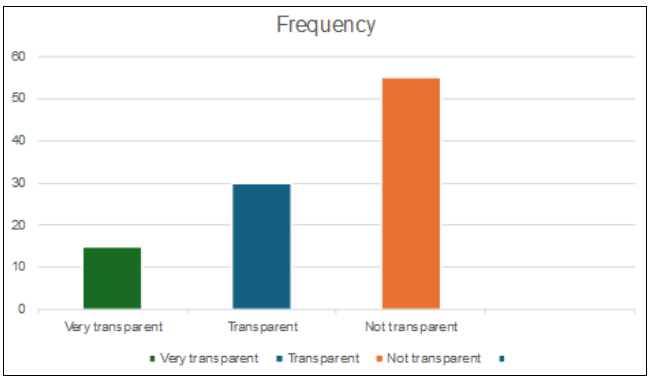

Fig 4.5.1: How you rate data transparency and public trust of the e-governance platform

The status of the participants above shows that 55 indicated that there is no transparency in data which affects the public trust with the ministry, 30 of the respondents indicated that there is just normal transparency with data which in turn enhances public trust and finally the least 15 indicated that there is very much transparency in the way they handle the data when dealing with the public regarding e governance effectiveness.

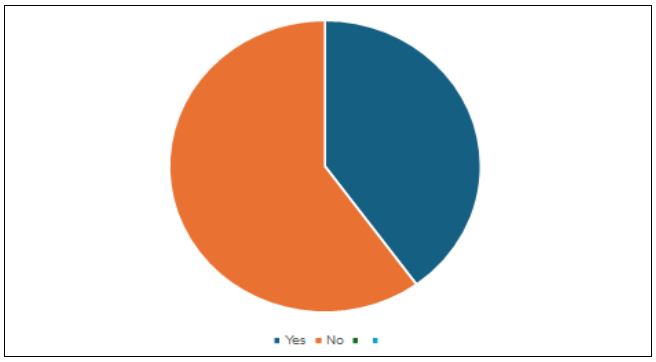

Fig 4.5.2: Has data transparency improved public trust in the use of the e-governance system platform

From the figure above, the participants show that 60 responded that data transparency hasn't improved the public trust in using the e-governance platform, while 40 responded that the system data transparency has somehow improved public trust in the use of e-governance at the Ministry of Land online platform.

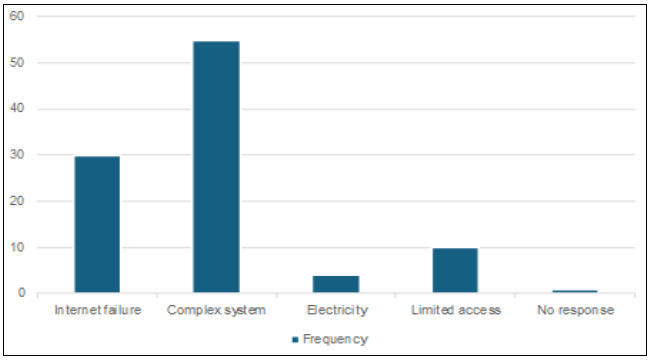

Fig 4.5.3: What challenges do you face when using the e-governance online platform

The above figure provides data representation about the participant's challenges when using the e-governance system online platform. The data shows that of all 100 participants, 55, which represents 55%, indicates that the system is complex for them to understand and use effectively, while 30, which represents 30% of the respondents, indicated that they face internet failure to access the portal due to terrain areas and distances. 10 of the respondents marked that they face limited access and fail to proceed with online usage. 04% represented the participants who face the challenge of electricity during the time they want to access the portal, and lastly, only one of the respondents indicated that there is no response when using the portal and unable to access it.

4.6 Discussion of Research Findings

Below is a comprehensive summary of the major findings of the study based on each objective of the study.

According to the study's demographic statistics, 72% of respondents were men and 28% were women. This suggests that male users are more likely to interact with the e-governance platform than female users. This gender mismatch is consistent with patterns reported in digital service consumption in many developing countries, where

men frequently have more access to digital tools and the internet due to socioeconomic and cultural factors (UNDP, 2018). The findings indicate that gender influences the adoption rate of e-governance technologies. Women's lower participation rates may be due to constraints such as poor digital literacy, the cost of internet connections, or a lack of awareness about the benefits of e-government. These findings highlight the relevance of gender-inclusive strategies in encouraging equitable access to online public services, in keeping with the World Bank's (2020) emphasis on integrating gender equality into ICT-driven governance projects.

Educational attainment appeared as a significant predictor of e-governance adoption. The study discovered that 40% of respondents had completed secondary school, 37% had degree-level qualifications, 14% had diploma-level education, and 9% had no official qualification. This suggests that the majority of participants had a reasonably high level of education, which influenced their ability to navigate and use the web portal. The results confirm Biel's (2017) theory that communication and education are crucial in improving the public's capacity to understand and use digital technologies. Individuals with higher educational attainment tend to be more confident and competent in embracing new technology. As a result, the findings imply that users' educational backgrounds have a direct impact on how efficiently they engage with e-governance services. This emphasizes the importance of ongoing public education and digital training initiatives to close literacy gaps and promote equitable access to digital platforms.

Respondents expressed considerable concern about system reliability, with 65% evaluating it as "average," 20% as "good," 10% as "excellent," and 5% as "poor." This implies that, while the system works well for the majority of customers, there are some visible issues that prevent constant and efficient service delivery. The findings are consistent with Gore's (2010) observation that the effectiveness of e-governance is strongly dependent on the stability and responsiveness of the infrastructure facilitating online transactions. The findings indicate that, while the Ministry of Lands has made progress in digitalising services, infrastructural and technical inefficiencies continue to impede user experience. In developing nations, insufficient ICT financing and maintenance frequently degrade the reliability of public internet systems (Bwalya & Mutula, 2016). Thus, while e-governance has increased accessibility, its dependability remains an area that requires additional investment and technical support to boost public trust in digital services.

Many respondents (78%) reported difficulty while utilizing the web portal, with only 22% reporting no problems. This exposes serious usability issues that prevent successful use of the e-governance technology. The biggest issue noted was the system's complexity, which forced many users to seek help from Ministry staff or other parties. These findings are similar with Dang and Pheng (2017) and Sachs (2018), who claim that in underdeveloped countries, the complexity of digital interfaces typically discourages users and hinders the inclusion of e-governance programs.

The usability challenge highlights the importance of streamlined system design, user-centered interfaces, and ongoing technical assistance. This follows the Human-Computer Interaction (HCI) idea that system design should promote user comfort and accessibility to enable long-term adoption.

The findings revealed that 70% of respondents believed there had been a considerable improvement in service delivery since the Ministry of Lands implemented e-governance, while 30% disagreed. This suggests that the digital transformation of land services has improved regulatory quality and administrative efficiency, which supports empirical findings from Dwivedi *et al*. (2020), who found that e-governance initiatives can reduce bureaucratic delays and improve transparency in public service delivery. The perception of improvement stems from favorable citizen experiences with digital service accessibility, decreased paperwork, and faster processing times. However, the 30% opposing opinion suggests that not all users gain uniformly, most likely due to system flaws, poor internet access, or inequalities in digital skills.

Regarding efficiency, 65% of respondents indicated that the system's impact was minimal, 25% described it as excellent, and 10% were uncertain. This suggests that while e-governance has enhanced accessibility, institutional bureaucracies continue to hinder optimal efficiency. These findings align with the arguments of Heeks (2018), who asserted that bureaucratic inertia, lack of interoperability among government systems, and limited ICT maintenance capacity can diminish the potential gains of e-governance initiatives. The persistence of bureaucratic hurdles underscores the need for organisational reforms and process re-engineering to ensure that digital systems translate into tangible efficiency improvements.

A whopping 85% of respondents said they needed training or support to use the online platform, while only 15% did not. This indicates that successful e-governance deployment is dependent not only on system availability, but also on user readiness. The increasing demand for training indicates that many citizens do not have the digital literacy to utilize online government services. This conclusion supports Ndou's (2019) view that capacity building and public sensitization are critical for long-term e-governance adoption. Training initiatives, therefore, play an important role in educating citizens to confidently participate with digital services and improve system utilization.

The survey discovered that 40% of respondents believed that literacy levels have a major impact on the adoption rate of e-governance platforms, 40% disagreed, and 20% remained neutral. This mixed impression reveals that, while many people understand the value of digital literacy, others see e-governance as a policy-driven requirement that is independent of user competency. However, existing literature (UNESCO, 2020; Biel, 2017) strongly supports the view that literacy, particularly digital literacy, is a critical enabler of technology adoption. The findings thus show a disconnect between policy implementation and user preparation, emphasizing the significance of incorporating digital literacy initiatives within national e-governance strategies.

According to the findings, 70% of respondents considered IT skills to be crucial for good system operation, 20% stated engineering skills, 8% administrative skills, and 2% thought all of these abilities were significant. This demonstrates that e-governance success requires diverse knowledge, such as technical system administration, policy creation, and operational oversight. According to Kettunen (2017), e-governance flourishes when technological and administrative capacities are aligned to enable seamless

system performance. The emphasis on IT and engineering skills highlights the importance of ongoing technical training for government workers in charge of digital infrastructure.

According to the findings, 55% of respondents saw little to no transparency in the e-governance system, 30% saw moderate transparency, and 15% saw great transparency. This shows that, despite efforts to digitalize, citizens continue to perceive restrictions in information access and process clarity. Trust in digital governance is based on perceived transparency, fairness, and accountability (Lemmen *et al*., 2021). The Ministry's poor view of openness necessitates the strengthening of feedback systems, clearer communication regarding processes, and increased visibility of digital transactions. Without adequate openness, citizens may remain distrustful of the system's integrity, stifling greater confidence and acceptance.

Finally, respondents cited numerous barriers to e-governance use: 55% claimed system complexity, 30% internet failure, 10% limited access, 4% power issues, and 1% a lack of system response. These findings are consistent with Bwalya's (2018) assertion that infrastructural deficiencies, such as unstable internet and electricity, are key barriers to e-governance effectiveness in Sub-Saharan Africa. Addressing these technical and infrastructure difficulties is critical to ensuring the long-term viability and stability of digital government systems.

5. Conclusion and Recommendations

5.1 Overview

The main findings of the study for each objective will be highlighted in the current chapter. This chapter also provides a conclusion to the study, recommendations for policy makers and stakeholders, and recommendations for future studies are also presented in the current chapter.

5.2 Conclusion

Drawing from global perspectives, public sector and research experts have become increasingly aware of the significant benefits inherent tools derived from functional e-governance for public service delivery infrastructures in the management of the day-to-day activities of the government particularly in public institutions. Results of this descriptive study further affirmed the need for the institutions to effectively implement an e-governance policy framework that will ensure timely and speedy service delivery across various public institutions.

E-governance has been a significant development in Zambia's public service delivery system. The country has made significant strides in adopting e-governance services such as online land title applications, electronic certification of credentials systems, online business registration, and the national identity card system. These services have not only improved efficiency and transparency in service delivery but also enhanced citizen engagement by providing opportunities for citizens to participate in decision-making processes, feedback mechanisms, and service delivery. Despite these significant achievements, there are still challenges such as inadequate ICT infrastructure and limited access to e-governance services in rural areas.

The government needs to prioritize the development of ICT infrastructure and ensure that e-governance services are accessible to all citizens. Further research is necessary to assess the long-term effects of e-governance on public service delivery and citizen engagement in Zambia. Continuous training and capacity building for stakeholders involved in e-governance initiatives are also necessary to ensure that e-governance services are sustainable and effective.

The study showed that depending on the indicator the relationship can change direction. Also relevant to the literature was the case where directional causality was found, meaning a dynamic and reciprocal relationship between the two variables., it emphasized that they mutually affect each other over time, the integration of service delivery and e governance practices results in good governance, as well as mixed results depending on the model for the contribution of good governance to the effectiveness of e governance for public service delivery.

This research confirmed that e-governance initiatives play a crucial role in promoting accountability and transparency within public administration and promotes effectiveness. The result highlighted in chapter four revealed that the ministry hasn't done much to improve the effectiveness in their online system portal due to few challenges and set back which had been identified by the respondents of the distributed questionnaires. Nevertheless, there are many but few challenges faced by the ministry of land online portal, including disparities (complexity) in digital access, concerns about data privacy lack of internet in some areas especially in rural areas. Additionally, continuous education and up skilling programs are necessary to equip government employees with the skills required to manage these digital tools effectively (*A, Chilembo, Z., & Tembo, S. (2020)* [1].

Despite these challenges, it is essential to view them as opportunities for improvement at the ministry rather than overlooking the challenges. This study's limitations, primarily due to its focus on ministry of land online portal and the use of qualitative data, suggests areas for further research. Artificial intelligence on e-governance. These technologies hold the potential to further enhance governance practices, making it imperative for policymakers and professionals to examine their implications closely (*Naumann, 2018*) while e-governance at the ministry of lands online portal has shown to be transparency and accountability, it is clear that continued efforts are required to address the challenges identified. By focusing on the ongoing development of digital governance strategies and embracing new technologies, the online service can serve as a model for other institutions seeking to implement successful e-governance systems. Understanding how cultural, socio-economic, and political factors shape the e-governance environment could be enriched by comparative studies across different public institutions, analysing similarities and differences in their approaches.

5.3 Recommendations

1. At the policy level, governments should prioritize the integration of open data frameworks into land management systems. According to worldwide literature, countries such as Estonia, Denmark, and the Netherlands have greatly increased public trust by making land records publicly available and verifiable online (World Bank, 2019; Lemmen *et al*., 2021). Zambia and other developing countries can establish similar frameworks by implementing or improving legislation requiring proactive disclosure of land information, transaction records, and cadastral maps.

Such legislative frameworks should also include data accuracy requirements, regular updates, and citizen access protocols to enhance accountability and eliminate perceptions of corruption and favoritism in land transactions.

2. At the institutional level, land administration agencies should invest in digital transformation with a citizen-centric approach. Digital systems should be transparent, user-friendly, and interoperable with other ministries such as Lands, Local Government, and Agriculture. However, as regional and local studies have shown, digitalization alone does not ensure confidence; systems must also include responsive service delivery, grievance redress procedures, and participatory land governance processes (Deininger *et al*., 2020; TI Zambia, 2023). As a result, institutions should establish interactive feedback channels where individuals may track land applications, file objections, and view transaction histories. These elements would not only increase openness, but also demonstrate institutional accountability, building long-term public trust.
3. The incorporation of customary land administration into official transparency systems demands special consideration. Many studies, notably in Africa, have found that excluding customary tenure from legal land systems fosters mistrust among rural inhabitants (FAO, 2018; Boone, 2020). Zambia should consequently create hybrid models in which traditional authorities and local land committees are integrated into transparent land information systems. This could include digitizing customary land records and linking them to government databases while respecting local autonomy and cultural land norms. Such inclusive transparency changes would bridge the trust gap between the state and communities that have previously been excluded from formal land processes.
4. At the capacity-building level, both institutional staff and the broader public require ongoing education about data openness and its importance. Institutional training programs should emphasize data management ethics, accountability procedures, and the use of digital platforms to ensure land transaction integrity. Public awareness initiatives and community education sessions could help residents better understand how to access and verify land information. Global evidence suggests that public trust improves when citizens are equipped with knowledge and consider transparency systems to be understandable and usable (Ameyaw, 2020; World Bank, 2021).
5. Future study should take a mixed-method approach, combining quantitative surveys and qualitative interviews, to reflect the multidimensional character of trust and transparency. Empirical research in Zambia should go beyond descriptive analysis by creating measurable indicators of transparency, such as accessibility, punctuality, and responsiveness, and then statistically analyzing their impact on public trust. Furthermore, longitudinal research could investigate how public opinions change after transparency reforms are implemented, providing insight into the long-term sustainability of trust. Comparative research across African countries may also reveal context-specific effective practices for improving transparency and trust under various governance and tenure systems.
6. Finally, collaborative governance methods come highly recommended. Collaborations among government agencies, civil society organizations, and technology companies can improve the design, monitoring, and credibility of transparency initiatives. Civil society engagement can act as an independent oversight mechanism, ensuring that land data is accurate, accessible, and free of corruption. Furthermore, partnership with universities and research institutes can help to inform evidence-based decisions by collecting data on transparency performance and public trust trends.

6. References

1. Chilembo Z, Tembo S. Opportunities and Challenges of Coordinating the Implementation of e-Government Programmes in Zambia. International Journal of Information Science. 2020; 10:29-43.
2. Al Salmi MA, Hasnan N. E-Government Analysis: Sultanate of Oman Case. Open Journal of Social Sciences. 2016; 4:35-40.
3. Chipeta J. A Review of E-Government Development in Africa. A Case of Zambia. Journal of e-Government Studies and Best Practices, 2018, Article ID: 973845.
4. Dhaoui I. Electronic Governance: An Overview of Opportunities and Challenges. MPRA Paper No. 92545, 2019.
5. Glass LM, Newig J. Governance for Achieving the Sustainable Development Goals: How Important Are Participation, Policy Coherence, Reflexivity, Adaptation and Democratic Institutions? Earth System Governance. 2019; 2.
6. Hair Jr JF, Black WC, Babin BJ, Anderson RE. Multivariate Data Analysis (7th ed.). Pearson, 2021, 2010.
7. Marikyan D, Papagiannidis S. Unified Theory of Acceptance and Use of Technology: A Review. In S. Papagiannidis (Ed.), TheoryHUB Book, 2021.
8. Sarfarazi J. Unified Theory of Acceptance and Use of Technology (UTAUT) Model-Mobile Banking. Journal of Internet Banking and Commerce. 2017; 22:1-20.
9. Sikaonga S, Tembo S. E-Government Readiness in the Civil Service: A Case of Zambian Ministries. International Journal of Information Science. 2020; 10:15-28.
10. Soneka PN, Phiri J. A Model for Improving E-Tax Systems Adoption in Rural Zambia Based on the TAM Model. Open Journal of Business and Management. 2019; 7:908-918.
11. Undi-Phiri B, Phiri J. Assessing Factors Affecting the Adoption of E-Government Services in Developing Countries for Transport Sector, amidst the Covid- 19 Pandemic. Scientific Research. 2022; 14:69-90.
12. Venkatesh MM, Morris MG, Davis GB, Davis FD. User Acceptance of Information Technology: Toward a Unified View The Factors Affecting the Adoption of e-PACRA Services through the Government Service Bus, 2023.
13. Adaba G, Nwainyekule L, Frimpong F. E-government development: Benchmarking Ghana and Tanzania. International Conference EGOV-CeDEM-ePart 2022, Linköping University, Sweden, September 6-8, 2022. CEUR Workshop Proceedings, 2022.
14. Anguche CA, Kimani H, Ndururi J. E-Government

Services and Performance of County Governments in Kenya: The Case of Nairobi City County. European Journal of Business and Strategic Management. 2024; 9(3):1-30.
15. Azeez O, Olanrewaju A. The role of e-governance in enhancing service delivery in Nigerian local governments: A mixed-methods approach. International Journal of E-Government Studies. 2021; 8(2):89-104.
16. Blom PP, Uwizeyimana DE. Assessing the effectiveness of e-government and e-governance in South Africa: During national lockdown 2020. Research in World Economy. 2020; 11(5):208-219.
17. Burzyński A. Estonia's digital transformation in public administration: The impact of e-governance on service efficiency and investment. Public Administration and Digital Governance Review. 2022; 15(3):115-129.
18. Coetzer L. Comparative study of e-government services in South Africa, Brazil, and Estonia: Implications for government-to-citizen services. International Journal of E-Government and Public Policy. 2022; 10(1):75-90.
19. Hans N, Rutenge MM. Evaluation of the Opportunities Presented by the Adoption of E-Government in Enhancing Local Government Authority Performance at Kinondoni Municipal Council in Tanzania. African Journal of Empirical Research. 2024; 5(4):479-488.
20. Jensen MC, Meckling WH. Theory of the firm: Managerial behavior, agency costs and ownership structure. Journal of Financial Economics, Elsevier. 1976; 3(4):305-360. McBride, K., Toots, M.,
21. Kalvet T, Krimmer R. Leader in e-government, Laggard in open data: Exploring the case of Estonia. Revue française d'administration publique. 2018; 3(6):613-625.
22. Metcalf KN. How to build e-governance in a digital society: The case of Estonia. Rev. Catalana Dret Pub. 2019; 58(4):7.
23. Michael K. Strengthening citizen participation through e-governance: Taking stock and looking forward to Ugandas local governments. London Journal of Research in Humanities and Social Sciences. 2023; 23(2):27-40.
24. Khawan Salim. The Implementation and Challenges of E-government Concept, September 17, 2021. Available at: SSRN:
25. Al Mudawi Naif, Beloff Natalia, White Martin. Issues and challenges: Cloud computing e-Government in developing countries. International Journal of Advanced Computer Science, 2020.
26. Ruhode E. E-government implementation for inter-Organizational information sharing: A holistic approach information system for developing countries, (Doctoral dissertation). Cape Peninsula University of Technology, Cape Town, 2018.
27. Rokhman A. Potential Users and Critical Success Factors of E-Government Services: The Case of Indonesia. Proceedings of the International Conference on Public Organization, Yogyakarta, 2011, 21-22.
28. Basamh S, Qudaih H, Suhaimi M. E-Government Implementation in the Kingdom of Saudi Arabia: An Exploratory Study on Current Practices, Obstacles & Challenges. International Journal of Humanities and Social Science, 2014.
29. Teddy V, Mwape G. The Critical Factors Affecting E-Government Adoption: A Conceptual Framework in Zambia and Sub-Saharan Region. Journal of Business and Social Sciences. 2023; 2:37-54.
30. Alabdallat WIM. Toward a regional mandatory public e-services in Jordan. Cogent Business and Management, 2020.
31. Almutairi FLFH, Thurasamy R, Yeap JAL. Historical Development of E-Government in the Middle East. International Journal of Recent Technology and Engineering, 2020.
32. Mees HLP, Uittenbroek CJ, Driessen PPJ. From citizen participation to government participation: An exploration of the roles of local governments in community initiatives for climate change adaptation in the Netherlands, January 2019.
33. Fan J, Zhang P, Yen DC. Among G2G information sharing government agencies. Information, & Management. 2014; 51(1):120-128.
34. Savoldelli A, Misuraca G. Understanding the e-government paradox: Learning from literature and practice on. (new), 2019.