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The journal is produced by the Faculty of Business Management at The Open University of Tanzania. It accepts theoretical, conceptual and research-based papers in a wide range of topics on business management in Africa and the world at large. It also accepts cases, book reviews and summaries of dissertations.

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## EDITORIAL NOTE

### *Dear readers*

It is with great honor that I present to you the June 2025 Issue (Volume 9, Issue 1) of the Pan-African Journal of Business and Management (PAJBM). This issue features a rich and timely collection of scholarly contributions that reflect the dynamic landscape of business, governance, and development across Africa, with a particular focus on Tanzania and other parts of the world.

This volume addresses a range of topics that are deeply aligned with the United Nations Sustainable Development Goals (SDGs) and Tanzania's National Development Priorities outlined in the Third Five Year Development Plan (FYDP III). In the wake of global uncertainties and regional challenges, the studies in this issue provide not only theoretical insights but also practical strategies for resilience, inclusive growth, and sustainability.

Key highlights of this issue include: Cross-border integration and sustainability are discussed in the paper on Transport Corridors, linking to SDG 9 (Industry, Innovation, and Infrastructure) and SDG 13 (Climate Action). This study provides essential insights for policymakers and regional bodies seeking to enhance trade and development through green and efficient infrastructure. Additionally, the paper exploring the Agriculture-Trade-Capital Nexus in Tanzania is highly relevant to SDG 2 (Zero Hunger) and SDG 8 (Decent Work and Economic Growth), contributing valuable strategies for structural transformation and economic diversification. Also, contributions focused on public debt, trade openness, and employment growth directly speak to SDG 1 (No Poverty) and SDG 17 (Partnerships for the Goals), analyzing macroeconomic dynamics critical for sustainable fiscal policies in Tanzania and beyond. Furthermore, empowerment of youth and women entrepreneurs and the sustainability of SMEs aligns closely with SDG 5 (Gender Equality) and SDG 8, emphasizing inclusive economic participation through financial access and business development support. Moreover, articles on community-based conservation and rural tourism entrepreneurship offer pathways for local economic empowerment and natural resource stewardship, central to SDG 11 (Sustainable Cities and Communities) and SDG 15 (Life on Land). These case studies showcase community-led approaches to resilience and eco-tourism development in rural Tanzania. Also, equally vital are the studies on corporate governance in Ghana, insurance profitability, and human resource systems in Tanzanian universities, which offer sector-specific insights into enhancing institutional

performance and service delivery. These works contribute to SDG 16 (Peace, Justice and Strong Institutions) and SDG 4 (Quality Education).

As we continue our commitment to advancing knowledge that matters, I want to extend my sincere appreciation to all the authors who entrusted PAJBM as their platform for scholarly dissemination. Your work enriches both academic discourse and practical policymaking.

We warmly invite submissions for our next edition, Volume 9, Issue 2, scheduled for December 2025. We look forward to publishing more innovative and impactful research that addresses the evolving challenges and opportunities within Africa and beyond.

Thank you once again for your contribution to PAJBM and to the wider academic and development community.

Warm regards,



Dr. Bukaza Chachage

**Chief Editor:** Pan-African Journal of Business and Management (PAJBM)  
contribution to the academic knowledge and debates in the respective areas.

## **Cross-Border Transport Corridors: Assessing the Influence of Policy, Technology, and Sustainability Practices on Regional Development, East Africa**

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### ***Abstract***

*This study evaluated the influence of policy frameworks, technology adoption, and sustainability practices on regional development within cross-border transport corridors, focusing on the Central Corridor in East Africa. A mixed-method approach was employed, incorporating both quantitative surveys and qualitative interviews with logistics companies operating within the corridor. The quantitative analysis, using descriptive and regression techniques, demonstrates that effective policies and technological advancements significantly contribute to enhancing operational efficiency and promoting regional development. However, sustainability practices, while gaining attention, face implementation challenges. The study highlights the need for integrated policy approaches that balance technological innovation and sustainability for long-term development.*

**Keywords:** *Cross-Border transport, transport corridors, Policy frameworks, Technology adoption, Sustainability practices, regional development.*

### **INTRODUCTION**

Cross-border transport corridors serve as critical infrastructure that facilitates regional development by enabling the efficient movement of goods and services across national boundaries. These corridors are integral to regional economic integration, trade facilitation, and global value chain enhancement. The Central Corridor, for instance, is a major trade route linking the Tanzanian port of Dar es Salaam to seven landlocked countries in East, South, and Central Africa, including Rwanda, Burundi, Uganda, Malawi, Zambia, and the Democratic Republic of Congo. The importance of this corridor lies in its capacity to provide access to international markets and stimulate economic growth in the region, significantly influencing trade dynamics and the movement of essential goods (African Development Bank, 2021; UNECA, 2020).

The operational efficiency and success of transport corridors like the Central Corridor are shaped by the policy frameworks, technological innovations,

and sustainability practices that govern them. The role of government policies in addressing logistical challenges, such as reducing congestion at border points and improving transport infrastructure, is paramount. For example, policies that promote trade facilitation, customs harmonization, and border management reforms are crucial in enhancing operational efficiency and streamlining cross-border trade (World Bank, 2022; Zacharia & Manirakiza, 2020). However, inconsistencies in policy implementation between countries and differences in regulatory frameworks hinder the seamless integration of the corridor, undermining its potential to drive regional development and integration (Zacharia & Manirakiza, 2020). This underscores the need for cohesive and harmonized policies that can address these disparities and ensure the corridor's effective functioning.

Technological advancements have further transformed the dynamics of cross-border transport corridors. The adoption of digital tools, including real-time cargo tracking systems, automated customs clearance, and electronic data interchange (EDI), has revolutionized how goods are managed and tracked within the corridor. These technologies have proven to reduce transit times, increase operational transparency, and improve the corridor's competitiveness in the global trade landscape (Ahmed & Halawa, 2022). Despite these benefits, challenges such as inadequate infrastructure, high adoption costs, and a lack of technical expertise remain significant barriers to fully realizing the potential of these technologies (Kyalo & Ochuka, 2021). Addressing these barriers is essential to improving the efficiency of the Central Corridor and ensuring that it remains competitive in the global market.

Sustainability has also emerged as a key concern for the development of transport corridors, as these corridors contribute significantly to environmental degradation and carbon emissions. In the case of the Central Corridor, there is an increasing push for adopting green logistics practices, such as using energy-efficient vehicles and investing in eco-friendly infrastructure. Furthermore, policies aimed at promoting renewable energy sources and reducing the environmental footprint of transport activities are critical to ensuring that the corridor contributes to long-term sustainable development (UNECA, 2020; African Development Bank, 2021). This focus on sustainability is not only essential for protecting the environment but also for promoting the corridor's role in sustainable economic growth.

This study aims to assess the influence of policy frameworks, technology adoption, and sustainability practices on the development of the Central Corridor and their impact on regional growth. By analyzing these critical factors, this research will offer valuable insights into improving the

efficiency, competitiveness, and sustainability of the corridor. Ultimately, the study seeks to highlight strategies that can enhance the Central Corridor's role in facilitating regional economic integration and development, contributing to broader objectives of sustainable growth across East and Central Africa.

## **PROBLEM STATEMENT**

The Central Corridor is a vital transport route connecting seven countries in East, South, and Central Africa, facilitating trade and improving regional access to global markets. According to UNECA (2020), the corridor plays a pivotal role in enhancing regional integration by linking landlocked nations such as; Rwanda, Burundi, and Uganda to the Tanzanian port of Dar es Salaam. However, despite its strategic importance, persistent inefficiencies and infrastructural limitations hinder its full potential, reducing its competitiveness in global trade networks.

A major challenge facing the corridor is the inconsistency in policy frameworks among its member countries. Zacharia and Manirakiza (2020) emphasize that variations in customs regulations, trade facilitation policies, and tariff structures across jurisdictions lead to regulatory bottlenecks, causing delays and escalating trade costs. These inconsistencies undermine the intended benefits of regional trade agreements, restricting the seamless movement of goods. Furthermore, the corridor's infrastructure remains inadequate, with Mwenda (2019) noting that poor road conditions, insufficient rail connectivity, and outdated port facilities contribute to higher transport costs and longer transit times, deterring investment and economic growth.

Another significant issue is the slow adoption of digital technologies in managing corridor operations. While digital transformation has revolutionized trade facilitation worldwide, the Central Corridor lags in integrating real-time cargo tracking, automated customs clearance, and electronic data interchange (EDI) (Ahmed & Halawa, 2022). The absence of modernized logistics systems and digital monitoring tools limits operational efficiency, exposing the corridor to inefficiencies, delays, and security risks. Without substantial policy reforms, infrastructure investments, and technological integration, the Central Corridor risks falling behind competing regional transport corridors, weakening its role in economic development and trade competitiveness.



This study addressed these challenges by evaluating the influence of policy frameworks, technology adoption, and sustainability practices on the corridor's efficiency and regional development.

### **Objectives of the Study**

The study was guided by the following objectives:

- i. To assess the impact of policy frameworks on trade efficiency in the Central Corridor;
- ii. To examine how technology adoption enhances operational efficiency and reduces transit time; and
- iii. To evaluate the role of sustainability practices in improving the corridor's long-term viability.

## **REVIEW OF RELATED LITERATURE**

### **Theoretical Review**

#### ***Institutional Theory***

Institutional theory is relevant to understanding how policy frameworks and regulations influence the operation of transport corridors. This theory suggests that organizations and institutions, including governments, must conform to established rules, laws, and norms to function effectively (Scott, 2020). In the context of the Central Corridor, institutional theory can explain how the alignment of policies between member countries ensures smooth operations and reduces trade barriers. When policies are inconsistent or lack harmonization, it creates bottlenecks that hinder the corridor's effectiveness (Zacharia & Manirakiza, 2020).

#### ***Technological Innovation Theory***

Technological innovation theory posits that the adoption of new technologies leads to improved processes, productivity, and overall efficiency (Dosi, 2019). In transport corridors, technology can revolutionize logistics management through digitalization, automation, and data-driven decision-making. For example, the use of real-time tracking and digital customs clearance systems in the Central Corridor can significantly reduce delays and enhance trade flow (Ahmed & Halawa, 2022).

#### ***Sustainable Development Theory***

Sustainable development theory focuses on the balance between economic growth, environmental protection, and social equity. This theory argues that development should meet the needs of the present without compromising the ability of future generations to meet their needs (Brundtland, 1987). In the context of transport corridors, sustainable development theory highlights the need for green logistics practices, energy-efficient infrastructure, and policies

that promote environmental conservation (Kyalo & Ochuka, 2021). The central corridor, given its expansion, must adopt such practices to ensure it remains an environmentally sustainable route.

## **Empirical Review**

### ***Policy and Regional Trade Facilitation***

Policy harmonization has emerged as a critical factor in facilitating cross-border trade. Zacharia and Manirakiza (2020) analyzed the role of policy inconsistencies across the seven member countries of the Central Corridor, noting that discrepancies in customs procedures and tariff regulations significantly delayed cargo clearance. Their study highlighted that, although the East African Community (EAC) has made strides in policy alignment, a lack of coordination among customs authorities across the region continues to hinder the seamless flow of goods. The researchers found that harmonizing policies could reduce delays and costs by up to 15%, ultimately boosting regional trade efficiency. Similarly, Mugisha (2021) explored how multilateral agreements like the African Continental Free Trade Area (AFCFTA) have enhanced operational efficiency along the corridor. He found that greater policy alignment, including standardized customs procedures and documentation, would further improve trade facilitation in the region.

### ***Technology Adoption in Transport Corridors***

Technological adoption plays a transformative role in improving logistics and trade facilitation. Ahmed and Halawa (2022) examined the impact of digital tools, such as electronic cargo tracking systems (ECTS), electronic data interchange (EDI), and automated customs clearance, on the efficiency of the Central Corridor. Their study found that the adoption of these technologies improved transit times by an average of 30% and increased the transparency of cargo movements. However, the study also pointed out that the uneven adoption of digital technologies across the region, with countries like Rwanda and Tanzania at the forefront, and others like the Democratic Republic of Congo (DRC) and Burundi lagging behind, hampers the full optimization of the corridor. In addition, Kinuthia et al. (2023) examined how blockchain technology could enhance supply chain security along the corridor. They found that blockchain implementation reduced cargo theft and fraud by enabling real-time verification of transactions and documentation, thus improving transparency and trust within the transport process.

### ***Sustainability in Transport Corridors***

Sustainability has become a key focus for improving the long-term viability of transport corridors. Masanja and Lema (2021) assessed the socio-

economic impacts of the Central Corridor, noting that it has provided significant economic benefits to communities along its route, particularly by improving access to markets and increasing employment opportunities. However, the researchers also highlighted that the benefits were unevenly distributed, with underdeveloped areas like Burundi and the DRC experiencing fewer advantages due to weaker infrastructure and less effective policy implementation. They recommended that future development initiatives focus on making the benefits of the corridor more inclusive. Similarly, Moyo and Ncube (2022) examined the role of transport corridors in regional economic integration. Their study found that the Central Corridor improved economic linkages between the member countries, enhancing the flow of goods and services. They argued that improved connectivity could accelerate the region's economic growth, advocating for more coordinated efforts to maximize the socio-economic benefits of the corridor.

### **Research Gap**

Despite extensive research on policy frameworks, technology adoption, and sustainability in cross-border transport corridors, several critical gaps remain unaddressed. Existing studies highlight the importance of policy harmonization in enhancing trade efficiency (Zacharia & Manirakiza, 2020; Mugisha, 2021), but they primarily focus on regulatory discrepancies rather than the practical challenges of policy implementation. There is limited empirical evidence on the effectiveness of specific policy interventions over time and how they impact trade competitiveness across different economies within the Central Corridor. Moreover, most studies overlook the role of public-private partnerships in addressing policy fragmentation, leaving a gap in understanding the collaborative mechanisms necessary for sustainable policy alignment.

Regarding technology adoption, research demonstrates the positive impact of digital innovations on operational efficiency (Ahmed & Halawa, 2022; Kinuthia et al., 2023). However, there is a lack of comparative analysis on why some countries within the corridor lag in adopting these technologies and how disparities in digital infrastructure impact trade performance. Furthermore, studies on blockchain and automation emphasize security and transparency but do not sufficiently examine the cost implications and scalability of these technologies for small and medium-sized enterprises (SMEs) operating along the corridor.

Sustainability research (Masanja & Lema, 2021; Moyo & Ncube, 2022) highlights the corridor's socio-economic benefits, but there is limited exploration of environmental sustainability challenges, such as carbon

emissions from freight transport. Additionally, the uneven distribution of benefits across member countries has been acknowledged, yet there is a research gap in strategies for making sustainability initiatives more inclusive. Future research should investigate how green logistics and alternative energy sources can be integrated into transport corridors while ensuring equitable economic development. Addressing these gaps will provide a more comprehensive understanding of the Central Corridor's long-term efficiency and sustainability

## **METHODS**

### **Approach**

This study adopted a quantitative methodology. The quantitative approach was implemented through structured questionnaires to gather measurable data on variables related to policy, technology, and sustainability's influence on regional development. The quantitative approach allows for precise measurement and statistical analysis of relationships between the key factors affecting regional development. A quantitative approach offers the advantage of generalizing results to a larger population, providing reliable, objective, and replicable findings. Moreover, it facilitates the use of statistical techniques such as regression analysis to identify significant relationships and causations among the variables, which is crucial for understanding the impact of policy, technology, and sustainability practices in the context of cross-border transport corridors.

### **Design**

A descriptive and exploratory research design was employed. The descriptive design aimed to portray the existing state of logistics operations in the Central Corridor, focusing on how policy, technology, and sustainability impact development in the region. The exploratory design allowed for an investigation into emerging trends, challenges, and gaps that have yet to be extensively studied, providing new insights into the logistics industry's future direction.

### **Measurement of Study Variables**

The study focused on four key variables: policy frameworks, technology adoption, sustainability practices, and regional development, each measured using specific indicators.

*Policy Frameworks* refer to the set of trade facilitation policies, customs harmonization efforts, and legal regulations that influence logistics efficiency (Zacharia & Manirakiza, 2020). These were measured using a five-point Likert scale, assessing factors such as the effectiveness of customs

procedures, trade facilitation policies, tariff structures, and regulatory efficiency.

*Technology Adoption* encompasses the use of digital tools, automation systems, and real-time tracking technologies to enhance logistics and trade facilitation (Ahmed & Halawa, 2022). This was measured by evaluating the adoption levels of electronic customs clearance systems, cargo tracking technologies, blockchain solutions, and electronic data interchange (EDI).

*Sustainability Practices* involve environmental and socio-economic strategies aimed at reducing the corridor's carbon footprint while ensuring long-term viability (Masanja & Lema, 2021). The study assessed sustainability using indicators such as the implementation of green logistics practices, the use of energy-efficient transport systems, carbon footprint reduction measures, and policies supporting renewable energy use.

*Regional Development* was conceptualized as improvements in trade efficiency, infrastructure development, and economic integration among Central Corridor countries (Moyo & Ncube, 2022). It was measured using logistics performance indicators (LPI), trade volume growth, reductions in transit time, and the economic contributions of the corridor to regional trade.

### ***Strategy***

Data collection involved a combination of questionnaires and interviews. Questionnaires were distributed to logistics employees to gather quantitative data, while in-depth interviews with key personnel were conducted to obtain qualitative insights into operational challenges and opportunities.

### ***Sample***

The target population for this study consisted of employees from three logistics companies operating within the Central Corridor: Africa Global Logistics (300 employees), Bravo Logistics (150 employees), and Bakhresa Group Logistics (200 employees), resulting in a total population of 650 employees.

To ensure a representative sample, stratified random sampling was employed. This method divided the population into subgroups based on their roles (management, staff, and operational personnel). The stratification ensured that employees at different levels were adequately represented in the sample, making it possible to compare their perspectives on the influence of policy, technology, and sustainability on regional development.

Using Krejcie and Morgan's sample size determination formula, a total of 242 respondents were selected. Specifically, the sample was allocated proportionally as follows: Africa Global Logistics 112 employees, Bravo Logistics 56 employees and Bakhresa Group Logistics 74 employees.

## **Data Analysis**

### ***Descriptive Analysis***

The study employed descriptive statistics to summarize and interpret the characteristics of the dataset. Measures such as mean, standard deviation, frequency distributions, and percentages were used to analyze the responses related to policy frameworks, technology adoption, sustainability practices, and regional development. Graphs and tables were utilized to illustrate key trends, including variations in the adoption of technology, policy effectiveness, and sustainability implementation across logistics companies operating in the Central Corridor.

### ***Reliability and Validity Testing***

To ensure the consistency and accuracy of the measurement instruments, Cronbach's alpha was used to test the reliability of survey responses. A Cronbach's alpha value above 0.7 was considered acceptable, indicating good internal consistency of the questionnaire items. In addition, content validity was assessed through expert reviews, while construct validity was examined using factor analysis to confirm that the questionnaire items adequately captured the intended study constructs.

### ***Regression Assumptions***

Before conducting regression analysis, several statistical assumptions were tested to validate the model:

*Linearity* – Scatter plots and residual plots were analyzed to confirm a linear relationship between independent variables (policy, technology, and sustainability) and the dependent variable (regional development).

*Multicollinearity* – The Variance Inflation Factor (VIF) was calculated to ensure that independent variables were not highly correlated. A VIF score below 10 indicated no serious multicollinearity issues.

*Homoscedasticity* – The Breusch-Pagan test was used to verify that residuals exhibited constant variance across all levels of the independent variables.

*Normality of Residuals* – The Shapiro-Wilk test and a histogram of standardized residuals were employed to check if residuals followed a normal distribution.

*Independence of Errors* – The Durbin-Watson test was conducted to detect autocorrelation in residuals, with values close to 2 indicating no serious correlation.

*Outliers and High Leverage Points* – The Cook's Distance method was applied to identify and eliminate influential data points that could distort regression results.

### **Regression Model and Equation**

To determine the relationship between policy frameworks, technology adoption, and sustainability practices on regional development, a multiple linear regression analysis was conducted. The regression model is specified as follows:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon$$

Whereby:

Y = Regional Development (dependent variable)

$\beta_0$  = Intercept (constant term)

$\beta_1, \beta_2, \beta_3$  = Regression coefficients representing the impact of each independent variable

$X_1$  = Policy Frameworks

$X_2$  = Technology Adoption

$X_3$  = Sustainability Practices

$\varepsilon$  = Error term

The regression analysis estimated the standardized beta coefficients ( $\beta$ -values) to assess the strength and direction of the relationships, while p-values ( $\leq 0.05$ ) determined statistical significance. Additionally, the R-squared ( $R^2$ ) value was used to evaluate how well the independent variables explained the variation in regional development.

### **Qualitative Analysis**

For qualitative data from interviews, thematic analysis was conducted to identify key patterns and insights related to challenges and opportunities within the Central Corridor. Transcribed responses were coded into themes such as policy inconsistencies, digital transformation challenges, and environmental concerns. These themes were then cross-referenced with quantitative findings to provide a more comprehensive understanding of the issues affecting regional development.



## RESULTS

### Descriptive Statistics

#### *Respondents' Distribution by Company*

The Table 1 shows the distribution of respondents from each logistics company operating within the Central Corridor.

**Table 1: Respondents Demographic Characteristics**

Company	Total Population	Sample Size	Percentage of Sample (%)
Africa Global Logistics	300	112	46.28
Bravo Logistics	150	56	23.14
Bakhresa Group Logistics	200	74	30.58
<b>Total</b>	<b>650</b>	<b>242</b>	<b>100</b>

**Source: Author, (2025)**

The majority of respondents were from Africa Global Logistics (46.28%), followed by Bakhresa Group Logistics (30.58%) and Bravo Logistics (23.14%). This reflects the proportional representation based on the population of each company, ensuring that responses are representative of the overall logistics operations within the Central Corridor.

#### **6.1.2 Influence of Policy on Regional Development**

Respondents were asked to rate the impact of policy on regional development using a Likert scale, where 1 = strongly disagree and 5 = strongly agree.

**Table 2: Policy's Influence on Regional Development**

Rating	Frequency	Percentage (%)
Strongly Agree (5)	121	50.00
Agree (4)	73	30.17
Neutral (3)	28	11.57
Disagree (2)	12	4.96
Strongly Disagree (1)	8	3.31
<b>Total</b>	<b>242</b>	<b>100</b>

**Source: Author, (2025)**

Half of the respondents (50%) strongly agreed that policy had a significant influence on regional development within the Central Corridor, while an additional 30.17% agree. This highlights a broad consensus that governmental and regional policies play a pivotal role in shaping the operations and success of logistics companies in this region.

#### *Influence of Technology on Operational Efficiency*

Respondents were asked to evaluate the impact of technology on their company's operational efficiency.



**Table 3: Technology's influence on Operational Efficiency**

Rating	Frequency	Percentage (%)
Strongly Agree (5)	102	42.15
Agree (4)	85	35.12
Neutral (3)	35	14.46
Disagree (2)	15	6.20
Strongly Disagree (1)	5	2.07
<b>Total</b>	<b>242</b>	<b>100</b>

**Source:** Author, (2025)

A significant proportion of respondents (42.15%) strongly agreed that technological advancements had positively influenced their company's operational efficiency. Combined with those who agreed (35.12%), the results indicated that the use of modern technology had become integral to improving logistics performance in the Central Corridor.

### ***Influence of Sustainability on Regional Development***

Respondents were asked to rate the influence of sustainability on regional development within the Central Corridor.

**Table 4: Sustainability's Influence on Regional Development**

Rating	Frequency	Percentage (%)
Strongly Agree (5)	103	42.56
Agree (4)	87	35.95
Neutral (3)	30	12.40
Disagree (2)	15	6.20
Strongly Disagree (1)	7	2.89
<b>Total</b>	<b>242</b>	<b>100</b>

**Source:** Author, (2025)

The results indicated a strong consensus regarding the significance of sustainability in regional development, with 42.56% of respondents strongly agreed and 35.95% agreed. This combined 78.51% highlights that the majority of respondents recognize sustainability as a critical factor contributing to the long-term success and growth of logistics operations within the Central Corridor. The widespread agreement suggests that sustainable practices, such as environmental considerations and resource efficiency, are viewed as essential components for enhancing regional development. However, 12.40% of respondents remained neutral, indicating some uncertainty or perhaps a belief that the effects of sustainability are not immediately visible or measurable. This neutral stance may also reflect differing perspectives on how sustainability is implemented or its perceived relevance in the short term.

On the other hand, a small minority, comprising of 6.20% who disagreed and 2.89% who strongly disagreed, believed that sustainability had little to no influence on regional development. This suggests that while the majority see its benefits, there is still a portion of respondents who may feel that sustainability initiatives do not directly impact their logistics operations or regional development outcomes.

### ***Inferential Statistics***

A multiple regression analysis was conducted to determine the relationship between the independent variables (policy, technology, and sustainability) and regional development.

**Table 5: Coefficients**

Variable	Coefficient	Standard Error	t-Statistic	p-Value
Policy	0.345	0.068	5.074	0.000
Technology	0.291	0.059	4.932	0.000
Sustainability	0.228	0.064	3.563	0.001
R <sup>2</sup> = 0.621	F = 12.39	p = 0.000		

**Source:** Author, (2025)

The regression analysis results indicate that policy, technology, and sustainability have a statistically significant positive impact on regional development ( $p < 0.05$ ). The R<sup>2</sup> value of 0.621 suggests that 62.1% of the variation in regional development can be explained by the combined effects of these three variables. Among these, policy has the highest impact, followed closely by technology, while sustainability also contributes meaningfully to regional development.

## **DISCUSSION OF FINDINGS**

The findings revealed that government policies significantly influence the performance of logistics companies within the Central Corridor. Respondents indicated that favorable policies, such as tax incentives and streamlined cross-border procedures, enhance operational efficiency and regional development. This supports existing research, which highlights the role of supportive governmental frameworks in facilitating logistics operations and regional trade (Mwangi et al., 2020). Inconsistent policies between member states, however, create operational challenges, underscoring the need for uniform regulatory practices to optimize logistics performance and regional integration (Ogunsanya & Obafemi, 2019).

Technological adoption is another critical factor impacting logistics performance. The study found that companies investing in advanced

technologies, like fleet management systems and digital tracking tools, experienced improved operational efficiency and customer satisfaction. This finding aligns with Wang and Zhao (2021), who emphasize that technological innovation is crucial for maintaining a competitive edge in the logistics sector. However, the cost of implementing these technologies poses a significant barrier for smaller firms, creating disparities in operational capabilities within the industry (Zhao, Wu, & Liang, 2020).

Sustainability practices, while acknowledged by respondents, have a less pronounced impact on performance compared to government policies and technology. Although some companies are beginning to adopt environmentally friendly practices, the high costs associated with these initiatives limit their widespread implementation. This observation is consistent with Jiang and Qiu (2023), who noted that while sustainable logistics practices are important, their short-term impact on performance is often overshadowed by the costs involved. As sustainability becomes more integral to business strategies, its role in enhancing performance may become more significant over time.

## **CONCLUSION AND RECOMMENDATIONS**

This study concludes that government policies and technological adoption are the primary drivers of logistics performance within the Central Corridor. Favorable government policies, such as tax incentives and streamlined customs procedures, enhance operational efficiency and support regional development. Technological innovations, including fleet management systems and digital tracking tools, significantly improve operational efficiency and customer satisfaction by reducing delays and increasing transparency. However, the integration of sustainability practices remains limited due to the high associated costs, with these practices currently having a lesser impact on logistics operations.

Based on these findings, it is recommended that policymakers prioritize the creation and implementation of uniform regulations across the Central Corridor. Such policies would facilitate smoother logistics operations, reduce trade barriers, and enhance regional integration. Governments should also consider offering incentives and support for the adoption of technological innovations, enabling logistics companies to remain competitive in an increasingly digitalized global market.

While sustainability practices are essential, companies should be encouraged to integrate these practices gradually, focusing on cost-effective solutions that provide long-term benefits.

For future research, it is recommended to explore the long-term impacts of government policies on the logistics sector, particularly their role in regional economic growth and integration over time. Investigating the barriers to technology adoption, especially for smaller logistics firms, would also provide valuable insights into how to make advanced technologies more accessible and affordable. Additionally, further studies should examine the role of sustainability in logistics, focusing on both the economic and environmental benefits of sustainable practices. Expanding the scope of research to include a broader range of logistics companies and countries within the Central Corridor will provide a more comprehensive understanding of the factors influencing logistics performance across different contexts.

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## **Unveiling the Agriculture -Trade-Capital Dynamics Nexus in Tanzania: A Structural Approach to Sustainable Economic Growth**

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### **Abstract**

*This study investigated the dynamic interplay between agricultural output, trade, capital formation, household consumption expenditures, and sustainable economic growth in Tanzania. Using a Vector Error Correction Model (VECM) and analyzing time-series data from 1970 to 2022, the study differentiates between short-term fluctuations and long-term equilibrium relationships. The Johansen cointegration test confirmed a stable long-run association, indicating that changes in these economic drivers are gradually corrected towards equilibrium over time. Empirical findings revealed that agricultural output (0.5264, SE = 0.1375), capital formation (0.4027, SE = 0.0305), and household expenditure (1.8771, SE = 0.1125) positively contributed to GDP growth, reinforcing the role of investment and agricultural productivity in long-term economic expansion. Conversely, trade (-2.2065, SE = 0.2048) exerted a negative impact, suggesting persistent trade imbalances and constrained savings that hinder sustainable growth. The short-run analysis highlights the speed of adjustment, with deviations from equilibrium being gradually corrected over time. These findings underscored the importance of strategic policy interventions, including export diversification, industrial policy reforms, investment incentives, and agricultural modernization. By addressing trade inefficiencies and promoting productive investment, Tanzania can strengthen economic resilience and foster sustainable growth. This study provides empirical insights for policymakers and contributes to the broader discourse on structural economic transformation in developing economies.*

**Keywords:** Agriculture, Trade, Capital Dynamics, Sustainable Economic Growth, Structural Approach.

### **INTRODUCTION**

Sustained economic growth is a primary objective for developing nations, as it drives improvements in living standards, poverty reduction, and overall national development. For Tanzania, where the economy remains

predominantly agricultural, agriculture and trade play crucial roles in shaping economic expansion. Agriculture serves as the backbone of the economy, employing a significant portion of the population and contributing substantially to Gross Domestic Product (GDP). According to the World Bank (2020), agriculture accounts for approximately 26.7% of Tanzania's GDP and employs nearly 65% of the workforce. Beyond employment, the sector is essential for food security, industrial raw material supply, and foreign exchange earnings. However, persistent challenges, including low productivity, inadequate infrastructure, and climate change vulnerabilities, continue to constrain its growth (Mtui, 2023).

Trade, particularly international trade, is equally instrumental in Tanzania's economic trajectory. Through specialization and comparative advantage, trade enhances economic efficiency and growth (Loff, 2010). Trade liberalisation and export-oriented policies have been integral to Tanzania's economic strategy, yet the persistent trade deficit raises concerns regarding their sustainability (Utouh & Tile, 2024). Despite deeper integration into the global economy, Tanzania's imports have consistently exceeded exports, leading to structural trade imbalances (Utouh, 2024). These imbalances, and their potential implications for long-term economic sustainability and agricultural sector performance, warrant deeper investigation.

A critical research question thus emerges: how do trade imbalances affect the long-term sustainability of economic growth in Tanzania, particularly within the agricultural sector? The nexus between agriculture, trade, and capital dynamics is complex and multifaceted. On one hand, agricultural exports generate crucial foreign exchange, facilitating the import of essential goods and promoting macroeconomic stability. On the other, trade policies that prioritise industrial over agricultural products may inadvertently stifle agricultural sector growth (FAO, 2017; World Bank, 2020; Malek & Sayef, 2024). Understanding these interactions is vital for developing policies that promote balanced and sustainable economic growth. Moreover, distinguishing between short-run and long-run economic dynamics is essential, as short-term fluctuations (driven by market shocks and policy interventions) may have different implications than long-term structural transformations.

This study employed Vector Error Correction Model (VECM) to examine these relationships, distinguishing between short-run adjustments and long-term equilibrium trends among agriculture, trade, and economic growth. The use of VECM is particularly suitable as it accounts for cointegration and



corrects disequilibrium in the long-run relationship, providing a robust analytical framework for policy implications.

Despite the recognised significance of agriculture and trade in Tanzania's economic development, existing studies tend to analyse these sectors in isolation, limiting the understanding of their interconnected effects. Furthermore, many prior studies have relied on outdated datasets, leading to gaps in assessing recent economic trends (Mtui, 2023; Utouh, 2024). This study addresses these shortcomings by integrating agricultural and trade dynamics within a single empirical model, offering new insights into their collective impact on Tanzania's economic growth.

The primary objective of this study was to examine the interplay between agriculture, trade, and capital dynamics in shaping Tanzania's economic growth using VECM methodology. Specifically, this study contributes to the literature by: providing empirical evidence on the short-run and long-run relationships between agriculture, trade, capital formation and economic growth, addressing a key gap in existing research: enhancing policy formulation by identifying optimal strategies for maximising the benefits of trade and agricultural development: extending economic development literature, by demonstrating the synergies and trade-offs between agricultural and trade policies in a developing economy context.

The remainder of this paper is structured as follows: Section 2 reviews relevant literature, Section 3 outlines the data and methodology, Section 4 presents empirical results and discussion, and Section 5 concludes with policy implications.

## **LITERATURE REVIEW**

### **Theoretical Literature Review**

The nexus between agriculture, trade, and capital dynamics in fostering sustainable economic growth has been extensively explored in both classical and contemporary economic literature. While the significant role of agriculture and trade in stimulating economic growth is widely acknowledged, there remains ongoing debate regarding their precise contributions to the economic growth trajectories of different nations, especially in the context of developing economies like Tanzania. Several theoretical perspectives have emerged to explain this complex relationship.

David Ricardo's theory of comparative advantage in 1817 traditionally underpins the notion that trade enables countries to achieve greater efficiency and economic growth by specializing in goods and services where they hold a



comparative advantage. However, this theory's application in today's dynamic global economy is increasingly debated, especially in developing countries where weak infrastructure and volatile trade conditions limit its effectiveness. Recent studies, such as those by Deardorff (2019) and Rahman (2022), argue that comparative advantage often fails to account for the nuanced trade dynamics in emerging economies, where industrial policy and sectoral shifts play a significant role.

Expanding on Ricardo's work, the Heckscher-Ohlin model and contemporary endogenous growth theories, such as those proposed by Krugman (1996), underscore how trade openness can promote efficient resource allocation, technological spillovers, and economies of scale. However, these models tend to overlook the challenges that developing nations face, such as inadequate infrastructure and political instability, which may undermine the expected benefits of trade liberalization.

The neoclassical growth model, pioneered by Solow (1956) and Swan (1956), posits that capital accumulation, labour, and technological progress are fundamental to long-term economic growth. While the model remains a cornerstone of economic growth theory, it often simplifies the complexities of developing economies, where factors such as governance quality and access to capital can significantly hinder the capital accumulation process (Webb, 2024)

More recent endogenous growth theories, such as those by Romer (1990) and Lucas (1988), place greater emphasis on human capital, technological innovation, and knowledge diffusion. These theories argue that economic development is primarily driven by internal processes, which can be influenced by trade policies and agricultural advancements. In the Tanzanian context, technological innovations in agriculture, supported by trade, are seen as critical drivers of productivity and long-term economic growth.

Despite these theoretical advancements, several gaps remain in understanding the interplay between agriculture, trade, and capital dynamics in Tanzania. Existing models often fail to incorporate the role of external shocks, such as; fluctuations in global commodity prices, and the impact of institutional quality, which can significantly affect the outcomes of trade and agricultural reforms. Moreover, while endogenous growth theories highlight the importance of technological progress, empirical evidence on how innovations in agriculture contribute to economic growth in Tanzania is sparse. This study seeks to address these gaps by applying the Vector Error Correction Model (VECM) to provide empirical evidence on the interactions between

agriculture, trade, and capital dynamics in Tanzania, thus offering valuable insights into the mechanisms of sustainable economic growth.

### **Empirical Literature Review**

The relationship between agriculture, trade, and economic growth has been widely debated, particularly in developing economies such as Tanzania. While agriculture provides the foundation for industrialization, trade openness is believed to enhance efficiency and economic expansion. Empirical evidence supports these claims but highlights significant outcomes disparities, driven by country-specific conditions, institutional quality, and trade structures (Rasoanomenjanahary et al., 2022). This section critically examines empirical studies on the agriculture-trade-growth nexus and identifies gaps requiring further investigation.

#### ***Trade and Economic Growth***

Empirical studies reveal mixed findings on the impact of trade on economic growth. Some studies suggest that trade openness fosters growth by enhancing productivity and capital accumulation (Gabriel & David, 2021; Kong et al, 2020). Others, however, report negative effects, particularly where trade liberalization leads to import dependency and deindustrialization (Sule et al, 2023; Bunje & Wang, 2022). In the context of sub-Saharan Africa, Malefane (2020) found a positive relationship between trade openness and economic growth in Botswana, consistent with Zahonogo (2017) in Sub-Saharan Africa (SSA) and Malefane & Odhiambo (2018) in South Africa. In the context of Tanzania, Miku et al. (2023) found that trade openness positively and significantly affects economic growth. Similarly, Hye & Lau (2015) observed a positive influence on India's economic growth in the short run, while having a detrimental effect in the long run. These findings align with classical trade theories but also indicate that the benefits of trade depend on macroeconomic stability and institutional frameworks.

#### ***Agriculture and Economic Growth***

The agricultural sector is regarded as a key driver of economic growth in developing countries. Several studies confirm a positive correlation between agricultural expansion and GDP growth. Nyamekye (2021) demonstrated a long-term cointegration between agriculture and economic growth in Ghana. Raza et al. (2012) found that all agricultural sub-sectors, except forestry, contributed positively to Pakistan's GDP. Sertoglu et al. (2017) reported a statistically significant relationship between agricultural productivity and economic expansion in Nigeria.

Similar findings are reported for Tanzania. Lyatuu et al. (2015) confirmed agriculture's role in GDP growth using time-series analysis, and Mhagama et al. (2023) found a positive correlation between agriculture and GDP growth. However, Alam & Myovela (2019) noted that while agricultural exports influenced GDP in Tanzania, the reverse causality was weak, suggesting that GDP growth did not significantly boost agricultural exports. These findings highlight structural inefficiencies in the sector, such as low mechanization, poor infrastructure, and limited access to credit.

### ***Capital Dynamics in Agriculture and Trade***

The role of capital accumulation and investment in agriculture and trade remains debatable. While capital-intensive agricultural models have driven economic growth in some countries, inadequate investment hinders Tanzania's agricultural transformation. Epaphra & Mwakalasya (2017) found no significant relationship between FDI inflows and agriculture's contribution to Tanzania's GDP, indicating that investment policies may not sufficiently prioritize agricultural modernization. Similar to Han et al. (2024), which highlight that while FDI fosters economic growth in many sectors, its effects on agriculture are often constrained by structural inefficiencies, inadequate technological adoption, and weak institutional frameworks. While Fatima et al. (2020) found a negative correlation between trade and economic growth.

### ***Challenges and Policy Implications***

Despite positive linkages between agriculture, trade, and economic growth, several challenges persist. Global market volatility, climate change, and geopolitical risks significantly impact agricultural productivity and trade competitiveness (Gray et al. 2020; Blanc & Schlenker, 2017; Kolstad & Moore, 2020). Additionally, trade liberalisation does not guarantee economic growth unless accompanied by value addition and industrial upgrading (Miku et al. 2021). These challenges underscore the need for integrated policies that enhance agricultural productivity while leveraging trade opportunities.

### ***Methodological Limitations in Existing Literature***

Many empirical studies rely on simple regression models or Vector Autoregression (VAR), which may not fully capture equilibrium relationships among variables. Lütkepohl (2006) emphasised that such models may fail to distinguish between short-run adjustments and long-term equilibrium. Given the evidence of cointegration between agriculture, trade, and economic growth, the application of a Vector Error Correction Model (VECM) is more appropriate. The VECM framework allows for a

comprehensive analysis of both short-term fluctuations and long-run adjustments, addressing gaps in previous studies.

While existing empirical literature provides valuable insights into Tanzania's economic growth dynamics, several gaps remain. First, there is limited research on the combined impact of agriculture and trade using advanced econometric techniques. Second, few studies assess the role of governance and institutional quality in shaping the agriculture-trade-growth relationship. Third, mechanistic analyses that integrate climate risks and global trade shocks are scarce. Addressing these gaps requires a multidisciplinary approach, including advanced econometric modelling, policy simulations, and comparative studies across developing economies.

## **METHODOLOGY**

This study employed the Vector Error Correction Model (VECM) to examine the interrelationships between agriculture, trade, and economic growth in Tanzania. VECM is well-suited for this analysis as it captures both short-run dynamics and long-run equilibrium relationships among variables, making it a powerful tool for time-series analysis (Johansen, 1988). Compared to alternative methods such as the Autoregressive Distributed Lag (ARDL) model and Bayesian Vector Autoregression (BVAR), VECM is more appropriate when dealing with multiple non-stationary variables that exhibit cointegration.

The study utilises annual time series data spanning from 1970 to 2022, sourced from the Ivan Statistics Database. The selection of this time frame is based on the following justification: Time-series models such as VECM require long-term data to establish stable cointegration relationships and ensure robust parameter estimation (Engle & Granger, 1987). Using data from 1970–2022 helps capture multiple phases of economic growth, stagnation, and recovery, making the results more generalisable.

## **Unit Root Test**

Since this study utilised time series data, it is essential to test for stationarity to avoid the issue of spurious regression (Granger & Newbold, 1974). If the variables are integrated in different orders, the estimation results may be misleading. Therefore, the study employed the Augmented Dickey-Fuller (ADF) test (Dickey & Fuller, 1981) and the Phillips-Perron (PP) test (Phillips & Perron, 1988) to determine the stationarity properties of the variables. The null hypothesis for both tests states that the series contains a unit root, indicating non-stationarity, while the alternative hypothesis suggests stationarity.

Furthermore, selecting an appropriate lag length is crucial before conducting the unit root test to ensure that the residuals are white noise. The study used the Akaike Information Criterion (AIC) and the Schwarz Information Criterion (SIC) to determine the optimal lag length. If the variables are found to be non-stationary at levels, they will be first differentiated to achieve stationarity before proceeding with the cointegration analysis.

### Testing for the Cointegrating Rank $r$

Once it is established that the variables are integrated in the same order, the study applies Johansen's (1988) cointegration test to determine the presence of a long-run equilibrium relationship among agriculture, trade, and capital accumulation in Tanzania. Cointegration implies that despite short-term fluctuations, the variables move together in the long run.

Johansen's cointegration approach is based on the maximum likelihood estimation of a **vector** autoregressive (VAR) model. The test identifies the number of cointegrating vectors ( $r$ ) using two test statistics:

Trace Statistic (1)

$$Trace = -T \sum_{i=r+1}^p \ln(1 - \lambda_i)$$

where:  $\lambda_i$  represents the eigenvalues of the system. If the trace statistic exceeds the critical value, the null hypothesis of no cointegration is rejected

Maximum Eigenvalue Statistic (2)

$$LR_{Max} = -T \sum_{i=r+1}^p \ln(1 - \lambda_{i+1})$$

This statistic tests whether the number of cointegrating vectors is exactly  $r$  against the alternative hypothesis of  $r+1$  cointegrating vectors.

The decision criteria indicate that if either test statistic exceeds the corresponding critical value, the null hypothesis is rejected, confirming the existence of cointegration. Once cointegration is established, the study proceeds to estimate a Vector Error Correction Model (VECM) to capture both the short-run and long-run dynamics.

### Model Specification

To investigate the impact of agriculture and trade on economic growth in Tanzania, the study specified the following mathematical function:

Economic Growth = F(Agriculture, Trade, Household Consumption Expenditure, Capital Formation) which translates into the following empirical model:

$$\text{GDP} = F(\text{AGR}, \text{TRD}, \text{HHE}, \text{CF}) \quad (3)$$

where GDP (Gross Domestic Product) represents economic growth, and the independent variables include agriculture (AGR), trade (TRD), household consumption expenditure (HHE), and capital formation (CF). GDP, AGR, TRD, HHE, and CF are expressed in millions of US dollars.

To estimate the model efficiently using EViews, equation (4) is transformed into an econometric model as follows:

$$\text{GDP}_t = \alpha + \beta_1 \text{AGR}_t + \beta_2 \text{TRD}_t + \beta_3 \text{HHE}_t + \beta_4 \text{CF}_t + \epsilon_t \quad (4)$$

where:  $\alpha$  is the intercept,  $\beta_1$ ,  $\beta_2$ ,  $\beta_3$ , and  $\beta_4$  are coefficients capturing the effect of independent variables on GDP,  $\epsilon_t$  is the error term.

Given that economic relationships often exhibit nonlinear patterns, this study applied the log-log transformation, which enhances model stability, reduces heteroscedasticity, and allows coefficients to be interpreted as elasticities (Gujarati & Porter, 2021). The transformed model is:

$$\ln \text{GDP}_t = \alpha + \beta_1 \ln \text{AGR}_t + \beta_2 \ln \text{TRD}_t + \beta_3 \ln \text{HHE}_t + \beta_4 \ln \text{CF}_t + \epsilon_t \quad (4)$$

#### ***Justification for Using the Vector Error Correction Model (VECM)***

**Since** the Johansen cointegration test confirms a long-run relationship among GDP, AGR, and TRD, this study employs the VECM to assess both short-run adjustments and long-run equilibrium dynamics (Nkoro & Uko, 2016). The VECM specification is as follows:

$$\Delta \text{GDP}_t = \alpha + \sum_{i=1}^p \gamma_i \Delta \text{GDP}_{t-i} + \sum_{i=1}^p \theta_i \Delta \text{AGR}_{t-i} + \sum_{i=1}^p \delta_i \Delta \text{TRD}_{t-i} + \lambda \text{ECT}_{t-1} + \epsilon_t$$

where:  $\Delta$  represents first differences, capturing short-term fluctuations; **ECT** (Error Correction Term) adjusts deviations from the long-run equilibrium;  $\lambda$  is the speed of adjustment parameter.

#### ***Diagnostic Tests for Model Validity***

To ensure the robustness of the Vector Error Correction Model (VECM), the study conducted several diagnostic tests. First, the Breusch-Godfrey LM test is applied to detect the presence of serial correlation in the residuals, ensuring that the model does not suffer from autocorrelation issues. Second, the White test is used to assess heteroscedasticity, verifying whether the variance of the residuals remains consistent across observations. Third, the study employed

the Variance Inflation Factor (VIF) to examine multicollinearity among independent variables, ensuring that no severe correlation exists, which could distort the reliability of coefficient estimates. Finally, the Jarque-Bera test was conducted to determine whether the residuals follow a normal distribution, which is essential for valid statistical inference. By performing these diagnostic tests, the study enhanced the credibility and reliability of the VECM results.

## EMPIRICAL RESULTS

### Diagnostic Test Results

To ensure the robustness of the Vector Error Correction Model (VECM), the study conducted the following diagnostic tests:

#### *The Breusch-Godfrey LM test*

The test is used to detect the presence of autocorrelation in the residuals. The null hypothesis ( $H_0$ ) states that there is no serial correlation in the residuals. Table 1 shows that the p-values for the LM test at both lag 1 and lag 2 are greater than the 5% significance level ( $\alpha=0.05$ ). This suggests that there is no significant serial correlation in the residuals, confirming that the VECM does not suffer from autocorrelation issues.

Table.1: Results of the Breusch-Godfrey LM Test

Lags	LM Statistic	p-value	Decision
1	3.271	0.071	Fail to Reject $H_0$
2	4.582	0.102	Fail to Reject $H_0$

Source: Author's Computation, 2024

#### *White Test*

The White test is applied to examine whether the variance of the residuals is constant. The null hypothesis ( $H_0$ ) states that there is homoscedasticity (no heteroscedasticity). The results in Table 2 show that the p-value (0.278) is greater than 0.05, indicating that the null hypothesis of homoscedasticity is not rejected. This means that the residuals exhibit constant variance, confirming the absence of heteroscedasticity, which strengthens the reliability of the VECM estimates.

Table 2: Results of the White Test

Test Statistic	p-value	Decision
8.146	0.278	Fail to Reject $H_0$

Source: Author's Computation, 2024



### ***Variance Inflation Factor***

The Variance Inflation Factor (VIF) is used to check for multicollinearity among independent variables. A VIF value exceeding 10 suggests severe multicollinearity. All VIF values in Table 3 are below 5, indicating no severe multicollinearity among independent variables. This confirms that the independent variables are not highly correlated, ensuring reliable coefficient estimation.

**Table 3: Results of the VIF Test**

Variable	VIF Value
Trade (TRD)	2.45
Agriculture (AGR),	3.12
Household consumption expenditure (HHE)	1.98
Capital formation (CF)	2.75

Source: Author's Computation 2024

### ***Jarque-Bera Test***

The Jarque-Bera test assesses whether the residuals follow a normal distribution. The null hypothesis ( $H_0$ ) states that the residuals are normally distributed. The results in Table 4 show that the p-value (0.235) is greater than 0.05, meaning the null hypothesis cannot be rejected. This suggests that the residuals are normally distributed, which is crucial for valid statistical inference.

**Table 4: Results of the Jarque-Bera Test**

Test Statistic	p-value	Decision
2.893	0.235	Fail to Reject $H_0$

Source: Author's Computation 2024

## **Empirical Findings and Discussion**

This section presents the empirical findings of the study and discusses their implications within the context of Tanzania's economic growth dynamics, focusing on agriculture, trade, and capital formation.

### ***Unit Root Test Results***

A unit root test was conducted using the correlogram technique to determine the stationarity properties of the variables. The results indicate that all variables are non-stationary at levels, signifying that they are integrated of order one,  $I(1)$ . However, after first differencing, all variables become stationary, confirming that they are integrated of order zero,  $I(0)$ . This outcome ensures that the regression analysis does not produce spurious results, as all models formulated in the study adhere to the same order of integration.



### ***Lag Length Selection Criteria***

The optimal lag length for the Vector Autoregressive (VAR) model was determined using five selection criteria: the sequential modified Likelihood Ratio (LR) test statistic, Final Prediction Error (FPE), Akaike Information Criterion (AIC), Schwarz Criterion (SC), and Hannan-Quinn (HQ) Criterion. Table 5 presents the lag selection results. While two criteria (SC and HQ) suggested one lag, with the lowest SC (-11.6049) and HQ (-12.3414) values and three criteria (LR, FPE, and AIC) recommended four lags as it has the highest significant LR statistic (37.77), the smallest FPE value (1.94e-12), and the lowest AIC (-13.1189). Since AIC, FPE, and LR tests are typically more reliable in VAR modelling, the optimal lag length is 4 (Liew, 2004).

**Table 5: VAR Lag Order Selection Criteria**

<b>Lag</b>	<b>LogL</b>	<b>LR</b>	<b>FPE</b>	<b>AIC</b>	<b>SC</b>	<b>HQ</b>
0	113.37	NA	6.84e-09	-4.6113	-4.4145	-4.5373
1	330.47	36.74	1.94e-12	-12.7858	-11.6049*	-12.3414*
2	351.00	31.46	2.43e-12	-12.5959	-10.4309	-11.7812
3	379.15	37.13	2.35e-12	-12.7299	-9.5808	-11.5449
4	413.29	37.77*	1.94e-12*	-13.1189*	-8.9856	-11.5235

Source: Author's Computation 2024

### **Johansen Cointegration Test Results**

Having confirmed that all variables were integrated in the same order, Johansen's cointegration test was applied to assess the existence of long-run relationships among GDP, agriculture, trade, household consumption expenditure, and capital formation.

Table 6 presents the Johansen Cointegration Test results, which assess the presence of long-run equilibrium relationships among the variables in the Vector Autoregressive (VAR) framework. The test provides both Trace Statistics and Maximum Eigenvalue Statistics, comparing them against their corresponding critical values at a 5% significance level to determine the number of cointegrating equations (CEs). The results show that the Trace Statistic (32.71) is higher than the critical value (29.79), with a p-value of 0.0225, indicating at least three cointegrating relationships and the Max-Eigen Statistic (22.06) marginally exceeds the critical value (21.13), with a p-value of 0.0369, confirming the third cointegrating equation. Both the Trace and Max-Eigenvalue test statistics indicate the presence of three cointegrating equations at a 5% significance level, confirming stable long-term equilibrium relationships. Since both tests consistently reject the null hypothesis, the findings strongly suggest the presence of three long-run equilibrium

relationships among the variables. These results suggest that agricultural productivity significantly influences economic growth. Furthermore, trade has a bidirectional relationship with economic growth, implying that an increase in trade activities can stimulate GDP growth and vice versa. Policymakers should, therefore, consider agricultural and trade policies that enhance economic sustainability.

**Table 6: Johansen Cointegration Test Results**

Hypothesised No. of CE(s)	Eigenvalue	Trace Statistic	Critical Value (5%)	Prob.	Max-Eigen Statistic	Critical Value (5%)	Prob.
None*	0.6396	111.78	69.82	0.0000	47.98	33.88	0.0006
At most 1*	0.4840	63.81	47.86	0.0008	31.09	27.58	0.0169
At most 2*	0.3745	32.71	29.79	0.0225	22.06	21.13	0.0369

Source: Author's Computation, 2024

### Long-Run Coefficients Results

The long-run relationship among economic growth (GDP), agriculture (AGR), trade (TRD), household expenditure (HHE), and capital formation (CF) is captured through the normalized cointegrating coefficients presented in Table 7. These coefficients provide insights into the magnitude and direction of the impact of each independent variable on economic growth in Tanzania. The results showed that Agriculture (lnAGR) had a Positive and Significant Impact on economic growth (GDP) (0.5264, SE = 0.1375). The coefficient suggests that a 1% increase in agricultural output led to a 0.5264% increase in GDP in the long run. This confirms the fundamental role of agriculture as a key driver of Tanzania's economic growth. The positive and significant relationship aligns with findings from Nyamekye (2021), Sertoglu et al. (2017), and Mhagama et al., (2023) who observed that agriculture contributes significantly to GDP in developing economies, particularly in Sub-Saharan Africa. Agriculture remains a major source of employment and food security in Tanzania, and the results emphasize the need for enhanced investments in agricultural productivity, mechanization, and value addition to sustain economic growth. However, the coefficient is below unity, implying that while agriculture is important, its impact is not as strong as expected. This aligns with studies like Thurlow et al (2009) which suggest that structural weaknesses such as low productivity, climate variability, and limited access to modern technology constrain agriculture's full potential.

Trade (lnTRD) indicates a negative and significant impact on GDP (-2.2065, SE = 0.2048). The coefficient suggests that a 1% increase in trade volume leads to a 2.2065% decline in GDP, indicating an inverse long-run relationship. This

finding contradicts traditional trade-growth theories (Solow's Growth Model and Heckscher-Ohlin Trade Theory), which emphasize the positive impact of trade liberalization on growth. This could be attributed to Tanzania's trade structure, where imports exceed exports, leading to negative trade balances. The negative coefficient for trade is consistent with Fatima et al. (2020), who noted similar patterns in developing economies. The result suggests that Tanzania's trade policies may not be effectively promoting local industries and exports, leading to a net outflow of resources. Policymakers should focus on export diversification, import substitution strategies, and strengthening regional trade agreements to mitigate adverse effects.

The results on Household Expenditure (lnHHE) show a positive and significant impact on GDP (1.8771, SE = 0.1125). The coefficient indicates that a 1% increase in household expenditure leads to a 1.8771% increase in GDP in the long run. The findings align with Keynesian economic principles, which emphasize aggregate demand as a driver of GDP. Since household consumption is a major component of aggregate demand, an increase in consumer spending fuels economic growth (Akmal & Fayzullok, 2023). While household consumption is a key driver of GDP, overreliance on it may not be sustainable. A balanced growth strategy should also strengthen investment, exports, and industrial production to ensure long-term stability. The results on Capital Formation (lnCF) show a Positive and highly significant Impact on GDP (0.4027, SE = 0.0305). The coefficient suggests that a 1% increase in capital formation leads to a 0.4027% increase in GDP, reinforcing the classical economic argument that capital accumulation drives economic growth. This finding is consistent with studies by Javed (2021) and Prasetyo (2020), which emphasize the importance of investment in physical and human capital for long-term economic expansion.

**Table 7: Normalized Cointegrating Coefficients**

Variable	lnGDP	lnAGR	lnTRD	lnHHE	lnCF
Coefficient	1.0000	0.5264	-2.2065	1.8771	0.4027
Std. Error	-	(0.1375)	(0.2048)	(0.1125)	(0.0305)

Source: Author's Computation, 2024

### **Short-Run Dynamics and Error Correction Term (ECT)**

The estimated Vector Error Correction Model (VECM) equation provides insights into the short-run adjustments towards long-run equilibrium. The error correction term (ECT) is negative and statistically significant, confirming that GDP adjusts towards equilibrium in response to shocks in agriculture, trade, and capital formation. This result underscores the

importance of policy interventions that promote agricultural productivity and trade efficiency to ensure long-term economic stability.

## **CONCLUSION AND POLICY IMPLICATIONS**

This study employed a Vector Error Correction Model (VECM) to investigate the dynamic interrelationships between agricultural output, trade activities, household consumption expenditure, capital formation, and economic growth in Tanzania using time-series data spanning from 1970 to 2022. The Johansen cointegration test confirmed the presence of a long-run relationship among these variables, suggesting a stable equilibrium over time. The normalized cointegrating coefficients reveal that Agriculture (lnAGR), Household Expenditure (lnHHE) and Capital Formation (lnCF) have a positive and significant impact on GDP growth, while Trade (lnTRD) has a negative and significant impact on GDP growth.

The results strongly support the Heckscher-Ohlin model, which posits that countries tend to specialize in sectors where they have a comparative advantage. Tanzania's agricultural sector, abundance in natural resources and labour, demonstrates its role as a fundamental driver of trade and capital formation. Furthermore, the study corroborates endogenous growth theories, particularly the role of capital accumulation and technological progress in sustaining long-term economic expansion. The results suggested that capital formation through foreign direct investment (FDI), domestic savings, and infrastructure development serves as a crucial conduit for translating agricultural and trade growth into sustained economic advancement.

Cointegration among GDP, agricultural output, and trade volumes highlights the importance of these sectors in driving economic growth in Tanzania. Policy implications drawn from these findings indicate that agriculture and capital formation remain fundamental drivers of Tanzania's economic growth. Therefore, enhancements in agricultural productivity have a substantial positive impact on economic growth. This suggests that policies aimed at improving agricultural practices, technology, and infrastructure can significantly boost GDP. The strong link between agricultural output and GDP is well-documented in the literature, emphasizing agriculture's role in economic development. Furthermore, the findings indicate the importance of capital accumulation in driving economic growth. The policy should emphasise the importance of investment in physical and human capital for long-term economic expansion, which could stimulate higher economic growth. In addition, capital formation plays a pivotal role in economic expansion, necessitating policies that attract foreign direct investment (FDI), enhance domestic savings mobilization, and improve access to credit for

industrialisation and infrastructure development. Policymakers should prioritise strategies that link agricultural productivity with industrialisation, ensuring value addition across supply chains.

Despite providing valuable insights into the nexus of agriculture, trade, and capital dynamics in Tanzania's sustainable economic growth, this study has several limitations. First, data limitations, including availability, frequency, and potential inconsistencies, may affect the robustness of the findings. Second, the Vector Error Correction Model (VECM) relies on the assumption of cointegration, which, if weak, may impact the validity of long-run relationships.

Future research should explore the role of institutional quality, financial sector development, and climate change resilience in shaping the nexus between agriculture, trade, and economic growth. Additionally, employing alternative methodologies such as Structural VAR, Bayesian VAR, or panel VECM could provide deeper insights and enhance the robustness of the findings.

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## **Impact of Public External Debt and Trade Openness on the Employment Growth in Tanzania: 1990- 2022, An ARDL Model**

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### **Abstract**

*Public External Debt and Trade Openness can have significant impact on employment growth. This paper examined the impact of public external debt and trade openness on employment growth, using time series data from 1990 to 2022 obtained from the Bank of Tanzania and the World Bank. Stationarity tests, co-integration bound tests, and the ARDL Error Correction Model were employed for analysis. The results indicated that, in the long run, trade openness ( $\beta = -0.002$ ,  $p = 0.836$ ), external debt ( $\beta = -0.024$ ,  $p = 0.030$ ), and foreign reserves ( $\beta = -0.028$ ,  $p = 0.009$ ) have a negative impact on employment growth. Conversely, GDP growth ( $\beta = 0.04$ ,  $p = 0.026$ ), external debt servicing ( $\beta = 0.019$ ,  $p = 0.032$ ), and foreign direct investment (FDI) ( $\beta = 0.003$ ,  $p = 0.419$ ) contribute positively. The study concludes that both trade openness and external debt can impede employment growth if not managed judiciously. It recommends revising trade tariffs and policies to bolster local participation in international trade, as well as improving borrowing conditions to ensure that external debt is directed towards productive investments in the agriculture and manufacturing sectors. Furthermore, it is advisable to shorten external debt servicing frameworks to facilitate faster debt repayment and create additional employment opportunities.*

**Keywords:** *Trade Openness, public external debt, employment growth, Tanzania.*

### **INTRODUCTION**

The National Development Agenda for 2025 has outlined the necessity of maintaining equality in wealth generation and ensuring fair resource allocation to promote a high-quality standard of living across all aspects of education, culture, politics, legislation, and employment (United Republic of Tanzania, URT, 1995). Furthermore, investing in infrastructural projects such as road networks, water supply, telecommunications, and energy is crucial for attracting both foreign and local investment, fostering wealth creation, and generating employment opportunities (URT, 1995). The National Five-

Year Development Plan (2021/22 to 2025/2026) also emphasises the importance of engaging in both regional and global trade activities, which enable local products to be absorbed in terms of exports, thereby increasing employment opportunities (URT, 2021). Tanzania continues to face challenges with unemployment, with the unemployment rate recorded at approximately 3.7% in 1995, 3.1% in 2000, 3.2% in 2005, 3% in 2010, 2.2% in 2015, 2.8% in 2020, and 2.6% in 2023 (ILO, 2024).

Considering the economic context, many countries implement trade barriers, both tariff and non-tariff, to reach mutual agreements that safeguard local employment and enhance the country's global market share, as well as foreign capital inflow (Martes, 2018). Developing countries like Tanzania regulate imports to protect local infant industries while ensuring the presence of trade competition (Kirema, 2019). Martes (2018) notes that countries typically prefer tariffs to secure domestic jobs while also supporting the growth of international trade. High import costs raise prices for imported goods and services from abroad in comparison with domestic products, prompting local producers to increase production for both local markets and exports, thus generating employment and encouraging foreign capital inflow. Tanzania's export and import profile has fluctuated, with import volumes consistently surpassing exports. In June 2010, exports of goods were recorded at USD 3,754.2 million, while imports amounted to USD 6,570.3 million. By June 2023, goods and services exports had risen substantially to USD 12,767.6 million, compared to USD 11,004.1 million in June 2022. Imports at the end of June 2023 were recorded at USD 17,007.2 million, compared to approximately USD 13,715.7 million in June 2022 (URT, 2010; 2023).

The higher level of imports relative to exports has resulted into significant import bills, especially for petroleum products, fertilisers, freight charges, and machinery, exacerbating current account deficits and leading to a shortage of foreign exchange reserves. This, in turn, diminishes both investment and employment opportunities in the country (URT, 2023). Sanjo et al. (2022) pointed out that trade barriers pose a significant challenge to the economy in maintaining opportunities for openness. Likewise, Kirema (2019) noted that local firms tend to disappear as domestic companies compete with advanced foreign firms, diminishing the employment landscape. However, Ngouhouo and Nchofoung (2021) and Martes (2019) indicated that openness to trade creates job opportunities for both importing and exporting countries by increasing demand for goods and services, thereby enhancing production processes. Sanjo et al. (2022) identified technology diffusion in production as the most significant factor facilitating trade openness.

Furthermore, Tanzania's fiscal policy has progressed towards increasing revenue collections by raising net taxes, expanding the tax base, and enhancing tax administration. In 2009, the business and investment climate improved, resulting in greater accountability among tax collectors and taxpayers. During the financial year 2012/2013, Electronic Fiscal Devices (EFDs) were introduced, alongside the Block Management System and tax audits conducted by the Tanzania Revenue Authority (TRA) (URT, 2013). Despite efforts to improve revenue collections, Tanzania has been experiencing a budget deficit. For example, it was reported that in 2013/2014, the government deficit was 4.5% of Gross Domestic Product (GDP); in 2014/2015, it was 3.3%; in 2015/2016, approximately 3.6%; in 2020/2021, it reached 3.9%; and in 2022/23, the government recorded a budget deficit of 4.2% of GDP (URT, 2010, 2023).

External debt has been utilised to finance this budget deficit (URT, 2010; 2023). Ijirshar (2016) demonstrated that developing economies often face insufficient capital, leading them to borrow to supplement their investment and savings. External debt rose to USD 21,917 million by June 2019, increased to USD 25,519 million by June 2021, and reached approximately USD 30,125 million by June 2023. This increase has been primarily attributed to infrastructure projects, including the Julius Nyerere hydropower dam and the standard gauge railway. However, the debt burden remains within acceptable thresholds, posing a moderate risk of debt distress (URT, 2023). The high external debt portfolio in the country contributes to balance of payments deficits through increased external debt servicing, further diminishing productive investment, which jeopardises economic growth and employment creation. Alnaa and Matey (2023) indicated that African countries have accumulated unjustified levels of external debt, which are often allocated to consumable projects, thereby failing to create opportunities for employment.

Tanzania's economy has been involved in international trade, where competition is not always free and fair. Its external debt profile has been increasing over the last decade as an alternative to financing the budget deficit. Therefore, this study examined the impacts of trade openness and external debt on employment growth from 1990 to 2022, analysing how changes in both trade openness and external debt affect employment growth in the country.

## **LITERATURE REVIEW**

### **Theoretical Review**

This paper draws on Keynesian economics (1936), where Keynes identified effective demand as the foundation of employment theory, asserting that

demand generates its supply. He used the aggregate supply and demand approach to determine full employment equilibrium. Effective demand refers to the income level where total demand and supply balance, comprising consumer and investment spending. Aggregate demand represents the total demand for goods and services in an economy over a year, while aggregate supply (or national income) reflects the monetary value of all goods and services produced. Keynes proposed three equilibrium levels: full employment, less than full employment, and more than full employment. The theory advocates for the effective use of fiscal instruments, such as reducing tax rates and increasing government spending, alongside monetary instruments like lowering bank rates, minimising reserve ratios, and purchasing government assets to remedy deficient demand or enhance export activities. Furthermore, Keynes contended that to address an inflationary gap, society could also implement fiscal policies that include raising tax rates and reducing government spending. Furthermore, it may include monetary policy measures, such as increasing bank rates, adjusting reserve ratios, selling government securities, and promoting imports, as noted by Mhenwa, Ngaruko, and Lyanga (2024), and Ngouhouo and Nchofoung (2021). This theory is pertinent to the study as it employs openness to trade (the sum of exports and imports relative to GDP) to examine how changes in trade openness impact employment growth in the country.

Additionally, the debt overhang theory, established by Krugman in 1988, highlights how excessive external debt in developing countries diverts funds from new investments to debt servicing. This burden adversely affects both public and private investments, stifling economic growth. To mitigate this issue, measures such as reducing the principal amount, reassessing loan terms, and lowering interest rates are recommended, as noted by Alnaa and Matey (2023). The debt overhang theory is directly linked to Keynesian theory in its pursuit to examine how accumulated debt impacts employment growth.

### **Openness to Trade and Employment Growth**

Using empirical evidence, Onifade et al. (2020) revisited the trade and unemployment nexus in Nigeria. The study found a direct relationship between trade openness and unemployment, demonstrating that most developing economies are import-oriented, where local manufacturers face significant competition, leading to unemployment. Asaleye et al. (2017) investigated trade openness and employment using the Vector Error Correction Model. The study demonstrated a long-term indirect relationship between trade openness and employment growth, arguing that the degree of competition is crucial in the context of international trade. Additionally,

Kirema (2019) examined the impact of trade openness on unemployment in Kenya from 1970 to 2017. Using multiple regression analysis, the study revealed an inverse relationship between exports and imports with unemployment, while GDP and openness to trade were positively related to unemployment. It was further argued that many companies in developing economies utilise sophisticated technology from abroad with which local citizens are not familiar; consequently, the manpower employed tends to come from outside, thereby minimising the employment profile.

Conversely, research conducted by Ngouhouo and Nchofoung (2021) in Cameroon examined the impact of trade openness on unemployment. The study confirmed that trade openness positively affects employment, as it increases both demand and supply, leading to higher GDP and greater employment opportunities. Similarly, Alkhateeb et al. (2021) explored the relationship between trade openness and employment in Saudi Arabia. Using the Auto-Regressive Distributed Lag Model (ARDL) for data spanning from 1980 to 2015, the study indicated a positive correlation between trade openness and employment growth. It was further argued that Saudi Arabia's economy, as an oil exporter, generates surpluses that facilitate sound employment creation. Martes (2018) investigated both the short-term and long-term effects of trade openness on unemployment. The study established that trade openness reduces unemployment, as it ensures the availability of more goods and services, thereby motivating domestic firms to increase production and hire more labour.

In Tanzania, some reviewed studies focused on the impact of trade openness on economic growth, such as the research conducted by Sanjo et al. (2022), which examined the effects of trade openness and the real exchange rate on economic growth in Tanzania, using time series data from 1970 to 2016. Employing the ARDL model, the study supported the notion that trade openness stimulates economic growth, as, in the long run, it bolsters domestic production, enhances export activities, and promotes economic development. Notably, Miku et al. (2021) studied the causal relationship between trade openness and economic growth from 1970 to 2021, using the Vector Autoregressive Model. The study discovered that trade openness induces greater growth through a multiplier effect. An increase in GDP leads to higher consumption, followed by increased investment spending and employment, which in turn creates further growth. Yusuf and Omar (2019), utilising the Vector Error Correction Model (VECM), examined the relationship between trade openness and economic growth in Tanzania from 1981 to 2017, establishing a direct correlation between trade openness and economic growth. The study further posited that Tanzania, alongside other

countries, recognised the potential of international trade by facilitating its penetration and adopting policies aimed at fostering economic growth during the 1990s.

### **External Debt and Employment Growth**

Some reviewed literature on external debt presents diverse conclusions, as noted by Alnaa and Matey (2023), and Ijirshar et al. (2016). The effect of external debt, the unemployment rate, and inflation on economic growth was studied by Evans (2022). The study employed regression analysis with data from 1991 to 2021, establishing that external debt directly affected economic growth, while unemployment and inflation adversely impacted it. Similarly, Alnaa and Matey (2023) examined the dynamic relationship between unemployment and external debt in Sub-Saharan Africa. Using panel data covering 25 countries, they found that public debt increased unemployment. Tang and Issahaku (2024) conducted a study using panel data from 26 countries and employed the System Generalised Method of Moments (SGMM), indicating that debt accumulation by Sub-Saharan countries increases unemployment growth. Similar findings by Saani et al. (2023) in Ghana, which utilised data from 1992 to 2022 to study public debt, inflation, and unemployment, established a direct relationship between public debt and unemployment. The study further suggested that, to mitigate inflation, the government should favour domestic debt over external debt.

Warsame and Mohamed (2024) studied the role of external debt on the determinants of unemployment in Somalia from 1991 to 2019. Using an ARDL model, their results indicated a direct relationship between public debt and unemployment. Ademola (2023) conducted a study on external debt and economic growth in Nigeria. Using VECM, it was established that there is an inverse relationship between external debt and economic growth, with arguments suggesting that the Nigerian economy has failed to fully utilise the potential of debt to enhance production. Awan and Qasim (2020) studied the impact of external debt on economic growth in Pakistan from 1980 to 2017. The study used the ARDL model and revealed that population growth, imports, external debt servicing, and external debt had diverse effects on Gross Domestic Product (GDP). It was suggested that Pakistan should create more revenue through exports and reduce the amount of borrowing. In contrast, Ijirshar et al. (2016) examined the relationship between external debt and economic growth in Nigeria, using data from 1981 to 2014. They found out that external debt was positively correlated with economic growth in both the short and long run, although external debt servicing had a negative effect.



The presence of diverse findings on trade openness and external debt concerning employment growth motivated this study, given that countries differ in their macroeconomic environments, making generalisation of findings inappropriate. Alkhateeb (2017) and Alnaa and Matey (2023) questioned the degree of openness while participating in international trade, while others indicated that the management of external resources is crucial for job creation. On the other hand, unemployment remains a challenge, and some literature from Tanzania has documented the effects of trade openness and external debt on economic growth, including the work of Yusuf and Omar (2019), Mikuet al. (2021), and Sanjo et al. (2022). To fulfill this gap this paper examined the impact of trade openness and external debt on employment growth, with the following hypotheses:

- i. *there was a significant positive relationship between openness to trade and employment growth;*
- ii. *there was a significant positive relationship between public external debt and employment growth; and*
- iii. *there was a significant positive relationship between other macroeconomic factors (GDP growth, external debt servicing, foreign direct investment (FDI), and foreign reserves) and employment growth.*

## **METHODOLOGY**

### **Types, Sources and Measurement of Data**

The annual secondary data from 1990 to 2022 were sourced from the Bank of Tanzania and the World Bank. This paper utilised this timeframe as it was characterised by significant fiscal and monetary reforms. Employment growth and GDP growth were measured as percentages, while openness to trade was expressed as a percentage of GDP. External debt was reported in millions of TZS, and external debt service was measured as a percentage of Gross National Income. Foreign Direct Investment was quantified in millions of USD, and foreign reserves were measured in current US dollars, including gold. The data were modified from the work of Alkhateeb (2017), Awan and Qasim (2020), and Alnaa and Matey (2023).

### **Theoretical Model Specification**

According to the Keynesian general theory of employment, interest, and money, national income is equivalent to employment growth, which is influenced by aggregate demand and aggregate supply. When aggregate demand and supply are equal that is effective demand, represents the equilibrium at the full employment level. The objective of this paper is to evaluate the impact of macroeconomic factors, specifically fiscal and



monetary factors, on employment growth, as adopted from Phipps and Sheep (1995).

$$\ln E = f \ln(Y, RW, TFP) \dots\dots\dots 1$$

Where  $\ln$  (RW) is the log of the real wage,  $\ln$  (E) is the log of the employment number,  $\ln$  Y is the log of economic growth as measured by gross domestic product, and TFP is total factor productivity. It is widely acknowledged that macroeconomic factors, specifically fiscal and monetary policies, are the primary drivers of a country's economic growth and employment. These factors are, in turn, influenced by both internal and external macroeconomic conditions. Such conditions include external debt, openness to trade, external debt servicing, foreign direct investment (FDI), and foreign reserves, all of which can impact output (Y) at a given point in time, as noted by Phipps and Sheen (1995), thereby leading to the establishment of Equation 2.

$$\ln E = f \ln(RW, FF, MF) \dots\dots\dots 2$$

Therefore FF and MF are vectors comprising fiscal factor and monetary factors indirectly influenced by both internal and external factors like external debt and openness to trade.

### Model Specification

The paper examined the impact of public external debt and trade openness on employment growth. To test the hypothesis of a significant positive relationship between trade openness, external debt, and employment growth, the paper employed additional control variables, including GDP growth, public external debt servicing, foreign reserves, and foreign direct investment (FDI). All variables were transformed to logarithmic form to ensure the stability of both the mean and variance. Consequently, the study analysed the econometric model presented in Equation 3, as referenced by Warsame and Mohamed (2024), Alnaa and Matey (2023), and Alkhateeb et al. (2017).

$$Emp = \alpha_0 + \beta_1 GDP + \beta_2 Ext + \beta_3 Opp + \beta_3 ExtS + \beta_4 FDI + \beta_5 Fr + \varepsilon_0 \dots\dots\dots 3$$

Where Emp stand for employment growth,  $\alpha$  was constant, GDP was growth rate,  $Ext$  is public external debt,  $Opp$  is openness to trade  $ExtS$  is public external debt servicing,  $FDI$  is foreign direct investment,  $Fr$  is foreign reserve and  $\varepsilon_0$  is stochastic term. Prior to the results estimation all variables

are expected to positively impact employment growth, therefore there is positive significant relationship between openness to trade and external debt were the hypothesis developend.

### Time Series Data Quality Tests

Following the methodology established by Dickey and Fuller (1979) and further supported by Micheni and Muturi (2019) and Onwuka (2021), all variables in the model were tested for stationarity using the widely adopted Augmented Dickey-Fuller (ADF) test.

$$\Delta C_t = \alpha_0 + \alpha_1 C_{t-1} + \Delta_{t-1} \alpha_2 C_{t-1} + \varepsilon_t \dots \dots \dots 4$$

Where  $C_t$  = Presence of non-stationary (unit root) at time t,  $\Delta_{t-1}$  = indicate first difference with lags,  $\varepsilon_t$  = adjustment variable of the errors of autocorrelation and  $\alpha_0, \alpha_1, \alpha_2$  indicated the estimates. The decision was under the null hypothesis,  $\alpha_2 = 0$  there is a unit root that the series is non stationary while alternative hypothesis,  $\alpha_2 < 0$  for non unit root that the series is stationary.

An Autoregressive Distributed Lag (ARDL) bounds test for co-integration was employed to examine the long-run relationship among the variables under investigation. Awan and Qasim (2020) and Alkhateeb et al. (2021) utilised the F-statistic to test the null hypothesis of no long-run relationship against the alternative hypothesis asserting the presence of a long-run relationship among the variables. The null hypothesis of no co-integration is rejected if the F-statistic falls below the lower bound critical value and exceeds the upper bound critical value, while it is not rejected if the F-statistic is greater than both the lower and upper bound critical values (Pesaran et al., 2001; Onifade et al., 2020; Sanjo et al., 2022). The Error Correction Model (ECM) was applied to estimate short-run parameters in multiple linear regression models. Mwamkonko (2023) and Onwuka (2021) indicated the presence of a co-integration relationship, suggesting an association among the variables. Generally, the ECM with a deterministic trend is expressed as shown in Equation 5.

$$\Delta Y_t = \alpha + \theta Y_{t-1} + \pi_t + \sum \tau_t \Delta Y_t + \varepsilon_t \dots \dots \dots 5$$

Where  $\alpha = \alpha_1 - y\alpha_2$  and  $\pi = \pi_1 - y\pi_2$ . Hence equation (5) can further be rewritten as

$$\Delta Y_t = \alpha = \alpha_1 + \pi_1 t + y(\beta \wedge' Y_{t-1} - \alpha_2 + \pi_2 t) + \sum \tau_t \Delta Y_{t-1} + \varepsilon_t \dots \dots \dots 6$$

The implications of equation (6) stem from the trend point at which the summation expression is employed to eliminate serial correlation. The condensed forms of the VEC model, which link employment growth with other independent variables, are delineated in equation (7).

$$\Delta Z_t = \beta_0 + \sum Z_{t-1} + \sum \beta_1 \Delta X_{t-1} + \beta_2 \Delta X_{t-1} + \beta_3 \Delta X_{t-1} + \dots + \sum \beta_n \Delta X_{t-n} + nECT_{t-1} + \varepsilon_t \dots \dots \dots 7$$

Where  $Z_t$  was exogenous variable,  $\beta_0$  was constant parameter,  $\beta_1, \beta_2, \beta_3, \beta_4 \dots \dots \beta_n$  are equilibrium convergence short-run dynamic coefficients,  $t$  was time trend,  $X_t$  selected explanatory variables and  $n$  was the speed of adjustment,  $ECT_{t-1}$  was the lagged error correction term and  $\varepsilon_t$  was a disturbance terms (Onwuka, 2021, Mwamkonko, 2023). Now the new employment growth VEC model specification equation was written as equation 8.

$$\Delta Emp_t = \beta_0 + \Delta Emp_{t-1} + \sum \beta_1 GDP_{t-1} + \sum \beta_2 \Delta Ext_{t-1} + \sum \beta_3 \Delta Opp_{t-1} + \sum \beta_4 \Delta ExtS_{t-1} + \sum \beta_5 \Delta FDI_{t-1} + \sum \beta_6 \Delta Fr_{t-1} + nECT_{t-1} + \varepsilon_t \dots \dots \dots 8$$

Where  $t-1$  =lag length reduced by 1,  $\beta_1 \dots \beta_6$  =short-run dynamic coefficients of the model' adjustment long-run equilibrium,  $n$  = speed of adjustment parameters with a negative sign,  $ECT_{t-1}$  = the error correction term was the lagged value of the residuals obtained from co integrating regression of the employment growth on the regressors,  $\varepsilon_t$  was disturbance terms and model variables remained identical as previously defined in equation 3. The Autoregressive Distributed Lag Model (ARDL) was employed to estimate the long-run relationship between the variables. This approach incorporates lags of both the regressors and the regressand, facilitating the analysis of variables with mixed orders of integration, specifically  $I(1)$  and  $I(0)$ . However, it does not account for the effects of variables at order two,  $I(2)$ . It is particularly suitable for small sample sizes. Additionally, the ARDL captures both long-run and short-run dynamics through the Error Correction Model (ECM), as noted by Alkhateeb et al. (2021) and Sanjo et al. (2022). Equation 9 presents the ARDL.

$$\begin{aligned} \Delta \log Emp_t = & \beta_0 + \Delta \log Emp_{t-1} + \beta_1 GDP_{t-1} + \beta_2 Opp_{t-1} + \beta_3 Ext_{t-1} + \beta_4 ExtS_{t-1} + \beta_5 FDI_{t-1} \\ & + \beta_6 Fr_{t-1} + \sum_{y=1}^r \beta_9 \Delta Emp + \sum_{y=0}^r \beta_{10} \Delta GDP_{t-1} + \sum_{y=0}^r \beta_{11} \Delta Opp_{t-1} + \sum_{y=0}^r \beta_{12} \Delta ExtS_{t-1} + \sum_{y=0}^r \beta_{13} \Delta FDI_{t-1} + \\ & \sum_{y=0}^r \beta_{14} \Delta Fr_{t-1} + \varepsilon_t, \dots, 9 \end{aligned}$$

Where  $r$  represents the ARDL extreme lag length,  $\Delta$  denotes the first difference operator, and the model variables remain consistent with those previously defined in Equation 3. Granger causality tests are applied to determine the direction of causality among the variables in the study (Engle and Granger, 1987). Alternatively, the test is employed to assess whether one trend can be used to predict another. Equation (10) continues to capture the directional relationship between employment growth and the other independent variables.

$$\Delta \begin{bmatrix} Emp \\ GDP \\ Opp \\ Ext \end{bmatrix} = \begin{bmatrix} m_1 \\ m_2 \\ m_3 \\ m_4 \end{bmatrix} + \sum_{i=1}^y \begin{bmatrix} \omega_{1i} \eta_{1i} \delta_{1i} \rho_{1i} \\ \omega_{2i} \eta_{2i} \delta_{2i} \rho_{2i} \\ \omega_{3i} \eta_{3i} \delta_{3i} \rho_{3i} \\ \omega_{4i} \eta_{4i} \delta_{4i} \rho_{4i} \end{bmatrix} X \begin{bmatrix} Emp_{t-1} \\ GDP_{t-1} \\ Opp_{t-1} \\ Ext_{t-1} \end{bmatrix} + \begin{bmatrix} m_1 \\ m_2 \\ m_3 \\ m_4 \end{bmatrix} (ECT_{t-1}) + \begin{bmatrix} \varepsilon_1 \\ \varepsilon_2 \\ \varepsilon_3 \\ \varepsilon_4 \end{bmatrix} \dots 10$$

Following Sanjo et al.(2022), where by the variables were earlier defined,  $ECT_{t-1}$  is error correction lag term from long run,  $\Delta$  is an operator lag,  $y$  represent number of lags while  $\varepsilon_1 \dots \varepsilon_4$  are stochastic error term. The null hypotheses tested were as follows:  $H_0$ : the lagged values of employment do not Granger cause GDP growth, openness to trade, and external debt;  $H_0$ : the lagged values of GDP growth do not Granger cause employment, openness to trade, and external , debt;  $H_0$ : the lagged values of openness to trade do not Granger cause employment, GDP growth, and external debt; and  $H_0$ : the lagged values of external debt do not Granger cause employment, GDP growth, and openness to trade.

## RESULTS AND DISCUSSIONS

### Descriptive Statistics

A statistical summary was conducted to examine the behaviour of the figures throughout the entire study period. The statistical descriptive summary is crucial as it provides a clear representation of the data in terms of magnitude and corresponding trends, as stated by Yusuf and Omar (2019). The objective was to establish a data summary that facilitates the understanding of the distribution, movement, and arrangement of the data (Awan and Qasim, 2020).

**Table 1: Statistical Summary Results 1990 – 2022**

	Emp	GDP	Opp	Ext	ExtS	FDI	Fr
Mean	86	5.54	41.52	11.82	1.90	748.26	2650.58
Maximum	90	7.9	66	30.2	5.3	2087.3	6386
Minimum	84	0.4	24	4.1	0.3	10	192
Median	87	6.2	42	7.8	1.5	581.51	2307
Standard deviation	2.2	1.96	12.01	7.48	1.58	599	1981.27
Skewness	-0.21	-0.97	0.42	1.18	0.89	0.463	0.22
Kurtosis	1.46	3.09	2.27	3.01	2.44	2.15	1.67
Observations	33	33	33	33	33	33	33

**Source:** Author Compilation 2024, Data from STATA

The mean value for employment growth, as indicated in Table 1, was approximately 86%, with a standard deviation of 2.2%. The mean value for GDP growth was about 5.54%, accompanied by a standard deviation of 1.19%. The mean value of openness to trade was recorded at 41.52%, with a standard deviation of 12.01%. The mean value of external trade (Ext) was estimated to be 11.82 million Tanzanian shillings, with a standard deviation of approximately 7.48 million. The mean value for external debt servicing (as a percentage of GNI) was estimated at 1.90, while the standard deviation was 1.58. Furthermore, the mean value of foreign direct investment (FDI) was 748.26 million USD, with a standard deviation of 599 million. Additionally, the average value for foreign reserves (Fr) in Tanzania was approximately 2,650.58 million USD, exhibiting high variation of about 1,981.27 million. The kurtosis values for employment growth, GDP growth, openness, external trade, external debt servicing, FDI, and foreign reserves were estimated at 1.46, 3.09, 2.27, 3.01, 2.44, 2.15, and 1.67, respectively. The data indicated normal distributions, as all kurtosis values were close to 3 (Yusuf and Omar, 2019). The skewness for employment growth was recorded at -0.21, for GDP at -0.97, for openness at 0.42, for external trade at 1.18, for external debt servicing at 0.89, for FDI at 0.463, and for foreign reserves at 0.22.

### **Openness to Trade and External Debt Root Test**

The logs of employment growth, GDP growth, openness to trade, external debt, and external services were not integrated at the first order  $I(0)$ , with the exception of the log of foreign direct investment, which was stationary at level  $I(0)$ . The non-stationary data were transformed, resulting in all becoming stationary at the first difference. (For further details, please see Table 2).

**Table 2: Unit Root at Level and First Difference**

Variables	At Level				At First Difference				
	With no Trend		With Trend		With no Trend		With Trend		Conclusion
	ADF Calculated	ADF Critical at 5%	ADF Calculated	ADF Critical at 5%	ADF Calculated	ADF Critical at 5%	ADF Calculated	ADF Critical at 5%	
lnEmp	-0.627	-2.980	-1.902	-3.572	-6.878	-2.983	-6.770	-3.576	I(1)
lnGDP	-2.186	-2.980	-2.827	-3.572	-5.518	-2.983	-5.426	-3.576	I(1)
lnOpp	-1.398	-2.980	-1.429	-3.572	-3.596	-2.983	-3.539	-3.576	I(1)
lnExt	0.234	-2.980	-1.358	-3.572	-5.116	-2.983	-5.292	-3.576	I(1)
lnExtS	-1.246	-2.980	-0.331	-3.572	-4.107	-2.983	-4.625	-3.576	I(1)
lnFDI	-2.589	-2.980	-2.173	-3.572	-7.520	-2.983	-8.427	-3.576	I(0)
lnFr	-1.859	-2.980	-1.258	-3.572	-8.936	-2.983	-10.276	-3.576	I(1)

**Source:** Authors compilation with data from STATA (2024),

### Openness to Trade and External Debt ARDL Bound Test Results

The F-statistic was estimated at 5.627, surpassing both the lower and upper bounds at the 5% significance level, indicating that all studied variables were co-integrated. The variables exhibited a significant long-run relationship, and the data estimation was more appropriately conducted using an error correction model.

**Table 3: Openness to Trade and External Debt ARDL Bound Test Results**

Test Statistic	Value	Lower bound	Upper bound	Significant level	Decision
F-Statistics	5.627	3.15	4.43	0.01	Co integration
		2.45	3.61	0.05	Co integration
		2.12	3.23	0.1	Co integration

**Source:** Author compilation, (2024)

### ARDL Long run and Short run Relationship Estimates

#### Impact of Trade Openness on Employment Growth

In Table 4, the long-run coefficient of trade openness (Opp) demonstrated an inverse relationship with employment growth (Emp) of 0.88%; however, this finding was statistically insignificant at the 5% level. The results suggest that as trade openness increases in the long run, employment growth decreases. In the short run, a direct relationship between trade openness and employment was established, with the coefficient being statistically significant at the 5% level at lag one. It was hypothesised that openness to trade has an undesirable relationship with employment growth in the long run during the studied period.

The inverse relationship between employment and trade openness in the long run can be attributed to the fact that developing economies like Tanzania heavily rely on the importation of goods and services. The local manufacturing sector does not generate significant employment, as most goods and services are produced abroad (URT 2010; 2023). Additionally, the country primarily exports raw materials rather than high-quality finished goods, yielding less value to the economy and limiting further investment and employment opportunities. Like other developing economies, Tanzania utilises sophisticated technology in production from developed countries, which is often unfamiliar to local job seekers (Kirema, 2019). These findings align with Keynesian theory, which posits that to rectify unemployment rates, countries must ensure that the export sector grows relative to the import sector. Tanzania continues to experience a high volume of imports, and the costs of these imports in terms of foreign currency are substantial, thereby limiting the generation of further employment opportunities.



These results are supported by Onifade et al. (2020), Asaleye et al. (2017), Kamar et al. (2019), Kirema (2019), and Edo and Oigiangbe (2024), who contended that the presence of openness to trade exposes more African countries to external shocks, which endanger job creation. However, the findings diverge from those of Martes (2018), Ngouhouo and Nchofoung (2021), and Alkhateeb et al. (2021), where it was argued that trade typically generates demand for goods and services, which in turn stimulates production and increases demand for labour. Similarly, openness to trade increases competition among local producers, leading to domestic surplus and greater exportation, which facilitates the expansion of economic activities and employment growth.

**Table 4: Openness to Trade and External Debt ARDL Long run and Short run Relationship Estimates**

Variables	Co-efficient	Std Error	T-Statistic	Probability
InGDP	0.040393	0.0163017	2.48	0.026**
InOpp	-0.0018485	0.0087951	-0.21	0.836
InExt	-0.0236457	0.0098441	-2.40	0.030**
InExtS	0.0189846	0.008004	2.37	0.032**
InFDI	0.003379	0.004066	0.83	0.419
InFr	-0.0278302	0.009298	-2.99	0.009*
Constant	2.226136	0.657155	3.39	0.004*
DlnGDP <sub>1</sub>	-0.0084489	0.0032342	-2.61	0.020**
DlnGDP <sub>2</sub>	-0.0096259	0.0029109	-3.31	0.005**
DlnOpp <sub>1</sub>	0.0190136	0.0051354	3.70	0.002**
DlnExt <sub>1</sub>	0.0187432	0.0052539	3.57	0.003**
DlnExt <sub>2</sub>	0.0095298	0.0052984	1.80	0.092***
DlnExtS <sub>1</sub>	-0.0065094	0.0029534	-2.20	0.044**
DlnExtS <sub>2</sub>	-0.0038647	0.0026171	-1.48	0.160
ECT	-0.4796879	0.1405054	-3.41	0.004**

Sample: 1993 - 2022 ARDL(1,2,1,2,2,0,0) regression , Number of obs = 30, R-squared = 0.7447 , Adj R-squared = 0.5064, (\*), (\*\*) and (\*\*\*) indicate 1 %, 5% and 10% level of significant, respectively, Durbin-Watson d-statistic= (2.255395), Heteroskedasticity Test (White's Test) = 0.4140, ARCH Test = 0.7862

Source: Authors Compilation with data from STATA (2024)

### **Impact of Public External Debt on Employment Growth**

The long-run coefficient of external debt (Ext) was found to have a negative relationship with employment growth (Emp) and was statistically significant at the 5% level. In contrast, the short-run analysis revealed a direct relationship between external debt and employment growth, with results being statistically significant at the 5% level for lag one, while results for lag two were not significant at the 5% level.

URT (2023) reported that the increase in external debt was due to infrastructural projects, such as the standard gauge railway and the Julius Nyerere hydropower dam. It is evident that in the short run, temporary contracts tend to create jobs due to ongoing construction activities. However, in the long run, as these short-term contracts expire, the unemployment rate increases. It has been demonstrated that as the country continues to accumulate external funds, employment opportunities deteriorate in the long run (Alnaa and Matey, 2023). The considerable accumulation of external debt suggests that the funds are not being allocated to projects that create employment; rather, they are primarily used for consumable projects. The effectiveness of directing external borrowing into productive sectors, such as manufacturing, is crucial, as these sectors tend to add value and subsequently increase local production. Moreover, servicing external debt will increase, necessitating payment through exports, remittances, donations, or further borrowing to repay previous loans. These actions typically hamper the balance of payments status and ultimately lead to a crowding-out effect for both the public and private sectors, further deteriorating employment creation (Ademola, 2023; Awan and Qasim, 2020).

Overall, the findings align with the debt overhang theory, which posits that external debt can create a burden when repaying it through foreign earnings, rather than utilising such funds to generate new investments. This is corroborated by the works of Edo and Oigiangbe (2024), Evans (2022), Alnaa and Matey (2023), Tang and Issahaku (2024), Wasarme et al. (2024), Saani et al. (2023), Ademola (2023), and Awan and Qasim (2020). It was noted that debt creditors typically impose several restrictions on loans that do not initiate employment creation, thereby increasing unemployment in the long run. Similarly, this inverse relationship indicates that the economy is not effectively directing external funds to the most productive resources. Nevertheless, servicing external debt tends to increase economic burden and consequently diminish employment. The findings defer to Nwannebu et al. (2016) and Ijirshar et al. (2016), which indicated that countries with a higher export profile can service their debt while creating employment opportunities. In line with openness to trade, this paper hypothesised that there is a negative significant relationship between external debt and employment growth in the long run over the observed period.

### **Impact of Other Macroeconomic Factors on Employment Growth**

In the long run, the coefficient of GDP growth was positive and statistically significant at the 5% precision level during the studied period. Conversely, in the short run, GDP growth was inversely related to employment growth across both lags, with results being statistically significant at the 5% level.

An increase in GDP growth in the long run indicates an expansion of economic activities, leading to heightened demand for labour. This is due to labour being a "derived" demand, meaning that as the demand for goods and services rises, so too does the demand for labour, thereby creating additional job opportunities. Warsame and Mohamed (2024), along with Evans (2022), found an inverse relationship between GDP growth and unemployment. Kamar (2019) argued that GDP is inversely related to employment growth because African countries are characterised by uneven employment due to large informal sectors.

Additionally, a positive relationship between foreign direct investment (FDI) and employment growth has been established, although the results were found to be insignificant. This influx of investment typically results in greater production and demand for labour. Adegboye (2020), Warsame and Mohamed (2024), and Sanjo et al. (2022) found that both FDI and economic growth contribute to increased employment. It was pointed out that a favourable environment ensures investments that stimulate economic growth. Kamar et al. (2019) established that FDI is positively related to employment growth in advanced economies but not in Africa due to institutional management challenges. Furthermore, it was noted that FDI in Egypt was inversely related to employment because the large inflow was concentrated in agriculture, services, and privatisation, where there has been a transformation towards capital-intensive production techniques, ultimately minimizing job creation.

The coefficient of external debt servicing (ExtS) exhibited a positive and significant relationship with employment growth in the long run, and it was statistically significant at the 5% level. These results contrast with those for external debt (Ext) during the same study period, indicating that while external debt servicing directly increases employment growth, external debt has a detrimental effect. The positive nature of external debt servicing suggests that the burden of repaying loans remains moderate, particularly given the cancellation of external debt by multilateral donors to heavily indebted countries (URT, 2010). Notably, Nwannebu et al. (2016), Ademola (2023), and Ijishar (2016) indicated an indirect relationship between debt stock services and economic growth, contending that servicing the debt increases the loss of foreign exchange, which could alternatively be allocated to expanding further investment and creating more employment.

Furthermore, the estimated coefficient of foreign reserves was negative and statistically significant concerning employment in Tanzania in the long run, although it was statistically insignificant at the 5% level. Foreign reserves

were found to diminish the employment profile in Tanzania, likely due to lower export volumes relative to imports, resulting in higher importation costs (URT, 2023). Moreover, Ademola (2023) established that foreign reserves are used to settle balance of payments instability and ensure stability of the currency in the exchange rate market during economic downturns.

The Error Correction Mechanism Term (ECT) was estimated to be -48% and statistically significant at the 5% level. The negative coefficient, statistically significant at the 5% level, indicates that in the event of a 1% shock from the previous period, approximately 48% of the shock can be corrected to adjust employment growth. In the long run, the system will adjust by 48% to any occurrence of long-run distortion (for details, see Table 4).

### **Granger Causality**

The established direction of causality validated that employment growth Granger-caused the growth rate(GDP) and trade openness during the studied period; however, employment growth did not Granger-cause external debt within the Tanzanian context during the same timeframe. In summary, employment Granger-caused all the factors studied in the Tanzanian case (appendix 1). Furthermore, a bi-directional causality was identified between trade openness and employment growth. A uni-directional causality was established between trade openness and GDP growth, running from GDP growth to trade openness. The results also indicated that trade openness did not Granger-cause external debt in Tanzania. Overall, it was demonstrated that trade openness effectively acted as a causal factor for all the studied variables within the Tanzanian environment, as noted by Sanjo et al. (2022), who also found a uni-directional relationship between trade openness and GDP growth, while Yusuf and Omar (2019) reported no existence of a relationship between trade openness and the GDP growth rate.

Additionally, a uni-directional relationship was observed between external debt and employment growth in Tanzania, running from external debt to employment growth. It was also shown that external debt did not Granger-cause GDP growth, while a uni-directional relationship existed between external debt and trade openness, running from external debt to trade openness. Overall, it was suggested that external debt Granger-caused all the factors studied during the specified period in the Tanzanian environment, as Ademola (2023) identified a uni-directional causality between trade openness to trade and external debt.

### **CONCLUSION, RECOMMENDATIONS AND FURTHER STUDY**

The paper examined the impact of trade openness and external debt on employment growth using time series data from 1990 to 2022, sourced from

the Bank of Tanzania and World Bank indicators. Due to the presence of lagged variables, the ARDL bounds test of cointegration was employed to assess both short- and long-run effects using STATA software. The findings indicated that, in the long run, trade openness, external debt, and foreign reserves hinder employment growth in Tanzania, despite the expectation that trade liberalisation and debt accumulation would enhance job creation. Conversely, GDP growth, external debt servicing, and foreign direct investment (FDI) emerged as effective macroeconomic tools for employment generation. In the short run, GDP growth and external debt servicing negatively impacted employment, whereas trade openness and external debt contributed positively. The study concludes that these factors function as a double-edged sword, significantly impairing employment growth.

The inverse relationship between external debt and employment growth suggests that increased debt leads to higher debt servicing, which crowds out public investment and limits job creation. Redirecting external resources towards domestic sectors such as agriculture, manufacturing, and vocational training could enhance production, create surpluses, and improve the trade balance. Increased domestic production would reduce reliance on imports, boost local trade, and strengthen government revenue, thus aiding in budget deficit management (Yusuph & Omar, 2019; Sanjo et al., 2022). The paper recommends revising trade policies to eliminate barriers and enhance local participation in international trade. Additionally, borrowing should be restricted to productive investments rather than consumable projects, and debt servicing frameworks should prioritise short-term repayment strategies. Further research can examine the institutional management which hold the external resources and how they channel them in realizing their targeted goals. The studied variables can be altered by adopting export and import, the same applied to other variables to study how they affect employment growth in the country.

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## APPENDIX

### Appendix 1: Granger Causality Wald Tests Results

Dependent variable: *ln-employment growth*

Excluded	Chi-sq	Prob Value	Decision
GDP	23.869	0.000	Reject H <sub>0</sub>
Openness to trade	17.309	0.001	
Public external debt	3.476	0.324	
External debt servicing	4.9801	0.173	
FDI	18.579	0.000	
Foreign reserve	12.549	0.006	
ALL	86.492	0.000	

Dependent variable: *ln-GDP*

Employment growth	7.0469	0.070	Reject H <sub>0</sub>
Openness to trade	47.895	0.000	
Public external debt	20.502	0.000	
External debt servicing	11.555	0.009	
FDI	22.197	0.000	
Foreign reserve	9.7617	0.021	
ALL	305.41	0.000	

Dependent variable: *ln- Openness to trade*

Employment growth	8.3223	0.040	Reject H <sub>0</sub>
GDP	5.3177	0.150	
Public external debt	1.0352	0.793	
External debt servicing	5.5422	0.136	
FDI	13.008	0.005	
Foreign reserve	10.363	0.016	
ALL	65.467	0.000	

Dependent variable: *ln- Public external debt*

Employment growth	21.216	0.000	Reject H <sub>0</sub>
GDP	5.9508	0.114	
Openness to trade	10.503	0.015	
External debt servicing	32.499	0.000	
FDI	17.067	0.001	
Foreign reserve	2.4313	0.488	
ALL	116.88	0.000	

**Source:** Author's Compilation, 2024

## **Empowering Youth and Women Small and Medium Enterprises: A Study on Enhancing Government Loans Operations in Tanzania**

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### **Abstract**

*This study investigated the small and medium enterprises owned by youth and women, which received government loans from a local government authority in Kinondoni Dar es Salaam. Qualitative design was adopted for the study and used focus group discussions as a data collection tool. A total of four focus group discussions were conducted with participants ranging from six to nine. The results showed that Ward Executive Officers and Community Development Officers were sources of loan scheme information. The SMEs group adhered to its formation. The study revealed the suitability of certain business practices and environments. The study identified challenges impeding the development of SMEs, including discouragement from surrounding communities, insufficient business education, inadequate space for business ventures, low purchasing power among customers, competition, and insufficient capital. The study also disclosed that strategies for enhancing government loan operations to better empower youth and women's SMEs included augmenting the quantity of government loans, lengthening the repayment period, offering subsidies for successful SMEs, conducting regular training for entrepreneurs, and notifying the bank about loan reimbursement. The study concludes that, by empowering youth and women entrepreneurs, Tanzania can strengthen its economy and create more inclusive opportunities for development. The study recommends that the government and all relevant stakeholders enhance the business operations environments to bolster the SMEs established through government loans.*

**Keywords:** *Youth empowerment, women empowerment, Small Medium Enterprises, Government Loans operations,*

### **INTRODUCTION**

Small and medium enterprises (SMEs) are vital to economic development, particularly in emerging economies like Tanzania. Globally, SMEs account for a significant share of employment and contribute substantially to GDP, supporting innovation and socio-economic stability (World Bank, 2020). In Tanzania, SMEs comprise roughly 35% of GDP and provide critical

employment opportunities, especially for marginalized groups such as youth and women (URT, 2023). Recognizing the potential of youth and women-led SMEs to foster poverty reduction and economic growth, the Tanzanian Government has established loan programs specifically aimed at empowering these groups (Mori, 2014). By facilitating access to financial resources, these programs seek to enable youth and women entrepreneurs to develop sustainable businesses that contribute to broader economic objectives.

However, despite the accessible and supportive nature of government loan schemes, youth and women face various challenges in effectively obtaining and utilising those resources. Issues such as; limited knowledge of loan application procedures, complex compliance criteria for group formation, and challenges in meeting eligibility requirements are common (Kimani & Kombo, 2021). There is also little data on how these loan schemes affect youth and women SMEs and how well group formation and compliance criteria work.

Despite the strategic intent of government loans to empower youth and women, multiple challenges have limited their effectiveness. Entrepreneurs report difficulties in accessing reliable information about these loans, as well as obstacles in navigating the compliance requirements tied to group-based loan applications (Ngugi & Mutuku, 2017). These constraints lead to low participation rates and limited impact on SME growth, curtailing the broader goal of socio-economic empowerment. The need to understand the origins of information pertaining to these loans, the compliance processes, and the impacts of government loan practices is critical for devising a more inclusive and effective loan system. If these issues remain unaddressed, the government's goal of empowering youth and women SMEs may not be achieved.

The main objective of this study was to assess the government loan operations aimed at supporting youth and women-led SMEs in Tanzania. In particular, the study concentrated on the following specific objectives: (i) To ascertain the origins of information related to government loan schemes for youth and women SMEs; (ii) To evaluate compliance with the criteria used for SME group formation within government loan frameworks; (iii) To assess the impact of current government loan practices on youth and women SMEs; (iv) To identify challenges facing Youth and Women SMEs in accessing government loans; and (v) To propose strategies to enhance the effectiveness of government loan operations for empowering youth and women SMEs.

### **Theoretical Ground of the Study: Financial Inclusion Theory**

This study is guided by Financial Inclusion Theory, which highlights the importance of providing access to appropriate and affordable financial services for disadvantaged populations. It argues that inclusive financial systems can enhance economic participation and diminish income inequality (Demirgüç-Kunt et al., 2018). This study defines financial inclusion as the provision of government loans tailored for youth and women-owned SMEs; certain loans facilitate the surmounting of obstacles that generally preclude certain populations from conventional financial services, such as insufficient collateral, elevated interest rates, or rigorous qualifying requirements. The theory of financial inclusion underpins the evaluation of the efficacy of loan schemes in addressing the requirements of underserved populations and how enhancements in loan operations might facilitate more economic participation and growth.

### **EMPIRICAL REVIEW**

#### **The Role of SMEs in Economic Development**

The World Bank (2020) reports that SMEs make up 90% of enterprises and 50% of jobs Worldwide. In Africa, SMEs are the greatest formal and informal employers, employing millions. SMEs make about 35% of Tanzania's GDP and employ over 5 million people, providing a vital source of income for many (NBS, 2019; ILO, 2017; OECD, 2018). The SMEs are widely recognised as key generators of economic growth, employment, and innovation. Their involvement in economic development, especially in Tanzania, is crucial since they produce jobs. SMEs are crucial to employment, especially in developing nations with few large-scale businesses. The SMEs aid poverty reduction. SMEs reduce poverty by providing revenue for entrepreneurs and workers. Tambunan (2019) states that SMEs provide jobs and improve access to key commodities and services for low-income people. The Tanzanian government has prioritised SME development to decrease poverty through inclusive economic growth (URT, 2018). SMEs benefit marginalised populations, including women and rural communities, by providing loans, business training, and market links, reducing poverty. SMEs provide income-generating opportunities to millions of individuals in developing nations, especially in Sub-Saharan Africa (Osei-Assibey (2020)). SMEs make about 35% of Tanzania's GDP and employ over 5 million people, providing a vital source of income for many (NBS, 2019; ILO, 2017; OECD, 2018).

#### **Government Initiatives and Programs that Assist Youth and Women's SMEs in Tanzania**

The Tanzanian Government has enacted numerous laws and measures to

promote and assist SMEs run by youth and women. The principal policies and efforts encompass the National SME Development Policy (2003). Tanzania's main SME promotion framework is the 2003 National SME Development Policy. The policy emphasises gender equality in economic activities and empowers young and women entrepreneurs (URT, 2003). Its implementation has been hampered by financial constraints and poor institutional coordination (Massawe, 2014). Despite the policy's focus on youth and women's empowerment, systemic gender and age biases in the financial and business ecosystems make it hard for them to get company development help (Kinyondo & Pelizzo, 2018).

Another SME-improvement initiative is the Youth Development Initiative (2007). The policy addressed unemployment through entrepreneurship and self-employment to include young people in Tanzania's socio-economic development. It provides skills, entrepreneurship, and financing to youngsters to generate money (URT, 2007). Kimaro and Philemon (2020) found that this strategy has increased young entrepreneurship, especially in metropolitan areas like Dar es Salaam, by giving training and financial access. Due to systematic gender and age biases in the financial and business ecosystems, youth still struggle to get business development help (Kinyondo & Pelizzo, 2018). Local Government Authorities (LGAs) offer 4% and 5% loans. The Tanzanian government required LGAs to donate 10% of their earnings to interest-free loans for youth and women entrepreneurs in 1993 (URT, 1993). 4% goes to kids, 5% to women, and 1% to disabled people. This initiative provides money to entrepreneurs who may not qualify for standard loans (Kweka and Sooi, 2022). Musabila and Pauka (2020) found that LGA loans had helped rural youth and women start and grow companies.

### **Challenges Faced by SMEs in Accessing Financial Resources**

Lack of collateral is a major obstacle for SMEs seeking financing. Land and property are often required as loan collateral by banks. Many SMEs, especially those owned by women and adolescents, lack such assets (Beck & Demircuc-Kunt, 2006). Studies show that SMEs without collateral generally use informal finance or personal resources to fund their enterprises, limiting their growth potential (Olomi & Urassa, 2015). SMEs also experience high borrowing costs due to rising interest rates. Tanzanian commercial banks have high interest rates, making it hard for SMEs to borrow without endangering their profitability and sustainability (Morris & Brennan, 2019). SMEs have higher interest rates than larger organisations due to the perceived risk of financing them, compounding the situation. Nanyaro (2020) found that SMEs avoid bank loans due to high interest rates, instead turning to microfinance organisations or informal lenders. SME capital to expand up

operations and invest in new technologies is limited by high borrowing costs (Machira, 2016).

### **Impact of Loan Programs on SMEs Growth and Sustainability**

SMEs boost economic growth by innovating, creating jobs, and improving society. Financial resources are a major barrier to SME growth and sustainability. Loan programs, especially for SMEs, help firms grow, expand, and become sustainable. Loan programs affect SME growth and sustainability, particularly in developing nations. Loan programs help SMEs grow, invest in new technology and boost efficiency. External funding, especially loans, boosts SME growth, according to Beck, Demirguc-Kunt, and Maksimovic (2008). Loans help SMEs manage their cash flow and grab development opportunities by providing working capital. Kira and He (2012) discovered that Kenyan SMEs with loans had higher revenue, market share, and hiring capacity. The survey also found that loaned enterprises expanded their product lines and consumer bases, making them more competitive and sustainable.

Tanzanian SMEs using government and microfinance lending programs grew faster than those without (Olomi, 2010). Mfaume & Leonard (2017) found that Tanzanian SMEs that borrowed from microfinance institutions were more likely to invest in innovative technologies and processes, notably in agriculture and manufacturing. Investors increased productivity, product quality, and cost savings, helping SMEs grow and survive. SME Loan Program Challenges: While loan programs contribute to the growth of SMEs, they encounter a variety of challenges. The high cost of borrowing is a problem. In developing nations, high interest rates might strain SMEs' finances, reducing loan benefits (Koech, 2011). Despite credit programs in Tanzania, many SMEs struggle to repay loans due to excessive interest rates, which hurts their profitability and sustainability (Nanyaro, 2020). Financial institutions' collateral restrictions typically prevent SMEs from getting loans (Morris & Brennan, 2019). Financial exclusion occurs when SMEs, especially those controlled by women and children, lack the assets to meet collateral requirements. Gichuki, Njeru, and Tirimba (2014) found that SMEs' biggest barrier is a lack of collateral, and loan schemes that don't address it may fail.

### **Best Practices for Empowering SMEs through Financial and non-financial Support**

A venture capital is a good best practice. Venture capital helps high-growth SMEs, especially in tech, in industrialised countries. Venture capital investment provides cash, mentorship, business networks, and managerial



knowledge, which helps SME growth and innovation, (Kaplan and Stromberg, 2009). Microfinance institutions (MFIs) are significant participants in supporting SMEs, especially in areas with inadequate traditional banking facilities. Microfinance empowers small businesses with low-interest loans and flexible repayment arrangements. Mrindoko and Pastory (2022) found that micro and small enterprises were involved in manufacturing, agriculture, services, and commerce. Best practices include simplifying loan applications and using collateral-free or low-collateral lending alternatives. The Tanzanian Government allows SMEs to apply for loans online without excessive documentation through digital channels (ESRF, 2016). Maintaining support programmes: insufficient financing, administration, or evaluation cause sustainability challenges for many support programs. Beck and Cull (2014) say strong SME support programmes use continual monitoring and evaluation to measure their effects and make modifications. Rwanda's Business Development Fund (BDF) monitors SMEs receiving financial and technical help to ensure sustainable growth (Malipula, 2023).

This review of literature shows that the empowerment of entrepreneurs through small and medium enterprises (SMEs) is a complicated issue involving many challenges. These challenges regarding LGA loans impact youth and women. So, it's important to find out where the information about loans for young people and women from the local government comes from, check if the criteria used for creating SMEs groups in government credit operations are being followed, look at how government loan practices affect the growth and sustainability of youth and women-led SMEs, find out the problems these SMEs face when trying to get and use government loans, and suggest ways to improve government loan operations for these types of businesses in Tanzania.

## **METHODOLOGY**

### **Research Design**

The qualitative design forms the foundation of this study. The choice of qualitative research design for this research was guided by the need to facilitate sharing views and illuminate differences in perspective among participants on SMEs' government loan operations in Tanzania. Kitzinger (1995) argues that interaction, particularly with questions related to process ("how" and "why") and context ("what questions"), is more likely to construct people's perspectives, experiences, and feelings. Therefore, this study selected focus group discussion (FGD) as both a strategy and a tool for gathering qualitative data. Focus group discussions take the form of natural conversations, ultimately serving as a useful method to encourage individuals

who may be reluctant to participate in one-on-one interviews due to the formality and isolation (Vicsek, 2010).

### **Study Area, Participants and Selection Procedures**

This study was undertaken in the Kinondoni Municipal Council in Dar es Salaam, focusing primarily on youth and women SMEs organisations receiving government loans facilitated by the Local Government Authority (LGA). The Kinondoni municipal council was intentionally chosen due to its exemplary performance and status as a model in the administration of government loans. The Kinondoni municipal council is a highly urbanized municipal council in Dar es Salaam, noted for its dynamic economic activity and a significant concentration of youth and women entrepreneurs. Kinondoni serves as an exemplary case study owing to its vibrant SME ecosystem, encompassing a diverse array of enterprises that can yield significant data regarding the efficacy of government lending initiatives (Kinondoni Municipal Council, 2020). The Kinondoni municipal council comprises 20 wards. Simple random sampling was employed to choose two wards for participation in the study. Stratified sampling was employed to identify four groups of SMEs: two from Magomeni and two from Ndugumbi wards. The criterion for selecting the SMEs was based on the group's performance. Consequently, two high-performing groups, one from each neighbourhood, were chosen, along with two low-performing groups, one from each neighbourhood ward.

To adhere to ethical guidelines in this investigation, the researcher substituted the names of these SMEs with numerical identifiers. Consequently, there were SMEs 1 and 2 from Magomeni and SMEs 3 and 4 from Ndugumbi wards, respectively. SME-1 specializes in the manufacture of furniture and consists of six young males. SME 2, which consists of seven male members, is involved in the sale of non-alcoholic and alcoholic beverages, food products, car wash services, and footwear. Additionally, SMEs 3 and 4 engaged in furniture manufacturing, juice production, bicycle assembly, and the sale of vegetables, fruits, and other food items. SME 3 comprised seven members, including three females and four males, but SME 4 consisted entirely of eight females. Therefore, the researcher invited six to eight individuals from each SME group to participate in the four (4) focus group talks.

### **Data Management and Analysis**

The focus group discussion lasted for 40–45 minutes before reaching data saturation. The researcher recorded these discussions using digital recorders with the participants' prior consent. The researcher transcribed this

information in Kiswahili and then translated it into English. The researcher stored both Kiswahili and English files on computer removable discs and flash discs and also took notes during the FGD for backup purposes. Finally, the researcher subjected the generated data to thematic analysis, presenting the findings in narrative form and supporting them with verbatim evidence based on respective objectives.

## **RESULTS AND DISCUSSION**

In focus group talks, entrepreneurs articulated significant challenges regarding youth and women SMEs obtaining government loans via a local government authority (LGA) in Kinondoni, Dar es Salaam. This study involved one focus group discussion at each participating SME, with six to eight individuals. Four (4) focus group sessions were conducted. The responses to the research objectives can be categorized into five themes: sources of information on local government loans for SMEs, compliance to criteria for SME group formation, practices related to local government loans, challenges, and strategies for enhancing local government loan operations

### **Sources of information on SMEs Local Government Loans**

Focus Group Discussions (FGD) held in four SMEs two in Magomeni and other two from Ndugumbi wards that composed of at least 8 SME entrepreneurs each and it revealed that the major source of information was through Ward Executive Officer (WEO) and to low extent through radio. All the participants shared similar views about the sources of the information on local government loans. All the SMEs entrepreneurs were in front line to ensure that they get the information government loan. In this regard, entrepreneurs they said:

In reality, the Ward Executive Office provided the loan information. (FGD with Entrepreneurs, SME 1, Magomeni Ward, 20th March, 2024)

One day, the broadcaster advertised on government loans and announced that those loans would benefit youth and women (FGD with Entrepreneurs, SME 2, Magomeni Ward, 20<sup>th</sup> March, 2024).

In all honesty, the Ward Office, through the Ward Executive Officer and Street Chairperson, informed people about the loans available to youth and women (FGD with Entrepreneurs, SME 3, Ndugumbi ward, 21st March, 2024).

People got the information through Ward Office; especially Ward Executive Officer, Community Development Officer and Street Chairperson. After receiving the loan information, we followed the procedures until we were

presented with a loan opportunity (FGD with Entrepreneur, SMEs 4, Ndugumbi ward, 21st March, 2024).

### **Compliance on Criteria Used for SMEs Group formation.**

During a Focus Group Discussion (FGD) with seven entrepreneurs from Ndugumbi and eight entrepreneurs from Magomeni wards, they responded that the SME group formation was in compliance. They postulated that no male in the group was older than 35, while there was no age limit for females. They were able to comply with the requirements of the SME group formation. Additionally, each group included members who consented to and could repay the loaned funds. A few quotes are provided below for illustration:

All of us are 35 years old, and therefore we are qualified to be given a loan, because this is one major criterion for youth to be given a government loan established through local government authority (FGD with Entrepreneurs, SME 3, Ndugumbi ward, 22nd March, 2024).

Every member of our group has additional financial resources that they can use to repay the loan initially (FGD with Entrepreneurs, SME 2, Magomeni Ward, and 22nd March, 2024).

### **Practices of Government Loans on the Growth and Sustainability of Youth and Women SMEs**

The analysis of the proceedings of the FGD with entrepreneurs on business practices and the environment of doing business experiences was summed up based on the following towards the SME operations:

#### ***Loan Distribution Mechanisms***

Seven entrepreneurs from Ndugumbi and Magomeni wards, along with eight others, participated in a Focus Group Discussion (FGD). They both concurred that the loan distribution mechanism's access to credit has moderately improved, while others contended. Therefore, during the FGD proceedings, some entrepreneurs expressed that the local government loan's credit access system is effective and should be maintained as it benefits the people. It should continue because it helps people. They further emphasized that this system carries no interest, unlike loans from banks or other financial institutions. A few quotes from their remarks are provided below for illustration:

The availability of credit through local government authority loans is favorable, and this trend should persist as these loans offer no interest rates, unlike those from other financial institutions such as banks (FGD with Entrepreneurs, SME 3, Ndugumbi ward, 23rd March, 2024).

### ***Capacity Building and Training***

The analysis of the FGD proceedings at Magomeni and Ndugumbi revealed that entrepreneurs had received business education early, when they received their first loan. However, the provision of knowledge ceases midway between businesses. Sometimes long-experienced loan beneficiaries attend the training with new entrepreneurs. The quotes illustrate that:

*The ward community offices provided us with training on how to use the loan when we first received it. However, since then, we have yet to successfully complete the training program. However, some long-term and experienced beneficiaries have decided to join forces with new entrepreneurs to receive training on business issues. However, there is no regular training provided for the entrepreneurs (FGD with Entrepreneurs, SME 2, Magomeni Ward, SME 4, Ndugumbi Ward, 23rd March, 2024)*

### ***Management of the SMEs***

The analysis of the FGD within the Magomeni and Ndugumbi wards revealed that the management was beneficial to most SMEs, particularly those that had a constitution and regularly hold meetings. In this meeting, they discussed several issues, including the monthly fee and other ones. Some of the SMEs had developed slogans to enhance their sense of unity. Quotations from the participants illustrate their observations:

*We have good management. In every month we conduct the meeting. In that meeting, we discuss several issues, such as a monthly fee. We have our slogan which strengthens our group togetherness. This slogan states that "Truth and Transparency is our hope" (FGD with Entrepreneurs, SME 3, and Ndugumbi ward, 24th March, 2024).*

*The management has no problem because we manage ourselves, no one from outside cares us or/ our group. (FGD with Entrepreneurs, SME 3, and Magomeni ward, 24th March, 2024)*

### ***Marketing and Selling of the Products***

The FGD proceedings' analysis at Ndugumbi and Magomeni wards revealed that the product's marketing was good, although most markets are seasonal. The market appears to be doing well during the harvest season, particularly in June. During rainy seasons, businesses stop entirely. Small and medium-sized enterprises (SMEs) that manufacture furniture, sofa coaches, and mattresses typically sold their products in both wholesale and retail formats. The regions in which they sold mattresses in wholesale style were Tanga-Handeni, Kilindi (Kwedi Boma), and Dodoma-Mpwapwa. The entrepreneurs argued that they needed a large enough market to strengthen both individual and group economies by selling goods and services to their esteemed customers, given the competition from other entrepreneurs. Additionally, they asserted

that they required access to markets beyond their domestic borders, such as Rwanda and Burundi. Generally, when business conditions deteriorate, the entrepreneur opts to decrease the number of assistants in their business venture. Their quotes illustrate the participants' remarks:

On our side, the marketing of products is good although sometimes our market is seasonal. During rainy seasons no business completely. But during the harvest period, especially in June, the company becomes excellent. Sometime during that period, you find all the products are being sold promptly. Also, juice products depend much on the season and daily weather conditions. During the rainy season and cold weather, the juice is not sold well. (FGD with Entrepreneurs, SMEs 3 and 4, Ndugumbi ward, 24th March, 2024)

We need substantial markets; because our products are ready-made, therefore there is much competition from other entrepreneurs surrounding our business. These will help us to sell our products in huge quantity regardless of many competitors surrounding our business premises (FGD Entrepreneur, SME 2, Magomeni ward, 24th March, 2024).

We are going to have some market even outside the country such as Rwanda and Burundi (FGD with Entrepreneurs, SME 4, Ndugumbi ward, 25th March, 2024)

### ***Production***

The analysis of the focus group discussions' proceedings revealed that the production was not good because there was a problem securing enough raw materials. Inadequate transport facilities prevented the entrepreneurs from receiving the few available raw materials on time. However, some SMEs asserted that there was a significant increase in the production of goods and services. The quotations from the participants illustrate some of their observations:

The scarcity of raw materials hinders the production process. However, other groups have organized a significant and large-scale event (FGD with Entrepreneurs, SME 3, Ndugumbi Ward, 25th March, 2024).

### ***Regulatory and Policy Framework***

The analysis of the focus group discussions revealed that the fifth-term government plan was fair due to the presence of excellent and conducive business policies and regulations. However, Tanzania Revenue Authority (TRA) workers estimate the tax without consulting or providing tax education to the entrepreneurs. Their quotes illustrated the participants' remarks:

TRA officers can estimate a tax of 900,000/- Tshs while the investment capital of the entrepreneur is 2,000,000/-, so automatically there is no correlation between the estimated tax and investment capital injected in the business (FGD with Entrepreneurs, SME 2, Magomeni Ward, 23rd March, 2024).

Mattresses made from reject mattresses its price is about 58,000/- Tshs. But when the TRA officers visit our business areas, they disagree with the mentioned price above. Instead, they say that the price of the same is 150,000/- Tshs, which is not true because these mattresses have been made from the reject mattresses, of which a cost of production is relatively cheap compared to other mattresses (FGD with Entrepreneurs, SME3, Ndugumbi Ward, 23rd March, 2024).

If there will be no good communication in terms of the language used between the TRA officers and the entrepreneurs towards tax payment exercises, the tax payment exercise will still face some challenges shortly (FGD with Entrepreneurs, SME 4, Ndugumbi ward 24th March, 2024)

The entrepreneurs insisted that there was a need for the TRA people to be truthful and honest when it comes to tax estimate and payment from the entrepreneurs. However, the tax regulations are not so clear on how the entrepreneurs should pay their tax. These SMEs are still using the entrepreneur identity cards, which cost about 20,000 Tshs, of which the capital investment should not exceed 4 million. The quotes illustrate the participants' remarks

We require clarification on the process of paying taxes, particularly when we are part of the entrepreneurial community. So, we need substantial tax education for entrepreneurs because most of us are not aware of the tax procedures (FGD with Entrepreneur, SME 4 Ndugumbi Ward, 23rd March, 2024).

### ***Physical Infrastructure***

The focus group discussions' proceedings' analysis revealed that the entrepreneurs have not enough space for their businesses. These entrepreneurs rent the rooms where they conduct their business. They use dark and small rented rooms to keep the products and raw materials used to produce goods. The entrepreneurs recommended that the government allocate sufficient open space for them to conduct their businesses effectively. Transporting raw materials from mattress manufacturing industries poses a significant challenge. Occasionally, they utilize alternative modes of transportation, like a three-wheeled motorcycle, to move the raw materials from the industries to the areas where the product is assembled. Their quotes illustrate the participants' remarks:



There is insufficient space for us to conduct our business effectively. We have rented several small, dark rooms in this house, where we store our raw materials and final products. We store even the smallest products we produce in these dimly lit rooms. Therefore, our customers are unable to easily view the products due to their limited visibility (FGD with Entrepreneurs, SME 3, Ndugumbi Ward, 23rd March, 2024)

### ***Banking and Financial Services***

The entrepreneurs encounter disruptions from the banks, such as delays in loan disbursements and network issues during money withdrawal. A quoted remark below is illustrative:

Banking services have been frustrating us; it can take one to two days to get money, and sometimes they tell us there is a network problem, so wait or come tomorrow. The focus group discussion took place with entrepreneurs from SME 3, Ndugumbi ward, on March 23, 2024.

### **Challenges facing by Youth and Women SME in accessing local government loans**

During FGDs with twelve with four SME the entrepreneurs, they responded that by engaging in SME government loans operations they realized that, there were several challenges facing youth and women SME and they were in a position to cope with such challenges. Therefore, entrepreneurs revealed some challenges that affect SMEs' efficiency and effectiveness under the LGA loan scheme.

- a. People in the nearby communities, particularly those outside the SMEs groups, have expressed discouragement.
- b. Entrepreneurs are not receiving sufficient business education.
- c. There aren't enough business spaces for entrepreneurs to operate in.
- d. Elderly negative attitudes towards youth entrepreneurship behaviour geared to business development;
- e. The poor business situation can be attributed to the low purchasing power of people in the communities.
- f. Competition from other business people and;
- g. Insufficient capital due to received merge government loans.

(FGD with entrepreneurs, SME1, SME2, SME3 & SME 4 both from Magomeni and Ndugumbi, 22 - 24<sup>th</sup> March, 2024)

### **Strategies for Improving Government Loans Operations to Better Empower Youth and Women SMEs.**

#### ***The Increase of the Amount of Government Loans***

During the Focus Group Discussion (FGD), both SME entrepreneurs proposed strategies aimed at enhancing the performance of youth and

women-owned small and medium-sized enterprises (SMEs). These entrepreneurs proposed strategies by requesting the government increase the amount of loans because the loans provided are too large to meet the entrepreneurs' business demands. These facts are illustrated here:

As entrepreneurs, we request the government increase the loan amount if possible because the amount we receive is small. If the group receives 5,000,000 Tshs, each member should receive at least 800,000/- Tshs of this small amount, as the remaining amount is used to cover other expenses like rent. (FGD with Entrepreneurs, SME 2, Magomeni Ward, 23rd March 2024)

Another FGD entrepreneur asserted that there is a need to request that the government increase the amount of loans given to SME entrepreneurs:

We suggest that the loan should be increased even up to 150,000,000/- Tshs because that substantial loan will enable us to do the business effectively and efficiently (FGD with Entrepreneurs, SME 3, Ndugumbi ward, 23rd March, 2024)

### ***Increase of the Repayment Duration***

The entrepreneurs through FGD they asserted that the one-week duration of repayment is too short for the entrepreneurs. They proposed that the refund should be made in the last week every month to pay back the money after profit generation. Within one week, it is impossible to generate profit and be able to repay the loans. This connotation has illustrated by quotes:

The Government should increase the repayment duration to one month instead of one week because in one week it is tough to get the money for repayment (FGD with Entrepreneurs, SME 4, Ndugumbi ward, 22nd March, 2024)

### ***Provision of Subsidies to a Good SME Repayment***

Through the analysis of focus group discussions, the entrepreneurs suggested that SMEs with a good repayment record should receive some subsidies as a form of motivation:

As entrepreneurs, we all together suggest that for those SMEs groups with a good track record in terms of repayment, the Government should provide subsidies as a motivation (FGD with Entrepreneurs, SME 3, Ndugumbi ward, 21st March, 2024)

### ***Entrepreneurs Regular Training***

In line with the FGD training, the entrepreneurs proposed the need for regular training, particularly for those who are performing well. Additionally, they suggested that ward community development officers should coordinate the

practice, with successful SMEs taking the lead in facilitating the training. In that regard, this can encourage other entrepreneurs to work hard and become successful like their fellow counterparts. Quotations illustrate the participants' remarks:

We suggest that regular training should be provided for us as entrepreneurs, and successful entrepreneurs should facilitate the movement. Therefore, this will encourage other entrepreneurs to work hard and become successful like their counterparts. Community development officers should coordinate the training process, not just facilitate it. Entrepreneurs should lead the training sessions, while community officers should serve as the coordinators. The entrepreneur can demonstrate in front of the other entrepreneurs that "have you seen me with my shirt?" is because of entrepreneurship, but if the community officer says that "quotation above," automatically they will tell him/her that it is because of your monthly salary. (FGD with Entrepreneur, SME 3, Ndugumbi Ward, 21st March, 2024)

### ***Notification of the Reimbursement of the Loan by the Bank***

In the FGD, the entrepreneurs provided some suggestions. A quoted remark below is illustrative:

Banks should notify us through the group's mobile phone message once they have disbursed the money. We often go to the bank without knowing precisely the amount of money deposited or whether the cash has already deposited. To prevent such disruptions, we kindly request that the bank notify us prior to our visit (FGD with Entrepreneurs, SME 3, Ndugumbi ward, 22nd March, 2024).

## **DISCUSSION OF FINDINGS**

The study aimed to evaluate the operations of youth and women SMEs that receive government loans from a local government authority (LGA) in Kinondoni Dar es Salaam. The study found that a prominent source of loan information was the Ward Executive Office (WEO). Entrepreneurs from SME1 Magomeni ward concluded in a focus group discussion that the Ward Executive Office (WEO) was the primary source of information regarding government loans. Another focus group discussion, SME 3, Ndugumbi ward, concluded that the Ward Executive Office, through WEO and the Street Chairperson (SC), informed the communities about the youth and women's loans". This finding is inconsistent with Okello-Oburu et al. (2008) in Uganda, who indicate that the most important sources of SMEs loan information are radio stations, personal contact, and newspapers, while the least sources of business information include private sector consultants, government departments, libraries, Internet sources, banks/other financial institutions, and television stations.

The study revealed that there was a compliance with criteria used in SMEs group formation because only males who were not beyond 35 years old formed SMEs groups, while women there were no age limit in order to become a member in SMEs. This was consistent with one focus group discussion of the entrepreneur from SME3, Ndugumbi ward, who said, "All of us are not above 30 years old; therefore, we qualify to be members because we are not above 35 years old, but for women, there is no age limit. Additionally, some argue that each member group is capable of repaying the money even before the profit from SMEs is realized. Research suggests that in certain scenarios, participants' equal size and economic power seem to contribute to trust, preventing them from fearing dominance or exploitation by others (Berry, 1997).

The findings showed a moderate improvement in credit access, good business management, and effective product marketing. Additionally, the results showed that production was performing well, despite some challenges, particularly in securing sufficient raw materials. While the business environment was favorable, there was a lack of adequate physical infrastructure. One FGD entrepreneur from SME 3 Ndugumbi ward stated, "We lack the necessary space to operate our business effectively." We have rented several small, dark rooms in this house, where we store our raw materials and final products. We store even the smallest products we produce in these dimly lit rooms. Therefore, our customers cannot see the products easily because these products are not seen by our customers." These findings align with the OECD's (2018) argument that a cross-cutting strategy is necessary for SME development. This strategy includes the ability of governments to implement sound macroeconomic policies, the development of conducive microelectronic business environments, the establishment of simplified legal and regulatory frameworks, good governance, abundant and accessible finance, suitable infrastructure, supportive education, a sufficient supply of healthy and flexible skilled labor, capable public and private institutions, and the ability of SMEs to implement competitive operating practices and business strategies.

The challenges identified, among others, include discouragement from nearby communities, especially people who are not in the SMEs groups, a lack of substantial business education for the entrepreneurs, and competition from other business people. These findings align with those of Kirama (2014), who asserts that SMEs encounter various challenges such as competition with large firms, capital constraints, and improper record-keeping due to inadequate business education. The study suggested several strategies, including augmenting the quantity of government loans,

lengthening the repayment period, offering subsidies for successful SME repayments, offering regular training to entrepreneurs, and promptly notifying the bank about loan repayment. These findings align with Chijioke's (2016) argument, which emphasizes the importance of creating new markets, encouraging opportunities for sustainable growth, securing additional funding sources, involving employees in decision-making, and gaining competitive advantages. SriBudhi et al. 2020 regard technology, capital, marketing, and infrastructure policies as policy packages for the development of SMEs.

## **CONCLUSION AND RECOMMENDATIONS**

The results showed that, despite minor differences, SMEs' operations are similar to those of most enterprises. Most SMEs identified Ward Executive Officers as sources of information on the LGA loan scheme. The results also showed that there was an age limit for males to join the SMEs group, while there is no age limit for women. Additionally, there were favorable business environments for access to credit, management, market conditions, and production. In this regard, local businesses had the power to either improve the performance of SMEs or hinder their operations. The empirical results of this study demonstrated that policies favouring private firms and the labour force had positive impact on the performance of SMEs. Business operation environments determined the efficiency and effectiveness of SMEs.

The study recommends strengthening the operations environment for SMEs to enhance the country's conducive and favourable business environment. Firstly, the government and other stakeholders should thoughtfully disseminate the LGA loan scheme information through different media, such as television, radio, magazines, and flyers. Secondly, there is a need to enhance the business operation environment by improving access to credit, providing adequate business education and training, developing a strong marketing strategy, increasing production, establishing a favorable policy and regulatory framework, improving financial services, and enhancing physical and technological infrastructure. All these measures would significantly improve the efficiency and effectiveness of small and medium-sized enterprises' operations.

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## **Empowering Local Communities through Community-Based Conservation: A Case Study of Randilen Wildlife Management Area in Tanzania**

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### **Abstract**

*Utilizing the Social-Ecological Systems (SES) theory and the Sustainable Livelihoods Framework (SLF), this research probes into the impacts of both community-based conservation and the lives of indigenous/local communities residing in the Randilen Wildlife Management Area. It presents a comprehensive analysis of the intricate interplay between wildlife conservation, community engagement, and the livelihoods of local inhabitants within the Randilen Wildlife Management Area. The data collection involved a combination of qualitative and quantitative methods via household surveys. The results indicate a significant and inclusive level of community involvement in activities associated with Randilen Wildlife Management area as a community-based conservation. Individuals residing in villages encompassed by the WMA generally have limited access to education, resulting in their inability to fully exploit the tourism opportunities. Consequently, many livelihood initiatives in the area tend to be dominated by individuals from outside the local communities. The study uncovers various perspectives concerning the satisfaction of community members with the income generated from Randilen WMA. While some express contentment, others are dissatisfied, underscoring the importance of ensuring that the distribution of revenue substantially enhances the well-being of the local residents.*

**Keywords:** *Community -Based conservation, Local communities, Randilen Wildlife Management, Wildlife management area*

### **INTRODUCTION**

The global wildlife conservation management sector has witnessed significant growth over the years, becoming a major source of income, employment, and prosperity for many countries (Novelli & Hellwig, 2011). Wildlife conservation is a multifaceted endeavour aimed at protecting the Earth's diverse species and their habitats, with the ultimate goal of ensuring their survival for current and future generations (WWF, 2014). This concept has deep historical roots, dating back to practices like the Arabian Himas

conservation area, which has existed for over 1,500 years (Mkumbukwa, 2008).

In the late 19th and early 20th centuries, colonial rulers in Africa introduced new wildlife management and conservation ideas, often leading to the displacement of indigenous people from wildlife utilization. However, the exclusion of indigenous communities eroded communal and customary land rights, and independent African regimes later adopted top-down colonial conservation models, resulting in growing disillusionment among local communities and a surge in wildlife poaching in the 1970s and 1980s, notably in Tanzania (MNRT, 2007).

The 1990s marked a shift in conservation approaches, particularly in Southern Africa. The emphasis shifted to the importance of involving local and indigenous communities in natural resource conservation. This change paved the way for community-based conservation programs, such as; the CAMPFIRE initiative in Zimbabwe, the Selous Conservation Project in Tanzania, and Community Wildlife Management Areas (CWMA). Legislative changes were also necessary to align with this paradigm shift, with Tanzania enacting the Wildlife Conservation Act in 2009 to accommodate community-based conservation.

In Tanzania, the Tanzania National Parks Authority (TANAPA) responded to ecological isolation in the parks by approving National Policies for National Parks in 1994. This policy recognized the need to establish a mechanism to address increased threats from land use adjacent to national parks. This mechanism, known as "community conservation" and currently referred to as the Outreach Programme, is aimed at ensuring that community livelihoods are supported, conservation awareness is raised, and pressure from local people eased (TANAPA, 2009).

The main role of the Outreach Programme is to explain the purpose of the parks to local communities, solicit local participation in park management, and protect the integrity of parks by promoting good relationships with surrounding communities (Ndomba and Chibunu, 2022). Wildlife Management Areas (WMAs) have been established to grant communities rights to participate in and economically benefit from natural resources, including wildlife. These areas aim to engage local people in wildlife conservation, fostering tourism activities, supporting local development, and enhancing livelihoods.

Randilen Community's Wildlife Management Area was established as a collaborative conservation initiative in 2012 and officially gazetted on February 1, 2013. Local communities initially resisted Randilen WMA during its inception, but a 2022 survey found a substantial shift in community sentiment, with 74.9% of respondents expressing their support for Randilen WMA and 93.5% recognizing it as a successful community-based conservation area. These two studies have revealed a dynamic spectrum of rejection and acceptance regarding Randilen WMA among local communities. However, they have not extensively explored the underlying reasons or the transformative processes that have led to this shift. Consequently, this study aims to comprehensively investigate the 'what, why, and how' of Randilen WMA's contributions to wildlife conservation and the livelihoods of local communities.

## **THEORETICAL FRAMEWORK**

This study adopts a comprehensive research approach, incorporating Social-Ecological Systems (SES) theory and the Sustainable Livelihoods Framework (SLF) to investigate the 'what, why, and how' of Randilen WMA's contributions to wildlife conservation and the livelihoods of local communities. It addresses issues related to local communities' socio-economic activities, revenue distribution, community participation, and projects financed by Randilen WMA.

### **SES Theory**

SES theory provides a comprehensive framework for understanding the intricate relationships between human communities and their natural environments, with a particular emphasis on the complex dynamics within such systems (Ostrom, 2009). This theory is instrumental in deciphering the interplay of ecological and social factors in a resilient and sustainable manner, spanning various hierarchically linked scales and characterized by continuous dynamism (Berkes *et al.*, 2003). In the context of wildlife conservation and community involvement, SES theory is a powerful tool for unravelling the multifaceted interactions between local communities, the natural world, and wildlife resources.

SES theory's inception can be traced back to the early 2000s when scholars such as Redman *et al.* (2004) pioneered its development. They define SES as a coherent system of biophysical and social factors that interact regularly in a resilient and sustained manner. These systems encompass ecological and social mechanisms, enabling the regulation of critical resources. SES theory explores a wide range of domains, including economic, recreational, and ecological interactions. It delves deep into the highly interdependent

relationship between society and ecosystems, making it an apt framework to study the multifaceted interdependencies at play within Randilen Wildlife Management Area, encompassing its historical evolution and contemporary dynamics (Redman *et al.*, 2004).

### **Sustainable Livelihoods Framework (SLF)**

In the context of this study, the Sustainable Livelihoods Framework (SLF) is applied to analyze the various livelihood assets or capitals surrounding local communities in relation to the Randilen Wildlife Management Area (Carr, 2015; Taylor, 2014). These assets encompass natural/environmental, physical, human, social, and financial capital. The SLF offers a holistic approach that captures and provides an understanding of the fundamental causes and dimensions of poverty and rural livelihoods without oversimplifying the focus on just a few factors.

The SLF aims to assist rural communities in achieving sustainable livelihoods by considering the various assets they have at their disposal. These assets include; Natural/Environmental Capital, which involves natural resources such as land, water, wildlife, biodiversity, and environmental resources. Another asset is Physical Capital, which encompasses housing, means of production, and basic infrastructure such as water, sanitation, energy, transport, and communications. Furthermore, Human Capital assets include health, knowledge, skills, information, and the ability to labour. Social Capital assets involve social resources such as relationships of trust, membership in groups, networks, and access to wider institutions as well as Financial Capital, comprising financial resources available, such as regular remittances or pensions, savings, and access to credit.

in the context of wildlife conservation and community involvement, the SLF assists in understanding which livelihood assets enable specific livelihood strategies and contribute to sustainable outcomes within local communities (Carr, 2015; Taylor, 2014). It provides a comprehensive framework for assessing the economic, social, and environmental dimensions of local livelihoods, making it a valuable tool for evaluating the impact of wildlife conservation efforts on the well-being of communities living in proximity to wildlife habitats.

By employing these two theoretical frameworks, this study gains a robust foundation for comprehensively examining the intricate relationships between wildlife conservation, community involvement, and the livelihoods of local populations within the Randilen Wildlife Management Area. These

frameworks help shed light on the dynamic interactions and factors at play in this complex and critical context.

WMAs are a good example of a day-to-day relationship between nature and society. WMAs can be classified as Social-Ecological Systems (SES), as they are complex, integrated, and interlinked systems of social and ecological processes consisting of various natural and social factors that change over time and space (Walker and Salt, 2006). As Social-Ecological Systems (SES), WMAs can be used to sustain the livelihood of communities endowed with plenty of natural resources. The Sustainable Livelihood Framework (SLF) can, therefore, be used to analyze which livelihood assets (capital) can enable which livelihood strategies and cause sustainable outcomes within local communities (Carr, 2015; Taylor, 2014).

## **STUDY METHOD**

### **The Study Area**

The study presents analysis of data collected from a purposeful field visit at Randilen Wildlife Management Area that it is within three villages among eight villages namely Lolkisale, Naitolia and Mswakini Juu this is due to the fact that the selected villages are closer to Randilen WMAs- compared to the others. The choice is driven by its contemporary community-based conservation model, geographic relevance near Tarangire National Park, its substantial size, limited previous research, and the dynamic context of being one of Tanzania's newest and fastest-growing WMAs. This combination presents a compelling opportunity to explore the impact of community engagement in conservation and its implications for local livelihoods.

### **Data Collection and Analysis**

Data collection and analysis information on local empowerment was obtained using a variety of methods, depending on the monitoring system, which allowed for analysis of different scales and dimensions. The coordinators, staff members, and associated researchers of each monitoring system, including the authors of this paper, conducted opportunistic surveys with monitors, community leaders, and representatives of grassroots organizations using various tools such as questionnaires, semi-structured interviews, focal groups and debates on workshops and meetings held with representatives of the communities.

In the data analysis process, both qualitative and quantitative data were carefully examined. Qualitative data, obtained through discussions with key informants and focus group discussions, underwent content analysis. Content analysis comprises a set of methods aimed at dissecting the symbolic content



within communication, to categorize the information into groups that represent specific research interests (Mustapha & Ebomoyi, 2019). The verbal discussions with key informants and insights from focus group discussions were meticulously broken down into the smallest, most meaningful units of information.

On the other hand, quantitative data collected through household surveys was processed and analyzed using the Statistical Package for Social Sciences (SPSS). The analysis predominantly revolved around the realm of "descriptive statistics." Descriptive statistics were applied to reveal frequencies and percentages within the dataset. Additionally, the Chi-square test was employed to determine whether there were significant differences or comparisons in responses related to the contributions of Randilen Wildlife Management Area (WMA) to wildlife conservation and the livelihoods of local communities. This comprehensive approach allowed for a nuanced exploration of both the qualitative and quantitative aspects of the study, yielding valuable insights into the complex dynamics of wildlife conservation and community involvement within Randilen WMA.

## **RESULTS**

### **Demographic Profile of Respondents**

The demographic characteristics of the respondents are presented in Table 1. The Results indicate that at Loikisale village about 92% of the respondents were males and 8% were females while in Mswakini Juu 90% were males and 10% were females and in Naitolia village 90% were males and 10% were females. This indicated that most of respondents were male because many were heads of households as per the study focused to interview them/heads. For the next study both father and mother of household should be interviewed during questionnaire survey in order to capture equal gender views pertaining conservation matters. Education level of the majority of the respondents had primary education (73%), secondary education was 17%, University education was 7% and only 3% had informal education. In the study area education was still low which might reduce the ability of understanding on wildlife conservation and its benefits to their livelihoods. This could prevent local community to access more opportunity about wildlife conservation and keep depending on farming as means of living. Therefore, there is need for the Randilem authority to organize scholarship to higher learning students from the local community as well as emphasize on taking children to colleges. Regarding employment of the respondent's majority were farmers (74%), while 18% were entrepreneurs and 8% were government employees. This indicated that local people depend mostly on farming for living which is not realible due to climate change impacts as well as dangerous wild animals



like Elephant. The local communities need to access more opportunities in wildlife management areas rather than depending on season farming which is vulnerable to climate change as well as dangerous wild animals. In general, the demographic characteristics suggest that there is a predominantly young, less formally educated, male population engaged in agriculture within the surveyed villages. These demographics may influence the level of involvement, knowledge, and perspectives on wildlife conservation in the region. Researchers and conservation practitioners should consider these demographics when designing and implementing conservation programs and tailor their approaches to the specific needs and characteristics of the local community.

**Table 1: Demographic Profile of Respondents**

Village	Sex %		Employment %						
	M	F	Pr	Sc	Use	If	Go	Fa	Ent
Village Iolkislae	92	8	65	19	10	6	10	71	19
Mswakini Juu	90	10	82	15	3	0	6	78	16
<b>Average</b>	<b>91</b>	<b>9</b>	<b>73</b>	<b>17</b>	<b>7</b>	<b>3</b>	<b>8</b>	<b>74</b>	<b>18</b>

Source: Researcher, 2023

**Key:**

M = Male

F = Female

Pr = Primary

Sc = Secondary

Ue = University

If = Informal

Go = government

Fa = Farmer

Ent = Entrepreneur

### Local communities' Participation in Randilen WMA-linked Activities

The findings revealed that 103 (97.17%) out of 106 within the female group responded YES, they participated in Randilen-linked activities and 3 (2.6%) out of 106 responded No. Nevertheless, 259 (97.4%) of males responded YES out of 266 they participated in Randilen WMA-linked activities and 7 (2.6%) out of 266 responded NO; see Table 2(a). The result confirmed that within female and male groups they were equally well engaged in Randilen WMA-linked activities and this could be possibly due to the created awareness among the gender groups by the Ujamaa Community Resource Team.

However, the research finds out that within the age group 18-30 years, 106 (97.2%) out of 109 responded YES that they engaged in Randilen linked activities, 3 (2.75%) out of 109 noted that they were not engaged, age group 31-50 years 190 (98%) out of 194 responded YES they were engaged, 4 (2%) out of 194 responded that they were Not engaged, age group 51-60 years 40 (98%) out of 41 responded YES they were engaged in Randilen WMA linked activities and 1(2%) out of 41 responded Not they were not engaged; age

group above 60 years 26 (93.3%) out of 28 responded YES they were engaged in Randilen linked activities and 2(6.7%) out of 28 responded that they were Not engaged; see Table 2(b). The result confirmed that there were closer similarities of age groups engaged in Randilen-linked activities. The major reason could be equal involvement of all age groups in Randilen WMA-linked activities.

**Table 2(a): Responses of Local Communities' Participation in Randilen WMA Linked Activities According to their Sex Group**

Sex group		No.	Yes	Total
Female	Count	3	103	106
	Percent within the group %	2.6%	97.17%	100%
Male	Count	7	259	266
	Percent within the group %	2.6%	97.4%	100%
<b>Total count</b>		<b>10</b>	<b>362</b>	<b>372</b>

Source: Field Data, (2023)

**Table 2(b): Responses of Local Communities' Participation in Randilen WMA Linked Activities According to their Age Group**

Activities According to their Age Group			Responses		Total
Category			No	Yes	
Age	18 – 30	Count	3	106	109
		% Within Age	2.7%	97.2%	100.0%
	31 – 50	Count	4	190	194
		% Within Age	2.0%	98.0%	100.0%
	51 – 60	Count	1	40	41
		% Within Age	2.0%	98.0%	100.0%
	Above 60	Count	2	26	28
		% Within age	6.7%	93.3%	100.0%
Total	Count	10	362	372	

Source: Field Data, (2023)

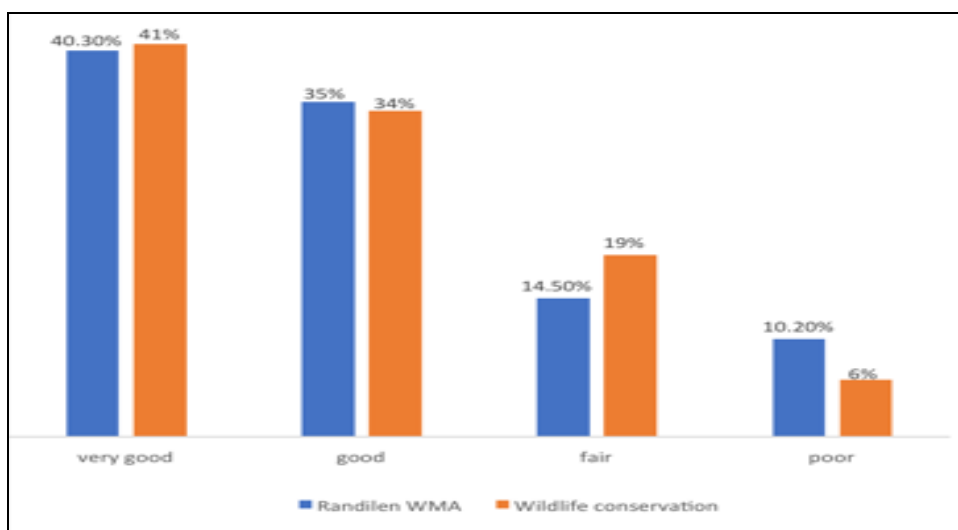
The findings implied that there was high and inclusive participation in Randilen WMA-linked activities among both genders and across various age groups. This suggests that efforts to raise awareness and involve the local community in wildlife conservation have been successful in promoting broad-based engagement (Taylor, 2014). The high overall participation rate underscores the community's support for the conservation endeavours, which is crucial for the long-term success of such initiatives.

### **Local Community's Understanding of Randilen WMA and Wildlife Conservation**

The result showed that the respondents understood Randilen WMA and wildlife conservation. The result indicated that 39.5% of the respondents responded that they understood very well about Randilen WMA and 38.2%

responded that they had a good understanding, 12.6% fair and 9.7% had poor understanding as seen in Figure 1. In addition, the study findings showed that 41% of the respondents had a very good understanding of wildlife conservation, good (34%) and poor (6%); as shown in Figure 1. Randilen WMA and wildlife conservation are synonymous. Randilen WMA is for wildlife conservation.

In this regard, the responses showed that both Randilen WMA and wildlife conservation were very well understood by the respondents (see Figure 1), and the reason for being well understood could be active involvement and engagement of the local communities in Randilen WMA. Other reasons include wildlife conservation activities that were undertaken through conservation awareness, workshops, trainings supported by NGOs such as African Wildlife Foundation, the Nature Conservancy and Honeyguide Foundation, Tanzania People and Wildlife and Oikos Tanzania to mention a few. Another reason outlined by the key informants was the democratic election of obtaining the representative of authorized association/CBO from each village, an exercise held after five years where all local people in every village participate in the election process. Therefore, this is an indication of active involvement and participation for local people in decision-making and activities linked to Randilen WMA.



**Figure 1: Response to Understanding of Randilen WMA and Wildlife Conservation**  
 Source: Field Data, (2023)

This strong understanding is a positive outcome and suggests that community engagement strategies have been effective in promoting conservation awareness and knowledge among the local population.

### **Response on the Satisfaction of Revenues from Randilen WMA**

The results indicated that 38.97% of respondents agreed to be satisfied with the revenues from Randilen WMA and 32.53% of respondents disagreed to be satisfied as shown in Table 3. However, the results indicated that the difference between the respondents was a bit small. The interviews for key informants have indicated that revenues from Randilen WMA were not enough.

Additionally, the financial data from the Randilen WMA office has indicated that from 2018/2019 up to 2022/2023 the three selected villages received a net share of their revenues amounting to 286,109,262 TZs which was an average of 95,369,754 TZs per village and equal to an average of 19,073,950 TZs per village/annually; see Appendix 7. This was 32.5% out of 65% of tourism revenues distributed to Randilen WMA from the Tanzania Wildlife Management Authority. The implication of this could be 17.7 TZs/person/day, which is below a new extreme poverty line of \$2.15 per person per day, as updated by the World Bank, in 2022.

The research conducted at Enduitmet by (WWF, 2014), supported that Enduitmet WMA received \$129,000 in 2012/2013 as its share of revenues after government taxation and distributed one-quarter to the 9 member villages equivalent to 0.6\$/capital/year, which was a smaller amount to the community development. Therefore, it may be true that revenues from Randilen WMA are not satisfactory to local communities.

**Table 3: Response on Satisfaction of Revenues from Randilen WMA**

<b>Responses</b>	<b>Frequency</b>	<b>Percent</b>
Agreed	145	38.97
Disagree	121	32.53
No idea	60	16.13
Strongly agreed	46	12.37
<b>Total</b>	<b>372</b>	<b>100.0</b>

Source: Field Data,(2023)

## **DISCUSSION**

### **Gender-Based Participation**

The study revealed a high level of participation by both male and female respondents in Randilen WMA-linked activities. Specifically, 97.17% of female respondents and 97.4% of male respondents reported active engagement in these activities. This gender balance in participation is a significant outcome, highlighting that community-based conservation efforts in Randilen WMA have successfully involved both genders. This outcome is

consistent with the principles of inclusivity and gender equity that community-based conservation initiatives aim to achieve.

The gender-balanced participation could be attributed to the active awareness campaigns and initiatives implemented by the Ujamaa Community Resource Team and the involvement of both genders in decision-making processes within authorized associations or community-based organizations. These findings demonstrate that community-based conservation in Randilen WMA is contributing to gender equality and inclusivity, ultimately empowering local communities irrespective of gender.

### **Age-Based Participation**

The study also explored the participation of local communities based on age groups. Notably, respondents from all age groups, including those aged 18-30, 31-50, 51-60, and above 60, reported high levels of engagement in Randilen WMA-linked activities. Participation rates ranged from 93.3% to 98%, indicating that community-based conservation activities in Randilen WMA are successful in engaging individuals across various age brackets.

This cross-generational involvement demonstrates that community-based conservation efforts are not limited to specific age groups. It suggests that people of all ages are actively participating in these activities, which is crucial for the sustainability of conservation initiatives. Furthermore, the study found that there were closer similarities in participation rates across age groups. This suggests that the conservation programs have effectively engaged the entire community, fostering a sense of shared responsibility for wildlife and habitat conservation.

### **Empowerment of Local Communities**

The high levels of participation among both genders and across age groups have significant implications for the empowerment of local communities in Randilen WMA. Community-based conservation has succeeded in creating a sense of ownership and shared responsibility among residents. Through their active engagement, community members are empowered to take a proactive role in protecting wildlife and their natural environment.

The empowerment of local communities is further reinforced by their deep understanding of Randilen WMA and wildlife conservation. The fact that the majority of respondents demonstrated a strong understanding of these topics indicates that awareness and education programs conducted by organizations like the African Wildlife Foundation, The Nature Conservancy, Honeyguide Foundation, Tanzania People and Wildlife, and Oikos Tanzania have been effective.

## **Discussion on Local Communities' Understanding of Randilen WMA and Wildlife Conservation**

The study provides valuable insights into the level of understanding among local communities regarding Randilen Wildlife Management Area (WMA) and wildlife conservation. Understanding the community's knowledge and perception is pivotal for effective community-based conservation. This discussion will analyze the findings in the context of the study's central theme, "Empowering Local Communities through Community-Based Conservation: A Case Study of Randilen Wildlife Management Area in Tanzania."

### ***Comprehensive Understanding***

The results of the study revealed that a significant proportion of respondents demonstrated a high level of understanding of both Randilen WMA and wildlife conservation. Specifically, 39.5% of respondents indicated that they understood Randilen WMA very well, and an additional 38.2% reported a good level of understanding. Similarly, 41% of the respondents expressed that they had a very good understanding of wildlife conservation, with an additional 34% reporting a good understanding. These statistics suggest that a considerable segment of the local communities possessed a comprehensive understanding of the concepts and objectives associated with Randilen WMA and wildlife conservation.

### ***Synonymous Nature of Randilen WMA and Wildlife Conservation***

The study highlights that Randilen WMA and wildlife conservation are regarded as synonymous by the local communities. This alignment is a significant achievement for community-based conservation efforts, indicating that the community recognizes the crucial role of Randilen WMA in wildlife protection and habitat conservation. The fact that Randilen WMA is perceived as a symbol of wildlife conservation is an affirmation of its success as a conservation initiative. Such recognition is vital for promoting local support and active participation in conservation activities.

### ***Factors Contributing to Understanding of Randilen Conservation Activities***

The study attributes the high level of understanding among local communities to several factors. One of the key contributing factors is the active involvement and engagement of the communities in Randilen WMA and wildlife conservation activities. These activities include conservation awareness campaigns, workshops, and training programs conducted by various Non-Governmental Organizations (NGOs) such as the African Wildlife Foundation, the Nature Conservancy, Honeyguide Foundation, Tanzania People and Wildlife, and Oikos Tanzania. These initiatives have

played a pivotal role in enhancing community awareness and knowledge regarding wildlife conservation and the significance of Randilen WMA.

Another noteworthy contributor to the communities' understanding is the democratic election of representatives from each village, undertaken every five years. This election process enables the participation of all residents, reinforcing their active involvement in decision-making processes and activities related to Randilen WMA. As a result, it strengthens the sense of ownership and responsibility among local communities regarding the management and protection of their natural resources.

### ***Implications for Empowering Local Communities***

The findings suggest that fostering a deep understanding of Randilen WMA and wildlife conservation within local communities is an effective strategy for empowering these communities. Informed and engaged communities are more likely to take proactive roles in conservation efforts. As residents perceive themselves as integral to the conservation process, their empowerment is naturally nurtured. Ultimately, the empowerment of local communities through such comprehensive understanding contributes to the success of community-based conservation, as outlined in the study's overarching theme.

### ***Mixed Perceptions on Revenue Satisfaction***

The study reveals that local communities exhibit mixed perceptions of their satisfaction with the revenues obtained from Randilen WMA. Approximately 38.97% of respondents agreed with their level of satisfaction, while 32.53% of respondents disagreed. An additional 12.37% strongly agreed with their satisfaction, and 16.13% claimed to have no idea. These figures underscore the complexity of local sentiments regarding revenue distribution, indicating that the communities are not universally satisfied.

### ***Key Informants' Perspective***

Interviews with key informants have highlighted the local communities' sense that the revenues generated from Randilen WMA are insufficient. This perspective is crucial for understanding the realities faced by the communities. Key informants often possess intimate knowledge of community dynamics and can provide valuable context to complement quantitative data.

### ***Quantitative Data on Revenue Distribution***

The financial data from the Randilen WMA office indicates that from the fiscal year 2018/2019 to 2022/2023, the three selected villages received a net



share of revenues totalling 286,109,262 Tanzanian Shillings (TZS). This figure translates to an average of 95,369,754 TZS per village, equivalent to an average of 19,073,950 TZS per village annually. The study notes that this amount constitutes 32.5% of the tourism revenues allocated to Randilen WMA by the Tanzania Wildlife Management Authority (TAWA). An important implication of this financial data is that the revenue distribution amounts to approximately 17.7 TZS per person per day. This figure falls below the new extreme poverty line of \$2.15 per person per day, as updated by the World Bank in 2022. To contextualize this finding, it is necessary to acknowledge that the revenues generated are intended to benefit the local communities by supporting livelihoods and development projects. The comparison with the poverty line underscores the concern that the revenues may not be adequate to address the economic well-being of the community members effectively.

### ***Support from Previous Research***

The study also cites research conducted in Enduitmet by the World-Wide Fund for Nature (WWF) in 2014, which found that Enduitmet WMA received \$129,000 in 2012/2013, equivalent to a distribution of 0.6\$/capital/year to the nine-member villages. This amount was deemed insufficient to support community development effectively. The findings of this research align with the local communities' perceptions of dissatisfaction with the revenues generated by WMAs.

### **Implications for Empowering Local Communities:**

The satisfaction, or lack thereof, with the revenues from Randilen WMA, has direct implications for the empowerment of local communities. Empowerment is not solely about conservation awareness and participation but also about improving the quality of life for community members. While community-based conservation aims to strike a balance between conservation efforts and the well-being of local populations, the study's findings suggest that there may be room for improvement in this regard.

Ensuring that the revenues from conservation activities adequately address the socio-economic needs of local communities is essential. This includes investments in infrastructure, education, healthcare, and other sectors that can help elevate the standard of living and enhance economic opportunities for the communities.

### **CONCLUSION**

The study has illuminated the success of community-based conservation efforts in empowering local communities across genders and age groups.

This empowerment is a pivotal step toward achieving sustainable wildlife management and environmental conservation, aligning seamlessly with the overarching theme of the study. Moreover, the research findings underscore the local communities' profound understanding of Randilen WMA and wildlife conservation, emphasizing the synonymous recognition of both. This heightened awareness is a testament to the effectiveness of community-based conservation in fostering local understanding and support. Nevertheless, the study reveals diverse perspectives on community members' satisfaction with the revenues derived from Randilen WMA. While some express contentment, others are dissatisfied, highlighting the necessity of ensuring that revenue distribution significantly improves the well-being of local residents. These findings bear broad implications for community-based conservation initiatives, showcasing the potential for engaging various demographic groups and enhancing community understanding and support. Moving forward, it is crucial to address revenue-related concerns while sustaining and reinforcing the successes outlined in this study to further empower local communities and achieve conservation goals.

## **RECOMMENDATION**

The majority of the residents living in villages surrounded by WMA have very low levels of education, thus, lack the means to take full advantage of tourism opportunities, leading to many livelihood programs being dominated by people outside their areas. Thus, the government and other conservation stakeholders should improve the learning environment in WMAs including provisions of study sponsorship for young people to attend tertiary education inside and outside the country so that in turn they can take full advantage of the opportunities provided by WMA. The study also recommends WMA authorities integrate local communities in all wildlife tourism activities within WMA to enhance the contribution of WMAs and wildlife tourism to rural livelihoods.

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## **Rural Tourism Entrepreneurship Skills and Knowledge as Strategy for Poverty Reduction: A Case of Bagamoyo District, Tanzania**

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### ***Abstract***

*Entrepreneurship is a process and art of managing business which needs an entrepreneur to have relevant sets of entrepreneurial skills and knowledge. These sets are considered as an alternative tool to minimize socio economic problems especially problem of high unemployment, environmental pollution, and poverty. The paper established entrepreneurship skills and knowledge as strategy for poverty reduction in Tanzania. The specific objectives of this study were to understand the local community's perception regarding the effects of entrepreneurial skills and knowledge, examined what are the key driving forces that make rural areas relevant to rural tourism, and to examine the destination-controlled challenges that militates its sustainability. The methods used included structured questionnaires, stakeholder's key informant interviews, and reviews of relevant literature. A likert scale range from 1 to 7 was used to measure the level of ranking and acceptance of variables from the sample of 100 respondents. SPSS software version 20 was used in all methods to analyze multivariate analysis. Findings revealed that entrepreneurial skills and knowledge is the most important dimension to explain rural tourism performance as opportunities for poverty reduction in local communities. Thus, it was recommended that there was a need to institute entrepreneurial training and tourism programmes that would ultimately provide chance for rural communities to be employed in high cadres with high pay, all tourism stakeholders have to provide enabling environment conducive for the smooth operation of both indigenous entrepreneurs and foreign investors. Further, there should be sound national tourism economic policy with respect to Small Medium Enterprises (SMEs) to make sure that rural tourism is promoted effectively and the community to integrate its marketing and products strategies. Areas for further research are also suggested.*

**Keywords:** *Entrepreneurial Skills, Rural Tourism, Poverty Reduction, Tanzania*

## INTRODUCTION

Rural tourism is recognized as an industry, involving the movement of people from one place to another (Mujanah *et al.*, 2015). This movement necessitates transport infrastructure, and the shift to a new location which requires accommodations for customers leading to the provision of food and drinks. Staying in a place facilitates interaction with the local community, generating job opportunities and economic activities. This interaction is associated with the blending of cultures from different origins (Nduna & Zyl (2017). The consumption patterns of tourists differ from those of local people, presenting challenges in waste generation and disposal. Rural tourism, reliant on the natural and cultural resources of an area, is unique, with the local community serving as the primary driving force. Key tourism destinations in developing countries often include national parks, wilderness areas, mountains, lakes, and cultural sites, many of which are rural (Lwoga, 2019).

Tourism is a significant sector in Africa, contributing nearly 9% to the GDP and holding immense potential for further growth (Carvache-Franco *et al.*, 2019). Given this potential, tourism businesses in the Bagamoyo district must adopt sustainable development principles to ensure enduring benefits for both current and future generations. Sustainable rural tourism development requires the inclusion of all stakeholders' perceptions and involvement in planning and development (Lundberg, 2017). Residents, through their prolonged exposure to tourism effects, are well-positioned to assess the impacts on economic, socio-cultural, and environmental dimensions of sustainable tourism development (Andersson, Armbrrecht, & Lundberg, 2016).

Approximately 75% of the world's poor, including Tanzania, reside in rural areas, with over one-third in arid and semiarid regions (URT, 2019). Rural tourism is identified as a tool for rural revitalization, posing the question of whether more can be done to develop it within these areas to disperse the benefits of tourism and increase its poverty impact (Kareem, 2015). Promoting rural tourism aims to enhance net benefits for rural people, increasing their participation in managing the tourism product. Developing tourism in rural areas, particularly with high local participation, can enhance poverty impacts. The nature of rural tourism products, often involving small-scale and culturally or farm-based operations, encourages broad participation and brings various benefits to rural areas, such as infrastructural development and spin-off enterprise opportunities, despite facing challenges (Kaptan *et al.*, 2020).

In Tanzania, the tourism sector has the potential to contribute significantly to socio-economic growth, accounting for approximately 17.5% of the GDP and 25% of foreign currency in 2019/20. The country's competitive strength in tourism lies in, abundant and diverse wildlife, spectacular landscapes, a clean environment, friendly people, and support from other economic sectors. However, rural tourism and the cultural heritage industry require diversification and commercialization. Thus, there is a need to increase the participation of locally owned enterprises in the top-notch rural tourism market. Current research proposes ways to optimize these opportunities. Successful tourism development, whether rural or not, hinges on commercial, economic, and logistical issues. Challenges faced by rural areas, including political and institutional obstacles, necessitate effective strategies to address them (UNWTO, 2021).

Rural tourism, as defined by UNWTO (2021), involves a visitor's experience linked to nature-based activities, agriculture, rural lifestyle/culture, angling, and sightseeing. Rural tourism encompasses various activities such as; farm-based holidays, special-interest nature holidays, ecotourism, walking, climbing, riding, adventure holidays, hunting, sports activities, and health and ethnic tourism (Lane & Kastenholz, 2015).

Motivation, a critical aspect of tourism, is the driving force behind goal-oriented behaviors. Lee's (1966) Push and pull theory propagates that, intrinsic and extrinsic factors influence individuals to participate in tourism activities. The push factor suggests that individuals engage in tourism to satisfy a need, such as correcting cultural and socio-psychological disequilibrium. In contrast, the pull factor posits that individuals participate in tourism because they are attracted by the destination's natural and cultural attractions and activities (Park & Yoon, 2009). This theory reflects the demand and supplies inherent in tourism, representing the needs and desires of tourists and the attractions that tourism operators offer (Lwoga, 2019).

The United Nations World Tourism Organization (UNWTO) designated 2020 as the Year of Tourism and Rural Development, emphasizing the potential of rural tourism to create jobs and opportunities. Rural tourism can revitalize and diversify rural economies, conserve local heritage, and revitalize traditional villages affected by urbanization and modernization (Anderson, 2015; Gao & Wu, 2017). In Tanzania, the development of rural tourism in villages began in 1995 with the Cultural Tourism Programme (CTP), expanding to 76 registered CTPs and 116 emerging Cultural Tourism Initiatives (TTB, 2019). Entrepreneurial skills and knowledge play a crucial role in identifying viable business opportunities, obtaining and managing

resources, and fostering innovation. Entrepreneurship is viewed as a catalyst for economic growth, job creation, and reducing dependence on imported products (Kareem, 2015; Brida *et al.*, 2010). Entrepreneurship development involves enhancing skills and knowledge through structured training and institutional building programs, aiming to enlarge the base of entrepreneurs, accelerate venture creation, and promote economic growth (Mwatsika, 2015).

Poverty, a significant challenge in developing countries like Tanzania, results from high unemployment rates. Poverty alleviation aims at improving living conditions through sustained development relying on the strength and resources of the society concerned (Adofu and Ocheja, 2013). Poverty, as defined by JRF (2013), encompasses pronounced deprivation in well-being, including low incomes, inadequate access to basic goods and services, poor health, education, and limited opportunities for betterment. Poverty reduction is closely linked to development; it involves increased productivity, equitable distribution of social products, and the emergence of indigenous institutions (Adofu and Ocheja, 2013). Rural tourism businesses in Tanzania require key factors from the local community for success. It includes financial planning skills, entrepreneurship management, environmental conservation awareness, and customer service excellence (Alsos and Clausen, 2014; Mujanah, 2015).

## **LITERATURE REVIEW**

This section examines the relevant rural tourism entrepreneurship skills and knowledge as strategy for poverty reduction to ensure that they equip local communities with relevant and up-to-date skills, because relevant skills are a pathway to rural tourism business and its sustainability. High quality and relevant higher financial management, administrative management, environmental conservation, customer care, communication, and good planning skills are able to provide local community with the knowledge, skills and core transferable competences they need to succeed in their tourism projects (Eusebio *et al.*, 2017).

### **Basic Skills of Local Community on Rural Tourism**

There are many specific skills required in the different sectors of the tourism industry. However, the basic skills that will help local community carry out their tasks effectively includes; financial management, administrative management, environmental conservation, customer care, communication, and good planning skills. Therefore, this section reviews the literature on the required rural tourism entrepreneurial skills and knowledge as strategy for poverty reduction in Tanzania. It is estimated that 3% of all international tourists travel for rural tourism purposes and rural tourism is estimated to be growing at an annual rate of around 6%, well above the growth rate for all



tourism (Eusebio *et al.*, 2017). The term skill refers typically to the use of methods or instruments in a particular setting and in relation to defined tasks (European Commission, 2014). In this study, skills are studied within the tourism industry and in the context of international tourism business development. Thus, skills refer to professional skills: the stakeholders' ability to apply knowledge, know-how and methods when working in the tourism industry to meet the challenges and tasks of their profession.

According to the European Commission (2016), higher education institutions need to ensure that they equip individuals with relevant and up-to-date tourism skills, because relevant skills are a pathway to employability and prosperity. High quality and relevant higher education are able to provide stakeholders with the knowledge, skills and core transferable competences they need to succeed in order to be able to supervise and manage the tourism business.

Tanzania is endowed with the existence of the necessary tourist attractions such as natural, the tranquility, cultural, historical and archaeological sites in high demand in international tourism markets. However, there are limited tourism linkages to other subsectors such as agriculture, transport, industry and services. The challenges in this sector include unpredictable business environment; inadequate regional and international tourist linkages, inadequate land for tourism investment outside protected areas leading to uncontrolled tourism development, unskilled personnel, limited budgetary allocations for tourism development and promotional activities, technical capabilities and coordination among various stakeholders involved in tourism development. The current study encouraging the application of science and technology for tourism marketing and entrepreneurial skills information, tourism socio-culture and environment, domestic tourism development, product development and diversification, and quality service delivery in enhancing the tourism industry (URT, 2021).

The importance of understanding residents' perception of tourism impacts for developing a sustainable rural tourism in a destination has motivated many researchers to embark on researching the antecedents and consequences of residents' perception of rural tourism effects (Lundberg, 2017; Ribeiro *et al.*, 2013; Sharpley, 2014). Residents' perceptions of rural tourism effect are categorized into economical, socio-cultural, and environmental dimensions reflecting the poverty reduction theory of sustainable rural tourism (Andersson *et al.*, 2016; Lundberg, 2017).

One of the major challenges facing developing and underdeveloped countries of the world including Tanzania is poverty. It has been so endemic as a result

of the high rate of unemployment that has become the major characteristic of the developing and underdeveloped countries of the world (Adofu and Ocheja 2013). The Millennium Development Goals (MDGs) advocate economic development to reduce extreme poverty by tackling the problem of capability deprivation through better access to education, health, and better opportunities for all (UNWTO 2005).

## **MATERIALS AND METHODS**

### **Study Area**

This study was conducted in Bagamoyo District in the eastern circuit Tanzania between August 2019 and September 2021. Geographically, Bagamoyo is situated at 6°26'S 38°54'E, encompassing two ecological zones the coastal strip, mainly savannah and bushy, and the upper country, covered with dense forest. The Coastal strip receives more precipitation than the upcountry, with rainfall ranging between 800 – 1200 mm per annum and temperatures between 13°C to 30°C. Short rain seasons occur from July to October, and long rain seasons are from February to June. Agro-Economic Zones: The district possesses 1,607,620 hectares of arable land, but only 250,000 hectares are utilized for agricultural activities, representing 16% of potential arable land.

There are two major agro-economic zones: The Coastal strip (lowland), characterized by sandy loamy soil where maize, rice, bananas, and cane crops are grown. The upcountry land, characterized by red soils, supports maize, cotton, and sorghum crops. Bagamoyo, known for its historic, cultural, and spiritual values, is a crucial tourist and investment destination in Tanzania. It is part of the seven districts forming the Coast region, with district headquarters located 65 kilometers north of Dar es Salaam. It shares borders with Morogoro district (west), Mvomero, Kilindi, and Handeni districts (north), Pangani district (northeast), the Indian Ocean (east), Kinondoni district (southeast), and Kibaha district (south) (URT 2012). Bagamoyo is divided into two councils, namely, Bagamoyo District Council and Chalinze District Council, each having its district executive director (DED). Saadani National Park (SANAPA) is the only national park on the East African coast situated in Bagamoyo. The large Ruvu and Wami rivers cover 9,847 km<sup>2</sup> of the district. According to 2012 population census, the district has 97,660 people and 23,066 households, with an average household size of 4.23 people and an annual population growth of 2.2% (National Bureau of Statistics 2012). Due to increasing industrial and economic activities, Bagamoyo was declared a planning area according to the Urban Planning Act of 2007 which led to new developments and the utilization of grazing areas for port infrastructure. Further, the study interviewed NLUPC staff on 25 June 2020;

they said that, resettlement plans were underway for people who were displaced from port areas.

### **Data Collection Methods**

Research design is the plan, structure and strategy of investigation concerned so as to obtain answers to research question. The plan is to overall scheme or program of research (Gao, 2017). The study adopted a descriptive research design using both qualitative and quantitative approaches for data collection and analysis. Purposive sampling method was adopted to identify key respondents. This method was used because a researcher wanted to get the technical information on rural tourism skills and policies. The other groups of respondents were selected through simple randomly sampling techniques in order to avoid the biasness. The target population comprised one hundred respondents aged 18 and above, forming a study sample size of 100. They ranged from 13 heads of departments (key informants), 45 local community members, 8 experts from higher learning institutions and 34 tourism entrepreneurs (tour agents, taxi drivers, curio managers, tour guides, and scuba divers).

The study used three research methods that includes; questionnaires which was designed based on an extensive review of the literature, interviews and field survey methods. Therefore, questionnaires were used in the collection of data which consisted of the general information while the interviews were used for the key informants to get the specific information on the influence of entrepreneurial skills, knowledge, and policies on rural tourism dynamics for poverty reduction (Table 1).

The study organized and administered interviews with 13 key informants (heads of departments) in Bagamoyo district council. They were selected by purposive sampling technique on the basis of their leadership experience and exposure to various aspects of tourism issues. In this case, the study sought their perceptions and opinions on the influence of entrepreneurial skills and knowledge of the local community on rural tourism dynamics. Also, the study convened a workshop forum with heads of tourism business entrepreneurs to discuss the role of entrepreneurial skills and knowledge on rural tourism business dynamics. Additionally, field surveys technique was conducted in different planned locations intended to capture various potential rural tourism information on facilities, traditional procedures, challenges, and opportunities in developing rural tourism.

**Table 1: Sample Study of Respondents who participated in the Interview**

<b>Respondents</b>	<b>Category</b>	<b>Sample (n)</b>
Local Government Employee 13 Heads of Department (key informants)	Policy makers and supervisors	13
Tourism Entrepreneurs	Leaders of tourism business practitioners (Tour- agencies, guides, managers, curio shops, Tax drivers,)	34
Local community/residents	Leaders of business groups, farmers, women groups	45
Representatives from Institutes of higher learning	Professionals and consultants	8
<b>TOTAL (N)</b>		<b>100</b>

**Source:** Field survey data (2021).

## **Data Analysis**

The Statistical Package for the Social Science (SPSS) software version 20 was utilized to analyze the data that was collected. The research data analysis included frequencies, percentages, correlations and regression analysis.

## **RESULTS AND DISCUSSION**

A total of 100 questionnaires were administered to the respondents in Bagamoyo district of whom 13 local Government employee and heads of departments, 34 tourism entrepreneurs, 45 local community/residents, and 8 Representatives from Institutes of higher learning Table 1. Questionnaires, interview, and field survey was used to collect the primary data desired; the results are presented in the following sub-section.

### **Effects of Entrepreneurial Skills and Knowledge on Rural Tourism**

On the upside effect of rural tourism skills and knowledge on the local community is the development and promotion of tourism in Bagamoyo district Tanzania. Knowledge refers to factual or theoretical information that a stakeholder possesses in a particular content area. Knowledge is generally regarded as the first determining factor in the execution of a task. Knowing how to complete a task is a pre-requisite for developing a skill in a particular area. It has an objective to develop rural tourism in a manner that contributes to the improvement of the quality of tourism business of rural areas in Tanzania (Abuhay, 2015).

The specific skills and knowledge intended in this study were; financial skills, managerial skills, conservation skills, customer care skills, communication and good planning skills. Therefore, this study explores the

relevance of local community entrepreneurial skills and knowledge, focusing on their perception of the impacts of rural tourism in Tanzania, specifically in Bagamoyo district within the Coast Region. The study established that these aspects were the opportunities and facilities towards poverty reduction making rural areas relevant to sustainable rural tourism dynamics. In other words, they are concerned with human capital development which is necessary for socio-economic transformation backed by access to quality education, health, water, sanitation, food security, nutrition, human settlement, land management, and demographics. To achieve this, there is great need to have equitable access to services, well-informed policies and strategies. These essential tools needed in transforming the growing population into skilled human capital for an entrepreneurial-based economy centered on rural tourism dynamics. Similar views are shared with other studies that; entrepreneurial skills and knowledge on rural tourism improve local communities' business management, conservation, financial management, managerial skills, communication, customer service, analytical and problem-solving skills, critical thinking, strategic planning, technical skills, time management, organization skills, branding, marketing, and networking (Indeed Editorial Team, 2021).

However, the study was informed by different informants by 53% who strongly agreed that; acquisition of entrepreneurial skills and knowledge on rural tourism per se is not effective unless it is coupled with financial skills which not only play a pivotal role in sustaining rural tourism but also contribute to the formulation of sustainable strategies, aiding the initiation and growth of tourism businesses (Table 2). Further, Financial skills stimulate entrepreneurial activities for the recovery of rural tourism potential, village traditions, local employment growth, and improved living standards. It can be inferred that; Entrepreneurs' training in financial management is an integral part of rural tourism initiatives, as financial knowledge significantly shapes and propels tourism business activities (Indeed Editorial Team, 2021). The fact that, one of the objectives of rural tourism (RT) in Tanzania is to improve the livelihoods of rural communities by offering them opportunities to organize tours showcasing their culture and lifestyle to visitors. Thus, RT is expected to provide tangible and intangible benefits, including direct tour fees, job opportunities, markets for local products, and knowledge exchange through interactions with tourists (Table 2).

**Table 2: The Effect of Local Community's Entrepreneurial Skills and Knowledge % on Poverty Reduction**

Statements	Strongly Disagree	Disagree	Slightly Disagree	Neither Agree nor Disagree	Slightly Agree	Agree	Strongly Agree
Rural Tourism Skills and Knowledge Required on Poverty Reduction							
Financial Skills and Knowledge are Helpful when I encounter Difficulties in my Business	1%	1%	2%	5%	10%	28%	53%
Customer-care and services positively affect my job experience	0%	1%	3%	9%	7%	29%	51%
Managerial Skills and Knowledge are Useful to Improve the Level of Decision Making	2%	2%	3%	5%	9%	22%	57%
Conservation Skills and Knowledge are helpful in Rural Tourism	1%	2%	3%	7%	5%	16%	66%
Customer care and services Skills Halt the Drift of Young to Cities	0%	0%	2%	10%	7%	19%	62%
Communication skills are helpful to Identify and Manage Rural Tourism Resources	0%	0%	3%	4%	6%	19%	67%
Financial Skills and Knowledge are helpful to Increase the Vacancy of Tourism Products	0%	1%	5%	8%	5%	18%	61%
Financial Skills Supports the Development of Rural Tourism Industry	1%	2%	2%	5%	5%	20%	62%
Financial Skills and Knowledge are helpful to Influence Tax Drivers and Tour Operators	0%	0%	2%	1%	7%	18%	72%
Managerial Skills and Knowledge helps to sensitize the awareness in Fighting Poverty	2%	5%	1%	17%	18%	20%	70%
Communication and good planning Skills and Knowledge help to Change Unused Farm building into Business Units	1%	2%	4%	5%	9%	32%	47%

**Source:** Researchers, 2021

### Key Driving Forces Relevant to Rural Tourism

The study examined six aspects central to community participation in rural tourism dynamics. They included, developing a business model, basic

financial management, critical thinking and problem solving, local community participation, benefits to rural areas; and the lack of viable options. These perspectives enable the assessment of responses, providing insights into respondents' understanding and relevant responses (Table 3).

### ***Developing an Entrepreneurial Business Model***

Table 3 shows that in the study area about 53% overwhelming responses from different informants strongly agreed and held the view that local communities and entrepreneurs have to collectively plan a business model as a high-level strategy for operating a tourism business profitably in a specific market. Such a model can be employed to analyses various product or service descriptions, targeted customers, marketing strategies, competition analysis, and projected costs and revenues. Developing a business model could serve as a business roadmap, regardless whether it is outsourced from professionals; it would have enhanced understanding of the respective business by its owner.

Shayo and Uiso (2021), from The Open University of Tanzania in their study, investigated the relationship between entrepreneurial orientation and tourism firm performance in selected regions in Tanzania mainland and Zanzibar. Structural equation modeling using AMOS was used in data analysis they argued that employee autonomy is the most important dimension to explain tourism firm performance, and reactivity followed by innovativeness skills. The study calls for tourism firms to promote employee autonomy, and become more innovative and proactive in overcoming the future challenges of tourism.

Sokko (2015) did a study on the “Roles of Entrepreneurs to the Development of Tourism Sector in Arumeru District, Arusha Region”. The main objective of this study was to explore the role of entrepreneurs to the development of tourism in Arumeru district. The study used case study research design. The purposive sampling technique and Simple randomly technique was used. The collection instruments were questionnaires and interview. Data were analyzed by Statistics Packages for Social Science (SPSS version 16.0) and explained in descriptive statistics. The findings revealed that unqualified entrepreneurs, high running costs, shortage of skilled workers, and high taxes were reasons for tourism industry fail to fulfill the needs of tourists. Furthermore, training for entrepreneurs is the best solution for the entrepreneurs to benefit from tourism industry. This study recommended for quality assurance for accommodation, entertainment, food and beverage, internet in hotels and restaurants, curio shops to meet the needs of tourists.



The current study concurred with these studies mentioned above due to the methodological approach.

### ***Basic Financial Management***

The informants emphasized the growth of international tourism and the increasing diversity of international tourists. As a result, important skills included marketing skills in international tourism. Therefore, it is vital to strengthen the skills in identifying and reaching various international target groups. The results of the study revealed also that in the study area recording revenues, monitoring spending, and managing costs are essential driving force for profitability and positive cash flow of the local community. The financial plan, a significant part of any business plan, aims to achieve financial growth through effective cash flow and equity management. Pricing packages should be agreeable to both the Tour Company and customers (Table 3).

### ***Critical Thinking and Problem Solving***

This study as depicted in Table 3 showed that 57% of respondents noted that there was a fundamental link between tourism skills and knowledge and problems solving in rural tourism businesses, ranging from logical thinking for effective solutions. Stakeholders must learn to think through problems logically, ensuring solutions enhance customer satisfaction and comfort. This factor demonstrated the local community's confidence in the ability of tourism development to bring people together, and to revive local customs and traditions.

Marinakou & Giousmpasoglou (2015) suggested that the most important aspect of the development of educational programmes in tourism is the relevance of the curriculum to the needs of the tourism industry. The stakeholder groups can influence thinking, or are affected by, tourism curricula decisions, and their interests with respect to tourism development should be taken into account when developing curricula. Therefore, to ensure that education for a tourism career is relevant to the employers within the industry, better communication between tourism education providers and the tourism industry is needed. Involving employers and labour market institutions in the design and delivery of decision making can help attune individuals to think better and emerging labour market needs and foster employability and entrepreneurship (Luka, 2015).

### ***Local Community Participation***

As shown in Table 3, the results showed that about 66% of the respondents agreed with the statement that rural tourism offers an opportunity to involve

more poor people in both urban and rural areas and community participation has become a common element in many development initiatives. Developing tourism enterprises where people live can positively impact economic growth, diversification, employment creation, and income generation. Rural tourism typically involves a range of enterprises, from small and informal to well-established or multinational, providing opportunities for local ownership. Therefore, local communities need to be empowered to decide what forms of tourism facilities programmes they would like to have developed in their respective communities, and to choose how tourism costs and benefits are to be shared among different stakeholder. It is similarly to (Anderson *et al.*, 2016; Lundberg, 2017) argue that it is important to develop tourism in rural areas in order to increase participation of the poor in the development of tourism and to bring wider benefits to rural areas.

### ***Entrepreneurial Benefits to Rural Areas***

Discussion with key informants asserted that rural areas often suffer from high poverty levels, low non-farm economic activity, infrastructural deficiencies, and inadequate access to essential services (Eusebio *et al.*, 2017). Rural tourism can address these challenges by fostering economic growth, diversification, employment creation, and income generation and 62% of respondents strongly agreed and 0% disagreed with the statement. It also contributes to population stability, improvement of public services, infrastructural development, preservation of local crafts, customs, and cultural identities, increased social contact, and environmental conservation and this statement was also supported by Nduna & Zyl (2017).

### ***Lack of Viable Options***

The study findings showed that lack of viable options in the study area raises many questions unanswered (Table 3) whereby about 67% of respondents strongly agreed with the statement while there was no informant who strongly disagreed which is equivalent to 0%. Similarly, rural areas may lack comparative advantages to attract economic activities other than agriculture or resource-based industries (Sango, 2014). Rural tourism becomes a suitable sector due to its compatibility with remote or non-urban areas, provided sufficient tourist access is available. The value of rural tourism in Bagamoyo is particularly high due to limited alternative options.

**Table 3: The Result of Key Driving Forces in Percent that Make a Destination Relevant**

Statements Rural Tourism Driving Forces	Strongly Disagree	Disagree	Slightly Disagree	Neither Agree nor disagree	Slightly Agree	Agree	Strongly Agree
Developing a Business Model	1%	1%	2%	5%	10%	28%	53%
Basic Financial Management	0%	2%	3%	6%	10%	29%	51%
Critical Thinking and Problem Solving	2%	2%	3%	3%	12%	22%	57%
Local Community Participation	2%	2%	1.9%	1.9%	1.2%	66%	16%
Entrepreneurial Benefits to Rural Areas	0%	0%	2%	11%	6%	19%	62%
Lack of Viable Option	0%	2%	2%	2%	8%	19%	67%
Environmental pollution and poverty	0%	0%	1%	0%	11	18	70

**Source:** Researchers, 2021

### The Destination Challenges

Results as depicted in Table 4 showed that the informants' skills and experiences identify current challenges hindering sustainable rural tourism dynamics and how should they have handled. These challenges include; high unemployment, environmental pollution, poverty, deficient financial management skills, infrastructural facilities, lack of technological since the national economic development is driven by the invention, adoption, adaptation, and innovation of appropriate technologies, issues related to administration of conservation laws and regulations (Nduna & Zyl, 2017).

Other challenges involved irregular power supply during the working hours, high production costs of tourist commodities, tourism policy inconsistencies, difficult access to funding (for example loans from government financial institutions), poor tourism policy implementation, tourism market restrictions, lack of tourism skills and experiences in the issues of tourism business management and record-keeping (Lundberg, 2017).

Discussions with key informants indicated that about 97% of the community living in this study area was willing to participate in rural tourism business venture. Given the necessary training in basic skill and knowledge through empowerment programmes and financial assistance, there is possible hope that this rural community can augment their living conditions through rural tourism. To overcome these challenges, stakeholders at all levels must maintain the mentioned aspects for effective rural tourism business implementation.

**Table 4: Challenges that Militate Against Sustainable Rural Tourism in Bagamoyo**

Statements	Strongly Disagree	Disagree	Slightly Disagree	Neither Agree Nor	Slightly Agree	Agree	Strongly Agree
Inadequate capital (unemployment) due to low level of tourism skills and knowledge	0%	1%	2%	5%	10%	31%	49%
Lack of requisite skill and experiences	0%	1%	3%	9%	7%	29%	51%
Inappropriate technology	2%	2%	3%	5%	9%	22%	57%
Inadequate market research	1%	2%	3%	7%	5%	16%	66%
Lack of proper records or lack of any rural tourism business records	0%	0%	2%	10%	7%	19%	62%
Restrictive effects of customs and market imperfections,	0%	0%	3%	4%	6%	19%	67%
Irregular power supply and other infrastructural inadequacies (water, roads),	0%	1%	5%	8%	5%	18%	61%
Uneasy access to funding (e.g. loan from banks),	1%	%	2%	5%	8%	20%	62%
Lack of business strategy (tourism planning)	0%	0%	2%	1%	7%	18%	72%
Fuel crises or shortages,	2%	5%	1%	7%	8%	20%	60%
Different perceptions on cultural issues among stakeholders	1%	2%	4%	5%	9%	32%	47%

Source: Researchers, 2021

## CONCLUSION AND RECOMMENDATIONS

The findings of the study lead to the conclusion that, the creation of employment and the improvement of the living standards of the local community through their tourism skills and knowledge are important dimensions of rural tourism business as a strategy for poverty reduction both at national and international levels. The study provides substantial evidence supporting the influence of entrepreneurial skills and knowledge on rural tourism dynamics and poverty reduction in Bagamoyo district. Entrepreneurial skills development is a crucial tool for poverty reduction, stimulating employment and economic growth in developing countries. These skills enhance educational attainment and contribute to economic growth through financial management, customer care, and environmental conservation skills. The study underscores the role of entrepreneurial skills and knowledge in Tanzania's economic and social development, emphasizing their significance for sustainable wealth creation. Attention to the growth of tourism entrepreneurial skills and knowledge from the household level it seems to be essential for Tanzania to overcome challenges such as poverty and unemployment.

The findings also revealed that local community do not have tourism information “points” in the region through entrepreneurial education and training. Both central and local governments should provide an enabling

environment for the smooth operation of indigenous entrepreneurs and foreign investors to boost the economy, reduce unemployment, and reduce poverty in Tanzania. Government, NGOs, and private sectors and all stakeholders has to influence and should create awareness of the benefits and role of entrepreneurial skills and knowledge development as a poverty reduction strategy. Establish a local rural tourism association in this destination to serve as a central mediation point for government, businesses, and the community, as well as to collaborate with tourism associations at other levels.

## RECOMMENDATIONS

Entrepreneurial skills and knowledge development should be inculcated into the academic institution's curriculum to promote human empowerment and development through entrepreneurial education and training. Both central and local government and all tourism stakeholders have to provide enabling environment conducive for the smooth operation of both indigenous entrepreneurs and foreign investors in order to boost the economy, reduced unemployment and ravaging level of poverty in Tanzania. Government, NGOs, private sectors should create awareness on the benefits and role of entrepreneurial skills development of rural tourism to individual towards poverty reduction, economic growth and development. There should be sound national tourism economic policy with respect to Small Medium Enterprises (SMEs) to make sure that rural tourism is promoted effectively including recognition of the vital contribution of entrepreneurial skills and knowledge to accumulate more customers in and out Tanzania.

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## **Strategies and Factors Influencing SME Sustainability : A Case Study of TSANG Company in Butembo, Democratic Republic of Congo**

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### **Abstract**

*Medium-sized enterprises (SMEs) form the backbone of the economy of the Democratic Republic of Congo. Indeed, these businesses are pivotal in sustaining the country's economic growth through job creation and alleviating poverty. Inasmuch as this fact stands, Congolese SMEs face a myriad of economic and political dynamics that intimidate their existence and essentially viability. The paper will highlight how TSANG, one of the prominent SMEs in Butembo, undertook strategies to remain competitive amid such a difficult environment and what would be some determinants of its sustainability. Guided by these following research questions : "What strategies does TSANG implement to ensure its sustainability ? " and "What factors influence the success of these strategies ? A qualitative and descriptive case study methodology was used, involving a literature review and semi-structured interviews with the company's manager. The study identified four main sustainability strategies : diversification, differentiation, long-term planning, and choice of financing method. Also, inside things like manager skills and worker motivation ; outside things such as stakeholder links and how fast you can get money all played big roles in whether these plans worked. The study wraps up by saying a mix of badly done plans and the skill to handle inside and outside factors is key for keeping SMEs in tough times. It suggests that to make their long-term success chances better and be more competitive, SMEs should work on building strong plans that deal with both their internal strengths and external challenges.*

**Keywords:** Strategy, Sustainability, SME, Butembo, TSANG

### **INTRODUCTION**

SME sustainability involves ensuring their long-term survival and prosperity by adapting to challenges and remaining competitive. (Abhaya et al., 2025). Several companies are created, develop, and fewer reach a level of

sustainability. In developed countries like Vietnam for example, the survival rate of SMEs is estimated at 54. 1% in 2019 (Sambou, 2019 ; Nguyet, 2022). According to Clément et al. (2023) fewer than two companies in three continue their activities after three years of existence and only one company in two manages to pass the five-year mark. In Central Africa, SMEs account for 99. 8% of businesses. However, 72% of SMEs created between 2010 and 2016 did not survive beyond six years. The creation of SMEs makes it possible to deal with unemployment and reduce poverty (Nesrine & Abdelaziz, 2023).

Thus the SME is the locomotive of the contemporary economy in both developed and developing countries, for its undeniable role in development and in the reduction of unemployment, hence the interest of public authorities in encouraging the creation of new businesses. Creating a business is a challenge ; ensuring its sustainability is an ongoing battle for managers. Given that businesses constitute the lungs of the economy, they must be sustainable in order to promote the development of the economy. As Sustainability requires a holistic approach that encompasses environmental, social, and economic aspects, and focuses on creating value for all stakeholders, not just shareholders (Masfer, 2023). The business world is constantly subject to upheaval, with companies operating in an increasingly complex and competitive environment in which changes seem difficult to identify and control. Thus, this climate plunges companies and more particularly SMEs into a situation of questioning, adoption of new strategies or the implementation of organizational decisions to compensate for the situations they are going through (Lati et al., 2023).

Most studies focus on developed countries, a minority on countries of the South and very limited on countries with hostile environments. In Democratic Republic of Congo, the economy is largely driven by small and medium-sized businesses and the trend of SMEs creation is growing. Since these companies contribute to the economic development of the country by creating jobs and reducing poverty (Natalia et al., 2020). However, these businesses face significant economic and security challenges, making their sustainability a difficult task. Various factors such as the hyper-competitive and fluctuating economic environment, the security situation and limited access to financing threaten their survival, 30% of SMEs have only 1 to 5 years of existence and more than 50% have less than 10 years of existence. This indicates that SMEs disappear as the time goes by.

The city of Butembo, located in the North Kivu province of the DRC, characterized by its strong commercial activity, nevertheless operating in the

hostile environment of the DRC, also faces challenges. However, some companies are more able to succeed compared to others despite a hostile environment in which they operate. The main question is why and how do they manage to stay on the market in a highly competitive environment ? Starting from the case study of TSANG Company with more than 25 years of existence and still strong on the market, we would affirm that there are secrets that these companies have to ensure sustainability. Business develop strategies to deal with challenges presented by the environment. Hence the following questions:

- To ensure its sustainability, what strategies does the “TSANG Company” implement ?
- By what factors is the success of its strategies influenced ?

This study aims to analyze the factors that influence the sustainability of TSANG establishments and determine their secrets for remaining on the market despite the economic environment which is highly competitive in the city of Butembo

## **LITERATURE REVIEW**

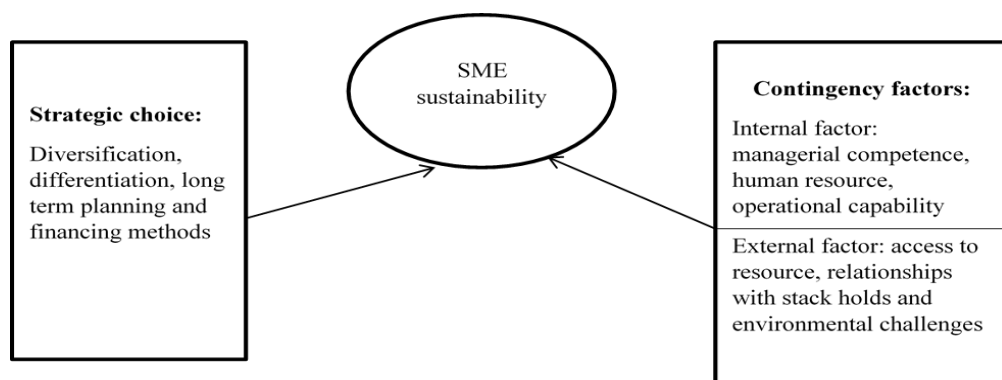
The survival and prosperity of SMEs are closely connected to the strategies they implement to make it a flawless sheep in the continuity of its daily activities. These strategies' success depends on the combination of a few factors internal to the company such as the competence of the manager (Claude et al., 2023), employee promotion, innovation, long-term management, harmonious relationships with customers and suppliers without forgetting external factors such as the environmental context (Sisira Kumara et al. , 2020). In a complex and turbulent context, coopetition, a strategy according to which competing companies cooperate with each other in order to create value and fairly large shares of commercial gain, would be implemented in order to achieve the desired performance, and to guarantee a certain lasting sustainability.

Several research studies on the sustainability of SMEs have been carried out and provide different results. Innovation is identified as a main source of long term success for companies (Filali & Torra Mohamed, 2023; Michel et al., 2016). Other studies have shown that human resource capacity, business diversification and the competence of the entrepreneur have a positive effect on SME sustainability (Firman et al., 2022 ; Claude et al. , 2023). Furthermore financial governance play a significant role in business

sustainability, the more effectively it is implemented ; the better equipped businesses are to prosper in the long term (Mehdi & Abdelhakim, 2023). In the specific context of the DRC, few studies have focused on the sustainability strategies of commercial SMEs. However found some strategies like specialization, market conquest or the Offensive Strategy, cost leadership, innovation, differentiation, diversification, collaboration and loyalty to face the challenges faced these businesses, notably insecurity, corruption and difficulties in accessing markets and ensuring sustainability.

### Theoretical framework

Contingency theory emphasizes that business success is from the combination of a set of factors, notably human, organizational, financial and environmental. The main suggestion of the theory is that there is no unique best way of organizing a business and that the organizational context influences efficiency. Guided by the general hypothesis that organizations whose internal characteristics best match the demands of their environment achieve the best results. In the context of the study, this is to mean that the sustainability of TSANG society depends on how its strategies align with the specific challenges and opportunities presented by the economic and political environment of the DRC. Strategically managing Porter's Five Forces can significantly enhance SMEs' competitive advantage and sustainability (Prihatin et al., 2019). SMEs leveraging differentiation and innovation are better equipped to address rivalry and buyer power. Managing supplier power is critical for cost control and quality fostering innovation can capitalize on the low threat of substitutes (Zemani et al., 2024).



**Figure 1: Framework of business sustainability**

The framework shows that the sustainability of SMEs in the DRC results from the interaction between strategic choices and contextual factors. The success of strategies is influenced by both internal factors (e.g, management

competence, employee motivation) and external factors (e.g., economic instability, stakeholder relations).

## **METHODOLOGY**

### **Research design**

This research used a qualitative and descriptive case study methodology. This methodology was chosen to gain an in-depth understanding of the sustainable development strategies of TSANG, an SME operating in the challenging context of Butembo, Democratic Republic of Congo, and the factors that influence their success. Semi-structured interviews with TSANG Company's director served as the data collection tool. Through these interviews, qualitative data provided detailed insight into the company's strategic approaches and the internal and external factors affecting their implementation. This data was processed using descriptive methods, including transcription, categorization, and thematic analysis by organizing information, to derive relevant insight, identify key strategies and influencing factors.

### **Research setting**

This study was conducted in Butembo city, North-Kivu in Republic Democratic of Congo; the data were collected in an SME in the region operating in a competitive, economically and politically unstable environment, which has existed for more than 25 years. The researcher met personally with the manager of the SME twice.

### **Data collection**

Semi-structured interviews with the director of TSANG Company, with the primary objective of collecting qualitative data to understand the company's sustainability strategies and the factors contributing to their success, constituted an important source of our data. We conducted four individual interviews with the director of the SME. We asked various questions through which information on various aspects of the company, including its characteristics, strategic drivers (such as product strategies, market scope, and planning), and the influence of the social, economic, financial, and political environments, was available to us. They explored the internal and external factors that play a role in the success of the company's strategies.

The qualitative data collected during the interviews were then transcribed for descriptive analysis. This analysis aimed to explore and gain an in-depth understanding of the strategies implemented by TSANG to ensure its sustainability in a competitive, economically, and politically unstable environment. Finally, it is important to note that the manager's participation

in these interviews was voluntary. To maintain confidentiality, transcribed data were stored on the researcher's personal computer and deleted after analysis was complete.

### **Data analysis**

This study used a descriptive analysis of qualitative data collected during semi-structured interviews with the director of TSANG. The main objective was to explore and understand the strategies implemented by the company to ensure its sustainability. The focus on the systematic organization of this qualitative information in order to derive relevant insights into the company's strategic approaches makes it an analytical method. The data transcription process, which consisted of converting oral statements into a written format for systematic analysis, marked the beginning of the process. This transcription was followed by a categorization of the data to identify key themes and trends related to the company's strategies and the factors influencing their success. This categorization consisted of classifying the identified strategies into four main areas : product-related strategies, market scope, planning, and the social, economic, financial, and political environment. The factors influencing the success of these strategies were then grouped into two main categories : internal and external. Internal factors included elements within the company's control, such as managerial skills and employee motivation, while external factors encompassed elements beyond its control, such as economic instability and stakeholder relations. With this structured approach, we were able to systematically examine qualitative data, providing a clear and structured understanding of the strategies employed by TSANG Company and the variables affecting their effectiveness. The results of this analysis form the basis of the study's conclusions and contribute to a better understanding of the sustainability of SMEs in challenging environments.

### **Ethical considerations**

The manager participation to the interview was voluntary. Data transcribed were store in the researcher personal computer and deleted after analysis.

### **Researcher reflexivity**

Based on my reading experiences on the strategies implemented by SMEs to ensure their sustainability and wanting to verify their applicability in a particular case of an SME having lived more than 25 years was of capital importance for the research. This may have influenced my analysis



## **RESULT**

### **Description of the company**

TSANG Company is an individual private company, located in the town of Butembo, North Kivu, DRC created in 1990, which at the creation specialized in the sale of construction hardware materials. As it evolved, it launched into livestock breeding and real estate, now it is in the hotel industry and transport. Thus the main activities of TSANG Company are: sale of construction hardware, livestock breeding, real estate, hotel industry and transport.

The annual sales volume is approximately \$50, 000 (fifty thousand) and the number of employees estimated at 38. Considering the information above, the company has been in existence for 34 years and is classified among small and medium-sized businesses in light of its turnover and the number of employees.

### **Presentation of main strategies identified**

In light of answers given by the manager during the interviews, we classified strategies identified into 4 categories :

Strategy linked to the activity : diversification

Here is the manager's declaration "given the unstable political environment and the hyper-competitive economic environment we thought not to do in a field of activity that is why we are also in livestock breeding, transport, real estate, hotels and our activities extend to other cities in the region such as Beni, Mambasa"

The company's activities include the sale of construction hardware materials, livestock breeding, transportation, hotel services, and real estate. From these qualitative data, it is seen that the company is expanding its portfolio of activities, by the fact that it is not only in hardware but also in livestock, real estate and transport.

While the company's main market is Butembo, it has expanded to Beni and Mambasa. From that it is seen that the company is diversifying geographically because its activities are spread across several areas of the country. This reduces the risk of bankruptcy if business does not work in one region, it works in another. In addition, this diversification makes it possible to improve its portfolio of activities.

### **Management-related strategy : long-term planning**

“The plan and process of expanding our market in major cities of the country and even abroad pushes us to do our best to be up to the task”

The company plans to expand its hardware sector to other major cities in the country such as Kinshasa, Lubumbashi, etc. Even in foreign countries for an internationalization process. This gives direction to the organization, drives it towards the goal in future proactively, able to allocate resources strategically also forms strategic alliances. Long-term planning is a key to sustainability but it is often not easy to carry out in an unstable context. Long-term plans should be flexible in view of the changing market conditions. The firm will need good market research as well as financial planning to support such a bold expansion

### **Product and market strategy: Differentiation**

“To attract customers we are trying our best to sell the best quality products”  
In the construction hardware materials sales market, try our best to sell high quality products. With TECNOMARK, it is renowned as an importer of good quality plastics and hardware, which allows customers to always buy its products and this gives it a leading position in the market. High-quality products can help TSANG Company to build customers loyalty, create strong brand reputation and gain competitive advantage. Financing method “Generally our source of financing is our own funds, however we also have access to credit from banks”

The company is financed by its own funds from its various sales and by credit granted by the banks. Its access to bank credit demonstrates financial credibility and the ability to invest in profitable projects that ensure timely repayment. Access to financing is a major element. Being financed by its own funds reduces dependence on external financing, but access to credit also allows for larger investments and faster expansion. However, relying exclusively on internal funds can slow the pace of growth. The need for strategic use of credit for rigorous management to avoid over-indebtedness is an asset.

### **Analysis of the factors influencing the success of these strategies**

We identified these factors into two main factors which are: internal and external factors.

#### ***Internal factors***

With regard to internal factors of the business we have identified 6 which are: profile of the manager. Who has the ability to adapt to change, his spirit of

listening. To the evolution of the environment to anticipate change and readjust strategies. Listening skills, the ability to adapt, and the ability to anticipate change are important qualities for a leader and contribute significantly to effective strategy implementation in a dynamic environment.

Regular staff training. For greater performance, staff training seminars are organized within the enterprise. Training employees is an investment for the company and helps improve the skills needed to enable the company to undertake new projects and maintain quality.

Committed and motivated employees. Employees are powerful enterprise ambassadors for they are motivated and committed. And they contribute to the effectiveness of achieving strategic objectives. Open collaboration between all levels of the company. For problem solving at all and prompt communication to foster a positive attitude that helps meet challenges and implement strategies effectively. Acquisition of new equipment to increase the productive capacity. The company has acquired the ACTROS type transport vehicle, which allows the company to transport its imported goods for itself instead of renting one. This vehicle is beneficial for the company because it constitutes a source of financing when other companies rent it for the transport of their goods. Investing in the acquisition of assets such as the ACTROS transport vehicle not only improves operational efficiency (internal transport) but also creates new revenue streams (leasing to other companies), thereby directly promoting diversification and financial stability.

### ***External factors***

With regard to external factors of the business we have identified : innovation, relation with stakeholders (customers and suppliers) and access to financing.

As the company operates in an unstable and hyper-competitive environment, it focuses on internal strengths to face challenges and seize opportunities and finally ensure its sustainability. Thus new markets, new activities and new products play an important role in the success of strategies.

## **DISCUSSION**

There are numerous and varied researches on the sustainability of SMEs. In light of this existing literature, we guided the questions during our interview with the company's manager in order to identify the main strategies implemented for its sustainability. And the study identified 4 main strategies which are diversification, differentiation, long-term planning and choice of financing method. In addition, the study identified internal and external factors such as manager competence, employee motivation and

communication between all stakeholders in the company that influence the success of these strategies.

The diversification strategy is supported by (Claude et al., 2023) et (Firman et al., 2022) as a strategy that companies implement to ensure their sustainability. It has been shown that diversification in both commercial activities and geographical location is a key strategy for TSANG Company as a response to the instable and hypercompetitive environment. It makes sense in an unstable economic and political environment such as that of the DRC. It can be an approach to SMEs whereby they would not have to put emphasis on a single product or market. According to It reduces risks by giving different market access, enhances the general portfolio, and creates synergies among variegated business units. The flip side is that running a diversified business can be very complicated and requires a different kind of expertise as well as resources which must be allocated properly.

To face the competition, the company is doing its best to offer the best quality products. This refers to the differentiation strategies supported by, maintaining quality, however, would be the biggest challenge for the company since its supplies can be easily disrupted. The desire to expand necessitates large resources and entails a need for stability that often cannot be met. Although the company currently uses its own funds, continued access to credit will be crucial to support its ambitious expansion plans and address potential economic challenges, since (Bianca, et al. , 2025) affirmed that equity can restrain growth, and though access to bank credit is good, it is not easy to come by and not affordable for most SMEs in the DRC.

A combination of internal and external factors can significantly impact the company's survival, either positively or negatively. In a hypercompetitive market, the ability to introduce new products, services, or processes is essential to maintaining a competitive advantage and ensuring the success of diversification efforts (Uwah et al., 2022). Strong relationships with customers (loyalty through quality) and suppliers (guaranteeing reliable resources) are essential to the smooth operation and success of product and market strategies (Obafemi, et al. , 2023).

Nesrine & Abdelaziz (2023) in their empirical study, made the statical analysis and the results denounce eight factors which are : the profil of the manager, enterprise strategy, innovation, entrepreunial support, the field of activity, enterprise environment, strategic implementation and customer/supplier role. The study concluded that profil characteristic of the manager is the most significant determinant. This meet our founding

according to which the manager profile characteristic is among internal factors that influence the success of sustainability strategies.

Carel & Jean Roger (2022) point out manager priority to the objective of maintaining their good image within the geographic area where they operate and meet all stakeholder needs as the main definition of sustainability. This meets our findings according to which the relation with stakeholder influences success strategies of sustainability. According to Ida & Doddy (2022), better business strategies improve the competitive advantage of SMEs and the evidence of the importance of innovation to improve the competitive advantage. Managerial competence and employee motivation are internal factors that cut across universality. In the DRC, security needs and managing limitations in infrastructure can also pose additional challenges. External factors, especially stakeholder relationships, are critical. In the DRC, these relationships can be adversely affected by political instability, corruption, or logistical difficulties. It can be concluded that though the strategies identified in the study are relevant, their successful implementation would hinge greatly on the ability of SMEs to address the specific challenges of their environment. This research focuses on a Congolese SME from Butembo operating in a competitive and unstable environment. The findings provide valuable insights for startups and other businesses in the region.

## **CONCLUSION**

Strategic management is essential to sustainability of SMEs, regardless of their location, in an unstable economic and political context. The resilience of TSANG in Butembo, DRC, is a testament to this. The company's success relies on a combination of diversification, differentiation, long-term planning, and rigorous financial practices, enabling it to meet the challenges inherent in its environment.

This strategy helps you get by right away and also encourages long-term growth and staying competitive. The success of these strategies, however, takes place due to the relation that strengths and opportunities have. Internal strengths such as managerial skills, employee motivation, and operational capabilities are required for the adaptation and innovation of the company. Just as much, external factors such as stakeholder relationships, resource availability, and ability to show dynamism towards environmental changes also determine what constitutes an opportunity or threat for the company. In challenging environments like TSANG's, as this case study demonstrates, comprehensive strategy, proactive internal management and adaptive responses to external forces are critical for SME sustainability. This case

study provides other SMEs aspiring to achieve sustainability in similar contexts with valuable lessons.

## **RECOMMENDATION**

Based on the findings of this study, the following recommendations are proposed:

- SME Owners and Managers should create and implement integrated sustainability plans to enhance internal capabilities, establish external relationships, and promote innovation and adaptability.
- Policymakers and Support Organizations should Support a good business climate, offer SMEs focused tools and support, and encourage networking and cooperation among them to thus increase information exchange, entrance to fresh markets, and group solutions to shared problems development.
- Future researcher should:
  - Include large-scale quantitative to give more generalized findings on SME sustainability strategies and contributing factors,
  - Focus on the problems and sustainability strategies of SMEs in various industries in the DRC to provide targeted solutions.
  - Focus on how technology adoption and digital transformation can improve the sustainability and competitiveness of SMEs in DRC

## **IMPLICATION OF THE STUDY**

Beyond its academic contribution, this study offers a direction for ensuring the resilience and growth of SMEs, which are considered key economic drivers. It sheds important light on the strategies and factors that determine the sustainability of SMEs in a challenging context such as Butembo, DRC. It emphasizes the crucial internal and external factors that enable SMEs to overcome market obstacles and achieve long-term success. By following the proposed strategies and focusing on continuous development, SMEs can increase their competitiveness, create jobs, and support economic growth in the DRC.

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## **Impact of Corporate Governance on the Financial Efficiency of Listed Commercial Banks in Ghana**

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### **Abstract**

*The study investigated the influence of corporate governance (CG) mechanisms on the financial efficiency of listed commercial banks in Ghana, emphasizing the emerging role of integrated reporting (IR). Financial data from 2018 to 2023 for eight listed universal banks were analysed using correlation and regression techniques. The cost-to-income ratio (CIR) served as the primary metric for financial efficiency. The findings revealed a significant positive relationship between financial gearing and CIR ( $\beta = 0.511$ ,  $p = 0.001$ ), while other CG mechanisms, such as board size, CEO duality, and audit committee effectiveness, exhibit negligible impacts individually. However, collectively, CG mechanisms significantly influence CIR ( $p = 0.024$ ). The study underscores the necessity of complementary CG practices to enhance operational resilience. The study highlights the potential of IR in improving transparency and stakeholder trust, addressing critical gaps in existing CG frameworks. Tailored CG prescriptions by the Bank of Ghana are recommended to optimize efficiency. This research provides novel insights into the interplay between CG mechanisms and financial efficiency in an emerging market context, offering actionable recommendations for policymakers and banking practitioners.*

**Keywords:** *Corporate Governance, Integrated Reporting, Ghanaian Banks, cost-to-income ratio, Financial Efficiency*

### **BACKGROUND**

The discourse surrounding Corporate Governance (CG) has garnered significant attention within governance literature, driven by its substantial impact on the growth and development of emerging economies (Owiredo & Kwakye, 2020). The aftermath of major corporate collapses, such as Enron and WorldCom in the early 2000s, has underscored the heightened importance of robust CG practices globally (Afriyie, Aidoo, & Agboga, 2021). This spotlight on CG extends beyond advanced economies, resonating strongly in developing economies like Ghana, which have faced notable CG challenges. The recent collapse of seven banks in Ghana further underscores the imperative for sound CG practices in the financial sector (Agyenim-

Boateng, Aboagye-Otchere & Aboagye, 2020). These developments have amplified the need for governance systems that can withstand the complexities of financial sector operations.

The study stems from the pivotal role of CG in enhancing financial performance, transparency, and resilience in the banking sector, particularly in emerging economies. Previous studies, such as Thaker et al. (2021), emphasize that effective CG practices significantly enhance bank efficiency, transparency, and financial outcomes. Bank efficiency, a critical metric of performance and managerial effectiveness, gains heightened importance in the context of Ghana, where deregulation, technological advancements, and evolving regulatory frameworks have created a dynamic operational landscape. Despite the wealth of literature on CG and financial efficiency in Ghana ((Nyarko et al., 2017; Puni & Anlesinya, 2020; Coleman & Wu, 2020; Owiredo & Kwakye, 2020; Gyamerah, Amo, & Adomako, 2020; Gakpo, 2021; Boachie, 2021; Musah & Adutwumwaa, 2021), the mixed and inconclusive results necessitate further exploration.

Another driving factor is the inadequacy of CG frameworks highlighted by the 2017 banking sector crisis in Ghana. This crisis revealed gaps in governance structures and their inability to prevent collapses, making it imperative to identify mechanisms that can bolster financial resilience and efficiency. Additionally, the emergence of Integrated Reporting (IR) as a CG mechanism offers a novel opportunity to address disclosure and accountability issues, further motivating the inclusion of IR in this study.

This study explored the relationship between CG mechanisms and financial efficiency in Ghanaian banks, contributing to the on-going discourse with a focus on practical and theoretical advancements. The specific objectives were:

1. To assess the influence of CG variables such as board size, CEO duality, audit committee effectiveness, and financial gearing on the financial efficiency of Ghanaian banks;
2. To evaluate the role of Integrated Reporting (IR) in enhancing CG frameworks within the banking sector; and
3. To provide actionable recommendations for policymakers and practitioners to strengthen governance structures in Ghana's financial sector.

To achieve these objectives, the study addressed the following research questions:

How did key CG variables influence the financial efficiency of listed universal banks in Ghana? What was the role of Integrated Reporting in improving CG practices in Ghanaian banks? How could robust CG mechanisms have mitigated governance-related crises in Ghana's banking sector?

The research hypothesized that *CG mechanisms influence financial efficiency in Ghanaian universal banks*. Analysing the financial reports from 2018 to 2023, the study offers valuable insights for theoretical advancement and practical application, particularly in addressing the pressing necessity for enhanced governance frameworks following the 2017 banking sector that collapsed attributed to weak CG practices. The findings of this study can guide policymakers and practitioners in implementing robust CG frameworks, thereby mitigating current challenges and preventing future crises.

This study extends existing research by adopting a country-wide perspective, analysing the financial reports of all eight listed universal banks in Ghana over a five-year period (2018 to 2023). Unlike prior studies that predominantly focus on traditional CG mechanisms, this research incorporates Integrated Reporting, highlighting its potential to enhance disclosure, accountability, and transparency, key elements often underexplored in CG literature.

Additionally, this research contributes to addressing governance challenges identified in the 2017 banking sector collapse by offering practical insights for implementing resilient CG frameworks. Policymakers and practitioners can leverage the findings to design governance structures that align with global best practices while addressing the unique challenges faced by Ghanaian financial institutions in 2019.

The paper is structured to offer a comprehensive analysis of the topic, covering literature review, methodology, empirical results, and conclusions, thereby contributing to the on-going discourse on CG and financial efficiency in Ghana's banking sector.

## **LITERATURE REVIEW**

### **The Theoretical Framework**

The theoretical framework underpinning this study embraces a novel hybrid perspective of CG, which synthesizes diverse established theoretical frameworks (van der Weert, Rijn, & Span, 2022; Mendoza-Velázquez et al., 2022), including agency theory, stewardship theory, stakeholder theory,

resource dependence theory, and institutional theory. By amalgamating these frameworks, the approach transcends the constraints of individual theories while capitalizing on their respective strengths. Notably, this governance framework stands out for its contextual sensitivity (González, Acosta, Muñoz & López, 2021). Recognizing the intricate nuances of organizational contexts, the hybrid acknowledges the imperative of tailoring governance mechanisms to fit the unique circumstances of each organization, taking into account variations across industries, regions, and organizational sizes.

At the core of this framework lies the imperative of balancing stakeholder interests (Alam, Ab Rahman, Mustafa, Shah & Rahman, 2019). It advocates for equilibrium among shareholders, employees, customers, suppliers, and the broader community, diverging from a zero-sum mind-set. Flexibility and adaptability emerge as fundamental tenets (Saltaji, 2018). Governance structures are expected to demonstrate agility and responsiveness to accommodate the diverse goals and contextual exigencies of organizations.

Moreover, the framework prioritizes long-term sustainability (Langan, Doherty & Downer, 2023) by championing sustainable and responsible business practices that account for the enduring consequences of decisions. Empirical research assumes paramount importance within this paradigm (Almashhadani, 2021). The perspective underscores the significance of evidence-based decision-making, advocating for governance practices grounded in empirical data rather than mere theoretical speculation. This critical approach elevates the discourse on CG, paving the way for informed and effective governance strategies.

Each theory is integrated into the study's constructs to contextualize their relevance to financial efficiency. For instance, agency theory informs the relationship between ownership concentration and CIR, while institutional theory underscores the role of regulatory compliance. The study further accounts for the multifaceted and dynamic governance landscape in Ghana, emphasizing the contextual sensitivity, adaptability, and sustainability of governance mechanisms (Saltaji, 2018; Langan, Doherty, & Downer, 2023). This hybrid approach also prioritizes evidence-based decision-making, reinforcing the importance of empirical validation (Almashhadani, 2021).

### **Models of Corporate Governance**

Corporate Governance (CG) models exhibit remarkable diversity across nations, shaped by complex interplays of historical, social, legal, and economic contexts. Broadly categorized, three traditional models of CG stand out: the Anglo-American model, the German (Rhine) model and the Japanese



model (Qaxramon o'g'li, 2022). Additionally, the Nordic model and the emerging global convergence model have garnered significant attention. This section critically examines these models and their implications for corporate efficiency.

The Anglo-American model of CG, often portrayed as shareholder-oriented, prioritizes shareholder interests above all other stakeholders. Central to this model is the separation of ownership and control, wherein shareholders delegate control to the board of directors (Aguilera, Marano & Haxhi, 2019). Comprising both inside and outside directors, the board is tasked with overseeing management and safeguarding shareholder interests (Cumming et al., 2017). While the inclusion of independent directors aims to mitigate conflicts of interest, recent criticisms question their efficacy in providing oversight (Kalia & Gill, 2023). Moreover, concerns regarding insider control persist, notwithstanding the model's widespread adoption, particularly in the United States and the United Kingdom (Aguilera, Marano & Haxhi, 2019).

The German model of CG, distinguished by its two-tiered board system, epitomizes a balanced approach to governance, fostering long-term stability and economic growth (Masroor, 2018). The supervisory board, comprising shareholders and employee representatives, oversees strategic decisions and appoints members to the management board (Behne, 2017). Notably, limitations on voting power mitigate shareholder dominance, promoting collective decision-making for sustained prosperity (D'Alessio & Oberbeck, 2018). While critics contend that the model prioritizes major shareholders, its inclusive structure has been pivotal in the success of many German companies (Alam et al., 2019).

In contrast, the Japanese model of CG embodies a stakeholder-oriented approach, emphasizing the welfare of all stakeholders over shareholder maximization (Alazzam, 2022). Characterized by insider-dominated boards and cross-shareholding, this model fosters long-term relationships and strategic planning (Kozuka, 2019). Although criticized for its resistance to change, the Japanese model underscores the importance of stakeholder engagement in decision-making processes (Murphy & Smolarski, 2020).

The Nordic model, prevalent in Scandinavian countries, integrates transparency, accountability, and social responsibility, combining elements of both shareholder and stakeholder approaches (Kjærland et al., 2020). Notably, gender diversity on boards promotes equitable representation and decision-making (Khatri, 2022). By emphasizing stakeholder engagement

and environmental considerations, this model fosters sustainable economic development (Hedenigg, 2019).

The emerging global convergence model seeks to harmonize CG practices across diverse jurisdictions, promoting transparency, accountability, and investor protection (Wahyuni et al., 2020). While recognizing the challenges of achieving full convergence, this model represents a significant step towards fostering globally consistent governance standards (Gindis et al., 2020).

Acknowledging the coexistence of numerous regional and national models is paramount. Variations in CG practices within countries and businesses underscore the complexity of the global governance landscape (Harper Ho, 2020). Civil law-based systems, prevalent in many European nations, emphasize codified laws and regulations to govern business activities (Kantár, 2018). This study positions Ghana's CG practices within this global landscape, emphasizing the influence of local regulatory reforms and contextual nuances on bank efficiency.

### **Banking Sector Clean-up and Corporate Governance in Ghana**

In recent years, the Ghanaian banking sector has undergone a significant transformation, primarily propelled by a series of reforms aimed at ameliorating CG and restructuring the industry landscape. These reforms included diverse strategies, notably the privatization of state-owned enterprises and the institution of CG codes tailored for listed firms (Gyamerah, Amo & Adomako, 2020; Nyarko, Yusheng & Zhu, 2017). The BOG, serving as the authoritative regulator overseeing banking institutions in Ghana, has diligently enforced measures to foster sound CG practices. This enforcement was notably accentuated by the adoption of the Risk-Based Supervision Framework and the issuance of enhanced CG directives in 2018, precipitated by the misfortune of bank collapses within Ghana (Gyamerah, Amo & Adomako, 2020).

Embedded within Ghana's banking sector, the legal and regulatory apparatus outlining CG norms finds its source in diverse legislative instruments, including the Companies Act 1963 Act 179, Securities Industry Law, Ghana Stock Exchange Listing rules (2006; L I. 1509), Banking Act 2004 Act 673, and Banking Act 2007 Act 738. These legal frameworks are systematically categorized into six distinct domains, including board responsibility and accountability, committees of the boards, relationship and rights of shareholders and stakeholders, financial affairs and auditing, disclosures in annual reports, and code of ethics (Gyamerah, Amo & Adomako, 2020).

Undeniably, the establishment of effective CG structures stands as a *sine qua non* for prudent supervision and control within the banking domain, thereby ostensibly strengthening the efficacy of financial institution regulators.

The recent trajectory of Ghana's banking sector has cast a glaring spotlight on the imperatives of upholding public trust and safeguarding the interests of myriad stakeholders. Illustratively, in 2018, the Bank of Ghana orchestrated the revocation of licenses belonging to five banks, subsequently consolidating them into 'The Consolidated Bank' of Ghana, ostensibly citing a confluence of issues ranging from conflict of interest to soaring operating costs, financial mismanagement, and malfeasance (Afriyie, Aidoo, & Agboga, 2021). These actions arguably emblemize the resolute commitment of the BOG towards the propagation and enforcement of robust CG practices within Ghana's banking sector.

### **Corporate Governance and Efficiency**

Corporate governance's influence on bank efficiency has been extensively scrutinized, yielding mixed findings. Gyamerah, Amo, and Adomako (2020) discovered that large board sizes exacerbate free-rider issues, impeding bank performance. CEO duality adversely affects efficiency, whereas board independence positively influences the CIR. Adeabah, Gyeke-Dako, and Andoh (2019) found gender diversity enhances efficiency up to a threshold, beyond which its impact wanes. They also noted a positive relationship between board size and efficiency, contrasting board independence's negative impact. Conversely, Ramly, Chan, Mustapha, and Sapiei (2015) argued that board independence enhances efficiency by bolstering monitoring capabilities. They found that gender diversity reduces cost and profit inefficiency. Zeineb and Mensi (2018) emphasized stringent CG enhances efficiency, especially in Islamic banks, which can take higher risks. Pradhan et al. (2019) observed that several governance factors, including board size, independence, and gender diversity, correlate positively with non-performing loans, indicative of lower efficiency. However, foreign ownership and CEO duality exhibit negative associations with non-performing loans, suggesting enhanced efficiency. Despite inconsistencies, it's evident that board size, independence, gender diversity, domestic ownership, bank age, and size significantly impact efficiency.

The literature reviewed so far supports the hypothesis that CG impacts listed commercial banks' efficiency in Ghana. Rooted in a hybrid perspective, it integrates various theoretical frameworks, emphasizing stakeholder balance, adaptability, and sustainability (González et al., 2021; Alam et al., 2019; Saltaji, 2018; Langan et al., 2023; Almashhadani, 2021). Analysing CG

models and Ghana's banking sector trajectory reveals regulatory efforts to enhance governance practices, emphasizing financial stability (Gyamerah et al., 2020; Afriyie et al., 2021). Empirical studies show governance's impact on efficiency through factors like board size, independence, and diversity (Gyamerah et al., 2020; Adeabah et al., 2019; Ramly et al., 2015; Zeineb & Mensi, 2018; Pradhan et al., 2019).

### **Synthesis and Critique of the Literature**

The literature on CG and financial efficiency in the context of Ghanaian banks is rich, yet several key gaps persist. While a significant body of research has examined the relationship between CG and bank efficiency, the findings remain inconsistent. Some studies (Gyamerah, Amo & Adomako, 2020) emphasize the negative impact of large board sizes, CEO duality, and inadequate gender diversity, while others (Ramly et al., 2015) suggest that independent boards and gender diversity improve bank efficiency. These contradictions underscore the complexity of the CG-efficiency relationship and the need for a nuanced understanding of the specific dynamics within Ghanaian commercial banks.

Furthermore, much of the literature has focused on specific banks or limited CG variables, leaving a broader, more comprehensive analysis of the entire sector unaddressed. A country-wide perspective is critical to fully understand how CG practices across different institutions influence efficiency at a national scale. Previous studies also offer limited insights into the impact of Ghana's recent regulatory reforms on CG and bank efficiency, particularly those post-2018 following the Bank of Ghana's reforms. While regulatory measures have undoubtedly affected CG practices, this aspect remains underexplored in existing literature.

Additionally, most of the research conducted thus far treats CG variables in a static manner, without considering how these variables may evolve over time. Governance structures and their impact on financial efficiency are dynamic, and therefore, a longitudinal approach is necessary to capture temporal variations and their implications.

### **Research Gaps**

Despite extensive literature on CG and financial efficiency, several gaps still persist which provides multiple justifications for the study. While prior research explores CG's impact on Ghanaian banks, most studies focus on select institutions or limited variables, leaving a country-wide perspective underexplored. This study bridges this gap by analysing financial reports from all eight listed universal banks in Ghana as of 2023, offering a

comprehensive national perspective. Contradictory results regarding board size, independence, and diversity suggest a need for further investigation. This study employs a hybrid theoretical framework to integrate diverse governance dimensions, providing nuanced insights. Limited attention has been paid to the unique effects of Ghana's recent regulatory reforms on CG and efficiency. This study addresses this gap by contextualizing findings within the post-reform landscape, emphasizing the role of enhanced CG directives. Existing studies often treat CG variables statically, ignoring their dynamic interactions. This research adopts a longitudinal approach, capturing temporal variations in governance practices and their efficiency implications.

### **Justification of Research Objectives**

The research objectives are clearly aligned with addressing the identified gaps in the literature. First, by analysing financial reports from all eight listed universal banks in Ghana as of 2023, this study provides a comprehensive national perspective on CG and efficiency, extending beyond the narrow focus of prior research.

Second, the hybrid theoretical framework employed in this study integrates multiple governance dimensions such as agency theory, stewardship theory, and stakeholder theory—to offer nuanced insights into the complex relationships between CG variables and bank efficiency. This approach helps resolve the contradictions found in previous studies by providing a more holistic and adaptable perspective.

Third, by situating the analysis within the post-2018 regulatory reform landscape, the study will shed light on the unique effects of these reforms on CG practices and bank performance, an area that has received limited attention in existing research. Finally, the adoption of a longitudinal approach ensures that this research captures the dynamic nature of CG practices and their evolving impact on financial efficiency, which is a critical step toward understanding the long-term implications of governance on bank performance.

Through these objectives, this study aims to contribute valuable insights into the impact of corporate governance on the financial efficiency of listed commercial banks in Ghana, addressing the gaps in the existing literature and offering a more comprehensive, context-sensitive analysis of the issue.

### **METHODOLOGY**

The research methodology employed a quantitative design approach to investigate the impact of CG on the financial efficiency of universal banks in

Ghana. The study population was comprised of all universal banks in Ghana, which currently stand at 23. The study employed purposive or judgmental sampling technique, which allowed the selection of eight universal banks listed on the Ghana Stock Exchange (GSE) and the availability of their financial statements. The study utilized secondary data collected from the annual published financial reports of the 8 universal banks listed on the GSE for the period 2018 to 2023. The published annual financial statement was used because of its efficiency reliability and ability to control for individual heterogeneity and multicollinearity (Al Farooque, Buachoom & Sun, 2020). The selected period was chosen because it allowed the measurement of the impact of CG mechanism on operating efficiency after the BoG issued the enhanced CG directives in 2018. The data collected were mainly CG related and relevant to the study. The study employed correlation and regression estimation to analyse the impact of CG mechanisms and banks operating efficiency using SPSS v 25. This analysis allowed for the examination of the relationship between CG variables and banks operating efficiency using the accounting measure of CIR.

### **Variable Measurement**

This section of the study discusses the various research variables used to measure CG mechanisms impact on banks' financial efficiency. The study incorporated dependent, independent, and control variables, selected based on their theoretical relevance and empirical validation in prior studies. Specifically, the study sought to shed light on the effectiveness of governance mechanisms in the banking sector by seeking to understand how the independent variables such as board size, board independence, audit committee effectiveness, CEO duality, disclosure and transparency, and integrated reporting impact the dependent variables (i.e. CIR and BOE), while controlling the variables (i.e. firm size, age and financial gearing).

#### ***Dependent variables***

In evaluating the financial efficiency of banks, this study employed the accounting measures, CIR. Calculated as operating expenses divided by operating income, is a widely accepted accounting measure for financial efficiency. Its application aligns with studies by Uckar and Petrovic (2021). The detailed can be found in Table 1.

#### ***Independent variables***

The independent variables included board size, board independence, audit committee effectiveness, CEO duality, disclosure and transparency, and integrated reporting. These variables reflect CG principles outlined by OECD (2015), as well as studies by Zamil, Ramakrishnan, Jamal, Hatif and Khatib

(2023) and Dragomir and Dumitru (2023). Each CG element was assigned a value of "3" if highly applicable to a particular bank and "0" if deemed to have little or no applicability. The precise definitions of the CG variables can be found in Table 1.

### ***Control variables***

Control variables account for external influences, following established precedents: The study incorporated a number of control variables, namely firm size, age, and financial gearing, in line with previous studies (Dzafic & Polic, 2019). These variables were selected based on their relevance and significance in prior research, and their definitions and descriptions can be found in Table 1.



**Table 1: Variable Measurement**

Variable	Variable Name	Measurement	Source
<i><u>Dependant Variable</u></i>			
Cost-to-Income Ratio	CIR	Operating Expenses/Operating Income	Financial Reports (Data); Uckar and Petrovic (2021)
<i><u>Independent Variable</u></i>			
Board Size	BSZ	Board Size CG Score	Financial Reports (Data); OECD (2015)
Board Independent	BID	Board Independent CG Score	Financial Reports (Data); OECD (2015)
CEO Duality	CED	CEO Duality CG Score	Financial Reports (Data); OECD (2015)
Audit Committee	AUC	Audit Committee CG Score	Financial Reports (Data); OECD (2015)
Disclosure and Transparency	DAT	Disclosure and Transparency CG Score	Financial Reports (Data); OECD (2015)
Integrated Reporting	IRE	Integrated Reporting CG Score	Financial Reports (Data); OECD (2015)
<i><u>Control Variable</u></i>			
Firm Size	SIZE	Natural log of total assets of the firm	Financial Reports (Data); Pratama (2018)
Financial Gearing	BFG	Total debt divided by total assets	Financial Reports (Data); Nguyen and Zhou (2023)
Firm Age	AGE	Natural logarithm of existing firm's age	Financial Reports (Data); Ferris, Javakhadze and Rajkovic (2019)

Source: Field data (2022).

## Diagnostic Testing and Robustness Checks

Prior to conducting the regression analysis, diagnostic tests were undertaken to evaluate the presence of multicollinearity, a phenomenon where explanatory variables display high linear dependence (Maulud & Abdulazeez, 2020). The assessment utilized the Variance Inflation Factor (VIF) and the Tolerance level, with a VIF value exceeding 10 (Schreiber-Gregory, 2018) and a tolerance level below 0.02 (Mulyadi & Sihabudin, 2020) indicating potential multicollinearity issues. The VIF test outcomes, as shown in Table 2, revealed no evidence of multicollinearity, with a mean VIF value of only 3.823 and a tolerance level of 0.405.

To ensure panel data compatibility, the Hausman test and Breusch-Pagan Lagrange Multiplier (BP-LM) test were conducted. The Hausman test ( $\chi^2 = 12.34$ ,  $df = 9$ ,  $p = 0.052$ ) indicated the preference for the random-effects model. The BP-LM test ( $LM = 24.56$ ,  $p = 0.001$ ) further confirmed the random-effects model as more suitable for the dataset.

The absence of severe multicollinearity, coupled with the confirmation of a random effects model, reinforces the credibility of the findings on the impact of corporate governance on the financial efficiency of listed commercial banks in Ghana.

**Table 2: Test of Multicollinearity**

Variable	VIF	Tolerance
Board Size	5.834	0.171
Board Independent	7.337	0.136
CEO Duality	3.502	0.286
Audit Committee	5.094	0.196
Disclosure and Transparency	5.298	0.189
Integrated Reporting	3.496	0.286
Bank Size	1.290	0.775
Bank Age	1.487	0.672
Financial Gearing	1.071	0.933
<b>Mean</b>	<b>3.823</b>	<b>0.405</b>

Source: Field data (2022).

## RESULTS AND DISCUSSIONS

### Results and Analysis

#### *Descriptive Statistics*

The descriptive statistics analysis unveiled significant insights into the variables under examination. The dependent variable, CIR, exhibited a level of dispersion with a mean (M) of 74.84 and a standard deviation (SD) of

36.40, ranging from a minimum of 25 to a maximum of 173, with a variance of 1,324.81. Among the independent variables, board size, board independence, CEO duality, audit committee, disclosure and transparency, and integrated reporting demonstrated a fairly normal distribution, with mean values ranging from 2.00 to 2.25 and standard deviations ranging from 0.64 to 0.98. The control variables, bank size, bank age, and financial gearing, displayed mean values of 16.55, 3.69, and 0.86, respectively, with standard deviations ranging from 0.06 to 1.89. These descriptive statistics offer preliminary insights into the distribution patterns and dispersion levels of the CG elements and financial performance indicators across the observed banks. Please refer to Table 3 for the details.

**Table 3: Descriptive Statistics of CG Variables and Banks' Operating Efficiency**

Variables	<i>N</i>	<i>Min</i>	<i>Max</i>	<i>M</i>	<i>SD</i>	<i>Var</i>
CIR	48	24.96	173.19	74.84	36.40	1,324.81
Board Size	48	0	3	2.25	0.84	0.70
Board Independent	48	0	3	2.06	0.98	0.95
CEO Duality	48	1	3	2.00	0.74	0.55
Audit Committee	48	1	3	2.10	0.75	0.56
Disclosure and Transparency	48	0	3	1.96	0.90	0.81
Integrated Reporting	48	0	2	1.40	0.64	0.41
Bank Size	48	15	23	16.55	1.89	3.56
Bank Age	48	2	5	3.69	0.67	0.45
Financial Gearing	48	1	1	0.86	0.06	0.00
<b>Average</b>	<b>48</b>	<b>4.47</b>	<b>21.87</b>	<b>10.77</b>	<b>4.39</b>	<b>133.28</b>

Source: Field data (2022).

### ***Correlation Analysis***

The correlation analysis revealed notable findings regarding the relationship between CG elements and the dependent variable, the operating efficiency indicator (CIR). Specifically, strong negative correlations were observed between CIR and several CG elements, including the audit committee ( $r = -0.010$ ), integrated reporting ( $r = -0.014$ ), and bank size ( $r = -0.119$ ). Conversely, minimal positive correlations were identified for variables such as board size ( $r = 0.088$ ), board independence ( $r = 0.043$ ), CEO duality ( $r = 0.138$ ), disclosure and transparency ( $r = 0.010$ ), and bank age ( $r = 0.049$ ). Financial gearing demonstrated an average positive correlation with CIR ( $r = 0.560$ ). These results indicate very weak relationships among the CG elements and control variables concerning the operating efficiency of universal banks in Ghana. These findings provide significant insights into the interaction between CG and bank efficiency in the Ghanaian context. For detailed results, refer to Table 4.

**Table 4: Pearson Correlation Results**

Variables	1	2	3	4	5	6	7	8	9	10	<i>M</i>	<i>SD</i>
CIR	-	0.088	0.043	0.138	-0.010	0.010	-0.014	-0.119	0.049	.560**	74.84	36.40
Board Size	0.088	-	.891**	.717**	.770**	.806**	.680**	0.059	-0.274	0.024	2.25	0.84
Board Independent	0.043	.891**	-	.762**	.804**	.804**	.704**	0.166	-0.268	-0.006	2.06	0.98
CEO Duality	0.138	.717**	.762**	-	.800**	.733**	.622**	-0.059	-0.243	0.070	2.00	0.74
Audit Committee	-0.010	.770**	.804**	.800**	-	.827**	.617**	-0.051	-0.232	-0.050	2.10	0.75
Disclosure and Transparency	0.010	.806**	.804**	.733**	.827**	-	.765**	0.095	-0.118	-0.036	1.96	0.90
Integrated Reporting	-0.014	.680**	.704**	.622**	.617**	.765**	-	0.214	0.135	-0.075	1.40	0.64
Bank Size	-0.119	0.059	0.166	-0.059	-0.051	0.095	0.214	-	0.136	-0.096	16.55	1.89
Bank Age	0.049	-0.274	-0.268	-0.243	-0.232	-0.118	0.135	0.136	-	-0.025	3.69	0.67
Financial Gearing	.560**	0.024	-0.006	0.070	-0.050	-0.036	-0.075	-0.096	-0.025	-	0.86	0.06
<i>M</i>	74.84	2.25	2.063	2.104	1.958	1.396	16.551	3.690	0.862			
<i>SD</i>	36.40	0.84	0.976	0.751	0.898	0.644	1.886	0.669	0.057			

**Note:** \* $p \leq 0.01$ , \*\* $p \leq 0.05$

**Source:** Field data (2022)

### ***Regression Analysis for CIR***

The regression analysis aimed to evaluate the relationship between bank operating efficiency, CIR and various CG and control variables, with a significance level set at  $p \leq .05$ . The overall regression model for CIR demonstrated a significant influence of the independent variables, with a p-value of .024, emphasizing the robustness of the model. Among the individual predictors, financial gearing exhibited significant impact on CIR, with p-values of .000 highlighting its role in enhancing bank efficiency. Conversely, other variables such as board size, board independence, CEO duality, audit committee, disclosure and transparency, integrated reporting, bank size, and bank age did not show significant relationships with CIR, as their p-values exceeded the threshold of  $p \leq .05$  (p-values of .484, .984, .286, .436, .928, 0.573, 0.637, and 0.320 respectively). The details are found in table 5.

**Table 5: Regression Results between CIR**

Dependent Variable	Independent Variable	Coefficient	Std. Error	B	-95% CI	+95% CI	T	P
CIR	Intercept	-226.730	96.494		-422.072	-31.387	-2.350	0.024
	Board Size	9.615	13.597	0.221	-17.910	37.140	0.707	0.484
	Board Independent	0.260	13.085	0.007	-26.229	26.748	0.020	0.984
	CEO Duality	12.839	11.868	0.262	-11.187	36.865	1.082	0.286
	Audit Committee	-11.161	14.184	-0.230	-39.875	17.552	-0.787	0.436
	Disclosure and Transparency	-1.097	12.087	-0.027	-25.566	23.373	-0.091	0.928
	Integrated Reporting	-7.787	13.699	-0.138	-35.520	19.945	-0.568	0.573
	Bank Size	-1.353	2.840	-0.070	-7.103	4.397	-0.476	0.637
	Bank Age	8.671	8.598	0.159	-8.735	26.076	1.008	0.320
	Financial Gearing	325.511	85.518	0.511	152.389	498.633	3.806	0.000

**Note.** CI = Confidence Interval, Field data (2022).

## **DISCUSSIONS OF RESULTS**

The findings presented in Tables 4 and Table 5 demonstrate a significant negative association between CG practices and the operating efficiency measure, CIR, at a 5% significance level. The regression results indicate that among the six CG factors examined, only financial gearing significantly contribute to banks' operating efficiency.

This finding aligns with previous research by Habib et al. (2022), which suggests that longstanding banks with a large asset base enhance financial reporting, reduce agency and overhead costs stemming from managerial opportunistic behaviour, and decrease information asymmetry. These results reflect the practical reality that longstanding banks with high-quality assets provide various stakeholders and investors with the confidence of sustained profitability, ultimately leading to improved financial efficiency (Lotto, 2019). Moreover, the findings are consistent with the argument that banks with sustained assets protect the interests of owners and managers, thus moderating conflicts of interest inherent in corporate management (Gyamerah, Amo & Adomako, 2020).

The results highlighted the importance of CG practices, specifically the role of financial gearing, in enhancing operating efficiency in the banking sector. This conclusion is supported by studies such as Lotto (2019), Naili and Lahrichi (2022), Cikovic, Smoljic, and Lozic (2021), and ElBannan (2017), which found that highly efficient and profitable banks tend to exhibit greater operating efficiency compared to their less profitable counterparts. The significant positive intercept ( $p = 0.024$ ) suggests that CG practices, when collectively implemented, create an enabling governance environment that enhances financial efficiency. This aligns with the resource-based view, which posits that complementary governance mechanisms provide synergistic benefits, even if individual mechanisms appear ineffective in isolation, thus validating the study hypothesis (H1). These findings also challenge simplistic assumptions that CG mechanisms independently drive efficiency. Instead, they suggest a nuanced view where governance elements function as a cohesive system. This interpretation aligns with studies by Cikovic et al. (2021) and ElBannan (2017), which advocate for an integrated approach to CG for achieving sustainable efficiency.

These results highlighted the need for further research to explore the impact of other CG factors and their specific mechanisms on operating efficiency. The current findings contribute to the literature by demonstrating how CG practices, particularly financial gearing, play a critical role in the operational success of banks. This research offers a comprehensive understanding of the



determinants of bank efficiency within the context of Ghana's listed commercial banks by integrating these findings with existing studies.

### **CONCLUSIONS AND RECOMMENDATIONS**

The study concludes that while individual CG variables such as board size, board independence, and CEO duality do not significantly impact CIR, the collective implementation of CG practices enhances operational efficiency, as evidenced by the significant intercept. Financial gearing emerges as the most critical determinant of efficiency, reinforcing its strategic role in governance. These findings highlighted the need for an integrated approach to CG, where mechanisms complement each other to foster operational resilience. This study provided actionable recommendations for practitioners, regulatory bodies, and policymakers aimed at enhancing the CG practices and financial efficiency of Ghanaian universal banks. These recommendations address critical governance, operational, and policy-level considerations:

**Implement Proactive Governance and Risk Management Systems:** Listed banks must adopt governance systems that prioritize proactive risk identification, effective control, and mitigation strategies. Regulatory authorities, especially those overseeing the stock market, should enforce compliance by ensuring that banks consistently emphasize risk management. Regular governance process reviews by corporate boards and management teams can pre-empt potential financial distress and reinforce financial stability.

**Adopt and Fully Implement Integrated Reporting (IR):** Integrated Reporting (IR) should be leveraged as a strategic tool to enhance disclosure and transparency. This approach improves stakeholders' and investors' confidence by demonstrating the alignment of financial and non-financial performance with long-term organizational goals. Regulatory frameworks should incentivize and monitor the adoption of IR by listed banks.

**Strengthen Corporate Board Competence and Composition:** Boards should consist of more than 50% non-executive members, ensuring independence and objectivity in decision-making. Board size should be capped at nine members to maintain efficiency and accountability. The periodic review of "fit and proper" directives is crucial for ensuring that board members possess the requisite expertise and qualifications to address the dynamic challenges of the banking sector.

**Monitor and Optimize the Cost-to-Income Ratio (CIR):** Banks must actively monitor their Cost-to-Income Ratio (CIR), aiming to maintain it within acceptable thresholds. High CIR levels signal operational inefficiencies, potentially undermining financial performance. Targeted cost-reduction strategies and efficient resource allocation are essential to improve operational and financial outcomes.

**Leverage Financial Gearing for Enhanced Efficiency:** Optimizing financial gearing—the ratio of debt to equity—is critical for improving operational efficiency and resilience. Policy makers and executives must align gearing strategies with the overarching goal of maximizing value creation while mitigating risks associated with excessive leverage.

**Adopt a Holistic CG Framework:** Banks should develop and implement cohesive CG frameworks that integrate various governance mechanisms, emphasizing their collective impact. This resource-based perspective highlights the importance of complementary governance practices that work synergistically to enhance financial efficiency.

**Promote Synergy in CG Mechanisms:** Regulatory and policy frameworks should prioritize the systemic interaction of CG elements over isolated interventions. A synergistic approach fosters sustainable operational and financial efficiency across the banking sector, creating a resilient governance ecosystem.

**Policy Implications:** Robust corporate governance mechanisms—grounded in accountability, transparency, and ethical standards—inspire stakeholder confidence, foster a stable investment environment, and enhance financial efficiency. By enabling clear governance protocols and well-regulated frameworks, policymakers can reduce governance-related crises, protect investors and depositors, and ensure financial institutions' stability and integrity. These measures collectively safeguard stakeholder interests, contribute to economic resilience, and promote sustainable growth in Ghana's banking sector.

### **Recommendations for Further Studies**

The current study aimed to analyse the impact of CG mechanism, CIR, and operating efficiency on listed banks in Ghana. The findings suggest that future research should replicate this study to investigate the influence of CG, capital structure, and operating efficiency. Additionally, exploring the effects of CG, CIR, and operating efficiency in major international banks in Africa would be valuable. Furthermore, conducting a comprehensive examination of how CG and climate change affect the world's largest corporations and their strategies in a carbon-constrained world is recommended. This study

contributes to the existing empirical evidence on CG by developing a comprehensive governance code index based on various factors that measure country-level CG mechanism. The objective is to establish the relationship between the country-level index and the operating efficiency of listed banks in Ghana.

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## **What Drives the Profitability of Insurance Companies in Tanzania? An Empirical Analysis Based on Panel Data**

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### ***Abstract***

*This study examined the drivers of the profitability of insurance companies in Tanzania. Subjecting secondary data extracted from the Annual Insurance Performance Report issued by the Tanzania Insurance Regulatory Authority to analysis, the study found the sample to be unbalanced as it did from 2011 to 2020. Nevertheless, it yielded 218 firms' year observations for analysis. Moreover, the study employed panel data regression models to calibrate the influence of the drivers on the profitability of insurance companies. The results indicate that market share and net premium significantly and positively correlated with the profitability of insurance companies in Tanzania. Furthermore, the study found a significant converse relationship between incurred claims and the profitability of insurance companies in Tanzania. Based on the research findings, the study recommends that the executives of insurance companies should expand their market share using marketing penetrating strategies to boost profitability. Likewise, they should strive to manage efficient incurred claims as they affect conversely the profitability of insurance companies.*

**Keywords:** *Profitability, Insurance Companies, Tanzania, Market share, Net premium, and Incurred premium*

### **INTRODUCTION**

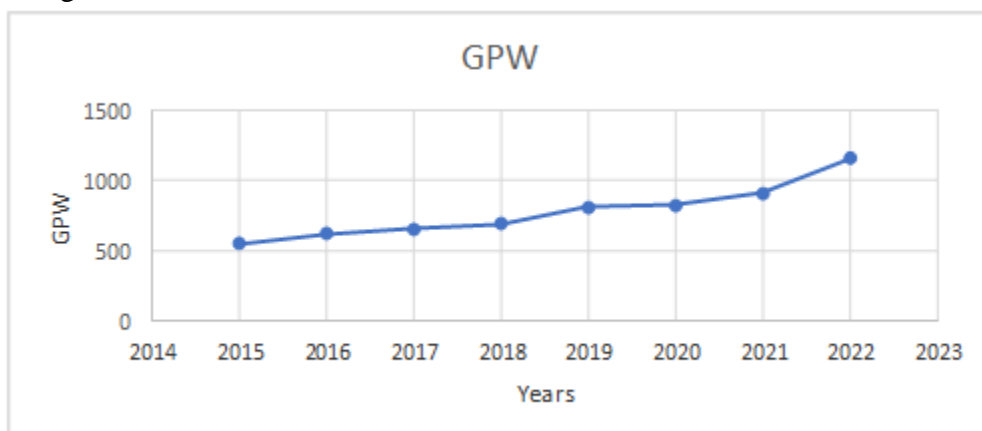
Well-performing insurance companies provide financial services and enhance financial stability that stimulates stable economic development, hence playing a vital role in national progress (Kaushal & Ghosh, 2018). Financial services such as the underwriting of risks inherent in economic entities create financial stability for economic growth. Moreover, well-performing insurance companies create favourable economic conditions that can lead to stable and sustainable development.

In Africa, the insurance sector has been growing steadily since 2000, thanks to the acceleration by growth in Gross Domestic Product (GDP) and per capita income (Han et al., 2010). For Tanzania, the growth of the insurance sector in the country has similarly been influenced by GDP growth over the years, according to (Abbas and Li, 2016). Moreover, Kahyarara (2022)

contends that economic growth stimulates infrastructure development that, in turn, stimulates the growth of insurance companies in Tanzania. The growth of insurance companies in the country is evidenced by a rise in the number of insurance firms (TIRA, 2022).

The history of the insurance sector in Tanzania has passed into two major eras: pre- and post-liberalisation. Before the liberalisation and reforms of the insurance sector in 1996, there was only one state-owned insurance corporation, the National Insurance Corporation (NIC). This monopoly created a less competitive environment for the insurance sector to grow and compete domestically and globally. The post-liberalisation, on the other hand, was marked by the enactment of the Insurance Act of 1996. This liberalisation opened doors for the private sector to flourish in Tanzania's insurance market. The liberalisation focused on making the sector competitive in mobilizing savings and stimulating the development and growth of the insurance sector in Tanzania. It also focused on enhancing a competitive sector in fostering customer-driven services to clients to stimulate a stable environment for the growth of business.

The liberation of the insurance sector in Tanzania has stimulated the profitability of insurance companies and made the sector contribute much to the country's financial stability. Insurance companies have already benefited much from the reforms as the increase in gross written premium, which is linked to the profitability of insurance firms (TIRA, 2022). The significant positive link between gross written premium and profitability has empirically been established in prior studies (Guendouz & Ouassaf, 2018; Kumar et al., 2022; Tuffour et al., 2021). Tanzania's insurance companies, for the last decade, have recorded a significant spike in the gross written premium from 550.2 million in 2015 to 1,155 million in 2022 (TIRA, 2022) as Figure 1 further illustrates:



**Figure 1: Gross Written Premium from 2015 to 2022**

Source: TIRA Annual Reports, YEAR?

This increase in gross written premiums reflects the increase in profitability of insurance companies in Tanzania. Despite the growth in written gross reflecting good prospects in terms of profitability, the adoption of insurance services in Tanzania's insurance sector remained low relative to Kenya and globally, with a penetration ratio of 2.02 percent in 2023 against 3.4 percent in Kenya and 7.3 percent globally (TIRA, 2023; Yarumba et al., 2024). Moreover, studies that have examined the drivers of profitability of insurance companies are limited in Tanzania relative to other East African countries (Horera & Maganya, 2020; Mwangi & Murigu, 2015; Opiyo, 2023). This study is, therefore, timely and relevant to understanding the profitability drivers of insurance companies in Tanzania, a country with fewer studies and lower insurance penetration than Kenya and globally.

Prior studies on drivers of profitability of insurance companies in different countries have attracted enormous interest in recent literature (Farhan et al., 2021; Pjanić et al., 2023; Vojinović et al., 2022; Worku et al., 2024). These studies have, however, arrived at different conclusions about the factors that catalyse the profitability of insurance companies. Moreover, these studies have documented the relevance of firm-specific factors and market-based factors in influencing the profitability of insurance companies. Specifically, these studies have identified key drivers of profitability of insurance companies across countries including market share, per capita income, age of the company, net premium, and incurred claims (Ambaw & Lijuan, 2021; Azmi et al., 2020; Kusi et al., 2020; Vojinović et al., 2022; Worku et al., 2024). Thus, this study examined the drivers of the profitability of insurance in the context of Tanzania. Specifically, the study objectives were five-fold: to examine the impact of market share, per capita income, age of insurance company, net premium, and incurred claims on the profitability of insurance companies in Tanzania. Understanding the drivers of the profitability of insurance companies in Tanzania is significant in enhancing the profitability of insurance companies and stimulating economic growth and development. The rest of the paper is organised as follows. Sections two and three cover a review of the literature and methodology, respectively. Section four discusses the findings and section five sums up the presentation.

## **REVIEW OF LITERATURE AND HYPOTHESIS DEVELOPMENT**

This section reviews the theoretical literature that underpins this study and the empirical studies on profitability drivers in the insurance industry that also informs the hypothesis development.

### **Theoretical Literature Review**

Theoretically, many theories underpin profitability determinants studies. The most employed theories are the structure conduit performance and efficient

structure hypothesis (Ambaw & Lijuan, 2021; Tuffour et al., 2021). The structure conduit performance is one of the earliest theories that account for the profitability of firms (Homma et al., 2014). This theory asserts that market structure influences performance and how a firm behaves in the market in terms of key decisions such as pricing, financing, advertising, and investing. The theory also recognises the impact of market structure on conduit and performance, but it fails to affirm the impact of performance on structure and conduit (Tuffour et al., 2021).

Studies that examine the drivers of profitability have employed the efficient structure hypothesis (Tuffour et al., 2021; Yahaya & Awen, 2020). In this regard, Demsetz's (2009) study was fundamental for the efficient structure hypothesis that serves as an alternative to the structure conduit performance and expense preference behaviour. Accordingly, Demsetz (2009) asserts that market competition leads to higher efficiency to the extent that it increases companies' profit and market share. Moreover, high efficiency enables insurance companies to lower incurred claims while increasing net premiums earned, thus maximising their profit. Likewise, older operating insurance has developed efficient structures that enable companies to have vast experience thus maximising profit. Likewise, when per capita income is higher and an efficient structure exists in the market, the market creates more demand for insurance thus maximizing the profits of insurance companies. Therefore, this study endorsed the efficient structure hypothesis as the key theory that explains the determinants of the profitability of insurance companies in Tanzania.

### **Drivers of Profitability**

Both firm-specific and macroeconomic often influence the profitability of insurance companies across countries (Azmi et al., 2020; Born et al., 2020). However, the influence of these drivers varies due to the governance and regulatory structures of different countries (Lament & Bukowski, 2024; Pjanić et al., 2023; Vojinović et al., 2022). As early studies have suggested, this study used both firm-specific and macroeconomic variables to examine the drivers of profitability of insurance companies in Tanzania. Specifically, this study used market, age of the company, incurred claim, net premium, and per capita income as drivers of profitability in line with prior studies (Ben Dhiab, 2021; Kusi et al., 2020; Vojinović et al., 2022; Zainudin et al., 2018).

### **Per Capita Income**

Per capita income indicates the average income of an individual in a given area and reflects the economic well-being of the population of the country. Higher capita income usually correlates with higher demands for insurance services with a positive effect on the profitability of insurance

companies (Pavic Kramaric et al., 2017). Studies have affirmed the profound positive role of per-capita income in influencing the profitability of insurance companies. Vojinović et al. (2022), who examined the drivers of profitability of Serbian insurance companies, found per capita income to have a positive association with the profitability of insurance firms. However, Datu (2015) studied the impact of per capita income on the profitability of insurance companies in the Philippines and uncovered an insignificant positive association between capital income and profitability. Moreover, Kantakji et al. (2020) found that GDP per capita influence positively the profitability of Islamic insurance companies in Saudi Arabia, Pakistan, UAE, Malaysia, and Qatar. Furthermore, Pavic Kramaric et al. (2017) found per capita income to have a positive link with the profitability of insurance companies in central and east Europe. Progressively, when people have higher per capita income, they would adopt more insurance products to hedge risks that enhance the profitability of insurance companies. Thus, this study hypothesizes:

*H1: Per capita income has a positive impact on the profitability of insurance companies.*

### **Age of Insurance Company**

The age of insurance companies indicates how long the company has been offering insurance services on the market. Older operating insurance companies have developed trust and vast experience over the years relative to newer insurance companies (Horera & Maganya, 2020; Worku et al., 2024). Generally, the age of insurance companies is linked with the profitability of the insurance companies (Samina, 2024). Customers' trust and experience built for years by insurance companies enhance insurance companies to compete and maximise their profitability (Horera & Maganya, 2020; Worku et al., 2024). Many prior studies support that age of insurance companies influence positively profitability of insurance companies. Horera and Maganya (2020) examined the determinants of profitability of insurance companies in Tanzania using a small sample of 10 Tanzanian insurance companies. They found that the age of an insurance firm influences positively their profitability. Moreover, Ambaw and Lijuan (2021) revealed that the age of the insurance company positively correlates with of profitability of Ethiopian insurance companies. However, Mwangi and Murigu (2015) conducted a study in Kenya and revealed that the age of insurance companies does not influence Kenyan insurance company's profitability.

Likewise, Derbali and Jamel (2018) and Guendouz and Ouassaf, (2018) affirmed that the age of insurance companies positively affects the profitability of insurance companies in Tunisia and Saudi Arabia. Worku et al., (2024) found that the insurance company's age and market share of the insurance company impact the positive profitability of Ethiopian insurance



companies. Moreover, Ilyas and Rajasekaran (2019) found that the insurance company's firm influences positively the profitability of Indian insurance companies. Similarly, older operating insurance companies have a large customer base and financial stability, derived from vast experience in serving customers that increases their ability to generate profitability relative to newer insurance companies. Therefore, the study hypothesised that:

*H2: The age of the insurance company has a positive impact on the profitability of the insurance company*

### **Incurred Claim**

The incurred claim refers to the sum of money paid to settle claims by insurance companies. Normally, the profitability of insurance companies is usually linked with the claims they incur (Hissiyah & Meylianingrum, 2023). Higher incurred claim reduces the cash flow and profitability of the insurance company. Ordinarily, efficient claim management lowers claims incurred thus enhancing cash flows and profitability of insurance companies. Prior research found an inverse relationship between the incurred claim and profitability. For example, Hissiyah and Meylianingrum (2023) documented that claims incurred by insurance companies influence conversely the profitability of insurance companies in Indonesia. Likewise, Farhan et al. (2021) found a significant negative link between incurred claims and the profitability of Saudi insurance firms. Hussanie and Joo (2019) found that incurred claims had a negative impact on the profitability of Indian insurance companies. However, Berhe and Kaur (2017) revealed that incurred claims are not associated with the profitability of insurance companies in Ethiopia. Moreover, Firmansyah et al., (2020) uncovered that claims incurred influence negatively the profitability of insurance companies in Indonesia. Additionally, Azmi et al. (2020) affirmed that claims incurred influence conversely the profitability of Indonesian insurance companies. Based on prior research findings this study advanced the following hypothesis:

*H3: The claims incurred have a negative impact on the profitability of insurance companies.*

### **Net Premium**

Net premium refers to the premiums the insurance company retains after netting reinsurance expenses. Usually, net premium is often related to profitability, as an increase in net premium, *ceteris paribus*, results in higher profits (Farhan et al., 2021; Hemrit, 2020). Prior studies associated net premium with profitability. Kusi et al. (2020) found out that net premium drives positively the profitability of insurance companies in Ghana. Moreover, Camino-Mogro and Bermúdez-Barrezueta (2019) found that net premium influences positively the profitability of insurance companies in Ecuador. Likewise, Farhan et al. (2021) found that net premium earned



correlates positively with profitability whereas net paid claims conversely relate to profitability in Saudi Arabia. Also, Kumar et al. (2022) found that net premium has a significant positive link with the profitability of insurance companies in Fuji. Thus, the net premium insurance companies earn has a positive profound effect on profitability, which informs the following hypothesis:

*H4: Net Premium has a positive impact on the profitability of insurance companies.*

### **Market Share of Insurance Company**

The market share of an insurance company refers to the portion of the sum of the insurance market that a company serves. The market share is usually proxied by the ratio of the gross premium written by a company to the gross premium written by the whole market (Kusi et al., 2020; Zainudin et al., 2018). Thus, a higher ratio of gross premium written relative to the market indicates a higher market share. Higher market share is associated with a large customer base and spread of risks that translate into higher revenue and growth. Thus, if the market share increase of an insurance company increases and the company operates with an efficient structure, this leads to an increase in profitability. Most studies that examined the influence of market share on profitability support that market share influence significantly the profitability of insurance companies (Ben Dhiab, 2021; Lament & Bukowski, 2024). Ben Dhiab (2021) affirmed that market share influences significantly positively the profitability of Saudi insurance companies. Likewise, Lament and Bukowski (2024) found that market share profoundly influences positively the profitability of insurance companies in 15 European countries. Moreover, Guendouz and Ouassaf (2018) found that market share, size, age of the company, and loss ratio are linked with the profitability of Takaful insurance companies in Saudi Arabia. Additionally, Tuffour et al. (2021) affirmed that market share influences significantly positively the profitability of insurance companies in Ghana. Likewise, Alshadadi and Deshmukh (2021) found that market share influenced significantly positively the profitability of insurance companies in Saudi Arabia. Azmi et al., (2020) uncovered that the market is positively linked to the profitability of insurance companies in Indonesia. Moreover, Born et al., (2020) revealed that market share is positively linked with profitability for US companies. However, Arintoko et al., (2021) found that market share exhibits an insignificant positive link with the profitability of insurance companies in Indonesia. The results of most of these studies suggest that market share influence positively profitability of insurance companies. Therefore, this study hypothesised that:

*H5: Market share has a positive impact on the profitability of insurance companies.*

However, studies that examined the drivers of profitability of Tanzania's insurance companies are limited. This study differs from the study conducted by Horera and Maganya (2020) that focused on a small sample of 10 firms, while this study focused on a large sample of 26 insurance companies. Thus, this study is positioned to examine the drivers of profitability of Tanzanian insurance companies and to shed new findings from the emerging economy.

## **METHODOLOGY**

This section detailed data uses variables measurement and the model specification.

### **Data and Sample**

The current study used secondary data extracted from the Annual Insurance Performance report issued by the Tanzania Insurance Regulatory Authority (TIRA). The study used unbalanced panel data extracted from 26 insurance companies with 218 firm-year observations. The unbalanced panel data ranges from 2020 to 2011. These companies are Reliance Insurance Tanzania, Alliance Insurance, AAR, Strategis Insurance, Resolution, Heritage, Britam, Jubilee, Sanlam General, Bumaco, Mgen, NIC, Star General, UAP, ZIC, IGT, Phoenix, Maxinsure, Mayfair, Tanzindia, Metropolitan, ICEA Lion, MO, First, Milembe, and GA5.

### **Variable Measurement**

To estimate the driver of insurance companies' profitability, the study used a quantitative research approach, specifically panel data regression. The dependent variable of the study which proxy profitability is the return on assets (ROA). There are many proxies of profitability. Prior studies have identified these proxies as ROA, return on equity (ROE), net income, operating profit, and others (Derbali & Jamel, 2018; Zainudin et al., 2018). However, these prior studies have documented the superiority of ROA over other proxies (Ben Dhiab, 2021; Zainudin et al., 2018). In line with prior studies, this study uses ROA to proxy the profitability of insurance firms.

The independent variables of the current study are the age of the insurance company, per capita income, incurred claim, net premium earned, and market share. These independent variables originated from studies that were conducted to examine determinants of the profitability of insurance companies (Ben Dhiab, 2021; Camino-Mogro & Bermúdez-Barrezueta, 2019; Zainudin et al., 2018). Table 1 depicts the measurement of the variables of the study:

**Table1: Measurement of Variables**

S/N	Abbreviation	Variable	Proxied by	Expected Sign
1	ROA	Return on asset	Profit after/total asset	N/A
2	PCI	Per capita income	National income/population	+
3	AGE	Age of company	Number of years since the inception of the company	+ / -
4	IC	Incurred claim	Natural log of incurred claim	-
5	NP	Net premium	Natural log of net premium	+
6	MS	Market share	Company gross written premium is scaled by the total gross written premium of all insurance companies.	+

Source: Adapted from Ben Dhiab (2021), Kantakji et al. (2020) and Worku et al. (2024)

### Model Specification

To estimate the drivers of the profitability of insurance companies, the current study used the panel data model used by prior studies (Azmi et al., 2020; Worku et al., 2024). Specifically, the study used the company's age, per capita income, claim incurred, net premium, and market share as independent variables in estimating drivers of profitability of insurance companies like prior studies conducted by Ben Dhiab (2021), Kantakji et al. (2020) and Worku et al. (2024). In line with these studies, the following equation depicts the model that facilitates the estimate of the drivers of profitability of insurance companies in Tanzania:

$$ROA_{i,t} = \varphi_0 + \lambda_1 PCI_{i,t} + \lambda_2 AGE_{i,t} + \lambda_3 \ln(IC_{i,t}) + \lambda_4 \ln(NP_{i,t}) + \lambda_5 MS_{i,t} + \alpha_{i,t} \quad (1)$$

where; ROA stands for returns on assets PCI stands for per capita income, AGE stands for the number of years since the inception of the company IC stands for incurred claims, NP stands for net premium, MS stands for market share,  $\alpha_{i,t}$  stands for error term and  $\varphi_0$  stands for the constant.

The nature of the study data favours the use of panel data regression to control for unobserved heterogeneity that is firm-specific characteristics and provides best estimations (Kniesner & Viscusi, 2016). Thus, the study employed both random and fixed effect models and to decide the best estimator Hausman test was conducted (Datu, 2015; Pavic Kramaric et al., 2017; Worku et al., 2024). Moreover, for the robust check panel-corrected standard error estimator (PCSE) was used in line with prior studies' methods that examined the same (Ben Dhiab, 2021; Worku et al., 2024).

## RESULTS

This section discusses the results of tests employed and panel data regression in estimating drivers for the profitability of insurance companies in Tanzania.

## Descriptive Statistics

Table 2 reports the descriptive statistics for the key variables of the study:

**Table 2: Descriptive Statistics**

Variable	Observation	Mean	Std. Dev.	Min	Max
ROA	218	0.080088	0.257478	-0.2699	0.3406
AGE	218	13.2844	10.99819	1	55
PCI	218	991.6881	82.95983	781.4	1085.9
IC	218	0.533008	0.650297	0.0006	3.8613
NP	218	0.979807	0.897369	0.00389	4.6259
MS	218	4.301193	3.617397	0.05	16.25

Source: Author's Computation (2024)

The mean value of ROA is 8% and the maximum and minimum values of 34.06% and -26.99% respectively. Likewise, Ben Dhiab (2021) reported a mean value of 7.9% for Saudi Arabian insurance companies when examining the profitability of Saudi insurance companies. Moreover, the average age of insurance companies is 13.28 and the maximum and minimum age since inception of insurance companies is 55 and 1, respectively. The mean value is larger compared to the mean of 1.3 reported by Worku et al. (2024) in Ethiopia indicating that few companies were entering the market.

Similarly, the mean value of per capita income is Tshs 991.688 and the maximum and minimum values are Tshs 781.4 and Tshs 1,085.9, respectively. Moreover, the average value of the incurred claim was 0.533 and the maximum and minimum values were 0.0006 and 3.8613, respectively. In addition, the average value of the net premium was 0.979, and the maximum and minimum values were 0.00389 and 4.6259, respectively.

Finally, the mean value of the market share proxied natural log of gross written premium was 4.301193 and the maximum and minimum values were 0.05% and 16.25%, respectively. The results further indicate that the market comprised large companies that own up to 16.25% of the market share and small companies that own 0.05% of the market share.

## Multi-collinearity Test

To check for multi-collinearity, the study employed both pairwise correlation and variance inflation factor (VIF). The tests were employed stepwise, starting with pairwise and then VIF, which is a superior test. Table 3 reports the results of both tests:

**Table 3: Pairwise Correlation and Variance Inflation Factor Results**

	Pairwise correlation						VIF
	PR	AG	PCI	IC	NP	MS	
ROA	1						N/A
AGE	0.2684	1					1.25
PCI	-0.0247	0.0689	1				1.31
IC	0.1405	0.2864	0.1628	1			7.66
NP	0.3006	0.3929	0.2055	0.7269	1		7.85
MS	0.4039	0.3219	-0.1464	0.6437	0.721	1	2.62

Source: Author's Computation (2024)

The result of pairwise indicates that the highest pairwise correlation was between incurred claim and net premium with a coefficient of 0.7269. However, the reported highest pairwise correlation of 0.7269 was slightly below the cut-off of 0.8 propounded by Wooldridge (2015), hence signalling no problem of multi-collinearity. Moreover, VIF was employed and indicated that VIF for age was 1.25 and VIF per capita income was 1.31. Likewise, the VIF for incurred claim and net premium were 7.66 and 7.85 respectively. Finally, the VIF for market share was 2.62. The results of VIFs reported were away from the cut of 10 implying that the variables are away from the multi-collinearity problem.

### Heteroskedasticity Test

The study employed the Breusch-Pagan and Cook-Weisberg test for heteroskedasticity to check for the potential problem of heteroskedasticity, which makes OLS furnish a biased estimator. Table 4 depicts the results of heteroskedasticity:

**Table 4: Heteroskedasticity Results**

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
Ho: Constant variance
Variables: fitted values of ROA
chi2(1) = 21.02
Prob > chi2 = 0.0000

Source: Author's Computation (2024)

The depicted p-value of 0.00 is less than 5% thus the null hypothesis of constant variance is rejected indicating that OLS will furnish a biased result. The study employed a panel data model that overcame the problem of heteroskedasticity. Moreover, PCSE which overcame the heteroskedasticity problem was used for the robustness of the results.

## Estimation Results for Drivers of Profitability of Insurance Companies

In this study panel regression was used to estimate the drivers of profitability of insurance companies in Tanzania using data from 2011 to 2020. Specifically, the fixed and random effects models were employed. To enhance the robustness of the estimation, the PCSE was used to overcome the heteroskedasticity and serial correlation. The results of the random effect model, fixed effect model, and Hausman test are depicted in Table 5.

**Table 5: Results of Regressions Models and Hausman Test**

Variable	RE		FE		PCSE	
	Coef.	P>z	Coef.	P>t	Coef.	P> z
PCI	-0.687	0.738	0.176	0.6	-0.407	0.856
AG	0.253	0.225	-0.145	0.2	0.191	0.206
IC	-0.319***	0	-0.299***	0	-0.349***	0
NP	0.244***	0	0.306***	0	0.244***	0
MS	0.017**	0.042	-0.017	0.266	0.024 ***	0
Constant	0.031	0.879	0.029	0.909	0.059	0.795
R-sq	0.513		0.141		0.287	
N	218		218		218	

Hausman Results

Test: Ho: difference in coefficients not systematic

$\chi^2(5) = (b-B)'[(V_b - V_B)^{-1}](b-B)$

2.07

Prob> $\chi^2 = 0.8396$

Note; \*\*\*, \*\*, and \* reflect statistical significance at 1%, 5%, and 10% respectively.

Source: Author's Computation (2024)

To decide which of the two models of which results hold over the other, a Hausman test was conducted. The result of the Hausman test is reported in Table 5. Based on the result, the random effect model is selected over the fixed effect since the probability value attached is 0.8396 which is greater than 0.05. Thus, the random effect model is an approximate estimator for determining the drivers for the profitability of the insurance companies in Tanzania.

The result of the random effect found an insignificant negative effect of per capita income on profitability ( $\lambda = -0.687$ ,  $p = 0.738$ ), implying that H1 has been rejected. Similarly, the results are consistent with the results of a robust check using PCSE that uncovered that per capita income had an insignificant negative influence on profitability ( $\lambda = -0.407$ ,  $p = 0.856$ ). Moreover, the regression results based on a random model revealed an insignificant positive link between the age of the insurance company and profitability ( $\lambda = 0.253$ ,  $p = 0.225$ ), hence invalidating H2. The results are alike with PCSE results

documenting insignificant positive between the age of the insurance company and profitability ( $\lambda = 0.253$ ,  $p = 0.225$ ).

Furthermore, the random effect model result indicates that the incurred claim is conversely and significantly linked with profitability ( $\lambda = -0.319$ ,  $p = 0$ ), implying that H3 is accepted. Moreover, the PCSE outcome that affirmed a significant negative link between profitability and incurred claim ( $\lambda = -0.349$ ,  $p = 0$ ) validated the results. Furthermore, the results of the random effect revealed net premiums had a significant positive effect on the profitability of insurance companies ( $\lambda = 0.244$ ,  $p = 0$ ), which confirms H4. Similarly, the results of panel regression affirmed that net premium significantly correlates with the profitability of insurance companies ( $\lambda = 0.306$ ,  $p = 0$ ). Also, the results of PCSE revealed that net premium influence significantly positively profitability ( $\lambda = 0.244$ ,  $p = 0$ ). Moreover, the results of the random model indicated that market share had a significant positive bearing on the profitability of insurance companies ( $\lambda = 0.017$ ,  $p = 0.042$ ), thus validating H5. The PCSE results uncovered that market share was significantly linked with profitability ( $\lambda = 0.024$ ,  $p = 0$ ) further support the outcome.

## DISCUSSION

The current study used panel data regression to estimate the drivers of profitability of insurance companies in Tanzania. In particular, a random effect model was used after conducting the Hausman test. The results revealed that incurred claims influence significantly inversely the profitability of insurance companies. Impliedly, as the incurred claim increases, the profitability of insurance companies decreases. The results of the current study are in line with the efficient structure hypothesis, this implies that when an insurance company is efficiently managed with results in lower incurred claims, thus enhancing profitability. Therefore, insurance companies should strive to manage efficiently the claims incurred as they affect negatively the profitability of insurance companies. The results are in line with prior studies that documented the same. Hissiyah and Meylianingrum (2023) affirmed that incurred claim is significantly conversely linked with the profitability of Indonesian insurance companies. Moreover, Hussanie and Joo (2019) documented that claims incurred influence conversely the profitability of Indian insurance companies. Farhan et al., (2021) revealed a significant inverse association between incurred claims and profitability of insurance companies in Saudi Arabia. Moreover, Berhe and Kaur, (2017) uncovered that incurred claims significantly impact negatively the profitability of Ethiopian insurance companies.

Furthermore, the results uncovered that net premiums had a significant positive effect on the profitability of insurance companies. This result implies



that as net premium increases also profitability increases consistently with an efficient market hypothesis. Thus, insurance companies should strive to increase net premiums to enhance profitability. The result of this study is consistent with the results of several prior studies (Camino-Mogro & Bermúdez-Barrezueta, 2019; Kumar et al., 2022; Kusi et al., 2020). For instance, Kusi et al., (2020) documented a significant positive link between net premiums and the profitability of Ghanaian insurance companies. Moreover, Camino-Mogro and Bermúdez-Barrezueta (2019) documented that underwritten premium is linked with the profitability of Ecuadorian insurance companies. Likewise, Azmi et al., (2020) uncovered a significant link between net premiums and the profitability of Indonesian insurance companies. Moreover, Kumar et al., (2022) found that net premiums significantly influence significant positive profitability of Fiji insurance firms.

Additionally, the results found out that market share and profitability are significantly and positively linked. The results of this study imply that as market share increases similarly profitability increases. Therefore, insurance companies should embark on various marketing strategies like market penetration, and product differentiation to expand market share to enhance profitability. Prior studies that examined the same have reported similar results (Ben Dhiab, 2021; Guendouz & Ouassaf, 2018; Lament & Bukowski, 2024; Tuffour et al., 2021). Guendouz and Ouassaf (2018) found that market share influenced significantly the positive profitability of Saudi insurance companies. Likewise, Ben Dhiab (2021) reported a significant positive link between market share and profitability of insurance companies in Saudi Arabia. Moreover, Worku et al. (2024) revealed the significant positive of market share in influencing the profitability of Ethiopian insurance companies. Likewise, Lament and Bukowski (2024) documented the relevance of market share to influence positively profitability in 15 European countries.

## **CONCLUSION**

The purpose of this study was to examine the drivers of the profitability of insurance companies in Tanzania. The study used secondary data extracted from TIRA annual reports. Specifically, the study used 26 insurance companies with 218 firm-year observations to examine the drivers of profitability of insurance companies. The sample was unbalanced ranging from 2020 to 2011. The study analysed five key drivers of profitability of insurance companies namely; the age of the insurance company, per capita income, incurred claim, the net premium earned, and market share. The study employed panel data regression models and to ensure robustness of the results PCSE estimator was used. The overall results revealed that market

share and net premium were significantly positively linked with the profitability of insurance companies in Tanzania. Moreover, the result uncovered a significant converse relationship between incurred claims and the profitability of insurance companies in Tanzania. Based on the study findings, profitability significantly correlates with both market share and net premium. Therefore, Tanzania's insurance companies should strive to increase the net premium and market share. Moreover, insurance firms must expand their market share through a market penetration strategy, and product differentiation strategy to reach more clients. Doing so could enable firms to attain higher market share that can lead to higher net premiums, thus enhanced profitability. Also, insurance companies in Tanzania should scrutinise incurred claims as it affects significantly conversely the profitability of insurance firms. Efficient management of incurred claims could enable companies to reduce incurred claims and boost their profitability.

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## **Human Resource Information System Social-Technical Aspects and Organizational Performance: The Role of Management Support in Tanzanian Universities**

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### **Abstract**

*This study examined the impact of Human Resource Information Systems (HRIS) on organizational performance at the University of Dar es Salaam (UDSM) and Mbeya University of Science and Technology (MUST) in Tanzania. The research adopted a quantitative approach, collecting data from 260 supervisors across various departments. Using surveys and statistical analyses, the study investigated how HRIS's social and technical aspects, coupled with management support, influenced institutional performance. The findings underscored the critical role of HRIS in enhancing efficiency, with management support significantly strengthening its effectiveness. Leadership engagement, continuous training, resource allocation, and improved communication emerged as essential factors in optimizing HRIS utilization. Additionally, findings showed that ensuring system accessibility and establishing regular evaluation mechanisms could enhance HRIS alignment with institutional goals. By addressing these areas, public universities in Tanzania can maximize the benefits of HRIS, ultimately improving operational efficiency and overall organizational performance.*

**Keywords:** Human Resource Information System, Management Support, Tanzania Public Universities, Organizational Performance.

### **INTRODUCTION**

In this contemporary era in administrative landscape, Human Resource Information Systems (HRIS) have become essential tools for managing human resources and enhancing organizational performance (Sadiq et al., 2022; Abuhantash, 2023). HRIS integrates both social and technical dimensions to streamline operations and improve efficiency. The social dimension encompasses employee interactions, organizational culture alignment, and communication channels that facilitate system utilization (Mutua et al., 2022). In contrast, the technical dimension encompasses system design, functionality, and the supporting technological infrastructure

(Alboloushi, 2020). When effectively integrated, these components play a crucial role in optimizing operational efficiency and strengthening institutional performance (Khan *et al.*, 2023).

Managing a diverse workforce of academic, administrative, and support staff in Tanzanian universities presents unique challenges (Mgaiwa, 2021a). These institutions must balance operational efficiency with maintaining high educational standards (Mgaiwa, 2021b). The complexity of human resource management (HRM) in universities is further heightened by the need for accurate personnel records, streamlined recruitment processes, efficient payroll management, and compliance with regulatory requirements. Traditional HRM approaches, which rely heavily on manual processes, often lead to inefficiencies, delays, and inconsistencies in HR operations. As a result, many higher learning institutions are adopting Human Resource Information Systems (HRIS) as a strategic solution to enhance workforce planning, improve data management, and facilitate informed decision-making (Bilgic, 2020).

HRIS integrates both social and technical dimensions, enabling institutions to optimize their human resource functions. The social aspects of HRIS focus on fostering employee interactions, aligning HR processes with organizational culture, and enhancing communication channels for system adoption and utilization (Mutua *et al.*, 2022). Effective user engagement and collaboration among employees contribute to the successful implementation of HRIS by ensuring that staff members are well-equipped to navigate the system and leverage its capabilities. On the other hand, the technical aspects of HRIS encompass system design, functionality, and the supporting technological infrastructure required to ensure smooth operations (Alboloushi, 2020). When these components are well-integrated, HRIS has the potential to significantly improve operational efficiency, streamline administrative processes, and enhance institutional performance (Khan *et al.*, 2023).

However, the success of HRIS in public universities is not solely dependent on system design and user engagement; rather, it also hinges on the level of management support. Leadership commitment is a crucial factor in facilitating HRIS implementation, as it ensures that adequate resources are allocated, necessary policies are put in place, and employees receive sufficient training and motivation to use the system effectively (Kumar & Jagadeesan, 2024). Management support encompasses multiple roles, including overseeing system adoption, addressing implementation challenges, and fostering a culture of technological acceptance within the institution



(Ibrahim & Ali, 2023). When leadership actively supports HRIS integration, the likelihood of achieving successful implementation increases significantly. Conversely, a lack of managerial involvement can lead to system inefficiencies, resistance to change, and ultimately, underutilization of HRIS (Panjaitan, 2023). Therefore, understanding how management support moderates the relationship between HRIS's social and technical aspects and overall organizational performance is essential for maximizing its effectiveness (Luseno, 2023).

Despite the transformative potential of HRIS in public universities, there remains a gap in research regarding its effectiveness, particularly in the Tanzanian context. While existing studies have examined the impact of HRIS on organizational performance, they have largely focused on system adoption, leaving the role of management support underexplored (Sadiq *et al.*, 2022; Abuhantash, 2023). Previous research has shown that HRIS enhances HR functions by reducing administrative workload, improving decision-making, and increasing overall efficiency (Mutua *et al.*, 2022; Ibrahim & Ali, 2023). However, these studies have not sufficiently examined how leadership engagement, resource allocation, and active facilitation shape HRIS success in public universities. Given that public institutions often operate under bureaucratic structures with resource constraints, understanding the extent to which management support influences HRIS implementation is crucial for optimizing its impact (Kumar & Jagadeesan, 2024).

Furthermore, research on HRIS in Tanzania has predominantly focused on local government institutions and the healthcare sector, with limited attention to higher learning institutions (Ngulugulu *et al.*, 2023; Lukumay, 2023; Matimbwa, 2023; Luseno, 2023). While HRIS adoption in universities has increased, the effectiveness of these systems in improving institutional performance remains an area of interest for further study. Without strong managerial commitment, universities may face challenges in fully realizing the potential benefits of HRIS, leading to inefficiencies and resistance among staff. Understanding how leadership involvement moderates the impact of HRIS social and technical aspects on organizational performance is, therefore, a key research priority.

Therefore, this study sought to bridge this knowledge gap by examining the role of management support in enhancing HRIS effectiveness within public universities in Tanzania. By investigating how leadership engagement, resource allocation, and continuous system evaluation influence HRIS success, this research aims to provide insights that can help higher learning

institutions optimize their HR management practices. Furthermore, findings from this study will contribute to existing literature on technology adoption in public institutions, offering practical recommendations for universities seeking to improve operational efficiency and performance through HRIS. Addressing these aspects is essential for ensuring that public universities in Tanzania harness the full potential of HRIS to meet their strategic and operational goals (Jayadeva *et al.*, 2022; Panjaitan, 2023; Luseno, 2023).

## **LITERATURE REVIEW**

### **Theoretical Literature Review**

The Social Technical System Theory, introduced by Trist and Bamforth in 1951, emphasizes the interplay between social and technical systems within organizations. This theory posits that for an organization to be effective, both its social -human factors, interactions, and cultural elements, and technical processes, technology, and systems aspects must be harmoniously integrated (Sony & Naik, 2020; Abbas & Michael, 2023). Key principles include the idea that changes in one system affect the other, necessitating a holistic approach to organizational design and implementation (Trist, 1981). Strengths of this social technical theory include its ability to foster employee engagement and improve performance by recognizing the importance of social dynamics alongside technical functionality (Geels, 2020; Bednar & Welch, 2020). However, critics argue that it may oversimplify complex organizational interactions and can be challenging to implement in practice due to varying levels of organizational readiness and culture (Panjaitan, 2023). Utilizing social technical theory in this study allows for a comprehensive analysis of how management support influences the effectiveness of Human Resource Information Systems (HRIS) by addressing both social and technical components, thereby contributing to better organizational performance in public universities in Tanzania.

### **Empirical Literature Review**

Luseno (2023) investigated the effect of Human Resource Management Information System (HRMIS) practices on employee performance in Kenya's civil service, with a focus on the moderating role of top-level management support. The study aimed to determine how HRMIS design, integration, operation, and planning influence employee performance. Using a descriptive research design and a positivist philosophy, Luseno (2023) targeted 1,384 HR personnel across National Government Ministries and drew a sample size of 549 respondents. Primary data was collected through questionnaires, and the data was analyzed using descriptive and inferential statistics with the assistance of SPSS. Regression analysis was employed to explore relationships between variables. The findings indicated that HRMIS design,

integration, operation, and planning significantly affect employee performance. Moreover, top-level management support played a crucial moderating role, enhancing the influence of HRMIS practices on employee performance. The study recommended optimizing HRMIS usage and enhancing management efforts to support employees, provide necessary tools, and foster a sense of involvement.

Lukumay (2023) investigated the impact of the Human Resource Information System (HRIS) on organizational performance. The research focused on HRIS's role in recruitment, control, and job monitoring, using a sample of 150 respondents. Data analysis showed that HRIS significantly enhances recruitment by streamlining resume tracking, matching job candidates, and scheduling interviews. It also improves human resource control through better security, payroll management, and succession planning, while facilitating job monitoring tasks like performance appraisals and attendance tracking. The study concluded that HRIS positively influences organizational performance, accounting for 55% of its variance. Recommendations included aligning HRIS with company policies to maximize its benefits, particularly in areas like payroll and training management.

The study by Ngulugulu *et al* (2023) investigates the adoption of Human Resource Information Systems (HRIS) in Tanzania's public sectors, driven by the growing use of Information and Communication Technology (ICT) over the last fifteen years. The study, engaged eight Districts in the Mwanza region, employed a mixed-methods case study design. A total of 63 employees were purposively selected from various Human Resources (HR) and Information and Communication Technology (ICT) departments to ensure the inclusion of relevant expertise and perspectives. Data collection employed self-administered questionnaires featuring closed-ended Likert scale items, alongside semi-structured interviews. The study findings were analyzed using SPSS for quantitative data and Atlas.ti for qualitative data to ensure a comprehensive interpretation of the results therefore the findings indicated that HRIS significantly enhances the management of HR functions, leading to recommendations for broader adoption across public sectors in Tanzania to reduce operational costs.

The study by Matimbwa (2023) examines the applications and extent of Human Resource Information Systems (HRIS) within selected Local Government Authorities (LGAs) in Tanzania. Utilizing a mixed research approach, data were collected through structured questionnaires and in-depth interviews with 201 Human Resources Officers from 39 LGAs across six regions. The analysis revealed a high extent of HRIS use for tasks such as

storing records of new recruits and facilitating strategic decision-making and human resource planning. However, the application of HRIS for employee promotions was found to be low, indicating significant variations among LGAs in HRIS utilization. The study recommends that enhancing IT training for employees, fostering HR officer commitment, and improving technological support and expertise in ICT personnel.

Mbamba and Sanga (2024) conducted a study examining the impact of Human Resource Information Systems (HRIS) on the competitiveness of higher learning institutions (HLIs) in Tanzania. The research employed a quantitative survey approach, collecting data from HR managers and heads of academic and administrative departments responsible for HR activities in the selected HLIs. Utilizing a purposive sampling technique, the study focused on HR and administrative officers from both public and private institutions. Data analysis was performed using Partial Least Squares Structural Equation Modelling (PLS-SEM). The findings indicated that HRIS implementation plays a pivotal role in reducing administrative costs, enhancing service delivery, and fostering HR innovation, thereby strengthening organizational competitiveness, particularly in low-technology environments.

In developed and developing countries HRIS is regarded as strategic instruments for improving the performance of many public and private organizations including public universities as it promotes efficiency and effectiveness in achieving the organization's goal and objectives. Previous studies on Human Resource Information Systems (HRIS) in Tanzania have primarily focused on local government institutions, with a few examining the health sector, particularly in the context of HRIS adoption (e.g., Ngulugulu *et al.*, 2023; Lukumay, 2023; Matimbwa, 2023; Luseno, 2023). Despite the recognized potential of HRIS, most existing empirical studies provide limited insights into its impact on public organizational performance, particularly in relation to the moderating role of management support. This gap is especially evident in the context of public universities, where the influence of HRIS on organizational performance remains underexplored. Recognizing this research gap, the present study seeks to assess the effect of HRIS on organizational performance, with a specific focus on the moderating role of management support in public universities in Tanzania. In line with these objectives, the study proposes the following hypothesis for empirical validation:

**H<sub>1</sub>:** *Management support significantly moderates the relationship between the social and technical aspects of Human Resource Information Systems (HRIS) and organizational performance in public universities in Tanzania.*

## Conceptual Framework

Based on the literature review and the formulated hypotheses, a conceptual framework has been developed to guide the testing of these hypotheses. Figure 1 illustrates the proposed relationships that will be examined in this study.

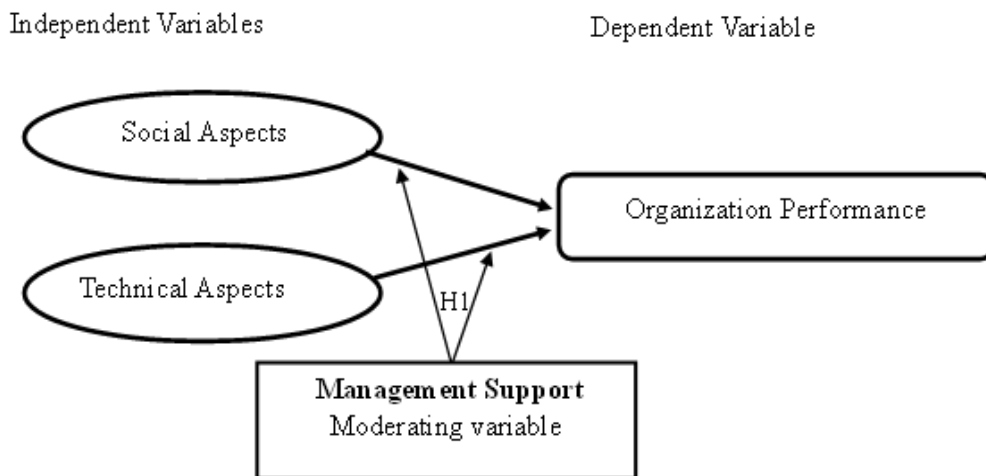


Figure 1: Conceptual Framework  
 Source: Authors Construct (2024)

## METHODS

### Sampling and Data Collection

This study employed a quantitative research design to examine the relationship between the social and technical aspects of Human Resource Information Systems (HRIS) and organizational performance at the University of Dar es Salaam (UDSM) and Mbeya University of Science and Technology (MUST). A census approach was utilized, targeting a minimum sample size of 260 respondents, comprising of supervisors from both institutions. The study engaged key respondents, including academic staff, administrative personnel, and HR managers who oversee and interact with HRIS. Data were collected over a one-month period using a structured questionnaire designed to evaluate the integration of HRIS social and technical aspects, as well as the perceived level of management support.

### DATA ANALYSIS

The data were analyzed using IBM SPSS Statistics version 20. Descriptive statistics were employed to summarize the demographic information of the respondents. Subsequently, Pearson's correlation analysis was conducted to assess the relationships between the variables, followed by regression analysis to explore the nature of the relationships between the dependent and

independent variables. F-statistics was also used as a measure of the model's goodness of fit.

A pilot study was conducted prior to the main data collection to ensure the validity and clarity of the questionnaire. Feedback from the pilot study led to necessary adjustments in the survey instruments, which were then refined for the final data collection phase.

## **RESULTS FINDINGS AND DISCUSSION**

### **Participants Profile**

The study involved a total of 260 respondents from the University of Dar es Salaam (UDSM) and Mbeya University of Science and Technology (MUST). Of the participants, 70.3% were male and 29.7% were female, indicating a higher proportion of male respondents in the study. This disparity can be attributed to the higher number of educated men compared to women in Tanzania. This imbalance is largely influenced by sociocultural norms prevalent in many Tanzanian and African societies, where male education is often prioritized over female education. These findings align with the study by Opoku *et al.* (2024), which highlights that women are less likely to participate in the workforce. Similarly, Ngowi, and Mafwolo (2020) emphasize the importance of affirmative action to promote equal opportunities for both men and women in organizational leadership and decision-making roles.

The age distribution of respondents was categorized into four groups: 40-49 years (47.3%), 30-39 years (42.5%), 20-29 years (9.9%), and below 20 years (0.3%). The majority of respondents fell within the 40-49 age group, indicating that senior staff members were more actively engaged in the study. This trend can be attributed to the fact that individuals within this age bracket are more likely to hold managerial, supervisory, or administrative positions, which directly influence the adoption, implementation, and effectiveness of HRIS within the institution. Their roles typically involve decision-making, policy formulation, and oversight of human resource functions, making them key stakeholders in understanding and evaluating HRIS applications.

Regarding educational qualifications, the majority of respondents (58.4%) held a PhD, followed by those with a Master's degree (16.9%), Postgraduate Diploma (16.7%), Bachelor's degree (7.1%), and Advanced Diploma (0.8%). This distribution indicates that individuals with higher academic qualifications, particularly PhD and Master's degree holders, were more actively engaged in the study. Their prominent participation can be attributed



to their supervisory and decision-making roles within the institution, which position them as key stakeholders in HRIS implementation and management. The respondents' experience levels varied. Majority (48.2%) had 11 to 20 years of experience, followed by 42.2% with 6 to 10 years, and a smaller proportion (9.6%) with 0 to 5 years. This distribution reflects a workforce with substantial professional expertise, suggesting that most participants had extensive exposure to HRIS and its application within their institutions. Such experience diversity enhances the study's reliability, as it captures insights from both seasoned professionals who have witnessed HRIS evolution and those with relatively recent engagement, offering a balanced perspective on its effectiveness and challenges.

The demographic information incorporated in this study is essential in ensuring the relevance and reliability of the selected respondents, as it reflects their familiarity with and involvement in the implementation of Human Resource Information Systems (HRIS). By capturing key attributes such as educational background, professional experience, and leadership roles, the study effectively identifies individuals who are directly engaged in HRIS operations and management support within public universities in Tanzania. This alignment strengthens the study's validity by ensuring that the perspectives gathered are from those with the requisite expertise to assess the applicability and impact of HRIS in the public sector.

### **Descriptive Statistics for HRIS Social Aspects**

The descriptive statistics for HRIS social aspects revealed generally positive perceptions of employee interactions, collaboration, and communication within the organization. A significant portion of respondents agreed that employees interact well (mean = 2.07), with 57.7% that agreed and 19.2% who strongly agreed. Organizational structure supports collaboration, as reflected by a lower mean of 1.85, with 65.4% of respondents who either agreed or strongly agreed. Open communication between management and staff received a strong endorsement (mean = 1.72), with 42.3% that agreed and 30.4% who strongly agreed. Employees are motivated to work together (mean = 1.90), supported by 61.5% that agreed. Additionally, teamwork is actively encouraged, reflected by a mean score of 1.84 and 62.3% of respondents that agreed or strongly agreed. Overall, the data suggests a collaborative work environment with room for improvement in certain areas as per Table 1 below:



**Table 1: Descriptive Statistics for HRIS Social Aspects**

Statement	SD	D	N	A	SA	Total	Mean
Employees in the organization are interacting well with each other	5	15	40	150	50	260	2.07
The organizational structure supports employee's collaboration	4	10	30	170	46	260	1.85
There is open communication between management and staff	6	20	45	110	79	260	1.72
Employees are motivated to work together	3	15	28	160	54	260	1.90
Team work is encouraged in our organization	2	18	35	150	55	260	1.84

Source: Field Data (2024) **Key:** SD = Strongly Disagree, D = Disagree, N = Neutral, A = Agree, SA = Strongly Agree, Total (Frequency) and mean.

### Descriptive Statistics for HRIS Technical Aspects

The descriptive statistics for HRIS technical aspects indicate overall positive feedback regarding the system's usability, updates, and impact on efficiency. A substantial number of respondents agreed that the HRIS technology is user-friendly (mean = 1.80), with 53.8% that agreed and 28.5% who strongly agreed. Regular updates of the system are acknowledged, as indicated by a mean of 1.87, with 50% that agreed and 28.8% who strongly agreed. The system's ability to enhance data accuracy is well-regarded (mean = 1.78), with 55.8% of respondents that agreed and 25.8% that strongly agreed. Efficient data processes are supported by the technology (mean = 1.91), with 59.6% of respondents in agreement. Moreover, employees feel adequately trained on using the HRIS (mean = 1.89), supported by 55.8% agreement. Overall, the data reflects a generally favorable view of the HRIS technical aspects, particularly in its usability and effectiveness in handling data as per Table 2 below:

**Table 2: Descriptive Statistics for HRIS Technical Aspects**

Statement	SD	D	N	A	SA	Total	Mean
The HRIS technology is user friendly	4	12	30	140	74	260	1.80
The systems used are regularly updated	5	15	35	130	75	260	1.87
The HRIS enhances data accuracy	6	14	28	145	67	260	1.78
The technology supports efficient data processes	3	16	30	155	56	260	1.91
Employees are adequately trained on HRIS usage	2	20	38	145	55	260	1.89

Source: Field Data (2024) **Key:** SD = Strongly Disagree, D = Disagree, N = Neutral, A = Agree, SA = Strongly Agree, Total (Frequency) and mean.

### Descriptive Statistics for Organizational Performance

The descriptive statistics for organizational performance reveal a positive impact of HRIS on various performance indicators. A significant proportion

of respondents agree that employee efficiency has improved (mean = 1.64), with 50% that agreed and 38.8% who strongly agreed. In terms of user satisfaction with the HRIS, the majority express satisfaction, with a mean score of 1.98, indicating that 53.8% of respondents agreed, and 26.2% strongly agreed. Additionally, the data reflects agreement regarding overall operational effectiveness, as evidenced by a mean of 2.08, with 57.7% of respondents that agreed and 18.1% who strongly agreed. These findings suggest that HRIS implementation has positively influenced employee efficiency, user satisfaction, and the organization's operational effectiveness as per Table 3 below.

**Table 3: Descriptive Statistics for Organizational Performance**

Statement	SD	D	N	A	SA	Total	Mean
Improvements in employee efficiency	2	2	25	130	101	260	1.6374
User satisfaction with HRIS	0	12	40	140	68	260	1.9802
Overall operational effectiveness	3	10	50	150	47	260	2.0765

Source: Field Data (2024)

**Key:** SD = Strongly Disagree, D = Disagree, N = Neutral, A = Agree, SA = Strongly Agree, Total (Frequency) and mean.

### Correlation Analysis Results

The correlation analysis shows a significant positive relationship between HRIS social aspects ( $r = 0.673$ ,  $p < 0.01$ ) and organizational performance. A similar positive correlation was found between HRIS technical aspects and organizational performance ( $r = 0.680$ ,  $p < 0.01$ ).

**Table 4: Correlation Analysis Results**

Variables	HRIS Aspects	Social	HRIS Aspects	Technical
HRIS Social Aspects	1		0.673**	
HRIS Technical Aspects	0.673**		1	
Organizational Performance	0.680**		0.685**	

Source: Field Data (2024) **Key:** \*\* Correlation is significant at the 0.01 level (2-tailed).

### Regression Analysis Model Summary

**Hypothesis:** Management support significantly moderates the relationship between the social and technical aspects of Human Resource Information Systems (HRIS) and organizational performance in public universities in Tanzania.

### Model Summary for HRIS Aspects and Organizational Performance

$R^2 = 0.482$  indicates that 48.2% of the variance in organizational performance can be explained by HRIS social and technical aspects.

**Table 5: Regression Analysis Model Summary**

Model	R	R square	Adjusted square	R	Std. Error of estimate
1	0.693	0.482	0.478		1.095

Source: Field Data (2024)

**Key:** Predictors: (Constant), HRIS Social and Technical Aspects; Dependent Variable: Organizational Performance.

### ANOVA for HRIS Aspects

The F statistic ( $F = 315.876$ ,  $p < 0.000$ ) shows a significant relationship between HRIS aspects and organizational performance.

**Table 6: ANOVA for HRIS Aspects**

Model	Sum of squares	Df	Mean Square	f	Sig.
Regression	292.934	2	146.467	315.876	.000
Residual	320.568	257	1.600		
Total	613.502	259			

Source: Field Data (2024)

### Regression Weights for HRIS Aspects

The results indicate that both HRIS social and technical aspects significantly impact organizational performance, with coefficients ( $\beta$ ) of 0.473 and 0.521, respectively.

**Table 7: Regression Weights for HRIS Aspects**

Model	Unstandardized coefficients	Standardized coefficients	t	Sig.
(Constant)	0.542		2.221	.027
HRIS Social Aspects	0.473	0.573	12.354	.000
HRIS Technical Aspects	0.521	0.589	14.908	.000

Source: Field Data (2024)

## DISCUSSION OF FINDINGS

The findings of this study reveal a clear and significant relationship between the social and technical aspects of Human Resource Information Systems (HRIS) and organizational performance. The integration of these two components plays a pivotal role in driving improvements in organizational outcomes, as supported by several empirical studies. The social aspects of HRIS, which include employee interaction, communication channels, and the organizational culture's alignment with the system, are critical for fostering collaboration and enhancing system adoption. On the other hand, the technical aspects, which encompass the design, functionality, and technological infrastructure of HRIS, provide the foundation for efficient system operation and user engagement. Both these aspects are found to be

positively correlated with performance, aligning with previous research that emphasizes the importance of both the social and technical elements of HRIS in achieving desired organizational outcomes.

The findings of this study are consistent with those of Matimbwa and Masue (2021), who explored HRIS adoption within Tanzanian local government authorities. Their research highlighted that key factor such as organizational support, user characteristics, and the technological features of HRIS were essential in determining the extent to which HRIS would contribute to the success of the organization. Similarly, the current study underlines the need for active organizational support, particularly from management, to ensure the successful integration of HRIS. As Matimbwa and Masue (2021) suggest, the provision of appropriate training and engagement by management fosters a culture of collaboration and competence within the organization, ensuring that HRIS technology is leveraged effectively to improve overall performance.

Furthermore, the technical aspects of HRIS, such as system usability and functionality, play an equally crucial role in organizational performance. This aligns with the findings of Abbas and Michael (2023), who argue that technological features are critical in determining the practicality and overall success of HRIS in organizations. The seamless integration of technology into the HR function, when properly executed, results in increased efficiency, streamlined processes, and better use of organizational resources. In the context of Tanzanian public universities, where HR functions often face challenges related to manual processes, the integration of advanced HRIS technology can significantly improve operational efficiency and enhance performance.

A key aspect of this study is the role of management support in moderating the relationship between HRIS and organizational performance. The hypothesis that management support amplifies the positive effects of HRIS on performance aligns with previous research findings. When leadership is actively involved in HRIS implementation, the positive impacts on organizational performance are intensified. This is because management support provides the necessary resources, sets the strategic direction for the system's integration, and ensures that training and communication channels are well-established to support staff in adapting to the new system. The ANOVA results from this study support this notion, as the significant relationship between management support and performance was confirmed. Studies by Lesono (2023), Sadiq *et al.* (2022), and Panjaitan (2023) have also established that the role of top-level management is critical in the successful

implementation of HRIS. These researchers emphasize that the involvement of management in system integration, despite the costs involved, is fundamental to enhancing organizational performance.

The study's findings suggest that management support fosters a culture of collaboration and communication, both of which are crucial for the successful adoption and utilization of HRIS. By ensuring the availability of training, allocating the necessary resources, and promoting employee engagement with the system, management can create an environment where HRIS is fully integrated into organizational processes. This, in turn, enhances employee efficiency, leading to improvements in overall organizational effectiveness.

This discussion highlights the importance of system integration and management engagement in maximizing the benefits of HRIS. Although the cost of implementing HRIS may pose challenges, particularly in public sector institutions like universities, the long-term benefits of improved operational efficiency, better decision-making, and enhanced service delivery justify the investment. The findings suggest that HRIS should not only be seen as a technological tool but as part of a broader strategy that includes management involvement, employee engagement, and continuous support. These factors are crucial in ensuring that HRIS delivers the expected benefits and contributes to achieving organizational goals.

## **CONCLUSION AND RECOMMENDATIONS**

This study concludes that the successful integration of Human Resource Information Systems (HRIS) in public universities requires a holistic approach that goes beyond mere technological adoption. Both the social and technical aspects of HRIS play a crucial role in enhancing organizational performance, as effective employee interactions and a robust technological infrastructure contribute to improved efficiency and service delivery. However, the success of HRIS implementation is largely dependent on sustained management support and active involvement. Management plays a moderating role by fostering an environment that encourages collaboration, communication, and technical proficiency, thereby amplifying the system's effectiveness. Only through a coordinated effort between management, employees, and HRIS technology can universities fully optimize organizational performance. The study contributes to the growing body of knowledge on HRIS adoption, particularly in Tanzanian public universities. Therefore, to ensure the effective implementation of HRIS in enhancing organizational performance and driving significant improvements in

operational efficiency and overall institutional outcomes, the following key aspects should be carefully considered;

- i. **Strengthening Management Support:** Public universities should ensure that management actively participates in the HRIS process, providing ongoing support through training programs, resource allocation, and fostering a culture of collaboration. This will help maximize the positive impact of HRIS on organizational performance.
- ii. **Improving HRIS Social Aspects:** Efforts should be made to enhance communication and collaboration between employees by implementing policies that encourage teamwork and interaction. This could include workshops or team-building initiatives that focus on improving employee engagement with the HRIS.
- iii. **Optimizing HRIS Technical Aspects:** Universities should prioritize regular updates to the HRIS system and ensure employees are well-trained in its use. Enhancing the user-friendliness of the system and ensuring the accuracy of data will contribute to better organizational outcomes.
- iv. **Continued Evaluation and Feedback:** Establishing mechanisms for continual evaluation and feedback regarding HRIS usage can help universities identify areas for improvement, ensuring the system remains effective and aligned with organizational goals.

By addressing these key areas, public universities in Tanzania can improve the overall performance of their HRIS and, consequently, their organizational effectiveness.

## **LIMITATIONS OF THE STUDY**

This study is limited in scope as it focuses on only two public universities (UDSM & MUST) in Tanzania, which may not fully represent the broader context of all higher education institutions in the country. As a result, the findings on the influence of HRIS social and technical aspects, along with the moderating role of management support in enhancing organizational performance, may not be entirely generalizable to all public universities in Tanzania. To strengthen the validity and applicability of these findings, further research should be conducted across a wider range of both public and private universities to provide a more comprehensive understanding of HRIS effectiveness in the higher education sector.

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## **Influence of Participatory Project Practices on Ruwasa Project's Performance: The Case of Ushetu District, Tanzania**

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### ***Abstract***

The study investigated the influence of participatory project practices (PPP) on performance of rural water projects carried out by Rural Water Supply and Sanitation Agency (RUWASA) in Ushetu district, Tanzania. It specifically looked at the influence of participatory project planning and implementation, monitoring, and communication on project performance. Using a casual research design and a Likert rated questionnaire, the study collected quantitative primary data from 171 respondents, including 143 water users and 28 RUWASA staff. Both descriptive and inferential statistics such as Pearson correlation and multiple linear regression were used to analyse the data. The results showed a positive relationship between project performance and participatory project planning, implementation, monitoring, and communication. The multiple linear regression analysis revealed that participatory project planning and implementation had a significant positive impact on project performance. Similarly, a participatory project monitoring and communication were also found to have a positive effect on project performance. The study concluded that involving the community in project planning, implementation, monitoring, and communication can enhance the performance of RUWASA projects in terms of cost-effectiveness and sustainable clean water supply. It was recommended that community members participate in all aspects of project planning, implementation, and monitoring, and that participatory communication be prioritized to facilitate knowledge-sharing and informed decision-making.

**Keywords:** *Project performance, participatory project practices, project planning project implementation, project monitoring, project communication*

### **INTRODUCTION**

Water is crucial for the socio-economic development and healthy ecosystems of the global population including Tanzania (Beard & Mitlin, 2021). It is utilized for various purposes such as domestic use, irrigation, transportation, livestock, fishing, wildlife, hydroelectric power generation, environmental flow, and recreation to mention a few. Despite the goals outlined in

Tanzania's Development Vision 2050, which aims to ensure that clean and safe water is accessible at homesteads (Safari, 2024), over 65 percent of the population living in rural areas currently has limited access to clean water and reliable sanitation (USAID, 2024). According to Kamara *et al.* (2017), challenges such as declining access to improved water supplies, inconsistent availability, and inadequate service quality are particularly pronounced in rural regions. These issues stem from infrastructure failures, aging infrastructure, lack of maintenance, and the impacts of natural disasters.

In response to this challenge, Maniu and Rambo (2018) suggested that involving the community in project planning and implementation, monitoring, and effective communication can improve project performance. Rushagika (2015) argues that community participation in project planning and implementation can lead to increased project acceptability. Rushagika (2015), fair distribution of benefits, local resource mobilization, proper project allocation, and project sustainability. On the other hand, Oduor and Murei (2020) assert that community participation in project monitoring is crucial for identifying and solving problems to ensure the project achieves its objectives. Also, Luhombo *et al.* (2019), recommend that project leaders and implementers should involve the local community in project implementation by establishing well-structured communication channels. Providing information effectively can build trust, promote community ownership, and encourage participation and feedback (Riaz, 2017).

In 2002, the Government of Tanzania recognized the importance of community involvement in the rural water supply and sanitation projects. As a result, they established the National Water Policy of 2002, which decentralized rural water management to communities, allowing them to operate, maintain, and sustain their water supply infrastructure. Additionally, the policy mandated district water engineers or managers to support Community Owned Water Supply Organizations (COWSOs) by assisting with registration, providing operation and maintenance guidelines, monitoring progress, and reporting. As part of these efforts, over 3,000 COWSOs were established to manage newly developed rural water schemes (Lemmens *et al.*, 2017). In 2019, the government further strengthened community involvement by transforming COWSOs into Community Based Water Supply Organizations (CBWSOs) through the Water Supply and Sanitation Act No.5 of 2019 (The United Republic of Tanzania, 2019). To ensure the effective functioning of CBWSOs, the Government established the Rural Water Supply and Sanitation Agency (RUWASA) to oversee their

operations. Additionally, this initiative aimed to facilitate community participation in the identification, planning, design, construction, and management of rural water supply and sanitation projects across the rural areas of mainland Tanzania (The United Republic of Tanzania, 2019).

Despite the government's efforts to establish RUWASA for providing safe drinking water and basic sanitation facilities to the people in line with MDGs, the sustainability of water supply and sanitation in rural areas is uncertain due to some non-functional water points. According to the World Bank (2023), only 61% of households in Tanzania currently have access to basic water supply and 32% have access to basic sanitation in rural areas, with figures remaining as low as 39% and 68% respectively. Specifically, in Ushetu district, access to water services has reached approximately 47%, leaving 53% of people without access to clean water and sanitation URT (2024).

Despite the lack of accessibility to clean water for some households in Ushetu district and other areas of the country, little attention has been paid to assessing the influence of participatory project practices on the performance of RUWASA. Most studies in Tanzania have focused on factors like accountability, transparency, capacity building, budgetary allocation, staff technical skills in Monitoring and Evaluation, and organizational capacity, neglecting the role of participatory project practices on project performance (Tonya, 2015; Eliamringi & Kazumba, 2017; IRC, 2017; Kirenga *et al.*, 2018; Mandara *et al.*, 2018; Juma, 2019). This lack of knowledge hinders understanding of how participatory project practices impact the performance of rural water supply in Ushetu district. Therefore, this study addressed this gap by examining the contribution of participatory approaches, such as project planning and implementation, monitoring, and communication, to the performance of rural water projects implemented by RUWASA in Ushetu district.

## **STATEMENT OF THE PROBLEM**

Access to clean and safe water is crucial for human health and well-being. In rural areas of Tanzania, the Rural Water Supply and Sanitation Agency (RUWASA) is instrumental in providing sustainable water supply services to communities. However, there are challenges in ensuring access to safe water, with many rural areas facing issues such as water scarcity, poor water quality, and inadequate infrastructure (Chowdavarapu & Manikandan, 2016; MoW, 2020; NAOT, 2020). Shayo (2020) noted that one potential solution to enhance the performance of rural water supply services is through the implementation of participatory project practices in project planning,

implementation, monitoring, and communication. These practices help in identifying proper project allocation, managing constraints, promoting coordination among team members, and enabling effective project progress (Kimisha, 2015).

Despite the fact that there are potential benefits of participatory project practices, there have been few studies that have looked into how it affects project performance (Tonya, 2015; Eliamringi & Kazumba, 2017; IRC, 2017; Kirenga *et al.*, 2018; Mandara *et al.*, 2018; Juma, 2019). Specifically, there has been limited research on the influence of participatory project practices on the performance of RUWASA's water projects in Ushetu district, where 53% of households still lack access to water supply. To address this gap, the current study aimed to examine how participatory project practices, including planning, implementation, monitoring, and communication, impact the performance of rural water supply projects implemented by RUWASA in Ushetu district.

## **The Study Objectives**

### ***General Objective***

The main objective of this study was to examine the influence of participatory project practices on the performance of rural water projects implemented by RUWASA in Ushetu District.

### ***Specific Objectives***

The specific objectives of this study were to:

- i. To determine the influence of participatory project planning and implementation on the performance of RUWASA's projects in Ushetu District;
- ii. To find out the influence of participatory project monitoring on the performance of RUWASA's projects in Ushetu District; and
- iii. To examine the influence of participatory project communication on the performance of RUWASA's projects in Ushetu District.

### ***Significance of the Study***

The study is beneficial to RUWASA in Shinyanga Region, Ministry of Water, Community Based Water Supply Organizations (CBWSOs), policymakers, and other stakeholders. RUWASA in cooperation with the Ministry of Water may use the results of the study to design strategies for involving communities in planning and implementation of water projects. The findings are also useful to scholars as a reference material when carrying

out further research in related areas. Also, the findings add knowledge to the existing literature.

## **LITERATURE REVIEW**

### **Theoretical Literature Review**

The study was informed by participatory development theory, which was initially developed by Freire in 1970 (Freire, 1970) and later formally introduced by Robert Chambers in 1983 (Chambers, 1983). This theory emerged in the 1970s as a response to the limitations of top-down development approaches that saw local communities as passive recipients of interventions (Freire, 1970). Influenced by Chambers, participatory development theory advocates for a more inclusive and participatory approach that actively involves local communities in decision-making processes (Chambers, 1983). The roots of participatory development theory can be traced back to the criticism of modernization theory, which promotes a top-down, ethnocentric, and paternalistic view of development rather than a bottom-up approach (Penderis, 2012). The top-down approach often disregarded the knowledge and expertise of local people, relying instead on experts and external agencies to design and implement projects (Cypher & Dietz, 1997).

Rahim (1994) stated that participatory development theory advocates for a shift towards more bottom-up and participatory approaches that empower local communities to control their own development processes. This involves local communities in identifying development priorities, making decisions, and implementing projects (Thomas, 1994). The origins of participatory development theory can be seen as a response to the limitations of top-down development approaches and a recognition of the importance of empowering local communities to lead their own development processes (Penderis, 2012). Today, the theory is popular because it allows people and communities to define and actively participate in their own development rather than being passive recipients of technological processes in development (Thomas, 1994).

Despite the importance of the participatory development theory in project performance, the approach still faces operational criticisms. Long (1992) stated that the theory is often criticized for being time-consuming and costly, as decisions may be delayed or changed based on feedback from community members, leading to projects taking longer to complete and potentially exceeding budget limits. Granovetter (1992) added that participatory development may not be suitable for all contexts, as some communities may



lack the capability or willingness to actively participate in decision-making processes. Furthermore, Nelson and Wright (1995) argued that participatory development theory sometimes neglects the significance of technical expertise and skills in project planning and implementation. They emphasize the need for a balance between participatory processes and expert knowledge to achieve successful development outcomes (Nelson & Wright, 1995). Furthermore, McAbee (2022) emphasized that variations in levels of participation within different segments of a community in participatory development can result in power imbalances and the neglecting of marginalized voices. For example, Inagaki (2007) conducted a study on a community partnership project aimed at improving healthcare services in South Africa, which revealed that certain groups such as youth, individuals with low income, the elderly, and those with limited education were excluded from the decision-making process. The study highlighted that inputs from these marginalized groups were overshadowed by those from academics, elites, and formal agencies (Inagaki, 2007). As a result, the sense of project ownership and commitment varied among different participants, impacting the effectiveness of coalition building efforts within the project (Inagaki, 2007).

Despite the potential drawbacks, there is a clear evidence that participatory development theory has become mainstream in recent empirical literature (Campbell & MacPhail, 2002; Inagaki, 2007). Among the development projects studied, more have followed participatory approaches rather than modernization or diffusion theories (Campbell & MacPhail, 2002; Inagaki, 2007). Hence, the selection of this theory in this study is based on the above argument. In this study, participatory development theory plays a crucial role in project planning and implementation (AlWaer *et al.*, 2008). When it comes to project planning, this theory emphasizes a bottom-up approach that involves active participation from community members in problem identification, goal setting, and strategy development (Korir *et al.*, 2021). This ensures that projects are relevant, sustainable, and tailored to the specific needs of the community. Moreover, involving community members in the planning process fosters ownership and support for the project, increasing the chances of its success (Menoka *et al.*, 2013). During project implementation, participatory development theory encourages the active involvement of community members in decision-making, resource allocation, and monitoring and evaluation activities (Dhakal, 2023). This ensures that projects are carried out transparently and accountably, with input from those directly impacted by the project.



Additionally, Oduor and Murei (2020) emphasized that participatory development theory plays a crucial role in project monitoring by advocating for the involvement of community members in data collection, progress assessment, and identification of challenges or opportunities for improvement. By engaging community members in monitoring activities, development projects can benefit from local knowledge, expertise, and perspectives, resulting into a more effective and sustainable outcomes (Luhombo *et al.*, 2019). Participatory monitoring also helps to build trust and collaboration between project implementers and community members, showcasing a dedication to transparency, accountability, and shared responsibility (Miseda & Nyonje, 2014). Ultimately, this approach to project monitoring can lead to more inclusive, responsive, and impactful development interventions that better cater to the needs and aspirations of the communities they aim to assist.

Furthermore, in terms of project communication, participatory development theory stresses the importance of creating open and inclusive communication channels among all project stakeholders (Mwanyalo & Mberia, 2017). This involves not only transmitting information from project leaders to the community but also allowing community members to express their opinions, concerns, and ideas (Anaeto & Solo-Anaeto, 2010). According to Luhombo *et al.* (2019), participatory communication encompasses sharing information about project goals, activities, and progress, as well as providing platforms for dialogue, feedback, and collaboration. Riaz (2017) asserts that participatory communication fosters a sense of ownership and empowerment among community members, resulting in more effective and sustainable development outcomes (Riaz, 2017).

### **Empirical Literature Review**

#### ***The Influence of Participatory Project Planning and Implementation on the Project Performance***

Mukamana and Kalimba (2022) conducted a study to establish the influence of stakeholder participation in the performance of Speak Out project implemented by FVA in Karongi, Nyanza, Gisagara, Nyaruguru Districts in Rwanda. Specifically, the study aims to determine the influence of stakeholder participation in project identification on the performance of Speak Out project; to examine the influence of stakeholder participation in project planning on the performance of Speak Out project; to find out the influence of stakeholder participation in resource mobilization and evaluation on performance of Speak Out project. The findings revealed that stakeholder participation in project identification, project planning, and resource

mobilization has significance positive influence in the performance of Speak out Project. Mkutano (2018) in His study attempted to investigative how participatory planning and implementation affected the project performance on NGOs in Nairobi City. The study found that there was increased and improved performance in NGOs projects when employees and stakeholders were effectively engaged in project planning and implementation. Specifically, it concluded that participatory project planning and implementation ensured employees and stakeholders worked towards a common goal.

Sam (2018) conducted a study to establish the influence of stakeholder's participation on the performance of WASH project in Musanze District public projects in Rwanda. The findings revealed that stakeholder participation in project identification, planning, and execution influenced project performance. The study recommended that WASH should put mechanisms that ensure the maximum participation of respondents in most roles during the implementation phase, more so in the conceptualization and project planning role and administration and logistics. Sabrie (2022) conducted a study to establish the influence of participatory project implementation on the performance of WASH projects focusing at Polish Humanitarian Action project in Banaadir region, Somalia. Specifically, the study focused on participatory project resources allocation and participatory project control. The findings revealed that both two variables were positive and had significantly influenced the performance of Polish Humanitarian Action project. The study concluded that participatory project implementation and the performance of Polish Humanitarian Action project are connected to each other.

### ***The Influence of Participatory Project Monitoring on the Project Performance***

Mutiso and Omwenga (2020), sought to investigate the influence of participatory monitoring on the sustainability of SamburuVigurungani Water Project (SVWP) in Kenya. The result obtained explained 71.9% of the variation in the sustainability of SamburuVigurungani Water Project (SVWP) in Kenya. Further, according to the ANOVA statistics, there is a significant relationship between all the independent variables and the dependent variable; while the p-value implied that there is a statistically significant relationship between participatory monitoring and the sustainability of Samburu Vigurungani Water Project (SVWP).

The study by Kirongo and Andala (2021) indicated that 90.6% of the respondents did agree greatly that participation of community at M&E stage influenced sustainability of Savings for Transformation Project. The study recommends an enhanced community participatory monitoring and evaluation to increase sustainability of Savings for Transformation project through engaging all stakeholders in M&E activities. Otieno (2016) investigated the perceived effects of participatory monitoring and evaluation on the LASDAP project implementation in the former Bondo County Council now named Bondo Sub County in the new structure of county government in Kenya. The study found that PM&E in general improved the LASDAP process and especially stakeholder relationships. These findings led to the recommendation that the county government adopt monitoring structures used by the defunct local authorities in current and future projects.

Sugal (2017) examined if participatory monitoring and evaluation affected effective implementation of the CDF in Balambala Constituency. Using the descriptive design, the researcher found that participatory M&E is important in projects implementation. Similarly, Jeremiah (2021) sought to investigate the effects of participatory monitoring and evaluation practices on performance of NG-CDF projects in Samburu County of Kenya. The findings obtained from a multiple regression model revealed a relationship between participatory monitoring and evaluation practices and the performance of NG-CDF projects, which turned out to be significant positive and strong.

### ***The Influence of Participatory Project Communication on the Project Performance***

Nyandongo (2017) in His study aims to investigate and evaluate the relationship between communication and project management performance. The results indicated that there was a strong positive relationship between communication and project outcomes. Communication increases success rates and improves the overall performance of projects. Moreover, the results have established that project managers who regard communication as one of the most important factors contributing to the success of projects, have achieved higher success rate in their projects than the other participants (Nyandongo, 2017). The high success rate seen on their projects is perceived as a direct result of effective communication.

Uwamahoro and Ogbe (2021) conducted a study to see if there is a link between effective communication and capacity factor of hydropower projects in Musanze District, Rwanda. The results obtained from regression analysis showed that R square was 0.391 means that capacity factor was increased by

effective communication by 39.1%. This agrees that this model is acceptable as an effective communication has a significant impact on the capacity factory. Kiradoo (2017) in His study focused at communication and the role it plays in management of quality and timelines as far as project success in concerned. Desk research was embraced where relevant literature was reviewed by the inquiry. The findings revealed that formal and informal tools of communication are key for sound comprehension of information of the project as well as the rate of success. Zulch (2014) looked on communication as a foundation of management of the project activities. It was noted that the skills of the project manager to communicate information in a way that is effective is an important factor of success in management of the project.

## CONCEPTUAL FRAMEWORK

A conceptual framework is the ideal framework designed by a researcher to show how dependent and independent variables of the study depend on or connect to each other. It is a conceptual framework that helps a researcher better understand his or her data presentations. In the same view, Mugenda and Mugenda (2003) argues that a researcher constructs a conceptual framework that act as study guidance during data presentation and discussion. Therefore, the conceptual framework for this study is clearly presented in Figure 2.1. This diagram shows the relationship between the dependent (performance of RUWASA's projects) and independent variables (participatory project practices), their possible pattern of influence on each other. The directions of the arrows show the interrelationships between the key variables of the study.

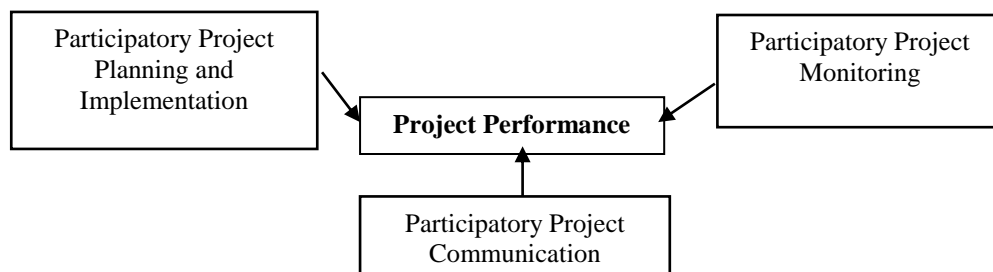


Figure 1: **Conceptual Framework**  
Source: Researcher (2024).

## METHODS

The study employed a casual research design and quantitative research approach to establish the influence of participatory project practices on the performance of RUWASA's projects in Ushetu district. To meet the objectives of the study, the study involved 171 participants, including 28

RUWASA employees and 143 households with water usage from Busenda, Iramba, Igwamanoni, Mbika, and Ulowa villages. The study sample size was obtained through Yamane (1967) formula with a 95% level of confidence (0.05 level of precision). The formula is represented by,  $n = \frac{N}{1 + N * e^2}$ , where n indicates sample size, N represents population size, and e is a margin of error. Also, the study participants were obtained through a simple random sampling technique. Study participants were guaranteed of confidentiality and the anonymity. The data was collected by using of a Likert rated structured questionnaire. The tool comprises close-ended questions that adopt a five-point Likert scale ranging from 1 to 5, where 1 represents strong disagreement, 2 represents disagreement, 3 represents undecided, 4 represents agreement, and 5 represents strong agreement. This tool allowed respondents to provide their perceptions regarding the research questions. The collected data were analyzed using descriptive and inferential statistics. Descriptive statistics were used to analyse the demographic information of the respondents and the result were presented through frequency and percentage. Also, inferential statistics through Pearson correlation and multiple linear regression were used to determine the bivariate relationship and casual relationship between the dependent variable (the performance of water projects) and the independent variable (participatory project practices), respectively.

## RESULTS

### Reliability of Instrument

To enhance reliability in the study, a pilot study was conducted separately with 25 participants, accounting for 10% of the target population. The data gathered from this pilot study was assessed for reliability using Cronbach's Alpha. The results presented in Table 2 showed that the Cronbach's Alpha values for each variable exceeded 0.7, indicating good reliability. As noted by Amirrudin *et al.* (2020), a reliability coefficient of at least 0.7 is generally deemed acceptable, whereas a coefficient below this threshold may suggest the necessity for additional revisions to the instrument.

**Table 2: Reliability Results**

Variable	Cronbach alpha ( $\alpha$ )	No. of items	Comments
Participatory Project Planning & Implementation	0.884	4	Acceptable
Participatory Project Monitoring	0.734	6	Acceptable
Participatory Project Communication	0.705	4	Acceptable
Performance of RUWASA Projects	0.911	6	Acceptable
<b>Overall</b>	0.920	20	Acceptable

Source: Field Data, (2024)

### Response Rate of Questionnaire

The questionnaires were distributed to 171 participants in Ushetu District, including 143 water users and 28 RUWASA employees. Participants were asked to indicate their agreement level using a 5-point Likert scale. Out of the 171 questionnaires distributed, 159 were completed and returned, resulting in a return rate of 92.98%. According to Mugenda and Mugenda (2003), a response rate of 50% is sufficient, 60% is good, and 70% is very good for drawing reliable conclusions. *Weisberg et al* (1996) recommend a response rate of 70% for reliable conclusions, which was exceeded in this study. See Table 1 for a summary of the questionnaire response rate.

**Table 1: The Response Rate**

Respondent category	No. of questionnaires distributed	returned	Percentage (%)
RUWASA employee	28	26	16.4
Household Water User	143	133	83.6
<b>Total</b>	<b>171</b>	<b>159</b>	<b>100.0</b>

Source: Field Data (2024)

### Univariate Descriptive Statistics

Tables 3-6 present the descriptive statistics of the respondents' demographic characteristics collected by the survey. The basic information collected in this study includes gender, age, education level, and their participation in project planning, implementation, and monitoring.

**Table 3: Gender of the Respondents**

Gender	Frequency	Percentage
Male	78	49.1
Female	81	50.9
<b>Total</b>	<b>159</b>	<b>100.0</b>

Source: Research Findings (2024)

The findings presented in Table 3 shows that the majority (50.9%) were female and the rest (49.1%) were male. However, the gap between female and male was very small. This implies that the study was gender sensitive.

**Table 4: Age of the Respondents**

Age	Frequency	Percentage
18-25 years	08	5.0
26-35 years	26	16.4
36-45 years	60	37.7
Above 45 years	65	40.9
<b>Total</b>	<b>159</b>	<b>100.0</b>

Source: Research Findings (2024)

Table 4 show that a bigger percentage of respondents were aged above 45 years (40.9%), followed by 37.7% who were aged 36-45 years. Other respondents were aged 26-35 years (16.4%), and 18-25 years (5.0%). This implies that majority of the respondents were aged above 36 years and so were mature enough to understand issues that were being investigated.

**Table 5: Level of Education**

Education Level	Frequency	Percentage
Primary	79	49.7
Secondary	50	31.4
Certificate	04	2.5
Diploma	08	5.0
Bachelor Degree	15	9.5
Master's Degree	03	1.9
<b>Total</b>	<b>159</b>	<b>100.0</b>

Source: Research Findings (2024)

The findings in Table 5 show that the majority of the respondents have at least a primary-level education. This implies that respondents had a basic knowledge of reading and writing; hence, they can fill out the questionnaire accordingly.

**Table 6: Participation in Project Planning and Implementation**

Participation in Project Planning and Implementation	Frequency	Percentage
Yes	140	88.1
No	19	11.9
<b>Total</b>	<b>159</b>	<b>100.0</b>

Source: Research Findings (2024)

The results presented in Table 6 demonstrate that a significant proportion of the participants (88.1%) have taken part in the project implementation, suggesting that they are well-acquainted with the factors that may influence project performance. Given their high level of engagement and knowledge of project implementation, researchers can anticipate receiving precise responses from the participants in the questionnaires.

### **Bivariate Statistical Analysis**

In contrast to univariate descriptive analysis which is used to summarize the characteristics of one variable separately, bivariate statistical analysis is concerned with comparing the characteristics between variables by assessing the strength of the associations. By using a standard measure of association, the main aim of the bivariate statistical analysis is to establish patterns within the data. This is achieved using a correlation matrix (Table 7). As the nature



of the data used in this study is continuous delivered from the computed mean of the ordinal level (ranked) data, Janse *et al.* (2021) suggests that one of the most suitable tests for assessing ordinal association is the Pearson's correlation coefficient (r). The Pearson correlation coefficient (r) is the test conducted for correlation purposes that highlights the relationship between a variable. It also provides information regarding the direction and magnitude of a particular relationship. The value of the correlation coefficient lies between +1 and -1. When the value range is close to 0, it means that the relationship between variables is very weak. In other words, when the value range is 0.2–0.39, there is a weak correlation. If value ranges are 0.4–0.59, there is a moderate correlation. Also, if the value range is 0.6–0.79, there is a strong correlation, and when the value is 0.8–1.0, there is a very strong correlation. 0 indicated no relationship between the two variables. The plus and minus signs show the positive and negative relationship between variables. Table 7 present the relationship between the independent variables (Participatory Project Practices) and dependent variable (Performance of RUWASA Projects).

**Table 7: Pearson's Correlation Analysis/Correlation Matrix**

Variable		Performance of RUWASA Projects
Participatory Project Planning and Implementation	Pearson Correlation	0.817**
	Sig. (2-tailed)	0.000
Participatory Project Monitoring	Pearson Correlation	0.659**
	Sig. (2-tailed)	0.000
Participatory Project Communication	Pearson Correlation	0.774**
	Sig. (2-tailed)	0.000

*Note: \*\*Correlation is significant at the 0.01 level (2-tailed).*

Source:

The Statistical Correlation Table 7 revealed that the three independent variables, Participatory Project Planning and Implementation, Participatory Project Monitoring, and Participatory Project Communication, were positively correlated with the dependent variable, Performance of RUWASA Projects, with correlation coefficients of 0.817, 0.659, and 0.774, respectively. Additionally, all the independent variables had p-values below 0.05, signifying a statistically significant relationship with the dependent variable. In light of these results, it can be concluded that Participatory Project Planning and Implementation, Participatory Project Monitoring, and Participatory Project Communication serve as reliable indicators of the performance of RUWASA Projects in Ushetu District.

## Explanatory Statistical Analysis

The correlation analysis performed using bivariate statistical analysis does not provide complete details about the variables. So, in order to further examine the relationship between independent variables and dependent variable, the multivariate explanatory analysis “regression analysis” was performed. Regression analysis helps to determine the effect of one variable on another. In this study, to validate the relationship between independent and dependent variables, multiple linear regression was carried out. However, before running the regression model, a model diagnostic was conducted to test the basic assumptions of regression. These are multicollinearity tests, normality of the distribution, outlier test, and homoscedasticity, which are shown below:

### *Multicollinearity Test*

Multicollinearity refers to the situation in which the independent or predictor variables are highly correlated. In this study, multicollinearity was checked with tolerance and variance inflation factor (VIF) statistics. According to McClelland et al. (2017), a tolerance value less than 0.1 almost certainly describes a serious collinearity problem. On the other hand, Elith et al. (2013) stated that a VIF value greater than 10 is also a concern. In this study, all of the independent variables were found to have a tolerance of more than 0.1 and a VIF value of less than 10, meaning that there is no multicollinearity in the independent variables.

**Table 8: Multicollinearity Test Result**

Model	Collinearity Statistics	
	Tolerance	VIF
Participatory Project Planning & Implementation	0.553	1.809
Participatory Project Monitoring	0.674	1.484
Participatory Project Communication	0.551	1.815

*Dependent Variable: Performance of RUWASA Projects*

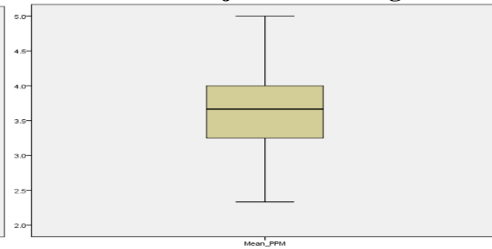
### *Outlier test*

The study conducted an outlier test to identify any potential anomalies within the data set. The results of this test indicated that there are no outliers present. This finding suggests that the data is consistent and reliable, allowing us to proceed with further analyses without concerns regarding extreme values that could skew the results. The absence of outliers strengthens the integrity of our study and supports the validity of our conclusions.

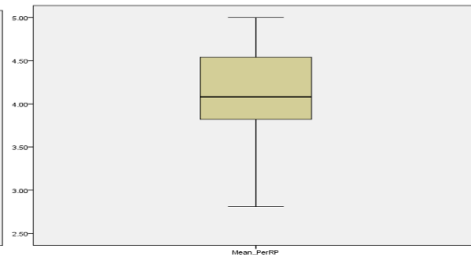
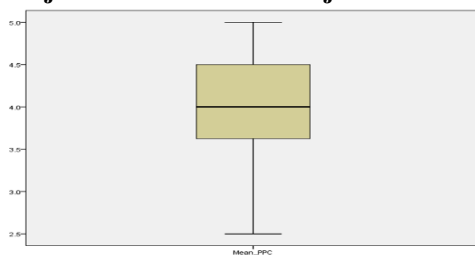
### Project Planning and Implementation



### Project Monitoring



### Project Communication Project Performance



### Normality Distribution Test

Regression analyses need the independent variables to be normally distributed. Skewness and kurtosis are statistical tools that can enable us to check if the data is normally distributed or not. Skewness assesses the extent to which a variable's distribution is symmetrical (Hair *et al.*, 2022). On the other hand, kurtosis refers to a measure of whether the data are heavy-tailed or light-tailed relative to a normal distribution. When both skewness and kurtosis are close to zero, the pattern of responses is considered a normal distribution (George & Mallery, 2016). For this study, the skewness and kurtosis test results were close to zero, and it can be concluded that the data for all variables were normally distributed.

**Table 9: Skewness and Kurtosis Test for Normality**

Independent Variables	N	Skewness	Kurtosis
		Statistic	Statistic
Participatory Project Planning & Implementation	159	-0.552	0.917
Participatory Project Monitoring	159	0.042	-0.047
Participatory Project Communication	159	-0.558	0.012

### Heteroscedasticity

According to Jung *et al.* (2023), one of the fundamental assumptions in linear regression is that the residuals exhibit equal variance across all levels of the predictor variable, known as homoscedasticity. The presence of heteroscedasticity, as noted by Daryanto (2020), indicates that this assumption has been violated, leading to unreliable regression results (Astivia

& Zumbo, 2019). To test for heteroscedasticity in the residuals, the researcher in this study utilized the Breusch-Pagan test, which aims to detect changes in variance within the regression residuals (Gelfand, 2015). If the p-value from this test is greater than the significance level of 0.05, then we fail to reject the null hypothesis, suggesting that homoscedasticity is present in the model Jung *et al.* (2023). Table 4.11 reveals that the p-value exceeds 0.05, indicating that the null hypothesis stands, and thus heteroscedasticity is not present in the residuals.

**Table 10: Breusch-Pagan/Cook-Wisberg Test for Heteroscedasticity**

Null Hypothesis (H0)	:Homoscedasticity exist (Constant Variance)
Chi2(1)	= 0.90
Prob> chi2	= 0.075

### ***Regression Model Estimation***

The research employed multiple regression analysis to establish the linear statistical relationship between Participatory Project Planning & Implementation, Participatory Project Monitoring, Participatory Project Communication, and Performance of RUWASA Projects.

### ***Model Summary***

Based on the model summary in table 11, the correlation coefficient (R) of 0.903 indicates a strong relationship between Participatory Project Implementation, Participatory Project Monitoring, Participatory Project Communication, and the Performance of RUWASA Projects. The regression coefficient ( $R^2$ ) of 0.811 signifies that Participatory Project Implementation, Participatory Project Monitoring, and Participatory Project Communication collectively contribute 81.1% to the performance of RUWASA projects. It is possible that other factors, not addressed in this study, account for the remaining 18.9% variation in the performance of RUWASA Projects.

**Table 11: Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.903 <sup>a</sup>	.815	.811	.28069

- a. **Predictors:**(Constant), Participatory Project Planning & Implementation, Participatory Project Monitoring, Participatory Project Communication

### ***Regression Model Goodness of Fit***

The study conducted an Analysis of Variance (ANOVA) to examine whether the multiple regression model was fit for the data. This helped to find out if

project performance can be predicted without relying on participatory project implementation, participatory project monitoring, and participatory project communication. The results of the Analysis of Variance (ANOVA) are shown in Table 12. The study findings provide an F test, which shows an overall test of the significance of the fitted regression model. The F value indicates that all the variables in the equation were significant, hence the overall regression model is significant. The F-statistics produced ( $F = 227.394$ ) were significant at  $p < 0.05$ , thus confirming the fitness of the model, and therefore, there is a statistically significant relationship between participatory project planning and implementation, participatory project monitoring, participatory project communication, and the performance of RUWASA projects. This indicates that the regression model predicts the dependent variable significantly and is a good fit for the data.

Table 12: ANOVA for Testing Multiple Regression Model

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	53.748	3	17.916	227.394	.000 <sup>b</sup>
Residual	12.212	155	.079		
Total	65.960	158			

a. **Dependent Variable:** Performance of RUWASA Projects

b. **Predictors :**(Constant), Participatory Project Planning & Implementation, Participatory Project Monitoring, Participatory Project Communication

### ***Multiple Regression Analysis Parameter (Beta Coefficients) Estimation***

In multiple linear regression analysis, the beta coefficients represent the change in the dependent variable (Y) for a one-unit change in the independent variable (X), while holding all other independent variables constant (Yu *et al.*, 2019). A positive beta coefficient indicates a positive relationship between the independent variable and the dependent variable, while a negative beta coefficient indicates a negative relationship (Vatcheva *et al.*, 2016).

The significance (sig) value associated with each beta coefficient indicates whether the relationship between the independent variable and the dependent variable is statistically significant (Nair & Ganapathy, 2023). A sig value less than 0.05 is typically considered significant, suggesting that the relationship between the independent variable and the dependent variable is not due to random chance (Göktaş *et al.*, 2021).

The t-test is used to determine the significance of each beta coefficient in the regression model. A t-value greater than 2 or less than -2 indicates that the beta coefficient is significantly different from zero, suggesting that the independent variable has a significant impact on the dependent variable (Ernst & Albers, 2017).

In this study, as displayed in Table 13, the t-test results for each variable under study are greater than 2, meaning that the independent variables (participatory project planning, participatory project monitoring, and participatory project communication) have a significant impact on the dependent variable (performance of RUWASA projects). In the same vein, the sig value of each beta coefficient is less than 0.05, meaning that there is a statistically significant relationship between the independent variable and the dependent variable.

**Table 13: Multiple Regression Analysis Parameter Estimation Results**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.279	.153		1.82	.070
Participatory Project Planning & Implementation = X <sub>1</sub>	.365	.036	.474	10.1	.000
Participatory Project Monitoring = X <sub>2</sub>	.242	.044	.231	5.49	.000
Participatory Project Communication = X <sub>3</sub>	.332	.044	.355	7.62	.000

Dependent Variable: Performance of RUWASA Projects = Y

The multiple regression model equation was developed from the coefficient as shown in equation 4.1;

$$Y = .279 + .365X_1 + .242X_2 + .332X_3 \dots \dots \dots 1$$

Where Y refers to the dependent variable (performance of RUWASA projects), X<sub>1</sub> is the participatory project planning and implementation, X<sub>2</sub> is the participatory project monitoring, and X<sub>3</sub> is the participatory project communication.

The regression coefficient results indicate that we would still realize a positive change in RUWASA Projects performance of 0.279, even if all the variables (participatory project planning and implementation, participatory project monitoring, and participatory project communication) were zero (0). Also, the findings show that a unit increase in participatory project planning and implementation will lead to a 0.365 significant increase in the performance of RUWASA projects when all other independent variables are

held constant. Meanwhile, a unit increase in participatory project monitoring will lead to a 0.242 significant increase in the performance of RUWASA projects when all other independent variables are held constant. Finally, a unit increase in participatory project communication will lead to a 0.332 significant increase in the performance of RUWASA projects when all other independent variables are held constant.

## **DISCUSSION OF THE FINDINGS**

### **The Influence of Participatory Project Planning and Implementation on the Performance of Projects**

The beta coefficient for participatory planning and implementation was found to be positive. This means that participatory project planning and implementation, if practiced by RUWASA in Ushetu district, could have a positive effect on the performance of water projects. In other words, an increase in participatory project planning and implementation would contribute to the performance of water projects implemented by RUWASA in Ushetu district by 0.365 (36.5%). In support of this finding, Wachaiyu (2019) found that participatory project planning contributed to a project's success as well as enabling resource deployment. Mkutano (2018) found that planning made employees and stakeholders' team up to achieve a common goal of successful project performance. The results also concurred with the findings of Kirongo and Andala (2021), who argued that the involvement of local people in the conception, execution, monitoring, and evaluation of development projects has become very central to their sustainability. Additionally, the results of the study affirm the findings of Njogu and Wanjohi (2018), who observed that community participation in financial planning, project governance, and project operations and management had a positive influence on project performance. Akin to these findings, Maina (2018) and Abdi (2018) found that the involvement of stakeholders in project planning and implementation can enhance project performance as well as create a sense of project ownership, and their absence can lead to sustainability challenges.

### **The Influence of Participatory Project Monitoring on the Performance of Project**

The study also found that participatory project monitoring, if practiced, could have a positive effect on the performance of water projects implemented by RUWASA in Ushetu district. The findings converge with those of Mutiso and Omwenga (2020), who found that community participation in project monitoring and evaluation showed a positive correlation with project completion and performance. Also, this finding is in line with the Ali and



Gitonga (2019) study, which found that when stakeholders participated in M&E, errors in projects were corrected in good time, reporting of activities was done promptly, and overall project performance was enhanced. This was also supported by the views of Dhakal (2023), who argued that the benefits associated with proper community participation in project planning and implementation include an assurance of the continuity of the project, timely maintenance and repair, harmony and conflict management, a strong sense of ownership of the project, better service delivery, and expansion of the project. The findings are also supported by Otieno (2016), who discovered that participatory project monitoring in general improved the Local Authority Service Delivery Action Planning (LASDAP) process and especially stakeholder relationships in Bondo sub-county, Kenya. This study is also consistent with Jamaal (2018), who found that the participatory monitoring process engages stakeholders in joint planning and assessing progress, leading to the successful completion of projects. Kadurira and Nyagah (2021), in their study conducted at Tana River County, concluded that stakeholder's involvement in monitoring and evaluation helps in the correction of errors, monitoring and evaluation guides in justifying project costs, increased response controls, monitoring and evaluation helps in identifying sustainability activity challenges, and that it fosters project sustainability progress reporting. Moreover, Aupe and Sagwa (2020), in their study at Kwanza Sub-County, Kenya, recommend that the government and other development agencies enhance stakeholder participation in project monitoring and evaluation for the sustainability of water projects.

### **The Influence of Participatory Project Communication on the Performance of Projects**

The study also found a positive relationship between participatory project communication and the performance of RUWASA projects in Ushetu district. The results indicated that there was a strong positive relationship between communication and project outcomes. The study findings are in agreement with Nyandongo (2017), who states that communication increases success rates and improves the overall performance of projects. Also, the study is supported by Mwanyalo and Mberia (2017), who established in their study that project managers who regard communication as one of the most important factors contributing to the success of projects. In the same vein, Zulch (2014) noted that communication allows the project managers to share information with regard to quality, time, scope, and costs within the projects. Sabrie (2022), in his study of the Banaadir region of Somalia, further argues that internal communication facilitated the flow of information, which allowed for proper coordination of various activities during the

implementation of WASH projects in Somalia. The existence of relevant systems allowed for effective communication with the stakeholders during the implementation of WASH projects (Sabrie, 2022). Kiradoo (2017), in his study, noted that formal and informal tools of communication are key for a sound comprehension of the information about the projects as well as the rate of success. Moreover, Alsulaimi and Abdullah (2020) observed in their study that the flow of information in the project makes it easier to coordinate the various project activities, which may contribute to overall success.

## **CONCLUSION AND RECOMMENDATIONS**

### **Conclusion**

This study concludes that participatory project planning, implementation, monitoring, and communication significantly influence the performance of water supply projects. Community involvement in various aspects, such as water facility allocation, project operations, decision-making, and feedback during planning, enhances both the cost-effectiveness and sustainability of clean water supply initiatives. Moreover, engaging the community in monitoring Rural Water Supply and Sanitation Agency (RUWASA) projects leads to better performance by enabling quick identification and resolution of issues, fostering trust and cooperation between residents and project implementers, and improving accountability and transparency. The study also emphasizes the importance of effective information flow between employees and project beneficiaries for timely problem-solving. Establishing feedback mechanisms, like community meetings and suggestion boxes, ensures community voices are heard, which contributes valuable insights into project progress.

### **Implication of the Study Findings**

Theoretically, these findings underscore the critical role of participatory approaches in project management literature, advocating for their integration into project frameworks. Practically, these insights guide policymakers and project managers in Ushetu District to prioritize participatory methods, as they are directly linked to improved project outcomes. Implementing these practices can enhance stakeholder engagement, ensure better resource allocation, and ultimately lead to more successful and sustainable RUWASA projects in the region.

### **Recommendations**

This study recommends that for RUWASA water projects in Ushetu district to be more effective, the community must be involved in all stages of project planning, implementation, monitoring, and communication. Engaging the

community ensures that local needs are met, fosters a sense of ownership, and encourages investment in the project's success. Community insights can help identify potential challenges, improve project design, and enhance monitoring, allowing for timely issue resolution. Additionally, prioritizing participatory communication promotes knowledge sharing and better decision-making, ultimately building trust and encouraging active participation, which are essential for project success.

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