

KOFORIDUA TECHNICAL UNIVERSITY

FACULTY OF BUSINESS AND MANAGEMENT STUDIES

DEPARTMENT OF ACCOUNTANCY



**THE EFFECT OF DIGITALIZATION ON REVENUE MOBILIZATION: A
CASE STUDY OF GHANA REVENUE AUTHORITY (GRA) KOFORIDUA**

BY

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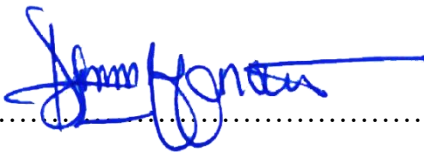
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**A PROJECT WORK SUBMITTED TO THE DEPARTMENT OF
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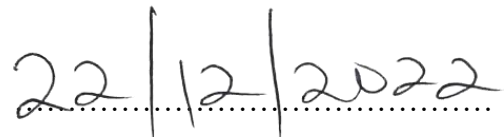
DECLARATION

We declare that this research is the result of our own original research under the supervision of Dr. Victor Curtis Lartey and that no part of it has been presented for another certificate in this institution.



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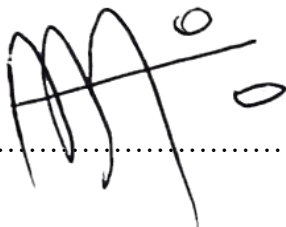
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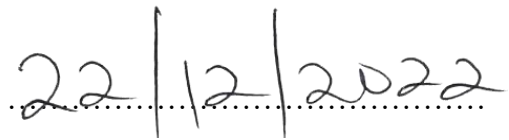
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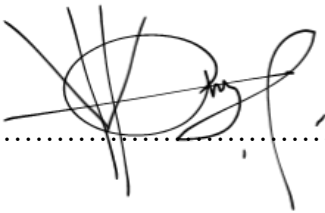
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CERTIFICATION

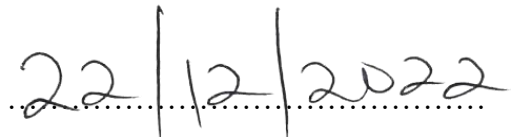
We hereby certify that this project work was supervised in accordance with the guidelines of supervision of the project works laid down by the university.



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DR. VICTOR CURTIS LARTEY

(SUPERVISOR)



.....

DATE

DEDICATION

YAMOAH STEPHEN

My sincere thanks go to the Almighty God who has endowed in me the knowledge and wisdom in my education and most especially the finishing grace.

I dedicate this project to my mother Mrs. Janet Kumah her immense help, care, advice encouragement and financial support.

To them I say a big thank you.

BONNEY REBECCA

I am always grateful to the Almighty God who has enriched me in knowledge and wisdom in my education.

This project is dedicated to my parents Mr. and Mrs. Bonney For their endless love advice, prayers and financial support. I cannot ignore my lovely sisters. I say a big thank you.

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Praise be to the most high God for his compassion and abundant Grace in our lives and for giving us the opportunity, strength and life throughout our studied.

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A special thanks go to Dr. Victor Curtis Lartey our helpful father and supervisor who though he had a busy schedule, read through the scripts offered his own suggestions and guidelines regarding the arrangement among other things. We are very grateful for his effort in reviewing and enhancing the final Project.

To many others and researchers without whose previous efforts our work would have been tedious, we acknowledge our indebtedness.

We say God richly bless you all for your effort.

ABSTRACT

This study focuses on the Ghana Revenue Authority to examine the impact of digitization on revenue mobilization. The study's goal is to investigate the role that digitalization plays in revenue mobilization, as well as the main advantages and limitations of employing digital payment and revenue mobilization. The study uses primary data sources based on the use of questionnaires to address the research questions. The study found that digitization has a significant impact on efficiency, the reduction of corruption, and minimizes man-hours lost in long queues forming in different offices. It was also found that digitalization is expensive in terms of financial and human capital requirements. For instance, competent ICT personnel is a relevant requirement in the adoption of ICT. We recommend that the GRA always hires the necessary IT personnel, network administrators, and other support staff, and also teach the employees and taxpayers how to use the improved cutting-edge payment technologies. Finally, GRA must invest in reliable ICT and internet facilities with enough capacity to handle the massive packets that will be sent from one location to another. This will help to accommodate the vast amount of data that will be transmitted and stored.

LIST OF ABBREVIATIONS

ICT	Information Communication Technology
GNA	Ghana News Agency
DP	Digital Process
UNCTAD	United Nations Conference on Trade and Development
LDCs	Least Developed Countries
NPSRS	New Public Sector Reforms Strategies
MMDAs	Metropolitans Municipal and District Assembles
DT	Digital Technology
GRA	Ghana Revenue Authority
IMF	International Monetary Fund
UN	United Nations
ATM	Automated Teller Machine
MOMO	Mobile Money
IoT	Internet of Things
DPS	Digital Payment Systems
IDF	Import Declaration Forms
EGDI	Electronic Government Development Index
DFS	Digital Financial Service
MPPS	Mobile Phone Payment System
PAAR	Pre-Arrival Assessment Report

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CHAPTER ONE

1.0 Introduction

The chapter provides background information, a problem description, research objectives, research questions, relevance of the study, study scope, study limits, methodology, and study organization.

1.1 Background of the Study

One of the most important factors in managing any nation is revenue (Bekoe et al., 2016). Digitalization's function in generating public sector revenue has the potential to improve every nation's efficacy and efficiency. Digital revenue mobilization is efficient and effective when the Ghana Revenue Authority is at the center of its execution (Shamika S, 2020). Ghana has used digital technology since 2017. There is broad agreement that increasing ICT integration into public sector institution management is crucial for aiding nations in their efforts to prosper (Asamoah, 2019; Heeks 2001). The adoption of digital technology as a component of the e-government architecture is generally acknowledged by academics to have the potential to improve revenue mobilization for public institutions through an increase in the efficiency of public service delivery. Most academics believe that digitization would boost productivity by making businesses and government organizations more effective and efficient. The majority of industrialized economies as well as those developing ones who have embraced digitization in nearly every aspect of their economies are currently benefiting (Shamika S, 2020). The use of digital technology to support revenue mobilization has been studied by academics. Ohemeng and Ayee (2016) claimed, but did not provide evidence to support, that the public sector's use of digitalization to raise money has reduced corruption in Ghana's public sector. Additionally, according to UNCTAD's 2019 Digital Economy Report, advances in the digital economy will have an impact on

almost all of the SDGs, as well as on all nations, industries, and the Ghana Revenue Authority.

Once more, they stated that only one in five individuals in least developed countries (LDCs) utilize the internet, compared to four out of five in developed countries. Osei-Kojo (2016) further reaffirmed that the potential of E-government and its ability to raise money for the public good have the potential to boost these institutions' productivity. F **Owusu**, E Kalipeni, N **Awortwi** (2017), on the other hand, corroborate the claim that the implementation of digital technology policies is accompanied by sizable financial commitments that could be challenging for public institutions in poor nations like Ghana to understand. Therefore, the findings of scholars like Osei-Kojo (2016) were not consistent with those of F **Owusu**, E Kalipeni, N **Awortwi** (2017). In view of the urgent calls for the reduction of public spending and an increment in the revenue mobilization capacity of public institutions, A Ayakwah, IS Damoah, ELC Osabutey (2014), concluded that the notion that digitalization technology in revenue mobilization enhances the revenue capacity of state institutions and their related Ghana Revenue Authority is contentious and needs further investigation.

In most developing countries, most citizens believe that, our delay in development is as a result of the failure of most public institutions to be transparent and accountable for the funds allocated to them Ojeka, S., Adegboye, A., Adegboye, K., Umukoro, O., Dahunsi, O., & Ozordi, E. (2019). In view of these, Ghana has jealously sought transparency in the public sector through the public accounts committee to hold officeholders accountable (Article 165(2) 1992 Constitution of Ghana).

Furthermore, the Vice President of Ghana outlined the difficulties the country encountered in mobilizing domestic resources when he opened a two-day session of the 11 G20-Compact of Africa (CWA, 2018) member-countries. The increasing net of tax

exemptions and the exemption crib, tax competitiveness in the resource taxation, profit shifting and base erosion by corporate tax payers, challenges with tax compliance, and the predominance of hard tax sectors were a few of these. He linked this to the dominance of the informal economy and the absence of digital technologies.

This has a significant implication for the 'Ghana beyond aid agenda'. As a result, he argued that for Ghana to achieve its aim of developing beyond aid, strong performance of domestic revenue is crucial and digitization is a pre-requisite. A new public sector reform strategy (NPPSRS) has been launched. This seeks to digitalize the activities of Ministries, Departments and Agencies (MDAs) as well as (MMDAs) in Ghana by 2023 (Government of Ghana, 2017).

1.2 Statement of Problem

There is empirical and theoretical justification for the necessity of digital technology in revenue mobilization (Nirmala et al, 2020; Daniel Agyapong July 2020). Ghana's government has been implementing a digitization strategy since 2017 in an effort to stop revenue leaks and boost revenue (GNA, 2017). A number of literary works have now arisen as a result of Ghana's digitization goal. However, current scholarship has not yet taken into account Ghana Revenue Authority's (GRA) appreciation of the digitalization program in public institutions in Ghana's Eastern Region. The introduction of digital technology in Ghana necessitates exploratory research to determine Ghana Revenue Authority's (GRA) perceived constraints, challenges, or impediments to the digitization of revenue mobilization in Ghana, aside from the effects on revenue mobilization that are thought to have occurred.

1.3 Research objectives

- i. To examine the extent to which Ghana Revenue Authority (GRA) appreciate digital payments in Ghana.
- ii. To ascertain the key benefits of adopting digital technology in Ghana's revenue mobilization
- iii. To examine possible constraints to, and negative effects of, the adoption of digitalization in Ghana
- iv. To examine possible solutions to the constraints and negative effects of digitalization

1.4 Research questions

The study seeks to answer the following questions.

- i. To what extent does Ghana Revenue Authority (GRA) appreciate digital payment in Ghana?
- ii. What are the key benefits of adopting digitalization in Ghana's tax mobilization?
- iii. What are the possible constraints to, and negative effects of, the adoption of digitalization in Ghana?
- iv. What are the possible solutions to the constraints and negative effects of adopting digitalization in Ghana?

1.5 Significance of the study

We find this study to be critical as it offers policymakers a deeper and better appreciation of Ghana Revenue Authority (GRA) experiences with the digital payment technologies.

The study will be of much importance to Ghanaian citizens who are not very conversant with digital payment technologies to know how they benefit (or otherwise affect) Ghana Revenue Authority in the mobilization of revenue.

The study will also be of great benefit to researchers since it will satisfy their thirst for knowledge by finding answers to the question of how digitalization technology has contributed to revenue mobilization in the opinion of Ghana Revenue Authority (GRA).

1.6 Scope of the study

The study will focus on Ghana Revenue Authority (GRA) in Koforidua.

1.7 Limitations of the Study

Due to the limited period to present our work, we could not cover all the public sector firms in the Eastern Region.

1.8 Organization of the Study

The entire study is divided into five (5) chapters. Chapter one is dedicated to the background to the study, statement of the problem, research objectives, research questions, significance of the study, scope and limitation of the study, and organization of the study. Chapter two is devoted to literature review. Various views from different authors were reviewed as regards to digitalization in Ghana and digitalization in the public sector revenue mobilization and definition of variables. Chapter three

concentrates the methodology of the research. Chapter four focuses on data presentation and results. Chapter five covers the summary of findings, conclusions and recommendations.

CHAPTER TWO

LITERATURE REVIEW

2. Introduction

Today's ideas characterize digitization as an inherent part of the contemporary global economy that significantly advances rational resource management (Antikainen, M., Uusitalo, T., & Kivikytö-Reponen, P. (2018); Ohemeng, F. L., & Ayee, J. R. (2016). Most effective business models (Asamoah, 2019), structural changes Heavin, C., & Power, D. J. (2018), and technological and digital processes become more complex as a result. It also speeds up innovation cycles Bekoe, W., Danquah, M., & Senahey, S. K. (2016). Complicates technological and digital processes, and enhances service supply management Srail, J. S., & Lorentz, H. (2019). Digitalization leads to the internationalization of industries and businesses in the public sector, as well as the creation of production ecosystems across the globe (Alcacer & Cruz-Machado, 2019).

2.1.1 Empirical Reviews on Digitalization of Revenue Mobilization.

Today, a number of ideas characterize digitalization as an essential element of the contemporary global economy that significantly improves resource management ((Antikainen, M., Uusitalo, T., & Kivikytö-Reponen, P. (2018); Ohemeng, F. L., & Ayee, J. R. (2016). In addition to complicating technology and digital processes, speeding up innovation cycles, and enhancing service supply management, it also makes the most efficient business models Heavin, C., & Power, D. J. (2018) more complex (Srail & Lorentz, 2019). The absence of precise word interpretation is one of the main problems with the digital economy, according to Barefoot, Curtis, Jolliff, Nicholson, and Omohundro (2018). It was broadly defined as the diversity of commercial and social activities people engage in using the internet and related

technologies in studies like Dahlman, C., Mealy, S., & Wermelinger, M. (2016). Thus, term "digital economy" refers to the use of cutting-edge technology to the delivery of socioeconomic activities in society. Although the impact of digitization and the digital economy on society was discovered, experts were unable to fully understand what they meant. Numerous academics have examined this issue from diverse angles. In a broader sense, it refers to all economic operations in a modern economy that, in a way, utilize digital data. Over time, this phenomenon, once known as the information economy, changed. The economic performance of the digital economy, resulting from new technology and a business strategy centered on digital goods and services, is applied by Bukht, R., & Heeks, R. (2017). This study defined the "digital economy" as the use of technology and business procedures to the delivery of financial services as well as the creation of new financial goods and services. The nexus of financial development (Schumpeter, 2011) demonstrates the crucial role that finance plays as a driver of economic expansion. In addition, by describing capital along with other factors like labor and technology, the neoclassical theory of growth aids finance in anticipating economic growth. It is characterized as economic activity and business transactions made possible by information and communication technology. The perspective offers a number of business ideas and tactics. Ex-ante and ex-post studies based on regulatory criteria, governance, risk disclosure, and other factors are also being conducted). The company's survival depends on the infrastructure, goods, operations, and procedures developed to deliver the financial service (Mwashuuya, H. T., & Mbamba, U. O. (2020). The distribution of financial services has altered as a result of the development of technology and the digital revolution Nair, M., Kuppusamy, K., & Davison, R. (2005); Ball, L. (2014). Financial services are digitized in the digital economy and operated Therefore, managers' main objective will be to specify the methods and strategies that

will be employed to lessen and minimize these risks in particular circumstances. Operational risk is important among those threats.

The company will need to hire more employees as a result of employing the usual approach, which will raise the cost of staff. One of the major expenses for financial organizations is personnel expenditures (Jenkins, P., & Mathurin, P. (2012). High staffing expenses are listed by Adjei-Frimpong, K., Gan, C., & Hu, B. (2014) as one of the issues facing Ghanaian banks. Financial institutions now use services and initiatives to cut staffing costs. It brings up the human factor, which occasionally seems to slow down or even obstruct the delivery of a trustworthy financial service. Since their introduction more than three decades ago, ATMs have completely changed the way financial services are delivered in Ghana. Since ATMs were introduced, banking hours and customer access to their deposits have gradually improved. The rise in popularity of these programs suggests that their intended goal was to decrease the usage of checkable accounts. This hasn't always been the case. Financial networks like MOMO, according to studies (Aker, J. C., & Wilson, K. (2013); Must & Ludewig 2010; Kang & Bae 2019), are assisting in extending access to financial services. Digitalization, apps, and mobile phones are effective means to mobilize savings due to the concentration of financial services firms in metropolitan regions. Due to how swiftly services are delivered, technology-driven networks and the internet are being employed more and more by financial service providers. Online and mobile banking, for instance, provides services more quickly than traditional banking because there are no human interactions required. Requesting checks, viewing mini bank statements, sending money, checking balances, and stopping payments. 9.4 million Cards were reportedly issued by Ghanaian banks in 2016, according to the Bank of Ghana (2016). This led to a total volume of 54.3 million transactions worth 14.2 billion in Ghana. Others come in the form of cards that may be used domestically, internationally, or both. However, the

majority of the cards that are used both locally and internationally are provided by foreign organizations (e.g. Visa, MasterCard, etc.). Some of the domestic cards are E-ZWICH and several debit cards utilized on the Ghana Link (Gh-Link) network. In order to connect financial institutions and share their ATMs and terminal points of sale, the Gh-Link platform was created in 2012. The Gh-Link aims to further the nation's ambition of establishing a cashless society. Still, there are.

The incorporation of these many channels is essential for the smooth functioning of digital financial transactions by all market participants. The development of new technologies and methods, as well as the expansion of the digital economy, have encouraged financial innovation. Currently, each of the 23 banks in the country provides at least one innovative service. These goods are either web-based or mobile. Additional financial institutions are adopting online-focused practices, products, or both, much like rural banks, mortgage firms, savings and loan associations, and MFIs. Credit cards, debit cards, electronic wallets, mobile money, and other items and processes are examples of such advancements (ATMs, online banking, mobile banking, e-payments, etc.). One of the nation's financial organizations is the Diaspora Current Account for Ghanaians residing abroad.

The internet economy has made financial institutions more accessible to both domestic and international financial service providers. Digital banking, for instance, makes it possible to maintain and operate checkable accounts internationally. These services are being offered by the nation's foreign financial institutions, which has increased competition on the market. While physical entry obstacles exist for foreign institutions, the use of digital technology to provide virtual financial services has increased bank competition in the nation. Due to the variety of customer service options available as a result of this rivalry, customer service quality is improved. However, this has a negative

impact on domestic banks because they lack the funding to purchase the necessary technology to offer digital financial services.

The administration of virtual financial institutions is the next significant issue, especially in light of unfair competition and unethical banking activities. There is also the complexity of Ghana's digital economy. Lax regulation of the digital economy may lead to the growth of an underground digital economy. In the current environment, there is a lot of potential for criminality, claim Grabosky, P., Smith, R. G., Smith, R. G., & Dempsey, G. (2001). . In the middle to late 2000s, financial fraud and cybercrime in Ghana and other West African countries attracted national, international, and global attention. Due to the actions of online financial transaction fraudsters, Ghana was ranked in 2008 as one of the top 10 nations for cybercrime.

Insufficient internal controls and the lack of a digital finance plan led to a number of mobile money fraud incidents, according to Akomea-Frimpong, I., Andoh, C., Akomea-Frimpong, A., & Dwomoh-Okudzeto, Y. (2019). In a financial institution notification published in 2018, the Bank of Ghana informed the public that there are no laws governing digital money. Additionally, the digitization of financial services makes anti-money laundering, Ponzi schemes, and fraudulent investing easier. The Internet was utilized to boost businesses and fraudulent financial games and pyramid schemes. Internet criminals frequently use new digital currency technologies as early adopters, especially when these products' features have the potential to let them evade the law Fanusie, Y., & Robinson, T. (2018).

2.1.2 Digitalization Implementation in Ghana

The adoption of a digital technology strategy typically "Hand in hand with the introduction and implementation of digitalization and the use of digital technology to provide new value creating and revenue mobilization technology" Parida, V., Sjödin,

D., & Reim, W. (2019). (Parida, V., Sjödin, D. R., Lenka, S., & Wincent, J. (2015). This pattern is captured in the newly published literature on digitalization technology Hofmann, E., Sternberg, H., Chen, H., Pflaum, A., & Prockl, G. (2019). Digitalization is both a product and a facilitator for effective revenue mobilization, and it may allow for new types of innovation and business models in public sector enterprises Sjödin, D. R., Parida, V., & Kohtamäki, M. (2016). As an example, the current state of digitization is enabling companies, like Ghana Post, to shift from product-centric models to digital service-oriented solutions with enhanced potential for value creation (Adrodegari, F., & Saccani, N. (2017). Digitalization, which also modifies consumer value propositions, alters a corporation's or industry's capacity to create and capture value through collaboration with customers to meet their demands (Lenka, S., Parida, V., & Wincent, J. (2017)

Public product providers frequently use digital technology to differentiate themselves from local and international competitors and become more distinctive Opresnik, D., & Taisch, M. (2015). Additionally, they look for new income opportunities that will boost the integration of data analytics, connectivity, and synchronized products, services, and other services. With these advantages of digitization, enterprises and the general public can now more easily incorporate digital technology into their policy frameworks. Despite the fact that research on digitalization has been extensively explored, it appears that developed economies are dominant since there is literature evaluating sociocultural settings and their influence on the adoption of digital technology-led policies.

2.2.3 Digitization Global Perspective from Advance Economies

Due to digitalization, modern industry is becoming increasingly customized in the majority of countries. As a result, each client's product creation is unique (Paritala, P. K., Yarlagadda, T., Ramakrishna, S., & Yarlagadda, P. (2017). Visualization,

production modeling, ergonomics, human factor analysis, a thorough approach to the design of the product and service process, as well as product services that are aware of the capabilities and constraints of the process, are all part of production. Modern manufacturing is impossible without data analysis, network systems, artificial intelligence, the Internet of Things (IoT), the global digitalization of business operations, and its features (for example, chemical processing in China) (Kockmann, N. (2019). Due to the growth of solar energy, a typical analogue electrical network in the United States was transformed into a digital operating system TAŞALTIN, N. (2019). These demonstrate that the majority of countries have made the decision to digitize the majority of their economies. The US, the UK, and Luxembourg Comparatively to underdeveloped countries, China and many other countries have made considerable advancements in digital technology. China and the United States are responsible for more than 70% of the stabilization of the global economy, according to the Jiang, H., & Murmann, J. P. (2022). This is because these two countries have made greater investments to make sure that more than 90% of their public institutions accept payments other than cash. They claim that these have assisted them in managing and mobilizing public funds.

2.2.4 Digitization in Developing Countries

In recent years, the majority of developing countries, including Argentina, India, Brazil, South Africa, Nigeria, and Ghana, have begun to see the benefits of implementing digital payment technologies. The "digital agenda" in Argentina, which would leverage digital technology and data, is a set of recommendations made by Argentina after it joined the OECD in 2015. They started off with the purchasing process. These investigations demonstrated that local government officials' attempts to increase revenue have become targets of criticism due to India's digitization. Additionally,

digitalization has the potential to increase public accountability and transparency. The government is typically the biggest employer in underdeveloped countries.

2.2.5 Sociocultural Environment and Digitalization

In many lower middle-income countries, including Ghana, the sociocultural backdrop and urban planning create considerable challenges that have serious negative effects on digitalization and e-learning. The Ghanaian Ministry of Education founded the Center for National Distance Learning and Open Schooling (CENDLOS) with the main objective of ensuring that Ghanaian students have access to a very sound environment, wherever they may be. The whole school system in Ghana participated in this program. But it doesn't seem like enough thought was put into how our surroundings may embrace the numerous digital tools to ensure that students have a positive learning environment (E-Learning Africa report, 2013). In reality, the findings have been validated by the coronavirus epidemic (COVID-19), particularly in light of the challenges most students face when using e-learning in some areas. Compliance with building regulations is one of the nation's ongoing structural issues, which can occasionally result in significant flooding during severe weather and rainy conditions. Reportedly, delivering effective and efficient quality social services depends on having an urban planning framework that is consistently followed, especially in emergency situations. According to the report, effective sociocultural planning has broad implications, including advantages from correct land management, greater economic potential, compliance with tax laws, effective services, etc. These will improve how effectively and appropriately the approach is implemented.

2.3 The Digital Process Simplicity and Preciseness

The procedure starts when the Ghana Revenue Authority and beneficiaries encounter obstacles when attempting to use public services when they are in need of assistance.

Institutions like the Port started the process of rectifying these issues by enabling importers to obtain and complete IDFs (Import Declaration Forms) by submitting supplier invoices online using the GCNET system. The Pre-Arrival Assessment Reporting (PAAR) system at Customs receives the IDF form together with the completed paperwork electronically. The accuracy and completeness of the documents are examined, confirmed, and approved. If all documents are compliant and accepted, the transaction is forwarded to the next phase of valuation and classification. Otherwise, it is referred or rejected. Customs through PAAR submits a summary of documents online to the importer for “validation” or “declaration”, highlighting the data anomalies. Before resubmitting the revised document to Customs via PAAR, the importer analyzes the papers and data elements and makes any necessary corrections. Benefits of post-digitalization include improved efficiency, service quality, transparency, and uniformity as well as more precise and extensive tax and tariff mobilization. The incidence of corruption has decreased, as has the demand for physical inspection. All manual stages have been removed from the Paperless System, improving accuracy. (GPHA Report, 2017; Ghana Port & Harbours Authority)

2.4 Effectiveness and Productivity Increase in Digitalization

The government's efficacy and efficiency in providing public services should rise as a result of digitization (Denhardt, J. V., & Denhardt, R. B. (2015). Most experts agree that incorporating digital technology into government processes has the potential to boost public institutions' capacity to raise funds by improving the efficiency with which they provide services to the general public. The majority of academics promise collaboration and increased productivity from government institutions. Organizations are better equipped to meet customer demand for services while earning more money when they are more productive when providing public services. Additionally, several

studies show how the use of digitalization by the government is expanding in underdeveloped economic areas. Modern digitalization has considerably enhanced productivity, efficiency improvements, and capacity growth through its core components (Ohemeng & Oforu Dankwah 2014). The improvement of business models to facilitate product delivery has been a significant issue for digitalization. The potential for efficiency in the accounting and management processes in many firms increases when proper digital processes are not followed, which makes the entire digitalization process challenging and accelerated (Bekoe, Danquah & Senahey, 2016). 2019 (Srai & Lorentz). If its setups are properly managed, digitalization promotes economic growth that lasts (Neubert, 2018) and builds strong ecosystems around the world (Alcacer & Cruz-Machado, 2018).

2.5 Digitalization's effects on Accountability and Transparency

The use of digital technology for service delivery and the involvement of digitalization in the public sector have the potential to create new norms for accountability and transparency in tax collecting Forkuor, D., & Adjei, P. O. W. (2016). There may be more openness in these procedures if these public organizations' digital efforts can provide suitable services to their customers (Lenka, S., Parida, V., & Wincent, J. (2017). The recently published research on digital technology identifies a trend where methods might be specified (Holmström, J., & Partanen, J. (2014); Vendrell-Herrero, F., Bustinza, O. F., Parry, G., & Georgantzis, N. (2017). Digitalization is both a driver and an enabler of Transparency in revenue mobilization for most public institutions to provide Accountability in efficient and effective service delivery to their customers and stakeholders. It may also enable new forms of innovation and business models in public sector firms. For instance, in Ghana's different ports, digitalization is helping businesses transition from product-centric models to digital service-oriented offerings with strong

value-generating potentials (Ardolino, M., Rapaccini, M., Saccani, N., Gaiardelli, P., Crespi, G., & Ruggeri, C. (2018); Adrodegari, F., & Saccani, N. (2017)). Through its processes and capabilities, digitalization also impacts how people view customer service. A corporation may fulfill its customers' changing needs by building and gaining value from solid customer relationships (Lenka, Parida & Wincent, 2017). In industrial ecosystems that adhere to the logic of digital sterilization, the proliferation of digital technology has made it possible for drastic changes to be made to goods, services, innovation processes, business models, and even the fundamental nature of corporate activity (Sklyar, A., Kowalkowski, C., Tronvoll, B., & Sörhammar, D. (2019); Sjödin, D., Parida, V., Kohtamäki, M., & Wincent, J. (2020). Based on the aforementioned, we define "digitalization" as the gradual creation, delivery, and capture of higher service value resulting from a wide range of enabling digital technologies within industrial businesses and their associated eco-systems.

Most often, product and service providers employ digital technology strategies to set themselves apart from rivals in the market Opresnik, D., & Taisch, M. (2015) and to embrace innovative methods of revenue mobilization as a result of working with their clients and other Ghana Revenue Authority members. The method of offering more synchronized goods and services, connection, and data analysis into product-service models using digital technology all increase the likelihood of growing income streams (Luz Martín-Peña, M., Díaz-Garrido, E., & Sánchez-López, J. M. (2018); Schroeder, A., Ziaee Bigdeli, A., Galera Zarco, C., & Baines, T. (2019).

2.6 Digitalization and its Effect on Corruption Reduction

Digitalization makes it possible to combat corruption more effectively. According to a number of studies, digitization can improve corruption detection, reporting, and prosecution (IMF 2018), particularly by promoting accountability, transparency, and

citizen participation. In this context, Kenya, Tanzania, and Senegal have recently embraced digital tax administration systems that decrease bureaucracy and aid in the fight against tax official corruption by lowering bribery chances. In addition to improving citizen-government relations, digitalization can also strengthen public faith in elected authorities. By lowering search costs and moral hazard, digitalization can aid in the cost-effective dissemination of information. The use of digital technology by the general public, such as e-participation, encourages more public participation in decision-making, policy-making, problem-solving, and program creation. This improves the level of service, promotes transparency, and aids in boosting public confidence in the government, which raises the credibility and transparency of the policy-making process in favor of citizen engagement (OECD 2018). According to empirical studies, adoption of digital technology is associated with decreased perceptions of corruption and increased confidence among tax officials. The study examines the impact of multi-indicator digitalization, including the World Bank's Digital Adoption Index, the Open Budget Index, and the United Nations' E-Government Index on corruption. The study uses individual-level data (covering 23,000 individuals and 26 countries in sub-Saharan Africa) from the sixth wave of African barometer surveys.

2.6.1 Process Reengineering and Digitalization to Curb Corruption

The overall definition of reengineering as it relates to business processes is "the fundamental rethinking and revolutionary redesign of business processes to accomplish substantial changes in important, modern performance measures such as cost, efficiency, service, and speed" Caeldries, F. (1994). Reengineering business processes, in addition to digitization, typically aims to streamline ineffective operational procedures to increase performance and efficiency (Kamal, M., Weerakkody, V., &

Irani, Z. (2011). Such simplification might involve automating updated processes, eliminating superfluous steps, and removing players from particular phases of a process

Thong, J. Y., Yap, C. S., & Seah, K. L. (2000). Restructuring business requirements typically aims to standardize ineffective operational procedures to increase performance and productivity in addition to digitization (Kamal, M., Weerakkody, V., & Irani, Z. (2011). This streamlining may involve automating updated processes, eliminating steps that are unnecessary, and removing actors from particular phases of a process

Thong, J. Y., Yap, C. S., & Seah, K. L. (2000). Reengineering corporate processes will result in successful administrative procedures, transparency, and increased responsibility, in addition to the generation of tangible value (Kamal, M., Weerakkody, V., & Irani, Z. (2011). Through the elimination of "red tape" and associated incentives for corruption, the disintermediation of potentially corrupt actors, or the restriction of their unrestrained power and flexibility through increased monitoring, these interventions are expected to collectively undermine the stable socio-technical structure of corruption in dysfunctional work processes

Addo, P. M., Guegan, D., & Hassani, B. (2018). Process reengineering and digitalization may also have the capacity to demolish the corruption ecosystem that feeds on and sustains inefficient and ineffective informal administration systems by increasing overall productivity in a dysfunctional and inefficient work system

Syed, R., & Bandara, W. (2019). Process reengineering and digitization programs rarely meet expectations in underdeveloped nations, despite their tremendous promise (Masiero, S., & Prakash, A. (2015). Although reformers may give these policies lip respect, they are frequently opposed or actively thwarted by sizable portions of the bureaucracy who see their interests as in jeopardy. However, the dynamics of such opposition to and undermining of reengineering and digitalization in the case of corruption in developing countries are poorly understood, in large part because corruption exists in secret (outside of

structured organizational channels and spaces) and inside complex transaction networks that are challenging to track.

2.7 Ghana Revenue Authority appreciation of Digital Payments in Ghana.

Many different forms of revenue can be mobilized. Ghana has developed a few tactics as a developing nation to help with the goal of revenue mobilization plan. Express pay, Slyde pay, Mobile Money, E-ZWICH, Hubtel, MayGh pay, GT Pay, Inter Pay, PayPal, Visa, MasterCard, and iPay are examples of online payment methods. All of these platforms assist Ghana Revenue Authority customers who use their services in paying their utility bills, levies, taxes, and other kinds of payment.

2.7.1 Digitalization in the Port and harbour system in Ghana

Digitalization, as it relates to the Ghana Ports and Harbor, is converting manual payments, bureaucratic procedures, and paper-based procedures into digital platforms, including payments Janssen, M., & Estevez, E. (2013). The advantages of digitizing administrative processes include shorter document processing times, faster information update, less errors caused by single data entry, lower document transfer costs, and higher information accuracy Carlan, V., Sys, C., & Vanelslander, T. (2016). Many nations have taken advantage of the chance to make digital technology available in order to improve productivity and connect activities of people, businesses, public agencies, and non-governmental organizations as well (Amankwah-Sarfo, F. (2019) June. These Ghana Revenue Authority actively coordinate Heilig, L., Schwarze, S., & Voß, S. (2017) and comply with legal procedures and information flows for cargo clearance (Amankwah-Sarfo, F. (2019) June; Sys, C., Vanelslander, T., & Carlan, V. (2015). In addition, (Amankwah-Sarfo, F., Effah, J., & Boateng, R. (2018) also argued that, the socioeconomic impact in the port have not be looking at critically considering the fact why corruption and inefficiency still exists in our ports in Ghana.

In December 2018, the National Health Insurance Scheme (NHIS) implemented a number of cutting-edge digital strategies to assist customers in renewing and paying their premiums utilizing digital models. Through the use of the digital banking system, the new strategy enables members to renew their membership on any mobile money technology. Through this program, the NHIS is attempting to digitize enrollment and renewal. By using this digital method, members can be reminded when it's time to renew their membership. Despite claims to the contrary, some citizens of underserved communities may not believe that the new digital technologies are accessible to them under the current payment system because of inconsistencies in their sociocultural environment

2.7.2 Digital Payment for National Health Insurance

In December 2018, the National Health Insurance Scheme (NHIS) implemented a number of cutting-edge digital strategies to assist customers in renewing and paying their premiums utilizing digital models. Through the use of the digital banking system, the new strategy enables members to renew their membership on any mobile money technology. Through this program, the NHIS is attempting to digitize enrollment and renewal. By using this digital method, members can be reminded when it's time to renew their membership. Despite claims to the contrary, some citizens of underserved communities may not believe that the new digital technologies are accessible to them under the current payment system because of inconsistencies in their sociocultural environment. The use of digital technology in Ghana's health sector has also shown to boost data security and financial transparency (Preko & Boateng 2020). The mobile phone payment system (MPPS) was created to assist customers who experience difficulties getting health insurance and paying for it, as well as difficulties with transportation and the associated costs and lengthy wait times at NHIS offices.

Incorporating digital technology into the healthcare industry was intended to lessen these challenges and increase program enrollment retention regardless of time or location.

2.7.3 Payment of Utility Bills in Ghana.

Another important factor in facilitating effective and sufficient payment in less developed countries is the adoption of digital financial services (DFS) and financial inclusions (LDCs). Institutions in Ghana, including as the Ghana Health Service, the DVLA, the Ghana Revenue Authority, Passport, Ghana ports, and harbors, are now implementing these DFS in their service delivery. It is observed that this system's intervention will increase its enormous productivity index (Agyekum, F., Locke, S., & Hewa-Wellalage, N. (2016). One of the best attempts to ensure reliable bill payment regardless of location and time is the usage of mobile payment for utility bills in Ghana. The usage of the DFS is playing a crucial role in current data analysis on the road plan for the use of E-payment for bills in Ghana, taking into account the reduction in the time of service and duration of service.

The adoption and implementation of an electronic water payment (EWP) system, particularly in Tema, have had a significant impact on the Greater Accra region, according to (Amankwaa, G., Asaaga, F. A., Fischer, C., & Awotwe, P. (2020). Using the information they have on the utility payments made by their customers, the data was analyzed over the course of a year to evaluate the usage of utilities by utility consumers during these times. For instance, the electronic water payment (EWP) system was developed to monitor the payment of water bills and was tested in Tema, Ghana Despite the system's apparent effectiveness, some users were having a tough time evaluating it (Awotwe, 2020). If it is easier for consumers to pay their bills independent of their

social surroundings, the government can influence and positively enhance the behavior of utility bill payment.

2.8 Efficiency Drive from Digital Infrastructure

Effective evaluation of digital infrastructure, according to (Bibi & Boateng, 2019), can help accomplish impartial analysis through interactions and interest groups with the Ghana Revenue Authority as well as how they explain. The case study further demonstrates that meeting staff expectations is sufficient justification for declaring the adoption of digital infrastructure successful. Gebre-Mariam, M., & Bygstad, B. (2019). To put it another way, digital infrastructure provides a strong framework for envisioning the growing methods that will connect the information systems collectively, which are present in most companies. However, there hasn't been much focus on how to create digital infrastructure generation mechanisms, which are the incidental forces that explain how and why such infrastructure changes over time Queiroz, M., Tallon, P., Coltman, T., & Sharma, R. (2020, January).

2.8.1 Efficiency as a Benefit of Adopting Digitization Policy.

Consumers of service may find it more convenient to use digital technology in transactions, especially when they have a larger cash payment to make. By ensuring that money is sent directly into the accounts of the various institutions rather than to revenue collectors in person, cashless transactions would ensure that there are less opportunities for revenue collectors to pilfer money (Mensah, 2016). If careful consideration is given to our socio-cultural milieu when evaluating the process, digitalization also eliminates superfluous procedures and documents that are present in the manual setting. One of the most important steps in preventing corrupt behavior is transparency. Transparency makes guarantee that dishonest public servants may be quickly found out and held accountable for their conduct. Additionally, it is thought

that implementing transparency in public institutions will lessen the incentive for public employees to engage in corruption. One of the biggest problems facing Ghana's public sector is corruption. Digital technology were used in revenue mobilization at our governmental institutions as a result of the fight against corruption. An effective strategy to combat the problem of corruption and bribery in Ghana was predicted to be the employment of digital technology in revenue mobilization

2.8.2 The Impact of Digitalization on Efficiency Economic Performance

On the other hand, digitalization has the potential to boost growth, employment, and productivity. Major digital systems promote production specialization and scale economics, both of which can boost growth and productivity. In other words, digitization has increased resilience by enabling businesses and employees to continue running some operations despite the COVID-19 epidemic. Connections between digital systems can help structural change by spreading knowledge and fostering progress. For instance, the article on digitalization that aims to grow Africa through IT innovation and business people. The UN's Electronic Government Development Index (EGDI) composite index includes the OSI. The OSI concentrate on an experience review of each nation's website, including the portal for electronic services and participation as well as the websites of relevant ministries, such as those for education, health, and finance (UN 2019).

2.8.3 Challenges of Digitization in Developing Countries.

Virtually all of the SDGs will be impacted by digitalization and its technical advancements, which will also have an impact on all nations. In terms of countries' levels of digitalization, the developed and less developed worlds have recently been

separated by a wide divide. For example, due to their effects on the socio-cultural milieu, less than one in five individuals in least developed or developing countries (LDCs) utilize the Internet, compared to more than four out of five in developed countries. This is only a small portion of the digital divide. The difference is extremely wide in other areas, such as the ability to use digital data and frontier technologies. Together, Africa and Latin America account for fewer than 5% of all colocation data centers worldwide. If ignored, these gaps will widen already existing income disparities. Therefore, it is crucial to think about how more participation in value creation and capture may influence developing countries and what can be done to reduce inequality. The conventional North-South divide is not evident in the economic geography of the digital economy. One developed and one developing nation alternately lead it. For instance, these two nations account for more than 75% of the global market share for public cloud computing, 50% of all information technology spending worldwide, and 75% of all patents relating to block chain technologies. And probably most notably, they represent 90% of the market capitalization value of the 70 biggest digital platforms in the globe. In terms of many digital technical advancements, the rest of the world—particularly Africa and Latin America—lags far behind China and the United States. (Commission Economica de Latinoamérica y el Caribe) (ECLAC report 2020)

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

This chapter focuses on the procedures which the researchers used to arrive at their findings conclusions and recommendations. These include, research design, population of the study, Sample and sampling techniques, data collection method, methods used for analysis of data.

3.1 Research design

This study adopted descriptive research design. A research design is the strategy for the study and the plan by which the strategy will be carried out. This study is concerned with the effect of digitalization on revenue mobilization in public sectors, case study of Ghana Revenue Authority (GRA). The plan adopted by the researchers was to obtain answers to research questions formulated. Questionnaire was the main instrument used to collect data. The use of questionnaire was employed to collect data from GRA in Koforidua. This method is quicker in collecting data from a number of people at the same time.

3.2 Population of the study

The population of the study was made up Ghana Revenue Authority (GRA) staff in Koforidua, Eastern region.

3.3 Sample size and sampling procedure

For the purpose of the study a sample size of twenty (20) was used. The twenty (20) made up of managements of Ghana Revenue Authority (GRA). There are various ways

of selecting a sample but for the purpose of the study, the convenience sampling was purposive sampling technique.

3.4 Data collection method

The researchers used both primary and secondary sources of information. The main information was gathered by a field survey that used a questionnaire. The researchers were able to contact the anticipated number of participants by using the questionnaire. Both open-ended and closed-ended questions were included in the questionnaire. Second, journals and books were used to gather data. The secondary data were largely provided on the internet.

3.5 Data analysis approach

Mugenda and Mugenda (2003) claim that raw data collected from the field is difficult to comprehend and must first be cleaned, processed, and examined. Analyses both qualitative and quantitative were used. To aid in the summarization and organizing of the data, qualitative data was categorized into meaningful patterns. Quantitative research.

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS AND DISCUSSIONS

4.0 Introduction

The chapter four of this study focuses on analyzing the effects of digitalization on revenue mobilization with particular reference to Ghana revenue authority (GRA). The questionnaires were used as the main research instrument and in total, Twenty (20) questionnaires were administered to Ghana Revenue Authority (GRA). The presentations are in the form of tables, frequency count and percentages to enrich readers and other researchers understanding in descriptive analysis. Details of the findings are shown below.

The presentation is in accordance with the objectives of the study and the research questions.

4.1 Response Rate

Table 4.1 Response Rate

	Frequency	Response rate (%)
Responded	20	100
Total	20	100

Source: Field survey, 2022

The researcher distributed a total of 20 questionnaires to Revenue Authority (GRA) in Koforidua. This therefore gave the study a response rate of 100%.

4.2 General information about respondents

The section represent below represents the general information of the respondents.

4.2.1 Gender

Table 4.2: Gender

	Frequency	Response rate (%)
Male	12	60
Female	8	40
Total	20	100

Source: Field survey, 2022

The section represent below represents the general information of the respondents

4.2.2 Age range

Table 4.3 Age Range

Years	Frequency	Response rate (%)
20 – 25	3	15
26 – 30	3	15
31 – 35	7	35
36 – 40	4	20
40 above	3	15
Total	20	100

Source: Field survey, 2022

The researcher wanted to find out the age limit of respondents. According to the findings as displayed in the table above, majority of the respondents are in age range of 31 - 35 which shows a percentage of 35. The next is the age range from 36 – 40 also shows 20% and between 20-25, 26-30 and 40 above also shows 15% respectively.

4.2.3 Marital status of respondents

Table 4.4 Marital Status of Respondents

	Frequency	Response rate (%)
Single	5	25
Marriage	15	75
Divorced	0	0
Widow	0	0
Total	20	100

Source: Field survey, 2022

The researcher wanted to find out the marital status of respondents. According to the findings as displayed in the table above, majority of the respondents are married and only few are single.

4.2.4 Academic Qualification of Respondents

Table 4.5 Academic Qualification of Respondents

	Frequency	Response rate (%)
Degree	12	60
Professional qualification	1	5
Diploma	5	25
Certificate	2	10
None	0	0
Total	20	100

Source: Field survey, 2022

The researcher wanted to find out the academic qualification of respondents. According to the findings as displayed in the table above, majority of the respondents are hold a degree certificate and this represent 60% response rate, 5% holds diploma, 5% holds a

professional certificate and 10% also holds ordinary certificate. This analysis show that all the respondents are educated.

4.2.5 Range of working at the GRA

Table 4.6 Range of Working Experience at the GRA

	Frequency	Response rate (%)
Less than a year	0	0
1 – 3 years	2	10
3 – 5 years	5	25
5 – 10 years	10	50
Over 10 years	3	15
Total	2	100

Source: Field survey, 2022

The researcher wanted to find out the range which respondents has worked at the GRA. According to the findings as displayed in the table above, 50% of the respondents falls in the range of 5 -10 years and 25% also falls in the range of 3 – 5 years. 15% of the respondents falls in the range of 10 years over

4.3 Objective One: GRA’s appreciation to digitalization payment

Table 4.7: GRA’s Appreciation to Digitalization Payment

Scale	Frequency	Response rate (%)
Very often	10	50
Often	8	40
Not often	2	10
Total	20	100

Source: Field survey, 2022

The researcher wanted to find out how often does Ghana Revenue Authority (GRA) use digitalized payment methods. According to the findings as displayed in the table

above shows majority of the respondents chose very often meaning that GRA normally uses the payment method. 40% of the respondents also chose often while 10% chose not often.

Table 4.8 How well Digital Payment has Helped the Ghana Revenue Authority

Scale	Frequency	Response rate (%)
Very helpful	10	50
Helpful	8	40
Average	2	10
Not helpful	0	0
Total	20	100

Source: Field survey, 2022

The researcher wanted to find out how well digital payment has helped the Ghana revenue authority. According to the findings as displayed in the table above shows majority of the respondents chose very helpful meaning that digital payment system is very helpful to GRA. 40% of the respondents also chose helpful while 10% chose not often.

Table 4.9 How Long Ghana Revenue Authority Have Been Using Digital Payment Methods.

	Frequency	Response rate (%)
Less than a year	0	0
1 – 3 years	2	10
3 – 5 years	6	30
5 – 10 years	11	55
Over 10 years	1	5
Total	20	100

Source: Field survey, 2022

The researcher wanted to find out how long Ghana revenue authority have been using digital payment methods. According to the findings as displayed in the table above, 55% of the respondents falls in the range of 5 -10 years and 30% also falls in the range

Table 4.10 Ghana Revenue Authority (GRA) Have Sufficient Knowledge In Digitalization Payment Process.

Scale	Frequency	Response rate (%)
Strongly agree	2	10
Agree	8	40
Not sure	6	30
Disagree	3	15
Strongly disagree	1	5
Total	20	100

Source: Field survey, 2022

The researcher wanted to find out the understanding of Ghana Revenue Authority (GRA) in digitalization payment process Ghana. According to the findings as displayed in the table above shows majority of the respondents agree that that Ghana Revenue Authority (GRA) agree to have in depth knowledge in the digitalization payment process which shows a respondent rate of 40%. 30% also selected not sure. This means that some Ghana Revenue Authority (GRA) are not sure about their understanding in the digitalization payment process. 10% of the respondents also strongly agree to have in-depth knowledge of the digitalization payment process while 5% strongly disagree.

4.4 Objective Two: Benefits of adopting digitalization in revenue mobilization

Table 4.11 Digitalization of Tax Revenue Makes Life Easy For Authorities

Scale	Frequency	Response rate (%)
Strongly agree	5	25
Agree	10	50
Not sure	3	15
Disagree	2	10
Strongly disagree	0	0
Total	20	100

Source: Field survey, 2022

In this table, the researcher wanted to find out how digitalization has make life easy for authorities by easing administrative burden, which gives officials more time to focus on higher-valued activities. According to the findings as displayed in the table above shows majority of the respondents agree that digitalization makes life easier by easing administrative burden on authorities. This shows 50% respondents rate. 25% also strongly agree, 15% of the respondents are not sure and 10%

Table 4.12 The use of Electronic Payment Systems has Reduced the Level of Corruption

Scale	Frequency	Response rate (%)
Strongly agree	4	20
Agree	13	65
Not sure	2	10
Disagree	1	5
Strongly disagree	0	0
Total	20	100

Source: Field survey, 2022

The researcher wanted to find out whether the use of electronic payment systems has reduced the level of corruption. The findings as displayed in the table above shows

majority of the respondents agree that digitalization has reduce the level of corruption with 65% respondent's rate. 20% also strongly agree

Table 4.13 Digitalization has Increased Government Revenue

Scale	Frequency	Response rate (%)
Strongly agree	2	10
Agree	7	35
Not sure	9	45
Disagree	2	10
Strongly disagree	0	0
Total	20	100

Source: Field survey, 2022

In this table, the researcher wanted to find out whether digitalization has increase government revenue which has helped the government to provide a wide range of public goods and services. According to the findings as displayed in the table above shows majority of the respondents are not sure that digitalization has increased government revenue with 45% respondent's rate. 35% respondents also agree, 10% of the respondent's rate strongly agree but 10% also disagree.

Table 4.14 Digitalization has Increase Responsiveness and Improved Customer Engagement

Scale	Frequency	Response rate (%)
Strongly agree	1	5
Agree	7	35
Not sure	9	45
Disagree	2	10
Strongly disagree	1	5
Total	20	100

Source: Field survey, 2022

In this table, the researcher wanted to find out whether digitalization has increase responsiveness and improved customer engagement. According to the findings as

displayed in the table above shows 45% of the respondents are not sure that digitalization has increase responsiveness and improved customer engagement. 35% respondents agree, 10% of the respondent’s rate disagree, 5% strongly agree and 5% also strongly disagree.

4.5 Objective Three: Possible constraints to, and negative effects of, the adoption of digitalization in Ghana

Table 4.15 Ghana Revenue Authority (GRA) Need a High Level of Expertise to Use the Tax Payment Systems

Scale	Frequency	Response rate (%)
Strongly agree	6	30
Agree	9	45
Not sure	3	15
Disagree	2	10
Strongly disagree	0	0
Total	20	100

Source: Field survey, 2022

The researcher wanted to find out whether Ghana Revenue Authority (GRA) need a high level of expertise to use the tax payment systems. The findings as displayed in the table above shows majority of the respondents agree that Ghana Revenue Authority (GRA) need a high level of expertise to use the tax payment systems with 45% respondent’s rate. 30% strongly agree, 15% are not sure and 10% of the respondents are disagree that Ghana Revenue Authority (GRA) need a high level of expertise to use the tax payment systems.

Table 4.16 High Cost for Government to Design Software to Support the Digitalization Initiatives

Scale	Frequency	Response rate (%)
Strongly agree	3	15
Agree	10	50
Not sure	3	15
Disagree	3	15
Strongly disagree	1	5
Total	20	100

Source: Field survey, 2022

The researcher wanted to find out whether there is high cost for government to design software to support the digitalization initiative. The findings as displayed in the table above shows majority of the respondents agree that there is high cost for government to design software to support the digitalization initiatives with 50% respondent's rate. 15% strongly agree, 15% are not sure, 15% of the respondents are disagree and 5% strongly disagree.

Table 4.17 Ghana Revenue Authority (GRA) Needs ICT Knowledge to Use the Electronic Tax Payment System

Scale	Frequency	Response rate (%)
Strongly agree	5	25
Agree	9	45
Not sure	4	20
Disagree	1	5
Strongly disagree	1	5
Total	20	100

Source: Field survey, 2022

The researcher wanted to find out whether Ghana Revenue Authority (GRA) needs ICT knowledge to use the electronic tax payment system. The findings as displayed in the table above shows majority of the respondents agree that Ghana Revenue Authority

(GRA) needs ICT knowledge to use the electronic tax payment system and this represent 45% respondent's rate. Respondents representing 25% strongly agree, 20% are also not sure and 5% each of respondents chose disagree and strongly disagree respectively.

Table 4.18 High Cost on Government to Embark on Public Education

Scale	Frequency	Response rate (%)
Strongly agree	1	5
Agree	10	50
Not sure	5	25
Disagree	4	20
Strongly disagree	0	0
Total	20	100

Source: Field survey, 2022

The researcher wanted to find out whether there is high cost for government to embark on public education to educate the people on the essence and processes of using the new software to make payment. The findings as displayed in the table above shows that 50% of the respondents agree that there is high cost on government to embark on public education. Respondents representing 25% are not sure, 20.

Table 4.19 Digitalization Project Takes Time Since It Has To Pass Through

Different Authorization Process Before It Is Implemented

Scale	Frequency	Response rate (%)
Strongly agree	7	35
Agree	9	45
Not sure	4	20
Disagree	0	0
Strongly disagree	0	0
Total	20	100

Source: Field survey, 2022

The researcher wanted to find out whether digitalization project takes time since it has to pass through different authorization process before it is implemented. The findings as displayed in digitalization project takes time since it has to pass through different authorization process before it is implemented. Respondents representing 35% strongly agree and 20% of the respondents are not sure.

4.6 Objective Four: Possible solution to constraints of digitalization

Table 4.20 Digital Payments System Are Made Simpler For Ghana Revenue Authority (GRA) To Use With Ease.

Scale	Frequency	Response rate (%)
Strongly agree	1	5
Agree	6	30
Not sure	11	55
Disagree	2	10
Strongly disagree	0	0
Total	20	100

Source: Field survey, 2022

The researcher wanted to find out whether digital payments system are made simpler for Ghana Revenue Authority (GRA) to use with ease. The findings as displayed in the table above shows that majority of the respondents are not sure with respondents rate of 55% that digital payments system are made simpler for Ghana Revenue Authority (GRA) to use with ease. Respondents representing 30% agree that digital payment are made simpler for Ghana Revenue Authority (GRA), 10% of the respondents disagree and strongly agree.

Table 2.21 Effort Are Made to Reduce Unnecessary Bureaucracies in the Acquisition, Implementation and Usage of Electronic Payments

Scale	Frequency	Response rate (%)
Strongly agree	1	5
Agree	5	25
Not sure	13	65
Disagree	1	5
Strongly disagree	0	0
Total	20	100

Source: Field survey, 2022

The researcher wanted to find out whether efforts are made to reduce unnecessary bureaucracies in the acquisition, implementation, and usage of electronic payments. The findings as displayed in the table above shows that the majority of the respondents are not sure that effort are made to reduce unnecessary bureaucracies in the acquisition, implementation, and usage of electronic payments with respondent rate of 65%. Respondents representing 25% chose to agree and 5% of each of the respondents disagree and strongly agree respectively.

Table 4.22: All Ghana Revenue Authority (GRA) Are Provided Sufficient Education in Digitalization

Scale	Frequency	Response rate (%)
Strongly agree	2	10
Agree	3	15
Not sure	10	50
Disagree	4	20
Strongly disagree	1	5
Total	20	100

Source: Field survey, 2022

The researcher wanted to find out whether Ghana Revenue Authority (GRA) are provided sufficient education in digitalization. According to the findings as displayed in the table above shows majority of the respondents are not sure Ghana Revenue Authority (GRA) or Ghana Revenue Authority are provided with sufficient education in digitalization which shows a respondent rate of 50%. 15% also agree and 20% disagree. It can be concluded that Ghana Revenue Authority (GRA) are not provided with sufficient education in digitalization.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

The research investigated the effects of digitalization on revenue mobilization at the Ghana Revenue Authority and its Ghana Revenue Authority. The main objective was to find out if there is an effect on digitalization on revenue at the GRA. The study used a sample of 20 respondents, which 2 are employees of GRA and 18 Ghana Revenue Authority (GRA) from different organization. The results of the findings are summarized as follows:

5.2 Summary of Findings

From our analysis, we can find out that, the implementation of digitalization as a tool to assist in revenue mobilization have a great impact on our economic contribution in Ghana. Indeed, digitalization have come to stay and it's very prudent we as a country identify and know its benefits and constrains so that we can attain its maximum benefits like the developed countries. In respect to Ghana Revenue Authority' appreciation, it was a key concern in our research work.

Again, we find out that, the implementation of digital technology is really benefiting in blocking revenue leakages in terms of reducing corruption, enhancing transparency and accountability, efficient service delivery and reliability, and achieving higher productivity. Moreover, the introduction of e-payment has not only benefited by improving revenue but has really created jobs in the area of the tools in payment such as mobile money, e-zwich payment, debit card, prepaid cards and internet banking. When this third parties who are also Ghana Revenue Authority gets these benefits, they will pay taxes which will also boost the revenue mobilization.

Finally, we find out that, although the implementation of digital technology is bringing a huge positive impact in terms of revenue mobilization, there are also constraints which are associated with these benefits. Key among this constraint is Ghana Revenue Authority (GRA) need a high level of expertise to use the tax payment systems, high cost for government to design software to support the digitalization initiatives and digitalization project takes time since it has to pass through different authorization process before it is implemented

5.3 Conclusion

From the analyses to mobilize income through digital systems in GRA, it can be inferred that the employment of digital payment models, such as mobile money platforms, as a means of moving money and for carrying out payments, is acceptable. Digitalization also makes it easier to mobilize income and gives more people access to financial services. Additionally, by minimizing human interaction and engagement, digitalization and platform utilization lower operating expenses. The introduction of digitalization tends to encourage a cashless society, freeing up money for enterprises to use for profitable endeavors. According to the findings, digitization generally tends to decrease corruption, boost accountability, and promote effective service delivery. The basis for gathering and keeping huge data on clients is digitization.

5.4 Recommendations

Competent ICT personnel is a relevant requirement in the adoption of ICT. In preparation for the adoption of ICT, we advise the GRA to hire the necessary IT personnel, network administrators, and their support staff, and teach the current employees in the use of cutting-edge technical instruments. The company must also make an investment in a dependable internet provider with the capacity to handle the

massive packets that will be transferred from one location to another. To accommodate the vast amount of data that will be kept, high storage capacity servers must be found.

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APPENDIX

QUESTIONNAIRES

KOFORIDUA TECHNICAL UNIVERSITY

TOPIC: THE EFFECT OF DIGITALIZATION ON REVENUE

MOBILIZATION. A CASE STUDY OF GHANA REVENUE AUTHORITY

(GRA)

Dear responders, the objective of this survey is strictly academic. Accurate responses from respondents will significantly improve the impartiality of this study. Your involvement will be much valued. All information provided by you will be kept private and utilized for the purpose of the research. Please examine how digitization has impacted revenue mobilization and mark the appropriate response in the categories of strongly agree, agree, not sure, disagree, and disagree strongly.

SECTION A: GENERAL INFORMATION

Please tick [] in the appropriate boxes

1. Gender

Male	Female
<input type="checkbox"/>	<input type="checkbox"/>

2. Age

20-25 years	26-30 years	31-35 years	36-40 years	Over 40 years
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3. Marital status

Single	Married	Divorced	Widow

4. Academic qualification

Degree	Professional qualification	Diploma	Certificate	None

5. How long have you work at Ghana Revenue Authority

Less than a year	1-3 years	3-5 years	5-10 years	Over 10 years

SECTION B: GRA APPRECIATION OF DIGITALIZATION PAYMENT

6. How well digital payment has helped the Ghana revenue authority

Very helpful	Helpful	Average	Not helpful

7. How long Ghana revenue authority have been using digital payment methods.

Less than a year	1-3 years	3-5 years	5-10 years	Over 10 years

8. Ghana Revenue Authority (GRA) have sufficient knowledge in digitalization payment process.

Strongly agree	Agree	Not sure	Disagree	Strongly disagree

SECTION C: BENEFIT OF ADOPTING DIGITAL TECHNOLOGY IN REVENUE MOBILIZATION

9. Digitalization of tax revenue makes life easier for authorities by easing administrative burdens, which gives officials more time to focus on higher-value activities.

Strongly agree	Agree	Not sure	Disagree	Strongly disagree

10. The acceleration of digitalization in public service has reduced the level of tax evasion up to a certain point.

Strongly agree	Agree	Not sure	Disagree	Strongly disagree

11. The use of electronic payment systems has reduced the level of corruption.

Strongly agree	Agree	Not sure	Disagree	Strongly disagree

12. Digitalization has increased government revenue which has helped the government to provide a wide range of public goods and services.

Strongly agree	Agree	Not sure	Disagree	Strongly disagree

13. The effectiveness and efficiency of the revenue mobilization system are the results of digitalization.

Strongly agree	Agree	Not sure	Disagree	Strongly disagree

14. Digitalization has increased responsiveness and improved customer engagement.

Strongly agree	Agree	Not sure	Disagree	Strongly disagree

SECTION D: POSSIBLE CONSTRAINTS TO, AND NEGATIVE EFFECTS OF, THE ADOPTION OF DIGITALIZATION IN GHANA.

15. The organization needs the expertise to run digitalization initiatives.

Strongly agree	Agree	Not sure	Disagree	Strongly disagree

16. The GRA need a high level of expertise to use the tax payment systems.

Strongly agree	Agree	Not sure	Disagree	Strongly disagree

17. High cost for the government to design t design software to support the digitalization initiatives

Strongly agree	Agree	Not sure	Disagree	Strongly disagree

18. GRA need ICT knowledge to use the electronic tax payment systems

Strongly agree	Agree	Not sure	Disagree	Strongly disagree

19. High cost for the government to embark on public education to educate the people on the essence and processes of using the new software to make payments.

Strongly agree	Agree	Not sure	Disagree	Strongly disagree

20. The digitalization project takes time since it has to pass through different authorization processes Before it is implemented

Strongly agree	Agree	Not sure	Disagree	Strongly disagree

**SECTION E: POSSIBLE SOLUTION TO CONSTRAINTS OF
DIGITALIZATION**

21. The Government has the ability to release enough funds to finance the digitalization project or Initiatives.

Strongly agree	Agree	Not sure	Disagree	Strongly disagree

22. Digital payment systems are made simpler for GRA to use with ease

Strongly agree	Agree	Not sure	Disagree	Strongly disagree

23. Government is providing education on the need to digitalize revenue mobilization.

Strongly agree	Agree	Not sure	Disagree	Strongly disagree

24. Efforts are made to reduce unnecessary bureaucracies in the acquisition, implementation, and usage of electronic payments.

Strongly agree	Agree	Not sure	Disagree	Strongly disagree

25. All Ghana Revenue Authority (GRA) are provided sufficient education in digitalization

Strongly agree	Agree	Not sure	Disagree	Strongly disagree



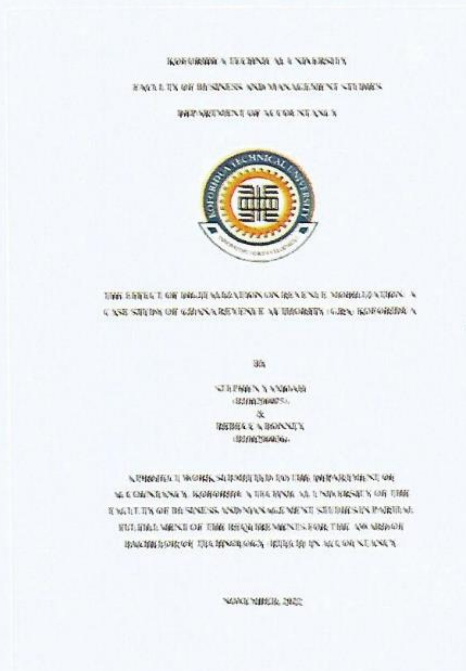
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