MAKERERE UNIVERSITY

ENHANCING GOVERNMENT TRANSPARENCY AND SERVICE EFFICIENCY THROUGH DIGITAL INTEGRATION: A CASE OF UGANDA'S UGHUB PLATFORM.

BY

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RESEARCH DISSERTATION SUBMITTED TO THE COLLEGE OF BUSINESS AND MANAGEMENT SCIENCES IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF A MASTER OF ARTS IN ECONOMIC POLICY MANAGEMENT OF MAKERERE UNIVERSITY.

NOVEMBER 2025

DECLARATION

I, Mutumba William, attest that this dissertation is my work and has never been submitted to any University in consideration for any form of award.

Sign.....

Date.....15th/11/2025

APPROVAL

This dissertation, submitted in partial fulfillment for the award of Master of Arts in Economic Policy Management of Makerere University, was done under my supervision.

Supervisor: Salmon Mugoda (PhD)

Sign:..... Date..15/11/25

DEDICATION

This dissertation is dedicated to my family, whose unwavering belief in me has been my greatest source of strength. Your endless support, encouragement, and love have guided me through every challenge and triumph, reminding me of my potential and pushing me to achieve this milestone.

Your faith in me has been my motivation, and your sacrifices have paved the way for this achievement. I am forever grateful for your guidance, patience, and unconditional love. This work stands as a testament to the strength and inspiration you have given me.

ACKNOWLEDGEMENT

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ACRONYMS

CPC	Centralized Processing Centre
DEG	Digital Era Governance
DS	Digital Solutions
EHR	Electronic Health Records
GoVTech	Government Technology
ICT	Information and Communication Technology
IT	Information Technology
MoICT&NG	Ministry of Information, Communication Technology, and National Guidance.
NITA-U	National Information Technology Authority Uganda
NPM	New Public Management
OECD	Organization for Economic Co-operation and Development.
OR	Odds Ratio
SMS	Short Message Service
UCC	Uganda Communications Commission
UNDP	United Nations Development Program
USSD	Unstructured Supplementary Service Data
WOG	Whole Of Goverment

ABSTRACT

Digital data integration is becoming increasingly vital for public sector reform, especially in enhancing transparency and boosting service efficiency. In Uganda, the UGhub platform was launched to enable data sharing between government and private-sector organizations, but its effectiveness has not been fully evaluated. The study aims to assess whether data integration significantly boosts transparency and service delivery efficiency. This research used a cross-sectional quantitative approach, analyzing secondary data from the 2023 NITA-U UGhub assessment study. The analysis included Pearson correlations, Chi-square tests, and multivariable logistic regression in STATA 17.

The findings revealed that using UGhub data for planning made institutions nearly 30 times more likely to report transparency gains (OR = 29.77, p = 0.003). Data accuracy also had a strong positive effect (OR = 8.25, p = 0.023), while SMS-based communication further enhanced transparency outcomes (OR = 13.23, p = 0.024). For service delivery efficiency, data accuracy was the strongest predictor, with institutions over 7,000 times more likely to report reduced turnaround time (OR = 7333.3, p = 0.002). Decision-making use of the platform showed a positive but marginally significant effect (OR = 21.69, p = 0.066). Although not statistically significant, information dissemination, USSD usage, and integrated services showed positive directional influence.

The study concludes that the UGhub platform significantly enhances both transparency and service delivery efficiency through improved data accuracy, planning functions, and SMS-based communication channels. However, limited innovation, uneven adoption, especially among public entities, and low citizen-facing service usage remain key challenges. These findings highlight the need for greater investments in interoperability frameworks, data quality systems, and digital communication infrastructure. Improving staff capacity, expanding access via SMS and USSD, and encouraging user-centered innovation will be crucial for scaling the platform's impact. Future research should use mixed-method or qualitative approaches to examine adoption barriers, institutional readiness, and citizen experiences with digital integration in the public sector.

Keywords: digital integration, e-government, transparency, service delivery

CHAPTER ONE

INTRODUCTION

1.1 Background of the study

In the 21st century, Information and Communication Technologies (ICTs) have become essential for transforming economies, governance, and social interactions worldwide (Mergel, 2019). The spread of the internet and digital technologies has revolutionized public service delivery, allowing governments to communicate with citizens and businesses more effectively than ever before. Traditional, paper-based administrative processes are increasingly being replaced with digital platforms that offer real-time access to information, streamline procedures, and boost accountability (Al-Mamary et al., 2023; Othman et al., 2018). By promoting transparency and efficiency, ICTs enable governments to better respond to citizens' needs while supporting evidence-based decision-making and the broader goal of inclusive socio-economic development.

E-government is a systematic way of using ICTs for public administration. Its development is usually viewed in four stages, showing increasing levels of digital maturity. The presence stage marks the initial use of digital platforms, providing citizens with static information through websites. The interaction stage introduces two-way communication between governments, citizens, and businesses, often via email, feedback forms, and online consultation tools (Gorla & Chiravuri, 2016). The transaction stage allows citizens to complete key activities online, such as paying fees, renewing licenses, and engaging in procurement processes. Finally, the transformation stage reflects a full integration of e-government services, where digital platforms support innovative service delivery, streamline administrative tasks, and enhance inter-agency cooperation (Janowski, 2015; Laney, 2016). Consolidated e-government services, therefore, unify digital systems across departments by standardizing and sharing resources, ensuring smooth coordination and better service delivery (Janssen et al., 2011).

A key driver of e-government and the Fourth Industrial Revolution (IR4.0) is data integration. By merging information from various sources, data integration enables managers and policymakers to access accurate, real-time data, improving communication within and across agencies and supporting more effective decision-making (Pardo et al., 2007; International, 2017). It involves

connecting different datasets, such as administrative records, household surveys, census data, geospatial information, and big data sources, into a single, unified system. When data remain siloed, policymakers get incomplete information, which can lead to inefficient resource use and poor policy outcomes. In contrast, integrated data converts scattered information into a strategic national resource, backing evidence-based planning, enhancing public service delivery, and promoting citizen-centered governance (Doan et al., 2012; Lu, 2017).

National development goals and international frameworks highlight the importance of data integration. Governments depend on timely and accurate statistics to track progress toward the Sustainable Development Goals (SDGs) and the African Union's Agenda 2063. However, many governments still face difficulties because different ministries, agencies, and departments collect and store data separately. This fragmentation often leads to duplicated efforts, wasted resources, inconsistencies, and a loss of public trust in official statistics. Data integration solves these issues by removing silos, standardizing indicators across agencies, speeding up reporting, and enabling real-time decision-making. By creating a single source of truth, integrated data improves accountability, strengthens policy development, and boosts national development results.

Citizens today increasingly demand transparent, accessible, and responsive public services. Despite efforts to improve service delivery through online portals, call centers, and one-stop digital platforms, many governments continue to fall short of public expectations. Surveys conducted by the McKinsey Center for Government reveal that citizens remain frustrated by complex and confusing digital platforms, often requiring interactions with multiple agencies to complete a single request (Baig et al., 2014). These inefficiencies not only reduce citizen satisfaction and trust in government institutions but also increase operational costs due to redundant service channels. Data integration offers a solution by streamlining information flows, reducing duplication, and enabling governments to provide faster, more coordinated, and citizen-centric services. It facilitates the creation of "smart services," which are reliable, efficient, and responsive services delivered to citizens, businesses, and government agencies (Manda, 2017).

At the regional level, East Africa has emerged as one of the fastest-growing digital ecosystems, fueled by expanding connectivity, fintech innovations, and youth-led entrepreneurship (World Bank, 2023). Countries such as Kenya and Rwanda have demonstrated the transformative potential

of ICTs through initiatives like M-Pesa and the Irembo portal, which have improved financial inclusion, enhanced public service delivery, and increased citizen engagement (Ojok et al., 2018). However, persistent challenges, including weak infrastructure, unequal access to technology, and limited digital skills, threaten to widen the digital divide, highlighting the need for coordinated regional approaches and knowledge-sharing among governments (World Bank, 2022).

Uganda has actively pursued digital transformation through national initiatives such as the National e-Government Framework (2010), the ICT Policy (2011), Uganda Vision 2040, the EAC Vision 2050, and the Digital Transformation Roadmap (2022). These initiatives have led to the digitization of key government services, including land registries, e-tax systems, and the e-Citizens Portal, resulting in an improvement in the country's GovTech Maturity Index from 0.639 in 2020 to 0.858 in 2022 (World Bank, 2022). A central pillar of these reforms is the Whole-of-Government (WoG) approach, which promotes cross-agency collaboration by breaking down departmental silos. WoG, a concept previously implemented in sectors such as national security, defense, and finance in developed countries, reduces fragmentation in public service delivery and enhances operational efficiency (Castelnovo, 2012).

To operationalize WoG in Uganda, the National Information Technology Authority-Uganda (NITA-U) established UGhub, a government data integration platform funded by the World Bank. UGhub provides a centralized system for storing, managing, and sharing data across government agencies, allowing authorized officials to access information without physical document transfers. By the end of FY 2022/23, UGhub had been rolled out to 116 entities, comprising 50 public and 66 private organizations (NITA-U, 2023). The platform enables agencies to verify citizens' national IDs, access medical records, and share relevant information across departments, reducing redundant documentation, expediting service delivery, and improving operational efficiency. Through UGhub, Uganda consolidates digital resources, strengthens inter-agency collaboration, and advances citizen-centric governance under the WoG framework.

Despite these achievements, challenges remain, including rural connectivity gaps, cybersecurity risks, and bureaucratic inefficiencies. Without integration, data collected by different ministries and agencies remain siloed, resulting in duplication, inconsistencies, and wasted resources that undermine trust in official statistics. Integrating data across sectors eliminates these silos,

harmonizes indicators, accelerates reporting for initiatives such as the SDGs and Agenda 2063, and enables real-time decision-making.

This study contributes to knowledge by examining how data integration can enhance the effectiveness of Uganda's e-government systems, providing empirical insights into best practices for consolidating digital resources, promoting inter-agency collaboration, and fostering a citizen-centric approach to public service delivery. The findings are intended to guide policymakers, ICT practitioners, and government institutions in leveraging data integration to improve efficiency, transparency, and innovation in Uganda's digital governance landscape. By linking global ICT trends, regional developments, and national initiatives, the study situates UGhub within the broader context of digital transformation, highlighting its potential to transform fragmented government processes into a cohesive, integrated, and responsive system of service delivery.

1.2 Problem Statement

Government institutions worldwide continue to face persistent inefficiencies in service delivery, including prolonged processing times, rising operational costs, and inconsistent service quality. These challenges often arise from fragmented and siloed information systems that hinder interdepartmental coordination, slow decision-making, and increase redundancies, particularly in public administration and finance, where manual processes and disparate systems lead to elevated costs, duplicated efforts, and reduced reporting accuracy (Kyomuhendo, 2019; Shayo et al., 2021).

Despite significant investments in ICT infrastructure and e-governance initiatives, many governments have yet to achieve optimal efficiency (Alahakoon & Jehan, 2020). While digitization promises benefits such as cost reduction, improved record management, and enhanced service delivery (Wanjiru, 2023), its success depends on addressing institutional capacity, workforce training, and digital inclusion through comprehensive policy frameworks. Integrated data systems offer a potential solution by consolidating information across departments, enabling real-time access, and improving the accuracy and timeliness of government processes (Nyaga et al., 2019).

In Uganda, efforts to modernize public service delivery include implementing digital platforms that connect government data. At the core of these efforts is UGhub, the national data integration platform, which allows secure data exchange among ministries, departments, and agencies, supporting interoperability and making service delivery more efficient (NITA-U, 2022). However,

challenges still exist: adoption varies widely across agencies, interoperability is not yet fully realized, staff digital literacy levels differ, and connectivity gaps, especially in rural areas, limit the system's effectiveness (Scovia & Asiimwe, 2024). Furthermore, there is limited empirical evidence on the real impact of UGhub and related platforms on enhancing service delivery efficiency in Uganda.

This study, therefore, aims to examine how data integration improves service delivery efficiency in Uganda. The findings are expected to provide policymakers with evidence-based insights, strengthen digital government strategies, and ensure that integrated data systems lead to tangible improvements in public service performance.

1.3 Objectives of the study

1.3.1 Main objective

To examine how digital integration enhances government transparency and service efficiency.

1.3.2 Specific objective

i. To examine how the UGhub data integration platform improves transparency in government and private sector institutions in Uganda.
ii. To examine how the UGhub data integration platform helps reduce service delivery time in government and private sector institutions in Uganda.

1.4 Significance of the study

This study provides empirical evidence on the role of digital data integration in improving government service delivery efficiency and transparency in Uganda. It offers insights for policymakers, ICT practitioners, and development partners on enhancing system adoption, interoperability, and public sector performance. Additionally, the findings contribute to academic literature on digital governance and inform strategies to increase citizen trust and satisfaction through faster, more transparent services.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter consolidates the theoretical and empirical research on digital integration in public service delivery, emphasizing its capacity to improve key performance indicators: decreasing service delivery time and increasing transparency.

2.2 Conceptual and theoretical literature review.

This section presents the conceptual and theoretical foundations guiding this study. The conceptual framework is based on the OECD GovTech Framework (2020), which highlights how digital integration via the UGhub data integration platform enhances efficiency, transparency, and standardization in public service delivery. The theoretical review combines NPM and DEG, providing a lens to examine how performance-oriented reforms and technology-driven, citizen-centered approaches collectively support the modernization and effectiveness of Uganda's public sector.

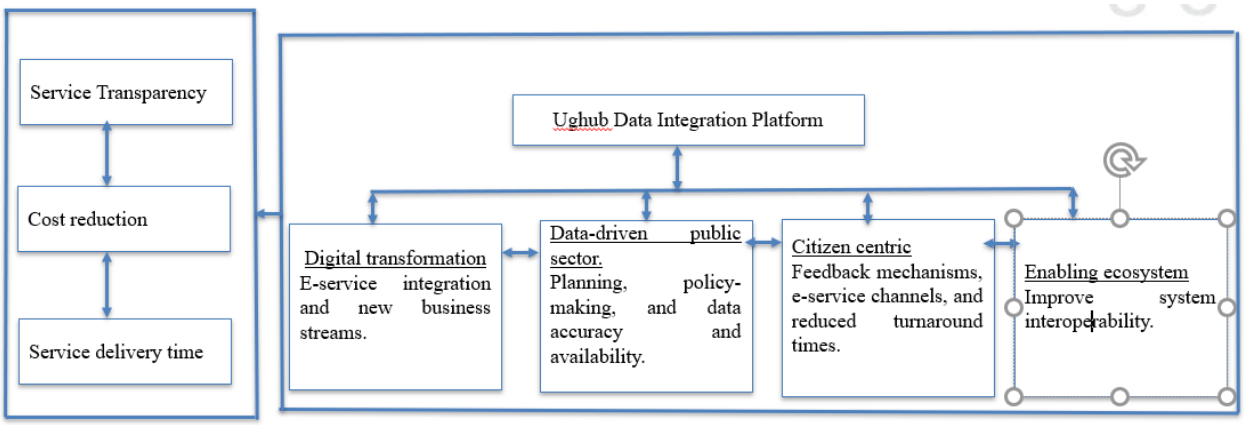
2.2.1 Conceptual literature review

The conceptual framework for this study draws from the OECD GovTech Framework (OECD, 2020), which situates the UGhub data integration platform at the center of digital transformation in the public sector. The framework explains how digital integration enhances government performance through four interconnected pillars: Digital Transformation, Data-Driven Public Sector, Citizen-Centricity, and an Enabling ecosystem. Together, these pillars promote efficiency, transparency in service delivery. The integration platform serves as the core infrastructure, linking government systems, streamlining workflows, and facilitating seamless data exchange. This integration minimizes duplication, reduces administrative costs, and accelerates service delivery by automating processes across agencies.

Using a data-driven approach, the framework illustrates how real-time analytics and accurate data improve policy planning, transparency, and accountability, ultimately leading to shorter turnaround times. The citizen-focused aspect guarantees that services are responsive, accessible, and tailored to public needs, while feedback mechanisms constantly refine service design. Lastly, the enabling

ecosystem offers the institutional and technical support for interoperability of systems. Together, these pillars demonstrate that the UGhub data integration platform supports a unified, efficient, and transparent public service system, aiming to reduce service delivery times, enhance transparency, and lower costs. The figure blow illustrates the conceptual framework design as alluded to in the above paragraphs.

Figure 2.1:Conceptual framework



Source: Adopted from OECD GovTech framework (2020)

2.2.2 Theoretical literature review

This study adopts two theoretical frameworks: NPM, which emphasizes efficiency, accountability, and performance-oriented reforms in the public sector, and DEG, which highlights reintegration, digitalization, and a focus on citizen-centric service delivery.

The NPM paradigm emerged in the 1980s as a reform model emphasizing efficiency, accountability, and citizen-oriented service delivery through the adoption of management principles from the private sector (Hood, 1991; Hays & Kearney, 1998). Grounded in new institutional economics and managerialism, NPM advocates decentralization, performance-based management, and competition to enhance effectiveness in public service provision (Dunleavy et al., 2006). Its focus on cost-efficiency, outcome-based performance, and reduced bureaucratic rigidity laid the foundation for contemporary governance reforms (Kaponda, T. 2025). Within this study, NPM is relevant as it underpins the design of Uganda's UGhub data integration platform,

which aims to enhance coordination, eliminate duplication, and streamline service delivery through efficient digital mechanisms.

Building on NPM, the DEG paradigm represents a shift toward holistic, technology-driven governance. DEG emphasizes service reintegration, needs-based holism, and digitalization as key principles that leverage technologies such as artificial intelligence, data analytics, and the Internet of Things to improve transparency, efficiency, and inclusiveness in public administration (Dunleavy & Margetts, 2010; Torfing et al., 2020; Ravšelj et al., 2022). It supports citizen-centered e-services, promotes interoperability across institutions, and contributes to achieving the Sustainable Development Goals (Sahur & Amiruddin, 2023; Slathia et al., 2025). In this study, DEG provides the theoretical basis for analyzing how the UGhub data integration platform facilitates data integration, rational decision-making, and improved public service delivery. By merging NPM's efficiency focus with DEG's digital reintegration, the framework captures Uganda's transition toward a more agile, transparent, and citizen-centered government.

2.3 Empirical literature review.

This review examines empirical studies on how digital integration influences service delivery time and transparency, highlighting both its potential and the persistent infrastructural and institutional barriers that shape its effectiveness.

2.3.1 Digitization and service delivery time.

Digital solutions have emerged as pivotal tools for reducing service delivery times by streamlining workflows and mitigating bureaucratic inefficiencies. Galindo-Dominguez and Bezanilla (2021) posit that the automation of routine tasks, such as document processing and application approvals, can reduce administrative delays by up to 50% in high-maturity digital governments. For instance, Estonia's e-tax system, which processes 90% of declarations within 24 hours (Katel et al., 2019), exemplifies the transformative potential of integrated platforms. However, such success is contingent on robust digital infrastructure and literacy, which are often absent in low-resource settings. Banna et al. (2020) corroborate this, demonstrating that automation reduces service delivery times by 35% in Malaysia's e-procurement system, but only after a five-year infrastructure upgrade. Contrastingly, in Uganda, Ojok et al. (2018) found that manual backlogs

persisted despite digitization efforts, with only 20% of health records digitized due to intermittent power supply and low digital literacy.

The disparities in outcomes underscore the role of contextual factors. Katel et al. (2019) attribute Estonia's efficiency gains to its 95% internet penetration rate and mandatory digital ID system, enabling seamless citizen-platform interactions. Conversely, Malawi's e-health initiative achieved only a 15% reduction in patient wait times despite similar technological investments, highlighting the limitations of "copy-paste" models in low-maturity contexts (Mergel, 2017). These findings reveal a critical gap that existing studies often overlook: systematic barriers such as infrastructural deficits (e.g., broadband access) and institutional resistance.

The integration of digital technologies into public administration is increasingly recognized as a transformative pathway toward enhanced transparency, accountability, and efficiency in governance (Kavoya, 2020). Emerging scholarship converges on the view that e-government initiatives not only streamline bureaucratic processes but also strengthen citizen trust and engagement by improving access to public information and monitoring mechanisms.

Setyarto et al. (2025) provide evidence that the adoption of information and communication technologies (ICTs) significantly improves transparency, with the majority of respondents (70%) reporting enhanced access to public information. Importantly, their study also demonstrates that digital platforms facilitate more efficient auditing processes, thereby reinforcing accountability. Building on this, Sharmin and Chowdhury (2025) argue that e-governance extends beyond access to information, fundamentally reshaping administrative efficiency through automation, cost reduction, and citizen engagement. They emphasize that digital transparency initiatives, such as blockchain-enabled procurement systems and open data policies, act as safeguards against corruption while fostering trust in government institutions.

2.3.2 Digital integration and transparency in public administration.

Digital integration has become a crucial element of modern governance reforms, with e-government initiatives serving as vital tools to enhance transparency, accountability, and citizen participation. By utilizing technologies such as real-time data systems, blockchain, and open data platforms, governments are increasingly able to eliminate bureaucratic inefficiencies, reduce corruption, and foster public trust.

Zhang and Kaur (2024) emphasize the transformative impact of e-government in providing real-time access to government data, which not only improves transparency but also boosts inclusivity. Their findings show that digital integration is especially helpful for marginalized and remote communities, where increased access to services can help bridge longstanding gaps in governance. This perspective is supported by Setyawan (2024), who demonstrates that e-government reduces opportunities for corruption and abuse of power by speeding up service delivery and promoting cooperation between agencies. However, Setyawan warns that these reforms are often limited by infrastructural deficiencies, bureaucratic resistance, and the ongoing digital divide, all of which hinder the full potential of transparency improvements.

On a broader regional level, Ramadhani et al. (2025) provide compelling quantitative evidence from ASEAN countries, demonstrating a clear positive relationship between the adoption of e-government and public trust. Notably, their analysis shows that transparency and service reliability have a greater influence on public trust than economic factors like GDP per capita. This indicates that the legitimacy of public institutions in the digital age increasingly depends on the quality and inclusiveness of digital services rather than solely on economic performance.

These studies show that digital integration improves transparency through various methods: increasing access to government data, strengthening accountability systems, and encouraging citizen participation. However, they also agree that addressing structural challenges such as infrastructural gaps and cybersecurity risks is necessary to harness the potential of digital governance fully. Ultimately, the literature indicates that transparency does not happen automatically with digitalization; instead, it requires deliberate policy frameworks and institutional reforms to ensure that technological integration results in inclusive, secure, and accountable governance.

2.4 Summary of literature

Digital integration is increasingly recognized as a key driver of efficiency and transparency in public administration. Conceptually, the OECD GovTech Framework (2020) places platforms like UGhub at the center of digital transformation, emphasizing data-driven management, citizen-centricity, and enabling ecosystems that reduce duplication, streamline workflows, and speed up service delivery. Theoretically, New Public Management (NPM) stresses efficiency, decentralization, and accountability, while Digital Era Governance (DEG) highlights technology-driven reintegration, interoperability, and citizen-focused services (Lips, 2019). Empirical studies show that integrated digital platforms can significantly reduce service delivery times and improve transparency, as seen in countries such as Estonia and Malaysia. However, infrastructural gaps, low digital literacy, and institutional resistance in low-resource settings, including Uganda, limit their full impact. Overall, the literature suggests that while digital integration has transformative potential, achieving inclusive, efficient, and accountable governance requires complementary policies, capacity-building, and institutional reforms to maximize technological adoption.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

This section presents the methods employed in this study, including the research design, data collection techniques, and analytical approaches used to address the research objectives.

3.2 Study design

This study uses a cross-sectional quantitative design and relies on secondary data from the 2023 Assessment of the UGhub data integration platform, conducted by the National Information Technology Authority of Uganda. Because this research is novel in Uganda, where few empirical studies have explored the topic, a cross-sectional design was selected as it is ideal for population-based surveys the collection of comprehensive data at a single point in time to establish baseline measurements for future research (Setia, 2016). The quantitative approach was chosen to ensure the findings are generalizable, reliable, and less biased, especially considering the structured nature of the secondary and survey data available (Hasan, 2024).

3.3 Data source

This study draws on secondary data from the 2023 Assessment of the UGhub data integration platform undertaken by the National Information Technology Authority-Uganda (NITA-U). The assessment involved both government and private sector entities, from which a purposive sample of 50 organizations was selected and interviewed between 5th and 26th June 2023.

3.4 Study population

The study population comprised seventy(70) entities, drawn from both the public and private sectors, that utilize services provided through the UGhub data integration platform.

3.5 Sampling

The assessment employed purposive sampling to select fifty (50) entities from both the public and private sectors. This approach was adopted to ensure inclusion of organizations that actively utilize or interact with the UGhub Data Integration Platform, thereby capturing the perspectives of key stakeholders directly relevant to the study objectives.

3.6 Sample size

A sample of fifty (50) entities was purposively selected for this study. According to Krejcie and Morgan's (1970) sample size determination table, a population of 70 would require approximately 59 cases at a 95% confidence level. However, the sample of 50 was considered sufficient given the study's exploratory nature and the limited number of institutions actively using the UGhub platform. As Etikan, Musa, and Alkassim (2016) note, purposive sampling with information-rich cases can produce valid insights when the population is homogeneous and closely aligned with the study objectives. The chosen sample thus provides enough analytical depth to explore the relationship between digital integration and institutional performance outcomes

3.7 Data collection

Data were collected through a combination of desk review and online engagement. The desk review examined the UGhub system integration platform concept and progress reports to provide contextual and background information. An online questionnaire was administered via email to representatives of the fifty (50) identified entities, with subsequent telephone follow-ups to enhance the response rate and ensure completeness of responses. Ultimately, data were obtained from fifty (50) respondents, forming the empirical basis for the study's analysis.

3.8 Study variables

The study selected relevant variables from the existing UGhub data set to examine the effect of digital data integration on government transparency and service efficiency in Uganda. The analysis distinguishes between dependent variables, which capture the outcomes of interest, and independent variables, which represent the key features and functionalities of the UGhub data integration platform that may influence these outcomes. Dependent variables include transparency gains and reduction in service turnaround time, reflecting improvements in institutional accountability and operational efficiency. Independent variables comprise: data utilization, communication channels, service integration, decision-making, planning, information dissemination, data accuracy, SMS usage, shared USSD usage, and the development of integrated services.

3.9 Data analysis

All quantitative analyses were performed using STATA 17. Descriptive statistics (such as frequencies and proportions) detailed demographic and institutional features, while correlation matrices revealed initial relationships between the study variables.

To assess the relationship between the study variables, Chi-square tests were conducted to measure the strength of association between the independent and the dependent variables. The margin of error was set at 0.05, and all variables with a p-value ≤ 0.05 were considered significant and included in multivariate analysis.

Logistic regression models were employed to examine the impact of explanatory variables on the outcome variable. The outcome in this study has two categories: 1 if the event of interest occurs, and 0 if it does not.

The expected value of Y_i denoted as E(Y_i) represents the probability that the event occurs:

E(Y_i) =P($Y_i = 1$)

The logistic model is given by:

$$\ln\left(\frac{E(Y_i)}{1-E(Y_i)}\right) = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \varepsilon_i \quad \text{.....(1)}$$

Where, Y_i=binary dependent variable, X_1= Decision making,X_2=Planning, X_3=information dissemination, X_4=data accuracy,X_5= sms usage, X_6=USSD usage, X_7=service integration and $\beta_0,\ldots,\beta_7$ are the model parameters.The maximum likelihood method is used to derive model coefficients.

The model can also be expressed in its exponential (odds) form as:

$$\frac{E(Y_i)}{1-E(Y_i)} = e^{(\beta_0+\beta_1 X_1+\beta_2 X_2+\beta_3 X_3+\beta_4 X_4+\beta_5 X_5+\beta_6 X_6+\beta_7 X_7)} \quad \text{.....(2)}$$

The estimated coefficients are presented as odds ratios, indicating how a one-unit change in an independent variable affects the odds of $Y_i = 1$

3.10 Ethical considerations

Research ethics were ensured by compliance with Uganda's Data Protection and Privacy Act (2019). Additionally, data anonymization was rigorously maintained by NITA-U, which granted access to the dataset under strict protocols that prohibited the disclosure of personally identifiable information.

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS, AND DISCUSSION OF THE FINDINGS.

4.1 Introduction

This chapter presents the data, analysis, and findings of the study. Using descriptive statistics and regression models, key trends and relationships are highlighted. The findings are organized systematically, followed by a discussion that connects them to the study objectives and relevant literature.

4.2 Descriptive statistics

This section covers the variables used in the analysis. It starts with describing the variables and how they are measured, followed by summary statistics showing the distribution of key indicators across the sampled entities.

Table 4.1: Study variables and their definitions

Variable	Type	Definition
Dependent Variable		
Transparency Gains	Binary (0 = No, 1 = Yes)	Did the institution report improved transparency after adopting the UGhub data integration platform?
Reduction in turnaround time	Binary (0 = No, 1 = Yes)	Whether the entity registered any reduction in turnaround time for its services attributed to data sharing at the hub
Independent Variables		
Decision Making	Binary (0 = No, 1 = Yes)	Entity uses UGhub data for decision-making.
Planning	Binary (0 = No, 1 = Yes)	Entity uses UGhub data for planning purposes.
Information dissemination	Binary (0 = No, 1 = Yes)	Whether the entity uses the hub to disseminate information to the public.
Data Accuracy	Binary (0 = No, 1 = Yes)	Entity registered an improvement in data accuracy due to UGhub data integration platform.
SMS usage	Binary (0 = No, 1 = Yes)	Whether the entity made use of any of SMS access channels linked to the hub to offer services to the public.

Shared USSD usage	Binary (0 = No, 1 = Yes)	Whether the entity made use of the USSD service access channel linked to the hub to offer services to the public.
Service integration	Binary (0 = No, 1 = Yes)	Whether the UGhub facilitated the development of integrated services in the entity.

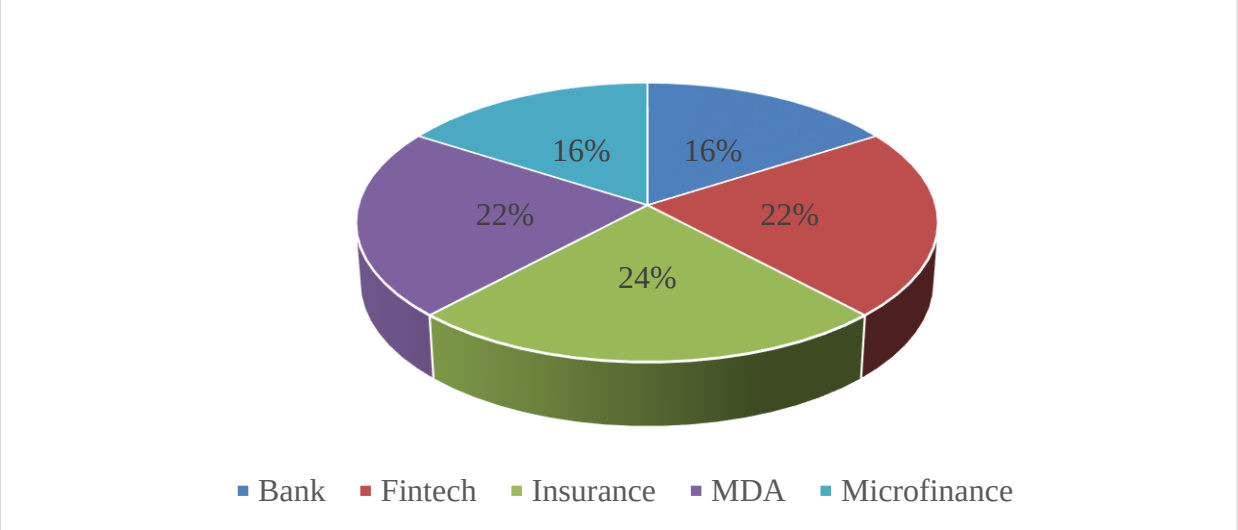
4.2.1 Summary statistics of the study variables

The survey included 50 participants, mostly (78%) from private entities and 22% from public entities. Among these, insurance companies made up the largest group of respondents (24%), followed by Fintechs (22%), and Ministries, Departments, and agencies (22%). Most responses (60%) came from senior and middle-level managers who are directly involved in planning, implementing, or overseeing UGhub platform projects within their organizations. This involvement adds credibility to the research results. These details are explained further in the following paragraphs.

4.2.2 Distribution of entities by category

The respondent institutions were categorized into different entity types, and the findings, as shown in Figure 4.1 below;

Figure 4.1:Distribution of entities by category

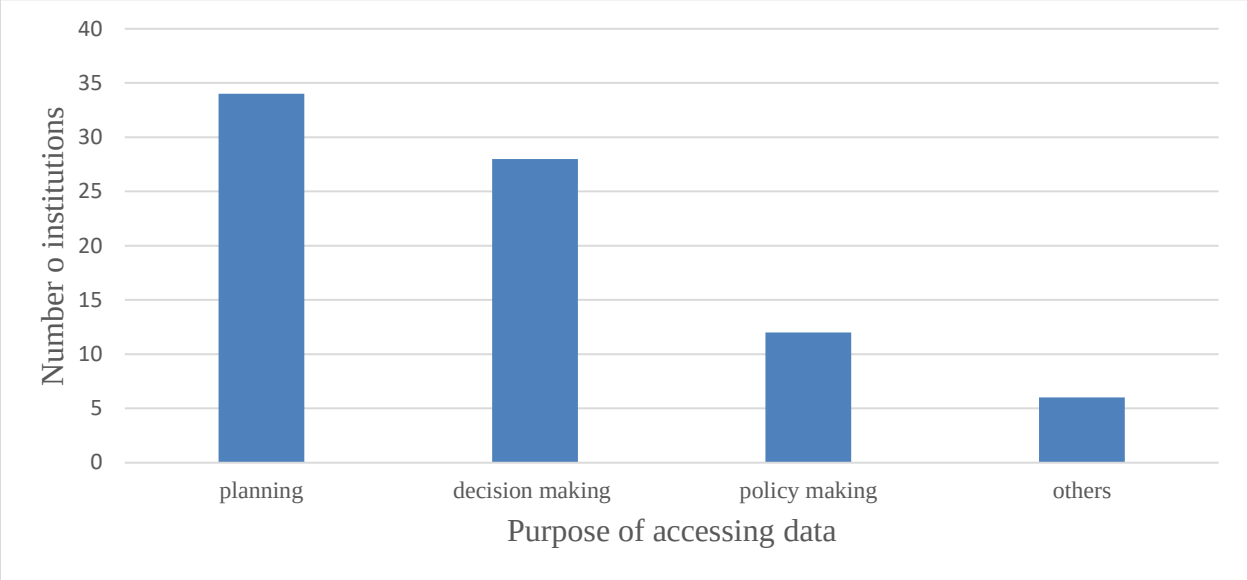


Source: Adopted from the UGhub secondary data(2023)

The figure above indicates that insurance companies constituted the largest share of representation at 24%, followed by Ministries, Departments, and Agencies (MDAs) and fintech institutions, each accounting for 22%. Banks and microfinance institutions had the smallest representation, each contributing 16% of the total sample. This distribution highlights the diverse nature of entities engaged in the study.

4.2.3 Purpose for accessing the data among institutions

Figure 4.2: Purpose of UGhub data cccess among institutions



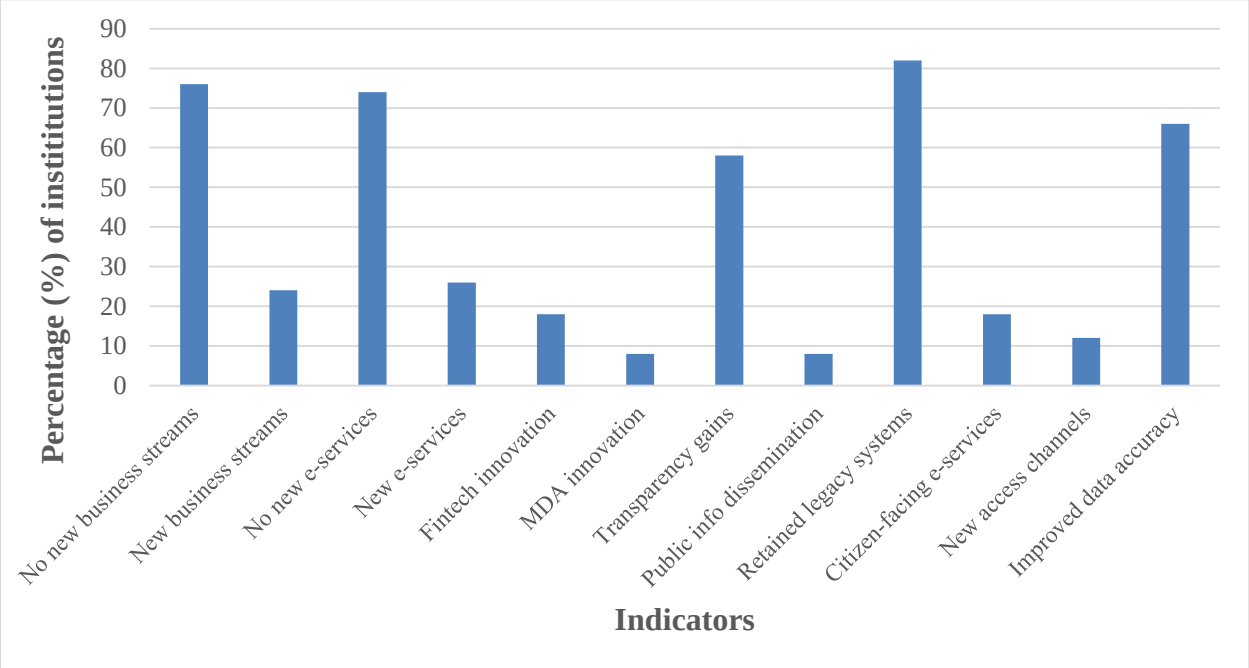
Source: Owner's computation from the UGhub secondary data(2023)

The figure 4.2 shows that 34 institutions primarily used UGhub data for planning and 28 for decision-making, emphasizing the platform's vital role in supporting operational and strategic functions. Fewer institutions accessed data for policy making (12), and the smallest number (6) used the data for other purposes. These findings indicate that the UGhub data integration platform is most valuable for improving institutional planning and evidence-based decision making, although its use in policy development and other areas remains relatively limited.

4.2.4 Distribution of key performance indicators of the Ughub digital platform.

Figure 4.3 below displays the distribution of key indicators assessing innovation, transparency, citizen-focused service delivery, and data accuracy among institutions connected to the UGhub platform. The results emphasize notable differences across areas, revealing both progress and persistent gaps in digital transformation efforts. While significant improvements are observed in data accuracy and transparency, innovation and citizen-oriented service delivery still fall behind.

Figure 4.3: Distribution of key performance indicators of the Ughub digital platform.



Source: Owner's computation from the UGhub secondary data(2023)

As shown in Figure 4.3, the results indicate a modest level of innovation among entities using the UGhub platform. The vast majority of institutions (76%) reported no new business streams resulting from data sharing, while only 24% developed innovative initiatives such as application interface monetization and digital workflow integration. Likewise, 26% launched new e-services, including mobile applications, though innovation was mostly concentrated in the private sector, especially among Fintech firms (18%). Public sector adoption remained notably low at 8%,

suggesting that capacity and institutional inertia continue to hinder the translation of digital integration into meaningful innovations.

Transparency outcomes indicate a more positive trend. Over half of the entities (58%) reported improved transparency and accountability, mainly through better audit trails and open dashboards. However, only 8% used the platform to share public information, revealing untapped opportunities for civic engagement and participatory governance. Regarding service accessibility and data reliability, the findings show that while 82% of entities still rely on legacy systems, a small portion (18%) have developed citizen-facing e-services, and 12% have established new access channels like mobile apps. This limited adoption highlights the need for deliberate policies that promote citizen-centric service design. Encouragingly, 66% of entities reported improved data accuracy after integrating with UGhub, aligning with the platform's core goal of reducing manual reconciliation errors. Overall, the results show incremental progress in transparency and data accuracy but reveal ongoing gaps in innovation and citizen engagement, underscoring the need for governance and institutional reforms to fully realize Uganda's digital transformation agenda.

4.3 Correlation analysis

This study employed Pearson's correlation analysis to assess the strength and direction of relationships among the independent variables. The correlation matrix (Table 4.2) reveals weak correlation among the variables, indicating minimal multicollinearity risk within the model. For instance, planning purpose shows negligible associations with other variables, such as data accuracy ($r = 0.051$) and decision-making ($r = -0.176$), all of which are statistically insignificant ($p > 0.05$). This similarly applied to other variables in the model, as illustrated in the table 4.2 below.

Table 4.2: Correlation matrix of main variables.

Variable	Decision Making	Planning	Data Accuracy	SMS Usage	Shared USSD Usage	Integrated Services	Reduced Turnaround Time	Transparency Gains
Decision Making	1							
Planning	-0.176	1						
Data Accuracy	0.214	0.051	1					

SMS Usage	-0.007	0.157	0.274	1				
Shared USSD Usage	0.113	-0.113	0.056	0.239	1			
Integrated Services	0.329	0.157	0.187	0.566	0.086	1		
Reduced Turnaround Time	0.214	0.013	0.543	0.134	-0.054	0.026	1	
Transparency Gains	0.062	0.459	0.416	0.469	0.102	0.3	0.551	1

The correlation analysis presented in Table 4.1 above shows that improvements in data accuracy are strongly associated with reductions in service turnaround time (r = 0.54) and greater transparency gains (r = 0.42). Similarly, the use of SMS communication channels is moderately correlated with both the development of integrated services (r = 0.57) and the achievement of transparency gains (r = 0.47). These findings suggest that data accuracy and digital communication channels play a significant role in enhancing both efficiency and accountability across government entities using the UGhub data integration platform.

4.4 Econometric results

4.4.1 Digital integration and improved transparency gains.

The results summarized in Table 4.3 show that the logistic regression model was highly significant overall (Prob > chi^2 = 0.0000), indicating that the explanatory variables collectively predict the likelihood of improved transparency resulting from the use of the digital data integration platform.

Entities that accessed data through the platform for planning purposes exhibit a strong and statistically significant effect (Odds Ratio = 29.77, p = 0.003), showing that such entities are nearly 30 times more likely to report transparency gains compared to those that do not. Similarly, reported improvements in data accuracy (Odds Ratio = 8.25, p = 0.023) significantly increase the likelihood of transparency gains, underscoring the critical role of reliable data in strengthening accountability. Use of SMS as a service access channel also shows a strong positive effect (Odds Ratio = 13.23, p = 0.024), suggesting that simple, widely accessible communication technologies enhance transparency outcomes.

By contrast, decision making (Odds Ratio = 2.18, p = 0.396), information dissemination (Odds Ratio = 1.68, p = 0.752), and shared USSD usage (Odds Ratio = 6.04, p = 0.290) were not statistically significant, although their odds ratios indicate positive associations. This suggests that while these factors may contribute to transparency, their effects are not sufficiently robust in this model.

The negative and significant constant (Odds Ratio = 0.0108, p = 0.002) implies that in the absence of the key drivers, the likelihood of transparency gains is very low.

Table 4.3: Econometric results for digital integration and transparency

variable	Odds ratio	Coefficient	p-value
Planning	29.7744	3.3936	0.003***
Decision Making	2.1821	0.7803	0.396
Information dissemination	1.6767	0.5168	0.752
Data Accuracy	8.2459	2.1097	0.023**
Sms usage	13.2336	2.5827	0.024**
Shared USSD usage	6.0371	1.7979	0.290
constant	0.0108	-4.5257	0.002**

Significance levels are indicated as follows: ***P< 0.01, **p < 0.05, and *p < 0.1.

4.4.2 Digital integration and service delivery time.

The econometric results presented in Table 4.4 reveal important insights into the role of digital integration in reducing service delivery time.

The model, which was statistically significant overall (Prob > chi^2 = 0.0000), indicates that certain digital integration factors have a greater influence than others. Among the predictors, data accuracy from using the UGhub digital data integration platform stood out as the most important factor, with an odds ratio of 7,333.3 and a coefficient of 6.5976, significant at the 1% level (p = 0.002). This suggests that data accuracy achieved through adopting the digital data integration platform greatly increases the likelihood of reducing service turnaround time, highlighting the importance of reliable and error-free information for efficiency.

Decision making also demonstrated a positive and meaningful effect, with an odds ratio of 21.7 (coefficient = 3.0767), which was marginally significant at the 10% level (p = 0.066). This finding indicates that institutions using the data integration platform for decision-making were more likely to see reductions in turnaround time, thereby improving service delivery efficiency.

On the other hand, entities that use the data integration platform to disseminate information to the public were not significant statistically, implying that information dissemination to the public alone had no measurable impact on reducing turnaround time.

The negative association of service integration (odds ratio = 0.1288) may reflect the transitional challenges of system integration, where short-term inefficiencies can outweigh long-term benefits.

The constant term was negative and marginally significant (coefficient = -4.9530, p = 0.089), suggesting very low baseline odds of reducing service turnaround time when these digital integration factors are absent.

Overall, the findings indicate that while various aspects of digital integration are important, data accuracy and the utilization of the data integration platform for informed decision-making are the primary factors driving improved service delivery efficiency.

Table 4.4: Econometric results for digital integration and service delivery time

variable	**Odds ratio**	**Coefficient**	**p-value**
Information dissemination	1.5512	0.4390	0.903
Data Accuracy	7333.303	6.5976	0.002***
Service integration	0.1288	-2.0494	0.191
planning	1.2426	0.2172	0.862
Decision making	21.6875	3.0767	0.066*
constant	-4.9530	0.0071	0.089*

Significance levels are indicated as follows: *P< 0.1, **p < 0.05, and ***p < 0.01.

4.5 Discussion

This section discusses the study's key findings on how digital integration through the UGhub platform influences service delivery and institutional transparency in Uganda. The discussion

connects the results to existing literature, highlighting how data accuracy, communication tools, and integrated platforms collectively drive improved performance across public entities.

4.5.1 Reduced service delivery time.

The findings reveal that 70% of entities reported reduced service delivery times while using digital services, highlighting the effectiveness of whole-of-government integration platforms in streamlining processes and enhancing responsiveness. Further analysis underscores the pivotal role of data accuracy in driving these improvements. Organizations focusing on data quality are significantly more likely to achieve reduced service delivery times, emphasizing the importance of investment in data verification and accuracy enhancements to optimize processes, reduce delays, and elevate service standards.

Data accuracy is fundamental to optimizing processes, minimizing delays, increasing public trust, and raising efficiency. The strong correlation suggests that investments in data verification and quality enhancement initiatives can yield significant improvements in operational efficiency and service delivery time, contributing to overall organizational performance and citizen satisfaction (Lim et al., 2018).

Integrated e-government platforms, through automation and time compression, have dramatically reduced processing times and created substantial efficiency gains for service providers and users alike (Madonia et al., 2021). For example, Choughri et al. (2018) highlight the role of accurate data in supporting effective decision-making and operational efficiency, while Choughri et al., (2018) emphasize its importance for providing decision-making, efficient resource allocation, enhanced process automation, better service personalization, and reduced errors. These advantages collectively contribute to streamlined processes, faster service delivery, and greater citizen satisfaction.

While data accuracy plays a pivotal role, other studies indicate that it is not the sole determinant of improved service delivery. Factors such as governance, availability of resources, and contextual conditions also play significant roles. (Boudreau & Bernier, 2017; Phuyal, 2024; Rendell et al., 2020).

Furthermore, Jelenic (2019) highlighted that the effectiveness of digital integration can vary significantly, with governance and accountability being crucial for successful service delivery

improvements. Challenges remain in e-service delivery, especially in areas lacking proper infrastructure and logistical support. Enhancing citizen satisfaction and infrastructure is essential for closing the gap (Saleheen, 2015).

4.5.2 Improved transparency

The findings of this study align with existing research highlighting the positive effects of digital integration on transparency and accountability. E-government platforms improve public access to information, with 70% of respondents reporting better access to government data, while facilitating more efficient monitoring of public sector activities (Setyarto et al., 2025). Integrated information systems reduce bureaucratic opacity and improve public trust, as demonstrated in Surabaya City's digital transformation (Hidayat, 2024).

The crucial role of communication channels, such as SMS, in enhancing transparency is further supported by prior research. Ho et al. (2010) found that mobile SMS-based e-government systems improve transparency by providing citizens with transaction confirmations and notifications, with 93.5% of recipients opening and reading these messages.

Data integration platforms consolidate information from various sources into a single, cohesive system. This centralization ensures that all stakeholders have access to the same data, reducing information silos and promoting consistency in planning. Such platforms serve as a central nervous system for projects, collecting data from various sources and presenting it in a unified, digestible format, which is crucial for enhancing how projects are perceived and understood by everyone involved (Hogan et al., 2017).

Overall, these results suggest that digital integration enhances transparency by providing more accurate and reliable data, thereby supporting evidence-based planning. Additionally, by utilizing SMS and other communication channels, institutions can efficiently share information with the public, promoting accountability and trust in service delivery.

4.6 Robustness checks.

To validate the robustness of our results, we re-estimated the baseline model using alternative specifications, namely the Probit model and the Linear Probability Model (LPM). The outcomes, presented in Table 4.5, remained consistent with those reported earlier in Tables 4.3 and 4.4, with no substantive deviations observed across the different estimation techniques. The close similarity

of the estimates across models reinforces the credibility and reliability of our findings, suggesting that the observed relationships are not sensitive to the choice of econometric specification.

Table 4.5: Digital integration transparency and service delivery efficiency.

Variable	Transparency gains(probit)	Service delivery time(probit)	Transparency gains (LPM)	Service delivery time (LPM)
Decision Making	0.551(0.5040)	0.070*(0.8005)	0.559(0.1162)	0.095*(0.0882)
Policy making	0.002***(0.5380)	0.870(1.0679)	0.001***(0.4363)	0.871(0.1122)
Information dissemination	0.901(0.8995)	0.840(1.5152)	0.990(0.2113)	0.934(0.1574)
Integrated services		0.172(0.8714)		0.330(0.0967)
Data Accuracy	0.033**(0.4949)	0.000***(0.9280)	0.019**(0.1241)	0.000***(0.0892)
Sms usage	0.023**(0.6174)		0.017**(0.3225)	
Shared USSD usage	0.435(.07750)		0.679(0.2148)	

Note: Estimations were conducted using both Probit models and the Linear Probability Model (LPM). Standard errors are presented in parentheses. Significance levels are indicated as follows: *P< 0.1, **p < 0.05, and ***p < 0.01.

4.7 Summary of findings

The study explored how the UGhub digital data integration platform improves transparency and service delivery among public institutions in Uganda. The results indicate that UGhub significantly boosts transparency and efficiency in service delivery through enhanced data accuracy, better planning, and communication systems. Organizations that used the platform for planning (OR = 29.77, p = 0.003), data accuracy (OR = 8.25, p = 0.023), and SMS communication (OR = 13.23, p = 0.024) were much more likely to report improvements in transparency.

Similarly, data accuracy (OR = 7,333.3, p = 0.002) and the use of UGhub data for decision-making (OR = 21.7, p = 0.066) were the main factors contributing to shorter service delivery times,

demonstrating that reliable and integrated data systems improve institutional efficiency. Overall, the UGhub platform boosts accountability, operational efficiency, and information reliability, although wider adoption and user-focused innovation are still needed to maximize its impact.

CHAPTER FIVE

CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter summarizes the study's key findings on the impact of UGhub digital data integration on transparency and service delivery in Uganda. It reflects on the study's limitations, discusses implications for policy and practice, presents evidence-based recommendations, and identifies areas for future research to strengthen e-government initiatives and governance outcomes.

5.2 Conclusion

The study concludes that the UGhub digital data integration platform significantly improves transparency and service delivery efficiency among public institutions in Uganda. By enhancing data accuracy, enabling integrated planning, and facilitating effective communication through channels such as SMS, the platform boosts accountability and operational responsiveness. The econometric results indicate that institutions using UGhub for planning and maintaining accurate data are much more likely to achieve increases in transparency and shorter service turnaround times. These findings underscore the importance of reliable, centralized data systems in promoting transparency, efficiency, and evidence-based decision-making within government operations.

The results of this research significantly contribute to the growing literature on digital governance in developing economies, particularly in the East African context. While global research has highlighted the general benefits of e-government, empirical evidence on the actual outcomes of data integration initiatives in Uganda has been limited. By offering both statistical and interpretive insights on platforms like UGhub, this research fills that gap and clarifies how digital integration impacts governance outcomes. Theoretically, the study supports digital governance and public administration frameworks that emphasize the Whole-of-Government approach as a way to reduce inefficiencies caused by fragmented institutions. The findings indicate that coordinating data across sectors enables a shift from isolated, paper-based processes to unified, evidence-based governance. Policy-wise, the study offers practical recommendations for government agencies, ICT regulators, and development partners seeking to advance Uganda's digital transformation. Specifically, the results highlight the importance of investing in data quality management, inter-

agency interoperability, and capacity building to maximize the benefits of platforms like UGhub. Practically, the findings suggest that effective data integration reduces duplication, accelerates service delivery, and enhances citizen trust, supporting Uganda's Vision 2040 and the Sustainable Development Goals (SDGs). By ensuring that information is accurate, timely, and accessible, digital integration promotes transparency, inclusivity, and accountability in governance.

5.3 Limitations of the study

Although this study offers valuable insights, the following limitations should be taken into account when interpreting its results. First, the analysis was conducted on a relatively small sample of 50 institutions actively using the UGhub platform, which, although adequate for exploratory purposes, may restrict the generalizability of the findings to all government and private sector organizations. Second, the cross-sectional design of the study limited the ability to establish causal relationships between digital data integration and improvements in transparency or service delivery efficiency. Third, relying on self-reported data from institutional representatives introduces the risk of subjective bias, as respondents might have exaggerated benefits or underreported challenges related to UGhub implementation. Lastly, the study focused solely on the UGhub platform, which, while central to Uganda's e-government framework, is only one part of the larger digital ecosystem. Excluding other platforms such as the Integrated Financial Management System (IFMS), the Uganda Revenue Authority's eTax system, and the National Identification and Registration Authority (NIRA) databases may have restricted the scope of the analysis. Therefore, the results should be viewed within these contextual limits, while highlighting the need for broader, multi-platform evaluations in future research.

5.4 Recommendations

The findings highlight the essential importance of planning and decision-making supported by UGhub data in enhancing transparency and speeding up service delivery. To achieve this, government agencies should focus on integrating UGhub data into their strategic and operational planning processes. Making the use of platform data a routine part of evidence-based decision-making can help eliminate redundancies, align policies better, and promote more transparent results. This might include creating internal guidelines and standard operating procedures for

systematic data use in planning and monitoring, thereby fostering data-driven governance practices across public organizations.

The results also emphasize the importance of data accuracy as a key factor in improving transparency and service efficiency. Therefore, investing in measures that boost the reliability and integrity of UGhub data is crucial. Institutions should adopt strict data verification procedures, perform regular audits, and pursue ongoing quality improvement efforts to maintain high standards of data accuracy. Additionally, training staff in proper data entry, validation methods, and understanding integrated datasets can further enhance the platform's effectiveness, ensuring that accurate information supports all decision-making and service delivery processes.

Additionally, the study demonstrates that communication channels like SMS are essential for enhancing transparency. Building on this, institutions should expand and improve the use of accessible digital communication tools to better engage stakeholders and citizens. This may involve sending timely notifications about service status, sharing important public information, and providing feedback mechanisms that allow citizens to monitor government services. By integrating these communication strategies with the UGhub platform, government agencies can increase accountability, build public trust, and foster a citizen-first approach to service delivery.

5.5 Areas for possible future research

Although this study offers valuable insights into the role of the UGhub digital data integration platform in improving transparency and service delivery in Uganda, it also reveals several avenues for further academic research. Longitudinal studies are especially needed to assess the sustainability and long-term effects of digital integration efforts. While the current cross-sectional design captures outcomes at one point in time, it does not allow for understanding how transparency improvements, reductions in service delivery time, and operational efficiency change as integration becomes deeper, institutional capacity grows, and user adoption increases. Future research using panel data or repeated measures over multiple time points would provide a more detailed understanding of the durability and progression of improvements linked to e-government platforms.

Comparative analyses offer another promising avenue for research. Cross-country studies could examine how Uganda's experience with UGhub compares to or differs from other African e-government initiatives, such as Kenya's e-Citizen platform or Rwanda's Irembo portal. These analyses would identify best practices, enabling factors, and structural challenges that impact the success of digital integration across different governance contexts. Furthermore, regional comparative research could uncover factors that enhance scalability, interoperability, and citizen-focused design, aiding in the development of strategies to harmonize digital governance frameworks within East Africa and beyond.

Furthermore, using mixed-methods approaches is recommended to supplement quantitative results with detailed qualitative insights. Interviews, focus groups, and case studies involving policymakers, ICT officers, and citizens can uncover perceptions, experiences, and challenges related to platform adoption that structured surveys might not fully capture. Understanding organizational culture, resistance to change, human capacity constraints, and user satisfaction is essential for creating interventions that optimize the operational and societal benefits of digital integration.

Sector-specific investigations would also improve understanding of how data integration affects different public service sectors. While this study looked at a broad range of public and private institutions, future research could focus on specific sectors like health, education, or local government to assess how integrated platforms influence sector-specific service outcomes. This approach would help create targeted policy recommendations, making sure that investments in digital integration lead to real improvements in efficiency, transparency, and citizen-centered service delivery in key areas.

Finally, future research could examine how digital integration influences citizen trust, engagement, and perceptions of government legitimacy. While this study showed improvements in institutional transparency and operational efficiency, how much these changes lead to greater public trust and more citizen participation is still not well understood. Surveys, experiments, or behavioral studies could assess how trustworthy, accurate, and accessible government data impact citizens' confidence in public institutions and their willingness to use e-government platforms, offering a clearer view of the societal effects of digital governance efforts.

In conclusion, future research should use a variety of methods, including longitudinal, comparative, mixed-methods, and sector-specific studies, to develop a comprehensive understanding of digital integration platforms. Broadening the scope and depth of investigation will produce evidence that informs policy, enhances institutional capacity, and helps design sustainable, citizen-focused e-government systems that improve transparency, efficiency, and governance outcomes in Uganda and the wider East African region.

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