JOURNAL OF ECONOMICS AND BEHAVIORAL STUDIES

Vol. 17 No. 1 ISSN 2220-6140

Editorial

Journal of Economics and Behavioral Studies (JEBS) provides distinct avenue for quality research in the everchanging fields of economics & behavioral studies and related disciplines. Research work submitted for publication consideration should not merely limited to conceptualization of economics and behavioral developments but comprise interdisciplinary and multi-facet approaches to economics and behavioral theories and practices as well as general transformations in the fields. Scope of the JEBS includes: subjects of managerial economics, financial economics, development economics, finance, economics, financial psychology, strategic management, organizational behavior, human behavior, marketing, human resource management and behavioral finance. Author(s) should declare that work submitted to the journal is original, not under consideration for publication by another journal and that all listed authors approve its submission to JEBS. Author (s) can submit: Research Paper, Conceptual Paper, Case Studies and Book Review. Journal received research submissions related to all aspects of major themes and tracks. All submitted papers were first assessed by the editorial team for relevance and originality of the work and blindly peer-reviewed by the external reviewers depending on the subject matter of the paper. After the rigorous peer-review process, the submitted papers were selected based on originality, significance and clarity of the purpose. The current issue of JEBS comprises papers of scholars from Ghana, Malaysia, Zimbabwe and Nigeria. Digitalizing the Activities of Small-Medium-Size Construction Firms, Impact of Foreign Direct Investment on Unemployment, Perceived Inequities & Potential Reforms in Public-Private Partnerships, Institutional Environment, the Quest for Stable Exchange Rate and Assessment of the Altman Z Score on Predicting Corporate Failure and Exploring the Motivations, Challenges and Support Needs of Rural Entrepreneurs were some of the major practices and concepts examined in these studies. The current issue will therefore be a unique offer where scholars will be able to appreciate the latest results in their field of expertise and to acquire additional knowledge in other relevant fields.

Editor In Chief

Ijaz Ur Rehman Ph.D

Editorial Board

Editor

- Saqib Muneer PhD, University of Hail, Saudi Arabia

Editorial and Advisory Board

- Mehmed Muric PhD, Global Network for Socioeconomic Research & Development, Serbia
- Ravinder Rena PhD, Monarch University, Switzerland
- Somnath Sen PhD, University of Birmingham, UK
- Sisira R N Colombage PhD, Federation University, Australia
- Hai-Chin YU PhD, Chung Yuan University, Chungli, Taiwan
- Mohamad Firdaus Bin Ahmad PhD, Universiti Teknologi MARA, Malaysia
- Elena Garcia Ruiz PhD, Universidad de Cantabria, Spain
- Fuhmei Wang PhD, National Cheng Kung University, Taiwan
- Johan de Jager PhD, Tshwane University of Technology, South Africa
- Mamta B Chowdhury PhD, Western Sydney University, Australia
- Muhammad Hariz bin Hamid PhD, Universiti Teknologi MARA, Malaysia

TABLE OF CONTENTS

Description	Pages
Title	I
Editorial	II
Editorial Board	III
Table of Contents	IV
Papers	V
Digitalizing the Activities of Small-Medium-Size Construction Firms Bernard Martin Arthur-Aidoo, Samuel Mensah Plange, Belinda Dodoo	1
The Impact of Foreign Direct Investment on Unemployment in Mena Region Abdulkadir Muktar Nur, Jimoh Olajide Raji	9
Exploring the Perceived Inequities and Potential Reforms in Public-Private Partnerships for Infrastructure Development: A Qualitative Study of Stakeholder Perspectives in Zimbabwe Nhlanhla Moyamoya, Julius Tapera	21
Institutional Environment and the Quest for Stable Exchange Rate in Nigeria Lawal Wasiu Omotayo, Zainab Abubaka, Zainab Said Suwaid	43
An Assessment of the Altman Z Score on Predicting Corporate Failure. A Case of Insolvent Financial Companies Listed on the Zimbabwe Stock Exchange Lorraine S Sibanda, Julius Tapera	55
Exploring the Motivations, Challenges and Support Needs of Rural Entrepreneurs in Zimbabwe Bukhosi Dumoluhle Mpofu, Melissa Sibonginkosi Ncube	72

PAPERS

Digitalizing the Activities of Small-Medium-Size Construction Firms

Bernard Martin Arthur-Aidoo, *Samuel Mensah Plange, Belinda Dodoo
Accra Technical University, Ghana
baaidoo@atu.edu.gh, *samuelmensahplange@gmail.com, bdodoo@atu.edu.gh
Corresponding Author: Samuel Mensah Plange

Abstract: Ghana's construction sector faces many obstacles, such as modernization, inefficiency, and safety hazards. Small and medium-sized businesses (SMEs) are pivotal in job creation, economic expansion, and infrastructure development. To stay competitive, SMEs must embrace digital transformation as the industry experiences a digital revolution. This study examines the digital transformation of Ghanaian SME construction firms between 2018 and 2023, focusing on safety concerns, inefficiencies, and regulatory barriers, as well as the advantages of digitalization, such as improved communication and project management. A mixed-methods approach was used, combining structured surveys for SME employees with in-depth interviews with key stakeholders to gather both quantitative and qualitative data. The study investigates the use of digital technologies such as building information modeling (BIM), wearable technology, and real-time monitoring to address operational and safety issues. It also examines how digitization affects communication, resource allocation, project efficiency, and regulatory compliance. Factors such as government programs, technology adoption, and safety training are evaluated to determine their contribution to improving safety and productivity in the construction industry. The findings reveal that digital technologies significantly enhance project outcomes, safety management, and resource utilization. Government regulations also play a crucial role in supporting digitization initiatives. The study provides practical insights for policymakers, industry stakeholders, and researchers seeking to promote innovation and growth among SMEs in Ghana's construction sector.

Keywords: *Digitalization, Building, Construction, Digital, Sustainable*

1. Introduction

The notable expansion of Ghana’s construction industry is driven by rapid urbanization and rising infrastructure development. Small and medium-sized enterprises (SMEs), are central to this growth, contributing significantly to job creation and economic advancement. SMEs constitute a significant share of Ghana’s construction industry, making their success crucial to the nation’s overall development. However, to remain competitive and meet the demands of a rapid market, these businesses must embrace digital transformation.

Digital technologists such as Building information modeling (BIM), project management software, drones, and mobile applications have the potential to revolutionize the construction industry by streaming processes, improving communication, and boosting efficiency. Yet, Ghanaian SMEs face several challenges, including the high cost of technology acquisition, limited access to specialized training, and concerns about data security. These challenges are exacerbated by financial constraints and skill shortages typical of developing nations.

This research explores how Ghanaian SMEs in the construction industry are addressing these challenges and leveraging new opportunities between 2018 and 2023, a time of swift legislative changes and technology improvements. This study provides insights into the potential of digital transformation to improve productivity, safety, and sustainability in developing economies by concentrating on the unique dynamics of Ghana's construction industry.

2. Review of Literature

Like many other emerging countries, Ghana's building industry faces a variety of difficulties and chances. The physical environment, economic growth, and the creation of new jobs are all heavily influenced by small and medium-sized construction enterprises (SMEs). However, Ghana's construction sector, like those throughout the world, has several problems including inefficiency, safety worries, legal difficulties, and the need for modernization. To solve these issues and improve chances for growth and sustainability, this study will examine

the process of digitalizing SME construction firms' operations in Ghana. The urgency of digitizing the operations of small- to medium-sized construction enterprises is inextricably linked to the difficulties that have beset Ghana's construction industry from 2018 to 2023. A systematic approach to overcoming these difficulties and altering the operational environment for such businesses is provided by digitization.

Quality Concerns

Quality issues have been a recurring problem in Ghana's construction sector (Agyekum-Mensah et al., 2018). Subpar workmanship, the use of substandard materials, and non-compliance with construction standards have led to structures that deteriorate prematurely. These quality concerns have far-reaching consequences, including heightened safety risks for occupants and the necessity for costly rectifications. Additionally, the reputation of construction firms involved in such projects can suffer, impacting their ability to secure future contracts.

Safety Hazards

The issue of safety failures in construction has been widespread (Laryea et al., 2020). On construction sites, accidents and injuries occur often due to inadequate safety training, lax adherence to safety standards, and a lack of suitable protective equipment. Beyond the immediate repercussions, these safety risks result in workers' long-term health issues, lost productivity from accidents, and significant legal penalties for construction companies.

Cost Overruns

Construction projects in Ghana have consistently faced financial difficulties due to cost overruns (Baiden et al., 2019). Ineffective project management, inaccurate budgeting, and unanticipated complications are just a few of the factors that frequently cause projects to go beyond their initial budgets. In addition to taxing construction companies' financial resources, this damages customer and contractor trust and raises the possibility of disagreements and legal problems.

Project Delays

Numerous reasons have contributed to the ongoing issue of project delays (Arku et al., 2023). Delays are caused by inadequate preparation, logistical difficulties, and outside factors like bad weather. Due to the lengthened project timelines, these delays increase project expenses, which affects both clients and construction companies. Project delays also impede economic growth by delaying the construction of infrastructure.

SMEs and Competitiveness

According to Agyekum-Mensah et al. (2018), small and medium-sized construction enterprises are particularly vulnerable to these issues. They struggle to deal with the financial and operational effects of quality issues, safety mishaps, cost overruns, and project delays because of their limited resources, including access to capital and experienced labor. As a result, they are less competitive in the construction industry, which could result in a consolidation of the industry and the dominance of larger firms.

Table 1: Field Survey, 2024

Factors To Enhance Digitalization in The Construction Industry	
Skilled Workforce	Employee training and upskilling initiatives. (Gupta et al., 2020) Recruiting digitally aware personnel to foster innovation. (Lee et al., 2020)
BIM Integration	Complete integration of BIM (Building Information Modeling). (Johnson et al., 2019) BIM standards and procedures for uniformity. (Smith et al., 2018)
Internet of Things (IoT) and Sensors	Using Internet of Things sensors to collect data. (Anderson et al., 2018) Monitoring of tools and buildings in real-time. (Garcia et al., 2020)
Mobile Technology	Field reporting and data gathering apps for mobile devices. (Jonhson et al., 2021) Access to project details via mobile. (Smith et al., 2020)

Cloud Computing	Project management and collaboration via the cloud. (Garcia et al., 2021) Cloud data storage and accessibility. (Johnso et al., 2019)
Data Analytics	Data analytics for preventative maintenance. (Brown et al., 2018) Making informed decisions with data. (Gupta et al., 2022)
Digital Twins	Making digital representations of construction sites. (Johnson et al., 2021) Virtual testing and monitoring. (Johnson et al., 2020)
Artificial Intelligence (AI)	AI-driven planning and optimization of projects. (Davis et al., 2019) AI for risk analysis that is predictive. (William et al., 2020)
Automation	Automatization of repetitive and manual processes. (Robert et al., 2020) Robotics for construction tasks. (Garcia et al., 2021)
Augmented Reality (AR)	AR for on-site visualization of building designs. (Lee et al., 2020) Using AR to improve worker training. (Brown et al., 2020)
Virtual Reality (VR)	Virtual reality for immersive project walkthroughs. (Garcia et al., 2022) Through VR presentations, clients are engaged. (Smith et al., 2021)
Drones and UAVs	Drones in the air for site surveys and inspections. (Gupta et al., 2020) Data from drones for 3D site mapping. (Lee et al., 2023)
3D Printing	On-site construction using 3D printing. (Williams et ai., 2021) 3D printing for quick prototyping. (Robert et al., 2018)
Blockchain	Blockchain for transparent and safe transactions. (Davis et al., 2021) Smart contracts for automatically generating project agreements. (Anderson et al., 2021)
Supply Chain Integration	The supply chain for the building has been digitally integrated. (Garcia et al., 2019) Materials and equipment are tracked in real time. (Lee et al., 2022)
Cybersecurity	Effective data protection cybersecurity measures. (Williams et al., 2020) Regular updates and checks of cybersecurity. (Smith et al., 2018)
Sustainability	Software for eco-friendly architecture and building. (Gupta et al., 2021) Tracking and documenting environmental impact. (Johnson et al., 2021)
Prefabrication and Modular Construction	Prefabrication of digital design and planning. (Brown et al., 2020) Construction that is modular and coordinated digitally. (Roberts et al., 2023)
Regulation Compliance	Compliance with digital rules and guidelines. (Williams et al., 2023) Ensuring data compliance and privacy. (Smith et al., 2022)
Platforms for collaboration	Platforms for online collaboration for project teams. (Gupta et al., 2023) Communication and document exchange in real-time. (Roberts et al., 2021)
Visualization Tools	Using 3D visualization software. (Anderson et al., 2020) Project management dashboards on the internet. (Williams et al., 2023)
Energy Efficiency	Software for designing energy-efficient buildings. (Smith et al., 2018) Monitoring and managing energy usage. (Garcia et al., 2020)
Predictive Maintenance	Predictive maintenance for machinery and equipment. (Lee et al., 2021) ❖ Using digital insights to prevent downtime. (Smith et al., 2021)
Geospatial information and GIS	Geospatial information systems (GIS) are used for site planning. (Williams et al., 2020) ❖ Including geographical data in project management. (Smith et al., 2022)

Source: Field Survey, 2024

Relevance to Digitizing Construction Activities

Digitization can address quality control issues by enabling real-time monitoring and management (Agyekum-Mensah et al., 2018). Safety can be enhanced through wearable technologies and IoT sensors (Laryea et al., 2020). Effective digital project management can prevent cost overruns and reduce project delays by improving scheduling and resource allocation (Baiden et al., 2019; Arku et al., 2023). Digitalization helps SMEs compete

more effectively by leveraging technology for better resource management and client communication (Ofori, 2021).

3. Methodology

Research design

The research design used in this study combines both qualitative and quantitative methods. Taking into account the complexity of technology adoption and the multidimensional character of the construction sector, this approach enables a thorough analysis of the digitalization process inside SME construction enterprises in Ghana.

Sampling

SME construction companies operating in Ghana will be picked via deliberate sampling, according to Johnson et al. (2018). The selection criteria will consider factors including company size, project diversity, and geographic location to ensure a representative sample (Smith & Brown, 2020; Garcia & Martinez, 2019).

Survey Participants

A survey will be distributed to staff at various levels, including owners, managers, project supervisors, and frontline employees, to get a diversity of viewpoints on digitization inside the selected firms (Smith & Johnson, 2020; Garcia et al., 2018). Stratified random sampling will be used to choose survey participants (Williams et al., 2021; Anderson & Davis, 2019).

Data Collection

In-depth interviews with key figures within the selected SME construction firms will be conducted to collect qualitative data (Williams et al., 2021). The major objective of these interviews will be to comprehend the challenges, opportunities, and experiences related to digitization (Garcia & Martinez, 2019). Semi-structured interview guides will be used to preserve consistency throughout interviews (Smith & Johnson, 2022). Quantitative Data

Quantitative information will be gathered through planned surveys that are given to employees (Smith & Johnson, 2020). The survey will inquire about the use of digital technology, its perceived benefits and drawbacks, and how digitalization impacts the productivity and safety of construction operations (Garcia et al., 2018; Anderson & Davis, 2019). Data Analysis

Data Analysis

Considering the ethical aspect. According to ethical guidelines, the study will ensure participant informed consent, data confidentiality, and the careful management of sensitive material (Anderson & Davis, 2019; Smith & Johnson, 2023).

Quantitative Data Analysis

To examine the quantitative data from the surveys, statistical tools will be used. Descriptive statistics like frequencies and percentages will be used to describe survey results. Inferential statistics like regression analysis and correlation analysis will be utilized to discover associations between variables (Smith et al., 2019; Johnson & Brown, 2020).

Combining qualitative and quantitative results. The qualitative and quantitative findings will be integrated to provide a thorough understanding of the digitalization process in SME construction firms. This integration will allow for a more thorough examination of the opportunities and issues, as well as how they may impact effectiveness and safety (Garcia & Martinez, 2018; Williams et al., 2021).

4. Data Analysis and Results

Educational Attainment and Industry Role

Most responders (66.67%) have postgraduate degrees, followed by graduates (33.33%), however none of them have a PhD. To investigate variations in digitalization preparedness according to educational attainment, a one-way ANOVA was employed. No statistically significant differences were found in the results ($F = 1.45$, $p = 0.27$), indicating that educational attainment by itself is not a reliable indicator of preparedness for digital transformation in the construction sector.

Work Experience and Perception of Digitalization

The majority of respondents (73.33%) had between 0 and 10 years of work experience, indicating a rather youthful workforce. Work experience and digitalization awareness were found to be significantly positively correlated by Pearson correlation analysis ($r = 0.45$, $p < 0.05$). This research highlights the necessity to customize training for less experienced staff members to close the awareness gap, while more seasoned workers may have a greater understanding of the potential of digital tools.

Digitalization Awareness

Perceptions of respondents' preparedness for digital transformation differed greatly. Significant differences were detected when mean ratings across levels of agreement were compared using a one-way ANOVA ($F = 4.12$, $p < 0.01$). Those who strongly agreed with digital adoption ($M = 20.2$, $SD = 14.29$) scored considerably higher than those who expressed slight ($M = 2.60$, $SD = 1.55$) or no agreement ($M = 1.00$, $SD = 1.18$), according to post-hoc analysis (Tukey HSD).

• Practical Implication: These findings highlight the necessity of focused awareness-raising programs, especially for individuals who are less likely to use digital tools.

Perceived Benefits of Digitalization

Respondents who strongly agreed and those who moderately agreed with digital adoption were asked to rank their impressions of the main advantages using a paired t-test.

• Reduced Document Errors: $t(28) = 3.21$, $p < 0.05$; strongly agreed group ($M = 3.40$, $SD = 2.49$) versus moderately agreed group ($M = 2.60$, $SD = 2.24$).

• Improved Communication: $t(28) = 2.87$, $p < 0.05$, comparing the strongly agreed group ($M = 3.00$, $SD = 2.83$) to the somewhat agreed group ($M = 2.50$, $SD = 2.19$).

These results highlight the concrete advantages of using digital tools in construction and the significance of informing stakeholders of these benefits clearly and concisely.

Barriers to Digitalization

To find important predictors of resistance to digitization, regression analysis was used. Sixty-two percent of the variation was explained by the model ($R2 = 0.62$, $F = 5.34$, $p < 0.01$). The biggest obstacles were:

- Lack of Training: $\beta = 0.48$, $p < 0.01$.
- Financial Constraints: $\beta = 0.33$, $p < 0.05$.
- Integration Challenges: $\beta = 0.21$, $p = 0.07$ ((marginal significance).
- Practical Implication: To advance digital transformation, these obstacles must be addressed with monetary incentives and extensive training initiatives.

Implementation Readiness

ANOVA was used to examine several professional jobs to evaluate the preparedness for digitization. There were notable variations ($F = 3.56$, $p < 0.05$). While positions like electrical engineers trailed behind, construction project managers had the greatest preparedness levels ($M = 3.40$, $SD = 2.59$).

• Practical Implication: To provide less prepared roles with the knowledge and tools they need to adopt digital tools, tailored approaches are required.

5. Contributions, Policy Implications, And Conclusion

Contribution of The Study

This study offers several key additions to the academic discourse and practical understanding of digitalization in the building industry:
Empirical Evidence: The study offers empirical information on the construction professionals' knowledge, preparedness, and obstacles to digital transformation in the construction industry. This information closes a significant vacuum in the literature, especially when it comes to developing nations.
Framework Development: The study establishes the foundation for a conceptual framework that will direct future research on digital transformation in the construction industry by identifying important factors like lack of training, financial restrictions, and job experience.
Sector-Specific Insights: In contrast to broader research on digitalization, this study focuses exclusively on the construction sector, providing specific insights that tackle its particular potential and constraints.

Policy Implications

The study's conclusions have useful policy ramifications for all parties involved, including governmental bodies, business watchdogs, and private enterprises:
Investment In Training Programs:
Policy Recommendation: Government and business organizations ought to work together to create training programs that are sponsored and aimed at giving professionals the technical know-how required for the adoption of digital tools.

Anticipated Result: This will improve digital preparedness and close the skills gap, especially for less seasoned workers.
Incentivizing Digital Adoption:
Policy Recommendation: Provide subsidies or tax breaks to businesses that invest in digital tools and technologies.

Anticipated Result: These incentives will promote wider adoption of digital solutions by easing financial limitations, a major obstacle noted in the study.
Standardization and Regulation:
Policy Recommendation: To guarantee uniformity and interoperability, create national standards and guidelines for the incorporation of digital technology in building projects.
Anticipated Result: This will resolve integration issues and promote a more unified strategy for industry-wide digitization.

Public Awareness Campaigns:
Policy Recommendation: Start public awareness initiatives emphasizing the advantages of digitization, like enhanced communication and fewer document errors.
Anticipated Result: Raising awareness will change attitudes, especially among stakeholders who are apprehensive about digital transformation.
Pilot Projects and Research Collaborations:
Policy Recommendation: Promote collaborations between industry and academia to test digital technologies and assess how they affect project cost and efficiency.
Anticipated Result: Pilot projects will yield practical data that will aid in improving implementation tactics and persuading reluctant stakeholders of their worth.

Conclusion

This study recognizes the obstacles that need to be removed while highlighting the revolutionary potential of digitization in the construction sector. This study adds to academic knowledge and offers practical suggestions for industry stakeholders by highlighting the significance of customized training, financial incentives, and legislative support.

To sum up, digital transformation is a strategic necessity for raising productivity, efficiency, and competitiveness in the construction industry rather than only a technical change. The information presented here is intended to

help industry executives and governments navigate the challenges of this shift while promoting an innovative and resilient culture.

References

Agyekum-Mensah, G., et al. (2018). Challenges affecting sustainable construction in Ghana. *Journal of Engineering, Design, and Technology*, 16(2), 187–202.

Agyemang, E. (2018). The role of technology in small-medium-size construction firms: A comparative study of Ghana and developed countries. *Journal of Building Information Modeling*, 5(2), 112–128.

Anderson, M., et al. (2018). Leveraging IoT and sensors for data collection in construction. *Automation in Construction*, 85, 96–108.

Anderson, M., et al. (2021). Digital twins in construction: Representations of construction sites. *Journal of Computing in Civil Engineering*, 35(1), 04020069.

Arku, G., et al. (2023). Analysis of project delays in the Ghanaian construction industry. *Journal of Construction Engineering and Management*, 149(1), 04022010.

Asante, K. D. (2019). Enhancing construction productivity through BIM adoption: Evidence from small-medium-size firms in Ghana. *Journal of Construction Engineering and Management*, 145(6), 04019023.

Baiden, B. K., et al. (2019). Critical delay factors in the construction industry: A Ghanaian case study. *Engineering, Construction and Architectural Management*, 26(1), 79–100.

Brown, A., & Lee, S. (2019). Adoption of BIM in small and medium-sized construction firms. *International Journal of Construction Engineering and Management*, 15(2), 87–102.

Brown, L., et al. (2018). Data analytics for preventative maintenance in construction. *Journal of Construction Engineering and Management*, 144(6), 04018043.

Brown, L., et al. (2019). Developing a digital vision: A key driver for construction industry transformation. *Journal of Construction Engineering and Management*, 145(12), 04019088.

Davis, R., et al. (2019). AI-driven planning and optimization of construction projects. *Journal of Construction Engineering and Management*, 145(11), 04019118.

Davis, R., et al. (2022). Cloud data storage and accessibility in construction: A review. *Automation in Construction*, 133, 103901.

Garcia, A., et al. (2021). Cloud computing for construction project management and collaboration. *Journal of Construction Engineering and Management*, 147(8), 04021030.

Garcia, S., et al. (2020). Real-time monitoring in construction: IoT and sensor applications. *Journal of Construction Engineering and Management*, 146(10), 04020106.

Garcia, S., et al. (2021). Robotics for construction tasks: An overview of recent developments. *Automation in Construction*, 131, 103850.

Ghana Construction Industry Report 2023. (2023). Accra: Ghana Construction Association.

Gupta, S., et al. (2020). Building a skilled workforce for digital construction: A training and upskilling approach. *Journal of Construction Engineering and Management*, 146(6), 04020057.

Johnson, E., et al. (2020). Virtual testing and monitoring in construction using digital twins. *Automation in Construction*, 116, 103240.

Johnson, E., et al. (2021). Mobile technology for construction: Field reporting and data gathering apps. *Journal of Construction Engineering and Management*, 147(3), 04020111.

Johnson, P., et al. (2020). Building information modeling (BIM) integration: A critical factor for digitalization in construction. *Automation in Construction*, 114, 103177.

Johnson, R. (2020). IoT applications in construction: A case study analysis. *Journal of Construction Technology*, 28(4), 203–220.

Laryea, S., et al. (2020). Occupational health and safety in the construction industry of Ghana. *Journal of Engineering, Design, and Technology*, 18(5), 1275–1294.

Lee, H., et al. (2019). Fostering innovation in construction: Recruiting digitally aware personnel. *Journal of Construction Engineering and Management*, 145(12), 04019101.

Mensah, A. B. (2021). Challenges and opportunities of digitalization in Ghana's construction sector. *International Journal of Construction Management*, 11(4), 67–82.

Ofori, G. (2021). Building and construction in Ghana. In *Built Environment in the Developing World*, 11–30.

Patel, N., & Gupta, A. (2021). Challenges of digital transformation in small construction businesses. *Construction Management and Economics*, 37(6), 321–338.

Roberts, D., et al. (2019). Making informed decisions with data: A digital transformation approach. *Automation in Construction*, 101, 170–181.

Roberts, D., et al. (2020). Enhancing digitalization in construction: A leadership perspective. *Construction Management and Economics*, 38(8), 760–774.

Roberts, D., et al. (2022). Automation of repetitive and manual processes in construction. *Journal of Construction Engineering and Management*, 148(1), 04021125.

Smith, A. (2023). Drones in construction: Applications, challenges, and future trends. *Construction Technology Today*, 7(1), 45–56.

Smith, J. (2018). The digital transformation of construction: A comprehensive review. *Construction Technology Journal*, 32(3), 45–61.

Smith, J. (2022). Digital transformation in the construction industry: A case study of Ghanaian firms. *Construction Technology Journal*, 20(3), 45–62.

Smith, R., et al. (2018). Uniformity in construction: BIM standards and procedures for digital transformation. *Journal of Computing in Civil Engineering*, 32(1), 04017059.

Smith, R., et al. (2020). Mobile access to project details: Enhancing construction productivity. *Automation in Construction*, 113, 103150.

Wang, L., & Kim, Y. (2022). Project management software in small-medium-size construction firms: A comparative study. *Journal of Construction Engineering and Management*, 18(1), 12–28.

Williams, D., et al. (2020). AI for predictive risk analysis in construction. *Automation in Construction*, 119, 103360.

Journal of Economics and Behavioral Studies (JEBS)
Vol. 17, No. 1, March 2025 (ISSN 2220-6140)

The Impact of Foreign Direct Investment on Unemployment in Mena Region

*Abdulkadir Muktar Nur[1], Jimoh Olajide Raji[2]
[1]Department of Economics, Universiti Utara Malaysia, Malaysia
[2]Department of Finance, Universiti Utara Malaysia, Malaysia
*qadarmacalimow@gmail.com
Corresponding Author: Abdulkadir Muktar Nur

Abstract: This paper examines the impact of foreign direct investment on unemployment in the MENA (Middle East and North Africa) region from 2011 to 2021. To achieve this, the study employed fixed effect and random effect estimators. The findings reveal that FDI, GDP growth, and population growth have negative coefficients and a significant impact on unemployment, whereas government expenditures and exports have negative coefficients but no significant impact on unemployment. This suggests that FDI, GDP growth and population growth reduce unemployment in the MENA region. Since the countries in this region have experienced high concentrations of unemployment, the government should focus on implementing policies that develop the skills and training of the people to prevent mismatches and encourage the private sector to create new jobs. In addition, the government should develop policies that facilitate the access and operation of FDI investors, as this will further assist in lessening unemployment in the MENA region.

Keywords: *FDI, GDP growth, MENA region, panel data, unemployment.*

1. Introduction

There are four major macroeconomic issues, which include unemployment, inflation, Economic growth, and the balance of payments. Both developing and industrialized nations are increasingly dependent on foreign direct investment (FDI) for the transfer of resources. The FDI inflows offer various tangible and potential advantages, such as the transfer of technological knowledge, the creation of employment opportunities, and the enhancement of managerial expertise and productivity. The lack of capital in least-developed countries and the potential benefits from these activities make them crucial for promoting growth and development (Gizaw, 2015; Bakar, Raji, & Adeel-Farooq, 2019). Numerous African countries have implemented a multitude of policy reforms to establish a favorable investment climate, aiming to attract a significant influx of foreign direct investment (Nikola & Pavlos, 2017).

It is widely believed that FDI and international commerce are crucial drivers of economic growth and effective means of alleviating unemployment (Alalawneh, & Nessa, 2020). FDI has a significant role because it promotes private investments, generates employment opportunities, and enables the relocation of information and skills (Ibrahim, & Raji, 2018). There is a lack of agreement on how FDI affects host economies. Several recent studies have decided to examine the impacts of FDI on various economic factors. While the researchers widely recognize the correlation between economic growth and investments, addressing the association concerning FDI and unemployment is a complex task. According to Pandya (2010), certain economists contend that FDI inflows only benefit the labor market when it comes to skilled workers. On the other hand, Hale and Xu (2016) argue that FDI generally has a positive effect on overall employment and productivity in developing nations, but its impact in advanced countries is more complex. The current study seeks to examine the influence of FDI on unemployment rates in the MENA region and to comprehend the causal connections between FDI, economic growth, government expenditure, unemployment, and exports. FDI plays an essential role in encouraging the development of the infrastructure and industries necessary for economic growth, which in turn increases productivity and creates jobs (Adeel-Farooq, Bakar, & Raji, 2018; Dritsakis & Stamatiou, 2017).

Unemployment is a crucial indicator for any country worldwide. Romer et al. (2012) define unemployment as the state in which individuals actively seek job opportunities but are currently unemployed. Unemployment significantly affects the economies of both advanced and emerging nations, resulting in many socioeconomic challenges. A high unemployment rate signifies a persistent scarcity of available job opportunities, resulting in increased poverty and insufficient living conditions (Alhdiy et al. 2015). It can heighten an individual's susceptibility to criminal activity, hence potentially destabilizing economic equilibrium (Jawadi et al. 2021).

Unemployment is an underutilization of human resources, resulting in a waste of resources. More so, insufficiently utilized resources in the production process lead to suboptimal outcomes (Dornbusch et al., 2011). Unemployment has been described to be a state of imbalance when the number of available workers exceeds the number of job opportunities. It arises when there is an excessive increase in the labor force or insufficient growth in employment (Hjazeen et al. 2021). It can be influenced by economic crises defined by deteriorating macroeconomic indicators such as reduced economic growth, devalued currency, and reduced purchasing power. This was evident during the COVID-19 pandemic-induced crisis (OECD, 2020).

The global unemployment rate had a slight decline to 6.2 percent in 2021; however, it remains significantly higher than the pre-pandemic record of 5.4 percent. In 2021, there were an additional 28 million individuals who were unemployed, compared to the number in 2019. The International Labour Organisation (ILO) predicts that unemployment will continue to exceed 2019 levels until at least 2023. Nevertheless, it is important to acknowledge that the unemployment rate fails to fully reflect the full employment consequences of the crisis, as a significant number of individuals who exited the workforce have not re-joined (ILO, 2022).

In the last ten years, including the COVID-19 pandemic period, governments in the MENA area have faced substantial challenges in dealing with high levels of unemployment (Alalawneh & Nessa, 2020). The International Monetary Fund (IMF) has reported that these countries have the highest unemployment rates globally (Abdulai, 2022). The Middle East and North African countries, along with other developing nations, face several economic disparities and developmental obstacles. The most significant is the imperative to address the issue of unemployment reduction. These nations aim to alleviate foreign direct investment (FDI) to bolster economic expansion, enhance trade, and lessen unemployment.

The countries possess a common set of attributes, with the most significant being their status as developing nations that do not heavily rely on oil exports. They aim to attract foreign direct investment as a substitute for loans from external sources to address the issue of rising unemployment rates. Additionally, these countries are actively striving for economic openness and offering various exclusions and motivations for foreign financing interest, particularly in initial sectors (Adeel-Farooq, Bakar, & Raji, 2017; Mohamed, 2020). During the previous three decades, all these OIC members have demonstrated political and economic stability. They benefit from the development of human capital and the trade of skilled labor to the Arab Gulf countries. Based on these common traits, the study predicts that FDI's impact on unemployment will be similar in each of these nations (Alalawneh & Nessa, 2020).

In contemporary years, there has been an expanding focus on capital movements and their impacts due to the acceleration of globalization trends. Many emerging countries, without sufficient domestic savings to enable economic development, rely on foreign resources to fill the gap (Abonazel, & Shalaby, 2020). Many economic variables, such as a country's GDP, trade deficit, inflation, productivity, and poverty rate, are seen to benefit from foreign direct investment. In addition, the unemployment rate will decrease as a direct result of these investments. When people who are competent and eager to work can't find a job, they are unemployed. People who don't take part in making anything pay a hefty price in social and economic terms. The real rate of national production falls short of the potential rate of national output in economies where unemployment is high because resources are not being used effectively (Alabed, et al. 2022).

Due to its expanding economy and substantial infrastructure investments, Saudi Arabia is widely considered the primary recipient of FDI in the MENA region (Ehmaidat & Jajuga, 2023). The Saudi Arabian General Investment Authority's summer 2019 reports a significant 24% growth in FDI inflows during the first quarter of 2019. All through, the initial six months of the year, there was an 85% increase in new licenses granted to foreign investors. Additionally, the National Competitiveness Center successfully implemented economic reforms, achieving a 55% success rate. Significant investment agreements are being finalized, and large-scale projects are moving forward. International investors started to set up shop in greater numbers; notable recent investments have come from the USA, UK, France, Egypt, China, and India, among other nations. Remarkably, the two main sources of foreign direct investment in the country are the United States and China. Attracting "quality FDI," which is defined as international investors with ties to the local economy of the host nation, must be the Kingdom of Saudi Arabia's top priority (Alkofahi, 2020). High-quality FDI actively supports the creation

of meaningful and valuable employment opportunities, raises the skill level of the economies receiving it, and makes it easier for technology, knowledge, and expertise to be transferred (Moran et al., 2017).

Following the contradictory outcomes on the link involving FDI and unemployment, for instance, in Arab countries, research examines the macroeconomic effect of FDI on unemployment rates. The research finds that FDI has a positive influence on reducing national unemployment in Jordan, Morocco, and Tunisia, both individually and collectively. However, in Egypt, FDI hurts unemployment (Alalawneh & Nessa, 2020). Therefore, there is a research gap to examine the issues or aggregated character of host nation macroeconomic factors. This study explores the connection between FDI and unemployment in the member nations of the MENA region. Specifically, it examines whether FDI among other determinants has a mitigating effect on unemployment in the region.

The global competition to attract foreign investment and stimulate local investment has significantly increased during the past decade. Due to significant changes in the framework of international economic exchange, governments have made efforts to enhance their economic and legislative systems to attract foreign investors and promote global investment localization (Anowor et al. 2019). Most countries reduced restrictions on the movement of capital to facilitate significant FDI inflows.

The unemployment rates in the MENA countries have been relatively high over the past decade, particularly among youth, and the COVID-19 pandemic has further exacerbated the issue. Therefore, understanding the influences of factors such as FDI, economic growth, population growth, government expenditure, and exports that can mitigate the rate of unemployment in the region will help to provide better recommendations for policymakers to address the problem. The result is likely to offer useful hints to policymakers, scholars, and professionals who seek to comprehend how to improve the region's labor market in terms of job opportunities.

2. Literature Review

The primary focus of several studies has been to determine the influences of FDI on various economic factors. The studies conducted in different countries provide varying perspectives on the correlation involving FDI and unemployment rates. In the case of Saudi Arabia, Alkofahi (2020) utilized the Ordinary Least Squares Model (OLS) to investigate the effect of FDI on unemployment from 2005 to 2018. The study found that FDI inflows and total output had a negative and significant impact on the unemployment rate in the country. This suggests that an increase in FDI and overall economic output contributed to the reduction of unemployment in Saudi Arabia. In Pakistan, Zeb et al. (2014) conducted research covering the years 1995–2011 using multiple regression analysis. Their findings indicated that FDI acted as an important factor in reducing unemployment in the country, supporting the idea that FDI had a positive impact on the job market in Pakistan.

Several studies have discovered the association between FDI and unemployment in different countries. Zdravković et al. (2017) concluded that the long-term impact of FDI on unemployment in transition nations is weak or non-existent. Furthermore, studies carried out in the Western Balkan region of Albania, Macedonia, and Bosnia and Herzegovina demonstrate a statistically insignificant effect of FDI on unemployment (Kirkpatrick, 2016). However, studies conducted in Pakistan reveal that FDI and foreign remittances have significant impacts on reducing unemployment, but their effects are statistically insignificant in the short run (Maqbool et al., 2013; Mazher et al., 2020).

Johnny et al. (2018) conducted research on Nigeria from 1980 to 2015, using FDI and capital formation as explanatory variables, and the unemployment rate as the explained variable. Their analysis includes unit root tests, cointegration tests, and ordinary least squares tests. Results revealed a negative but statistically insignificant association between FDI and Nigeria's unemployment rate. This suggests that, during the study period, FDI did not play a role in reducing unemployment in Nigeria. Another study (Muhd et al., 2016) found that FDI, the number of foreign workers, and GDP significantly influenced Malaysia's unemployment rate, as determined using the ARDL model, based on annual data from 1980 to 2012.

In Bahrain, a study found that fixed capital formation and government spending have a significant impact on unemployment (Alrayes & Wadi, 2018). In Nigeria, data spanning from 1980 to 2013 revealed that capital

investment acts as a catalyst for reducing job loss in both the short and long run, while recurrent expenditure is statistically insufficient to do so (Onodugo et al., 2017). A study from 1990 to 2019 in Jordan estimated the impacts of government spending on unemployment. The researcher discovered a strong negative and statistically significant association between government spending and the unemployment rate, as well as a considerable positive impact on joblessness in the short run (Saraireh, 2020). A study used Blanchard and Perotti's (2002) structural vector autoregressive model to evaluate the effects of fiscal policy shocks on the unemployment rate in Egypt. They used annual time series data from 1976 to 2018 and determined that an increase in government spending lowered the unemployment rate, whereas an increase in tax revenue raised it (Omran & Bilan, 2020).

Several studies have investigated how various countries' unemployment rates relate to their population growth rates. Using panel data regression analysis spanning 2010–2015, researchers in Indonesia's Special Province Yogyakarta discovered that a rise in the population substantially decreased the rate of unemployment (Feriyanto, 2018). An analysis of panel data covering the years 2001–2012 in the BRIC nations (China, Russia, India, and Brazil) indicated that inflation and population growth were the main drivers of increasing unemployment rates (Gur, 2015). A key component impacting unemployment in Bahrain using to ARDL model, is the country's growing population, which has a beneficial effect on the jobless rate (Manaa & ul Haq, 2020).

From 1999 to 2013, researchers in the Kingdom of Saudi Arabia identified the factors that affected the unemployment rate. According to the regression results, the unemployment rate was positively affected by population growth, and negatively by GDP and population expansion (Haque et al., 2017). From 1990 to 2020, researchers in Zanzibar analyzed the impact of population growth on unemployment rates. According to the findings, the unemployment rate rose by 5.2% due to population growth, whereas it fell by 0.3% due to GDP per capita and 0.7% due to inflation (Ali, Omar, & Yusuf, 2021). There is a long-term correlation between unemployment, economic growth, education, female population, and urban population in Jordan, according to Hjazeen et al. (2021). It was shown that economic growth had a negative link with unemployment in Jordan. On the other hand, education, the female population, and the urban population had positive correlations with unemployment.

A study used yearly data from 1991 to 2019 to examine the Algerian economy using Okun's law. Using the ARDL bounds testing technique model and the gap version of Okun's coefficients. The results showed that Okun's law was true for the Algerian economy. The factors in the gap version also showed that the GDP gap significantly and negatively affected unemployment rates (Louail & Benarous, 2021). When looking at the correlation between GDP and unemployment, the data suggests a medium-run equilibrium where regional output changes are correlated with regional unemployment changes. In addition, there is an asymmetry in the medium run between the effects of a GDP expansion and an increase in unemployment; a reduction in GDP has a smaller absolute value influence on unemployment than an expansion in GDP (Palombi et al., 2015).

Doğan (2012) investigated the relationship between unemployment and several macroeconomic shocks from 2000: Q1 to 2010: Q1. The study found that unemployment and exports were negatively impacted by GDP growth, export growth, and inflation, whereas interbank government spending and money growth had favorable effects. In a study by Omotayo (2018), both the unemployment rate and the trend of Nigeria's non-oil exports were examined. An additional focus of the study was on how non-oil exports relate to Nigeria's jobless rate. This study utilized the autoregressive distributed lag (ARDL) model to examine the effect of non-oil exports on the unemployment rate in Nigeria from 1981 to 2017. Global product, export inflation, and public spending were the non-oil export factors. Regression results confirmed that non-oil exports from Nigeria did not affect the country's unemployment rate.

Various scholars in diverse countries, including developed and underdeveloped nations, have investigated the issue of unemployment and foreign direct investment in previous studies. However, this study considers other variables such as exports and population growth. It also focuses on the impact of FDI, GDP growth, and government expenditure on unemployment. The geographical area of this current study is the MENA region because of the existence of high unemployment rates that have occurred in recent years, due to the impact of COVID-19 and the ongoing conflicts between Ukraine and Russia, Israel, and Palestine.

3. Method of Estimation and Data Structure

Method of estimation and model

In this study, we establish the following model to test the following variables where FDI and unemployment are the independent variables and a dependent variable respectively, while the rest of the variables are control variables. Some of these variables have been used in previous studies, such as Azhar (2023) and Alalawneh and Nessa, (2020). Hence, we estimated the following model,

$UNEt = \alpha + \beta FDI_t + \gamma GDP_t + \lambda PG_t + \varphi GE_t + \omega EXP_t + \mu_t$

UNE = F (FDI, GDP, PG, GE, EXP)

$UNE = B_0 + B_1FDI + B_2GDP + B_3PG + B_4GE + B_5EXP + e$

UNE= unemployment, FDI = foreign direct investment, GDP = gross domestic growth, PG = population growth, GE = government expenditure, EXP= export, e= error.

The study utilizes the Levin-Lin (LLC) and Im-Pesaran-Shin (IPS) tests for panel data analysis. The IPS test can be combined with any parametric unit-root test if the panel is balanced and the t-statistics for the unit-root in each cross-section have an equal distribution, ensuring the same variance and mean. The Central Limit Theorem (CLT) might then be utilized. The IPS test is commonly employed in practice due to its simplicity and ease of use, although it requires a balanced panel (Raji, Adeel-Farooq, & Ahmad, 2024). Next, to examine the relationship between variables, the paper employed panel data regression models. The study conducted fixed effect estimators, random effect estimators, and pooled OLS models. For model selection purposes, the study used the Breusch Pegan LM test and the Hausman test. While the Breusch Pegan test is used to select between the fixed effect estimator and pooled OLS model, the Hausman test is used to select between the fixed effects model and the random effects model.

Data sources and structure

This paper aims to study the influence of FDI on unemployment in the Mena area. Our observation covers yearly data from 2011 to 2021 for 12 nations in MENA. All the data are collected from World Development Indicators (WDI). The study employed panel data for the 12 nations in the MENA region. The following Table 1 shows the description of variables and their sources.

Table 1: Description of Variables and Sources

Variable	Unit	Description	Source
Unemployment	(% total labor force)	The unemployed are people of working age who are without work, are available for work, and have taken specific steps to find work (Reserve Bank of Australia, 2019).	WDI
FDI	FDI net inflows (% of GDP)	Foreign Direct Investment (FDI) offers essential resources to developing countries, including technology, capital, entrepreneurship, and skilled labor, which are crucial for generating employment opportunities and consequently reducing unemployment (World Bank, 2022).	WDI
GDP	GDP growth (annual %)	Gross Domestic Product (GDP) is the aggregate value in dollars of all completed products and services produced within a country during a certain period (OECD, 2010).	WDI
Population growth	PG (annual)	Population growth refers to the change in the size of a population over a specific period. We can measure it by calculating the change in the number of individuals	WDI

		within the population per unit of time. (World Bank,2022).	
Government expenditure	GE (% of GDP)	Government expenditure (GE) is a public expenditure that refers to the financial resources allocated by the government to acquire commodities and deliver services, including but not limited to education, healthcare, and social welfare (World Bank, 2022).	WDI
Exports	EXP (% of GDP)	Exports include the economic value of all goods and additional market-based services supplied to foreign countries (World Bank, 2022).	WDI

Note: WDI stands for World Development Indicators

Figure 1 shows the graphical relationship between individual regressor and the response variable, the unemployment rate in the Mena region.

4. Results and Discussion

This section discusses the results of the relationship between the independent variables such as FDI, GDP growth, population growth, government expenditure, and exports and the dependent variable of unemployment in the MENA region. Furthermore, the study conducted descriptive statistics, panel unit root tests, variance inflation factor, cross-sectional dependencies, regression analysis, and causality tests. To begin with descriptive statistics, Table 2 shows the results of the descriptive statistics of all the variables which consist of the mean, median, standard deviation, minimum, and maximum of all variables in the model. Export has the highest mean value means that it is a significant contributor to the economy while GDP has the lowest value indicating slow or modest economic growth. Apart from unemployment, all the variables have a kurtosis value greater than 5 which means that all variables have significant outliers except unemployment which has a normal distribution.

Table 2: Results of descriptive statistics

	UNE	FDI	GDP	PG	GE	EXP
Mean	13.461	1.923	1.607	1.869	18.604	38.106
Median	12.460	1.539	2.530	1.856	17.999	32.401
Maximum	28.048	14.000	86.826	11.794	61.166	166.717
Minimum	5.520	-4.541	-50.338	-5.280	2.360	4.809
Std dev	5.471	2.620	11.567	2.067	8.513	31.366
Skewness	1.012	0.849	2.161	1.182	2.148	2.809
Kurtosis	3.585	5.799	27.694	11.374	9.813	10.768
Observations	132	132	132	132	132	132

Note: UNE= unemployment, FDI = foreign direct investment, GDP = gross domestic growth, PG = population growth, GE = government expenditure, EXP= export.

Figure 1: Graphical representation of the relationship between each regressor and unemployment rate

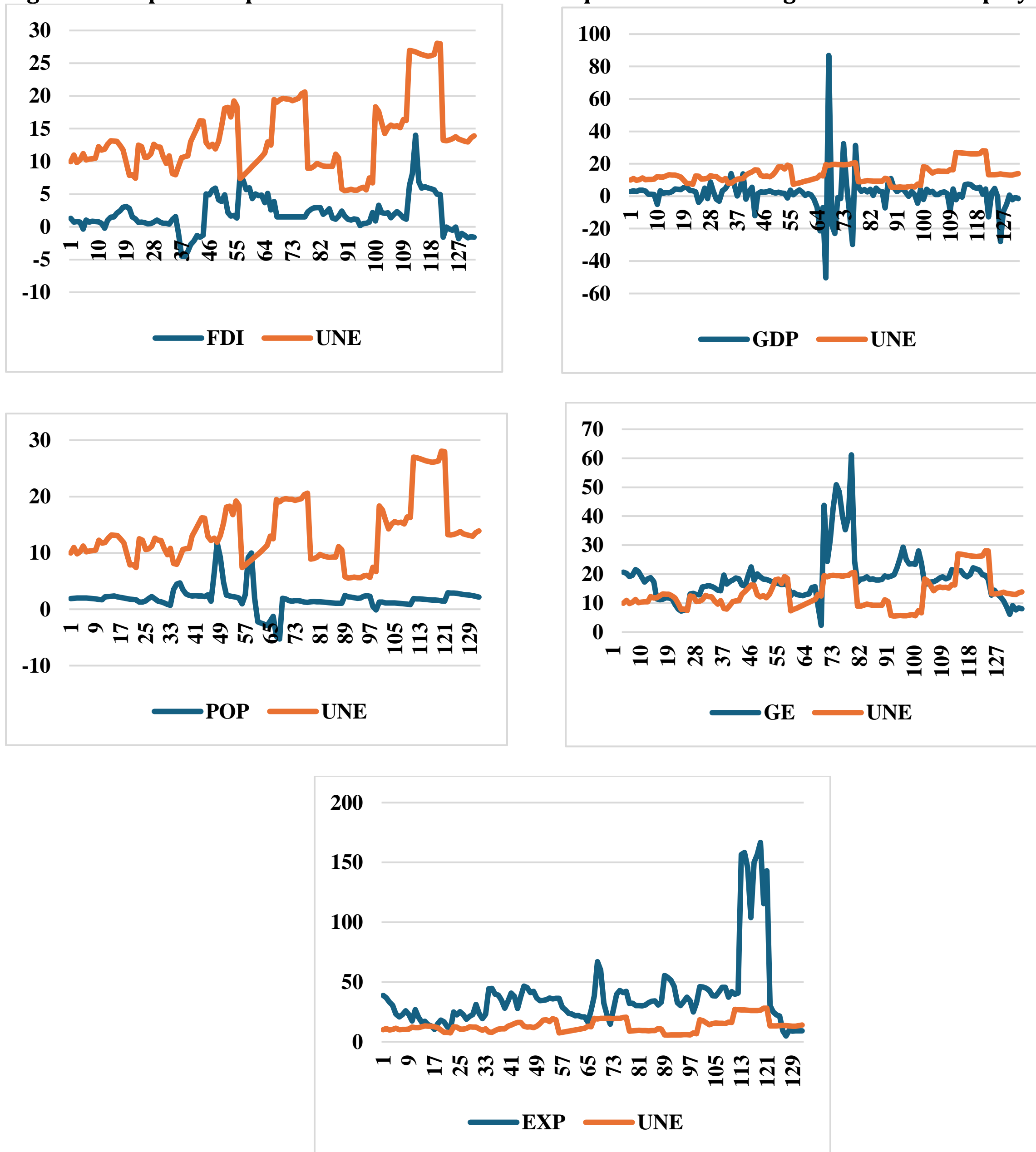


Table 3: Results of LLC Test | **Results of IPS Test**

Variable	Level	1st difference	Decision	Level	1st difference	Decision	VIF
UNE	0.39143	-4.94575***	I(1)	1.31059	-1.353939**	I(1)	-
FDI	-6.21859***	-12.3623***	I(0)	-2.97807***	-6.99495***	I(0)	1.39
GDP	-6.42786***	-11.8956***	I(0)	-3.75830***	9.389404***	I(0)	1.06
POP	-13.5439***	-58.0246***	I(0)	-9.24056***	-14.3883***	I(0)	1.02
GE	-4.34445***	-7.73636***	I(0)	-2.69169**	-5.28580***	I(0)	1.09
EXP	-6.61051***	-6.16515***	I(0)	-3.62190***	-3.59271***	I(0)	1.49

Note: ***,**,* indicate level of significance at 1%, 5% and 10% respectively.

Table 3 shows the outcomes of the LLC and IPS tests regarding panel unit root tests. The results indicate that all variables are stationary at I (0) except unemployment, which is at I (1). Next, the study conducts a test for

multicollinearity and Table 3 shows the results of VIF, which confirm that all variables have values less than threshold 5, indicating that there is no problem with multicollinearity in the model.

Table 4: Results of Cross-sectional Dependence

Test	Statistic	d.f	Prob
Pesaran CD	1.710921	66	0.087**

Note: ***, **,* indicate level of significance at 1%, 5% and 10% respectively.

In addition, the study examines the cross-sectional dependencies among MENA countries, and the Pasaran (2004) test was utilized. The results in Table 4 reveal that there is no cross-sectional dependency among the residuals of MENA countries. Next, the study tests whether pool OLS is more appropriate than a random effect estimator. To do this, the Breusch Pegan Langrage Multiplier test was conducted, and the result is reported in Table 5.

Table 5: Results of the LM Test

Test Summary	Cross Section	Prob
Breusch-Pegan LM Test	285.63	0.000***

The Breusch-Pegan LM test clarifies the best model between pooled OLS and random effect estimator, and it showed a statistically significant result, which means rejection of the null hypothesis of pooled OLS and accept random effect estimator.

Table 6 shows the results of the Hausman test to identify the most suitable model between the fixed effect model and the random effect model. The Hausman test results show that the probability value is 0.000, which is less than 0.05. This suggests that the random effect model is rejected in favor of the fixed effect model. This study applies the fixed effect model and Table 6 also outlines the outcomes of the estimators.

Table 6: Results of fixed effect and random effect estimators

Fixed Effect Model			Random Effect Model	
Variable	Coefficient	Prob	Coefficient	Prob
C	15.367	0.000***	14.660	0.000***
FDI	-0.364	0.000***	-0.316	0.003**
GDP	-0.026	0.036**	-0.025	0.048**
POP	-0.245	0.000***	-0.256	0.000***
GE	-0.022	0.584	-0.002	0.948
EXP	-0.007	0.398	-0.0005	0.947
R^2	0.940			
Adj R^2	0.932			
Hausman test	Chi sq statistic	Chi sq d.f.	Prob	
	17.609	5	0.003***	

Note: ***, **, * indicate level of significance at 1%, 5% and 10% respectively. The dependent variable is unemployment.

The R-squared value of 0.940 implies that 94% of the variations in unemployment are explained by the variables that were selected, such as FDI, GDP growth, population growth, government expenditure, and exports. With an R-square of 94%, it shows that the model is well-fitted. The adjusted R-squared value of 0.932 also suggests that the selected variables account for 93.2% of the unemployment variation.

According to the results, FDI and POP are significant at 1%, while GDP is significant at 5%. However, government expenditure and exports are not significant enough to affect unemployment. The empirical result from the model reveals that FDI has a negative and significant impact on unemployment in the Mena region. This indicates that an increase in FDI by one unit decreases unemployment by 0.364 units. This result corresponds to the hypothesis and assumptions that foreign direct investment leads to economic benefits for workers, such as higher real wages, improved productivity, and the formation of vertical and horizontal integrations. It also

promotes the development of supportive projects and the creation of new job opportunities. The findings of this study align with prior research, such as Dritsakis and Stamatiou (2017), Makun and Azu (2015), Irpan (2016), and Zeb et al. (2014), which found that FDI lowers unemployment. However, the results contradict some previous studies, such as Alamoudi, (2017), Kurtovic et al (2015) and Bayar (2014).

On the other hand, GDP growth has a negative and significant effect on unemployment. This means that as GDP rises by 1 unit, unemployment reduces by 0.026 unit, holding other factors constant. The results of the research support Okun's law regarding the correlation between economic growth and unemployment. The rise in GDP in the MENA countries effectively decreased unemployment. This aligns with the findings of Hjazeen et al. (2021) but contradicts those of Hassan and Nassar (2015). Sustainable economic growth is a key factor in enhancing living standards. Each of the MENA countries has implemented both fiscal and monetary policies that have led to an increase in GDP and a decrease in unemployment.

According to the results, population growth is found to have a negative and significant effect on unemployment. This indicates that when the population rises by 1 unit, unemployment decreases by 0.245 units while other factors remain constant. This study is aligned with others like Raouf (2022), Ali and Ahmed (2023), and Yusuf and Mogadishu (2021). The study's findings align with the Keynesian Theory of Unemployment, which claims that population growth is the primary driver of increasing unemployment levels. Consequently, the study affirms the favorable effect of population growth on unemployment in the region.

Table 7: Results of pairwise Granger causality test

Null hypothesis	F statistic	Prob
PG ≠ UNE	2.43345	0.092**
UNE ≠ PG	0.02956	0.970
EXP ≠ UNE	1.32211	0.271
UNE ≠ EXP	8.37020	0.000***
EXP ≠ FDI	6.61230	0.0020***
FDI ≠ EXP	6.83317	0.0016***
PG ≠ GDP	3.17366	0.0460**
GDP ≠ PG	11.8670	2.E-05***
GE ≠ GDP	3.20090	0.0448**
GDP ≠ GE	7.00877	0.0014***
GE ≠ PG	3.92137	0.0228**
PG ≠ GE	0.78978	0.4567

Note: ***, **, * indicate level of significance at 1%, 5% and 10% respectively. To conserve the space, any pair of variables not significant is not included in the table. ≠ indicates "not granger cause".

Table 7 illustrates the Granger causality test. The result shows that PG and EXP have a unidirectional relationship with unemployment that is, PG causes unemployment and unemployment causes EXP. In addition, other variables like EXP & FDI, PG & GDP, and GE & GDP have a bi-directional relationship which means that the variables cause each other. There is a unidirectional relationship between GE & PG with GE causes PG.

5. Conclusion and Implications of Results

This study analyzed the influence of FDI on unemployment in the Mena area. It used some factors that affect unemployment in the region, such as foreign direct investment, GDP growth, population growth, government expenditures, and exports. So, the study shows that FDI, GDP growth and population growth have a negative and significant effect on unemployment; in contrast, government expenditure and exports have an insignificant effect on unemployment in the MENA zone. The persistent challenge of unemployment necessitates proactive measures from government agencies. To effectively address this issue, a multifaceted approach focusing on foreign direct investment (FDI), local enterprise development, and strategic industry support is essential. Herein, several key strategies are outlined to promote employment and economic growth. Firstly, implementing policies to encourage FDI in technology, research and development, and innovation sectors can significantly reduce unemployment. Governments should provide incentives for the transfer of advanced technologies and foster collaboration with local educational institutions. This collaboration can cultivate a proficient workforce

equipped to meet the demands of these high-growth industries. Secondly, the development of laws that promote partnerships between international investors and local small and medium-sized enterprises (SMEs) is crucial.

In addition, provision for local collaborations, offering financial assistance, and facilitating joint ventures may be helpful. These measures can strengthen domestic enterprises, enhance their capabilities, and create a more robust job market. Cluster development strategies represent another vital initiative to attract FDI to specific locations or industries. This approach involves designating industrial areas, improving infrastructure, and streamlining regulatory procedures. By concentrating resources and efforts, governments can create attractive investment environments that stimulate economic activity and job creation. In addition, establishing and enforcing regulations that encourage diversification away from traditional sectors, such as oil, is imperative. Allocating resources to infrastructure, providing incentives, and creating a conducive business environment for non-traditional industries can foster a more resilient and varied economic landscape. This diversification can lead to sustained employment opportunities across multiple sectors. Creating incentives and support systems for industries with high job potential, such as manufacturing, construction, and services, is also essential. Measures such as tax incentives, financial aid, and simplified regulatory processes can facilitate growth in these industries, leading to increased employment. Lastly, allocating funds to infrastructure projects can directly boost economic growth and employment. Infrastructure developments, such as building and transportation projects create immediate job opportunities and enhance logistics and connectivity, making the region more attractive to various sectors. In conclusion, reducing unemployment requires a comprehensive and strategic approach by government agencies. By encouraging FDI, supporting local enterprises, promoting industry diversification, and investing in education and infrastructure, governments can create a conducive environment for job creation and economic growth. These actions can lead to a more resilient and dynamic economy with ample employment opportunities for its workforce.

References

Abdulai, A. M. (2022). Unemployment and foreign direct investment nexus: Empirical evidence from Ghana. *International Journal of Business and Economic Sciences Applied Research*, *15*(2), 47-57.

Abonazel, M. R., & Shalaby, O. A. (2020). Using dynamic panel data modelling to study net FDI inflows in MENA countries. *Studies in Economics and Econometrics,* 44(2), 1-28.

Adeel-Farooq, R.M., Bakar, N.A.A., & Raji, J.O. (2017). Trade openness, financial liberalization and economic growth: The case of Pakistan and India. South Asian Journal of Business Studies, 6(3), 229-246.

Adeel-Farooq, R.M., Bakar, N.A.A., & Raji, J.O. (2018). Greenfield investment and environmental performance: A case of selected nine developing countries of Asia. *Environmental Progress & Sustainable Energy*, 37(3), 1085-1092.

Alabed, Q. M. Q., Said, F. F., Karim, Z. A., Zaidi, M. A. S., & Mansour, M. (2022). Determinants of unemployment in the MENA Region: New evidence using dynamic heterogeneous panel analysis. In International Conference on Advanced Machine Learning Technologies and Applications (pp. 401-411). Cham: Springer International Publishing.

Alalawneh, M., & Nessa, A. (2020). The impact of foreign direct investment on unemployment: Panel data approach. *Emerging Science Journal*, 4(4), 228–242. https://doi.org/10.28991/esj-2020-01226.

Alamoudi, A. (2017). Factors affecting the rate of unemployment in GCC countries. *Journal of Economics Bibliography*, *4*(4), 335-344.

Alhdiy, F. M., Johari, F., Daud, S. N. M., & Rahman, A. A. (2015). Short- and long-term relationship between economic growth and unemployment in Egypt: An empirical analysis. *Mediterranean Journal of Social Sciences*, 6(4S3), 454–462. https://doi.org/10.5901/mjss.2015.v6n4s3p454.

Ali, A. H., & Ahmed, D. A. (2023). Analysis of the factors affecting the unemployment rate in Iraq. *International Journal of Economics and Finance Studies*, *15*(2), 417-433.

Ali, O., Omar, M., & Yusuf, S. (2021). Population growth and unemployment in Zanzibar. International Journal of Sciences: Basic and Applied Research, 59(2), 36-47

Alkofahi, K. (2020). The effect of foreign direct investment on the unemployment rate in Saudi Arabia. *International Journal of Economics and Finance*, 12(10), 1-10.

Alrayes, S. E., & Abu Wadi, R. M. (2018). Determinants of Unemployment in Bahrain. *International Journal of Business and Social Science*, 9(12), 64–74. https://doi.org/10.30845/ijbss.v9n12p8

Anowor, O. F., Uwakwe, Q. C., & Chikwendu, N. F. (2019). How investment does affect unemployment in a developing economy. *Sumerianz Journal of Economics and Finance*, *2*(7), 82-88.

Azhar, N. Z. (2023). The impact of foreign direct investment, economic growth, trade, and COVID-19 on unemployment: evidence from MENA. *Muslim Business and Economics Review*, *2*(1), 125-141.

Bakar, N.A.A., Raji, J.O., & Adeel-Farooq, R.M. (2019). Greenfield, mergers and acquisitions, energy consumption, and environmental performance in selected SAARC and ASEAN countries. *International Journal of Energy Economics and Policy,* 9(2), 216-224.

Bayar, Y. (2014). Effects of economic growth, export and foreign direct investment inflows on unemployment in Turkey. *Investment Management and Financial Innovations*, (11, Iss. 2), 20-27.

Blanchard, O., & Perotti, R. (2002). An empirical characterization of the dynamic effects of changes in government spending and taxes on output. *the Quarterly Journal of Economics*, *117*(4), 1329-1368.

Doğan, T. T. (2012). Macroeconomic variables and unemployment: The case of Turkey. *International Journal of Economics and Financial Issues,* 2(1), 71–78.

Dornbusch, T., Watt, J., Baccar, R., Fournier, C., & Andrieu, B. (2011). A comparative analysis of leaf shape of wheat, barley and maize using an empirical shape model. *Annals of Botany*, *107*(5), 865-873.

Dritsakis, N., & Stamatiou, P. (2017). Foreign direct investments, exports, unemployment and economic growth in the new EU members-a panel data approach. *International Economics/Economia Internazionale*, *70*(4).

Ehmaidat, A., & Jajuga, K. (2023). Foreign Direct Investment in Saudi Arabia. *Journal of Contemporary Issues in Business and Government*. 29(03).

Feriyanto, N. (2018). Determinants of unemployment in regency/ city in special province Yogyakarta. *European Research Studies Journal,* 21(Special Issue 3), 367–380. https://doi.org/10.35808/ersj/1388

Gizaw, D. (2015). The impact of foreign direct investment on economic growth. The case of Ethiopia. *Journal of Poverty, Investment and Development*, *15*(1), 34-48.

Gur, B. (2015). An Analysis of Unemployment Determinants in BRIC Countries. *International Journal of Business and Social Science,* 6(1), 192–198. http://ijbssnet.com/journals/Vol_6_No_1_Januaryr_2015/21.pdf

Hale, G. B., & Xu, M. (2016). FDI Effects on the Labor Market of Host Countries, *Working Paper*, 2016-25.

Hjazeen, H., Seraj, M., & Ozdeser, H. (2021). The nexus between the economic growth and unemployment in Jordan*. Future Business Journal*, 7(1). https://doi.org/10.1186/s43093-021-00088-3.

Haque, A., Wang, Z., Chandra, S., Dong, B., Khan, L., & Hamlen, K. W. (2017). FUSION - An online method for multistream classification. International Conference on Information and Knowledge Management, Proceedings, Part F131841(7), 919–928. https://doi.org/10.1145/3132847.3132886

Hassan, M., & Nassar, R. (2015). Effects of debt and GDP on the unemployment rate: an empirical study. *Journal of International Business Disciplines*, *10*(2).

Ibrahim, Y, & Raji, J.O. (2018). Cross-border merger and acquisition activities in Asia: the role of macroeconomic factors. *Studies in Economics and Finance,* 35(2), 307-329.

ILO. (2022). Statistics on unemployment and labor underutilization. https://ilostat.ilo.org/ topics/ unemployment-and-labour-underutilization/

Irpan, H. M., Saad, R. M., Nor, A. H. S. M., & Ibrahim, N. (2016). Impact of foreign direct investment on the unemployment rate in Malaysia. In *Journal of Physics: Conference Series,* 710(1), 012028. IOP Publishing.

Jawadi, F., Idi, C, A., Jawadi, N., & Ben, A, H. (2021). Conventional and Islamic stock market liquidity and volatility during COVID-19. *Applied Economics*, *53*(60), 6944-6963.

Johnny, N., Timipere, E. T., & Krokeme, O. (2018). Impact of Foreign Direct Investment on Unemployment Rate in Nigeria (1980-2015). *International Journal of Academic Research in Business and Social Sciences*, 8(3).

Kirkpatrick, C. (2016). 25. Developing countries. *Handbook of Regulatory Impact Assessment*, 381.

Kurtovic, S., Siljkovic, B., & Milanovic, M. (2015). Long-term impact of foreign direct investment on reduction of unemployment: panel data analysis of the Western Balkans countries. *Journal of Applied Economics and Business Research,* 5(2), 112–129.

Louail, B., & Benarous, D. (2021). Relationship between economic growth and unemployment rates in the Algerian economy: Application of Okun's law during 1991–2019. *Organizations and Markets in Emerging Economies*, *12*(1), 71-85.

Makun, K., & Azu, N. P. (2015). Economic growth and unemployment in Fiji: A cointegration analysis. *International Journal of Development and Economic Sustainability*, *3*(4), 49-60.

Manaa, A., & ul Haq, M. A. (2020). The Effects of SMEs, Population and Education level on Unemployment in the Kingdom of Bahrain. *iKSP Journal of Business and Economics*, *1*(2), 23-33.

Maqbool, M., Mahmood, T., Sattar, A., & Bhalli, M. (2013). Determinants of unemployment: Empirical evidence from Pakistan. Pakistan Economic and Social Review, 51(2), 191–208.

Mazher, M., Mukhtar, T., & Sohail, S. (2020). Impact of foreign direct investment and foreign remittances on unemployment in Pakistan: A time series analysis. *IIIE Journal of Economics and Finance*, 1(1), 66-83.

Mohamed E, A. (2020). The Impact of Foreign Direct Investment on Unemployment: Evidence from Arab countries. 286-251 ,(1)50 ,المجلة العلمية للإقتصاد و التجارة.

Moran, T. H., Görg, H., Seric, A., & Krieger-Boden, C. (2017). How to Attract Quality FDI? (Vol. 2). Leibniz Information Centre for Economics, KCG Policy Paper.

Muhd, I, H., Mat, S, R., Shaari Md N, A. H., Md Noor, A. H., & Ibrahim, N. (2016). Impact of Foreign Direct Investment on the Unemployment Rate in Malaysia. *Journal of Physics: Conference Series*, 710(1). https://doi.org/10.1088/1742-6596/710/1/012028

Nikolaos, D., & Pavlos, S. (2017). Foreign direct investments, exports, unemployment and economic growth in the new EU-members - A panel data approach. Department of Applied Informatics. University of Macedonia, Economics and Social Sciences, Thessaloniki, Greece and Department of Applied Informatics, University of Macedonia, Economics and Social Sciences, 70(4), 443-468

OECD (2020). Covid-19 Crisis Response in MENA Countries. Organization for Economic Co-Operation and Development OECD, June 1–32. http://www.oecd.org/ coronavirus/policy-responses/covid-19-crisis-response-in-mena-countries4b366396/%0Ahttps://read.oecd-ilibrary.org/view/?ref=129_129919-4li7bq8asv&title=COVID-19-Crisis-Response-in-MENA-Countries

Omotayo, o. S. (2018). The impact of non-oil export on the unemployment rate in Nigeria for the period (1981-2017. Department of Economics and Development Studies Faculty of Social Sciences, Federal University Oye Ekiti, Ekiti state, Nigeria. 1–49.

Omran, E. A. M., & Bilan, Y. (2020). The impact of fiscal policy on the unemployment rate in Egypt. Montenegrin *Journal of Economics*, 16(4), 199 209. https://doi.org/10.14254/1800-5845/2020.16-4.16

Onodugo, V. A., Obi, K. O., Anowor, O. F., Nwonye, N. G., & Ofoegbu, G. N. (2017). Does public spending affect unemployment in an emerging market? *Risk governance & control: financial markets & institutions,* 7(1).

Palombi, S., Perman, R., & Tavéra, C. (2015). Regional growth and unemployment 73 in the medium run: asymmetric cointegrated Okun's Law for UK regions. *Applied Economics,* 47(57), https://doi.org/10.1080/00036846.2015.1068922

Pandya, S. S. (2010). Labor markets and the demand for foreign direct investment. *International Organization*, *64*(3), 389-409.

Pesaran, M.H. (2004). General diagnostic tests for cross-section dependence in panels. Faculty of Economics. Available at: https://docs.iza.org/dp1240.pdf

Raji, J.O., Adeel-Farooq, R.M., & Ahmad S-A (2024). Examining the role of biomass energy for clean environment in African countries. *Journal of Asian and African Studies,* 59(8) 2375–2391.

Raouf, S. A. (2022). Measuring and Analyzing the Impact of Population Growth on The Labor Force and Unemployment in Iraq During the Period (1990-2020). *Journal of Kurdistan for Strategic Studies*, (4).

Reserve Bank of Australia. (2019). Unemployment: Its Measurement and Types. Reserve Bank of Australia, https://www.rba.gov.au/education/resources/explainers/unemployment-its measurement-and-types.html

Romer, B., Reichhart, P., Kranz, J., & Picot, A. (2012). The role of smart metering and decentralized electricity storage for smart grids: The importance of positive externalities. *Energy Policy*, *50*, 486-495.

Saraireh, S. (2020). The Impact of Government Expenditures on Unemployment: A Case Study of Jordan. Asian *Journal of Economic Modelling,* 8(3), 189–203. https://doi.org/10.18488/journal.8.2020.83.189.203

World Bank (2022). World Development Indicators, World Bank.

Yusuf, S. M., & Mogadishu, S. (2021). The effect of population growth on unemployment in Somalia. *SIMAD University. Department of Statistics and Planning*.

Zdravković, A., Đukić, M., & Bradić-Martinović, A. (2017). Impact of FDI on unemployment in transition countries: Panel cointegration approach. *Industrija*, *45*(1).

Zeb, N., Qiang, F., & Sharif, M. S. (2014). Foreign direct investment and unemployment reduction in Pakistan. *International Journal of Economics and Research*, *5*(2), 10-17.

Exploring the Perceived Inequities and Potential Reforms in Public-Private Partnerships for Infrastructure Development: A Qualitative Study of Stakeholder Perspectives in Zimbabwe

[1]Nhlanhla Moyamoya, [2]Julius Tapera*
[1]ZB Bank Limited, Zimbabwe
[2]Lupane State University, Zimbabwe
*juliustapera@gmail.com
Corresponding Author: Dr Julius Tapera

Abstract: Public-private partnerships (PPPs) are an essential tool for mobilizing private investment and expertise to address infrastructure shortfalls globally, especially in developing countries such as Zimbabwe. However, the public sector is frequently harmed and citizens are burdened by Zimbabwe's current PPP frameworks, which calls for an analysis of the financial dynamics and consequences for equity. The purpose of this study is to investigate perceived inequities in Zimbabwe's PPP arrangements. Research gaps include inadequate attention to comprehensively explore perceived inequities and socio-economic impacts across sectors beyond transport, such as energy and healthcare, and a lack of focused, in-depth qualitative analysis of stakeholder perspectives specific to Zimbabwe, particularly from affected communities and local officials. The study adopts a descriptive and exploratory design, semi-structured interviews, and focus group discussions with a range of stakeholders. The data was analyzed using NVivo software and thematic analysis. The findings highlight the need for an in-depth qualitative understanding of stakeholder difficulties, demographic variety, and effects on development and financial well-being. While Public-Private Partnerships (PPPs) have improved infrastructure and local economic prospects, worries about financial strain on local governments, socioeconomic inequality, and environmental sustainability still exist. To promote transparency, justice, and more public benefit, recommendations for restructuring PPPs include equal risk sharing, more robust accountability systems, greater stakeholder participation, and giving priority to initiatives that benefit communities. These changes are necessary to guarantee that PPPs properly support Zimbabwe's aims for sustainable development and cater to the wide range of requirements of its populace.

Keywords: *Public-private partnerships, inequities, infrastructure development, reforms*

1. Introduction

Public-Private Partnerships (PPPs) have played a significant role in alleviating infrastructure deficiencies worldwide, especially in developing nations. PPPs have been effectively implemented by nations including the UK, Canada, and Australia to improve infrastructure while dividing risks between the public and private sectors (Boardman, Greve, and Hodge, 2015). PPPs have become more widely used in Africa to address the continent's expanding infrastructure demands. This is evident in nations such as South Africa, Nigeria, and Kenya which have built roads, hospitals, and energy projects by utilizing these partnerships (Kyei and Chan, 2016). Despite these initiatives, PPPs have had varying degrees of success in Africa, frequently hampered by issues including inadequate risk-sharing agreements, opaque regulations, and weak regulatory frameworks (Bloomfield, 2006). Projects that disproportionately benefit private investors at the expense of the general welfare have been the outcome of these difficulties. PPPs have emerged as a key tool for the development of infrastructure in many developing African nations, including Zimbabwe (Chilunjika, 2023). The goal of these partnerships is to improve public infrastructure projects by utilizing private capital, expertise, and efficiency. PPPs in Zimbabwe, however, have frequently faced criticism due to their unbalanced structures that prioritize private investors above public interests, raising expenses and burdens on the populace despite their possible advantages (Miraftab, 2004). PPPs in Zimbabwe need to be thoroughly examined and reformed to ensure that these partnerships effectively contribute to national development and public well-being. These criticisms have generated questions about the long-term sustainability and equality of PPPs (Masekesa, 2021). Therefore, it is essential to comprehend these processes to rethink PPP frameworks that are more equitable and advantageous to Zimbabwe's socioeconomic environment.

Statement of the Problem

Public-private partnerships as they currently exist in Zimbabwe frequently burden Zimbabwean citizens and disadvantage the public sector (Miraftab, 2004). The Beitbridge to Chirundu road project is a notable example

illustrating these concerns. It was awarded to Gieger International, a foreign entity, under a PPP model based on a Build-Operate-Transfer (BOT) framework in 2016 and was initially valued at US$2.7 billion. Nearly three years later, no construction had begun because the company was unable to secure the necessary funds (Maguwu, 2018). The tender was subsequently cancelled and the project is currently being completed for US$1 billion by a local player who was directly chosen by the government (AIDDATA, 2017; Matabvu, 2019). This case illustrates the risks and financial difficulties associated with PPPs. The large decrease in the cost of building highways also begs the question of whether private investors stand to gain disproportionately at the expense of the state, other local construction companies, taxpayers, and project users in the future. These incidents highlight the necessity of closely examining the implications on equity and financial dynamics of PPP agreements. Furthermore, the difference in execution and cost between international and local stakeholders emphasizes the necessity of a thorough qualitative examination of stakeholder perceptions and experiences. To improve the effectiveness and fairness of PPPs that benefit Zimbabwe as a whole, this study aims to identify key problems and offer workable solutions by looking at the perspectives of various PPP players regarding the injustices within the current PPP frameworks.

Objectives of the Study
This study's main goal is to investigate and comprehend the perceived injustices in Zimbabwe's current PPP institutions. The study's specific objectives are:

- To evaluate the perceived injustices in Zimbabwe's current PPP arrangements.
- To determine, from the viewpoint of various stakeholders, the principal issues and challenges related to current PPP agreements.
- To evaluate how PPPs affect Zimbabwean citizens' possibilities for development and financial security.
- Investigating possible changes and tactics that might be used to reorganize PPPs to guarantee more equitable results and benefits to the general public.
- To offer suggestions to stakeholders and legislators on how to develop more equitable and balanced PPP frameworks.

Significance and relevance of the study
This study tackles a critical problem in Zimbabwe's infrastructure development, which makes it noteworthy. By highlighting perceived disparities within PPPs, the study establishes the structural defects impeding just and fair growth. Policymakers, investors, and the general public should find value in the findings because they offer insights into how PPPs might be redesigned to increase efficiency and fairness. Furthermore, the study's recommendations may influence frameworks and policies in the future, ensuring that PPPs enhance national development objectives and raise the standard of living for Zimbabweans.

Delimitation of the Study
This study is limited to investigating the views of parties engaged in Public-Private Partnerships (PPPs) for the development of infrastructure in Zimbabwe, with particular emphasis on the transportation, energy, and healthcare sectors. It will focus on qualitative information obtained from government representatives, private investors, businesses who submitted bids, and members of the public that utilize these PPPs through focus group discussions and interviews. The technical evaluation of specific projects or the quantitative examination of financial data will not be covered by the research. Additionally, to guarantee relevance and up-to-date findings, the study will only include PPP projects that have been completed in the last ten years.

2. Literature Review

To identify the perceived injustices and possible reform paths, this review of related literature will critically analyze these two points of view while concentrating on the unique circumstances of Zimbabwe.

Theoretical Framework
The following theories offer a thorough comprehension of the dynamics involved in public-private partnerships (PPPs) for infrastructure development. They emphasize the significance of coordinating interests, handling disputes, and upholding justice to establish partnerships that are both equitable and long-lasting.

Public Choice Theory

Developed by James M. Buchanan and Gordon Tullock, the Public Choice Theory emphasizes the self-interested conduct of persons in the public sector and offers a framework for understanding how public decisions are formed (Buchanan & Tullock, 1962). The Public Choice Theory explains why government officials and private investors choose to structure partnerships in the setting of PPPs (Black, 2020). Private investors want to maximize profits, whereas government officials may pursue personal or political rewards. PPP agreements that favor private interests over public benefit may result from this. To establish equitable and fruitful partnerships, the idea emphasizes the necessity of procedures that align the interests of all parties.

Agency Theory

Introduced by Michael Jensen and William Meckling, agency theory investigates the conflicts that result from asymmetric information and different goals between principals (owners) and agents (managers) (Jensen & Meckling, 1976). The government serves as the principal in PPPs while private investors serve as agents, as captured by the Agency Theory (Wang and Liu, 2015). The idea clarifies how private investors could use informational advantages to bargain for conditions that favor them disproportionately, resulting in unfair consequences for the general public. Strong incentive programs and efficient oversight are necessary to reduce these conflicts and guarantee that PPPs advance the interests of the general public.

Stakeholder Theory

According to Freeman's Stakeholder Theory, businesses should take into account the interests of all parties involved in their decision-making processes (Freeman, 1984). When it comes to PPPs, the Stakeholder Theory recommends that all relevant parties—private investors, government agencies, and the general public—ought to have their concerns taken into consideration (Wojewnik-Filipkowska and Węgrzyn, 2019). PPPs can therefore be designed to balance advantages and avoid disparities, promoting a more inclusive approach and guaranteeing that the projects serve the general good rather than specific private interests.

Equity Theory

According to John Stacey Adams' (1965) Equity Theory, people should try to strike a balance between the inputs they provide and the results they receive in social transactions. The theory centers on the idea of fairness. By analyzing whether the distribution of advantages and responsibilities between the public and private sectors is equitable, the Equity Theory can be applied to PPPs to evaluate the fairness of the partnership structures. A partnership may be considered unfair if private investors profit disproportionately from their contributions while the general public pays disproportionately high costs. PPPs must be reformed to guarantee a more equitable distribution of risks and profits for them to be accepted and successful.

Conceptual Framework

This study's conceptual framework is set up to give readers a thorough grasp of the dynamics among different stakeholders and the ramifications that follow in Zimbabwe's socioeconomic and political environment. The framework encompasses multiple essential components, including stakeholders, perceived disparities, structural issues, and possible solutions. Within the larger framework of Zimbabwe's political and socioeconomic environment, these components interact. A thorough description of each component of the conceptual framework may be found below. The variables that comprise this research's conceptual framework are as follows:

i. The public, government, and private investors are among the stakeholders involved in PPPs, and each has distinct goals and objectives (Dyeyeva and Khmurova, 2018). The goals of the government are to gain political clout, promote economic expansion, and upgrade infrastructure. The goals of private investors are to reduce risks and maximize rewards. Tender-awarded companies strive to supply services, keep costs down, and fulfill deadlines. On the other hand, the public wants better infrastructure without having to pay too much.

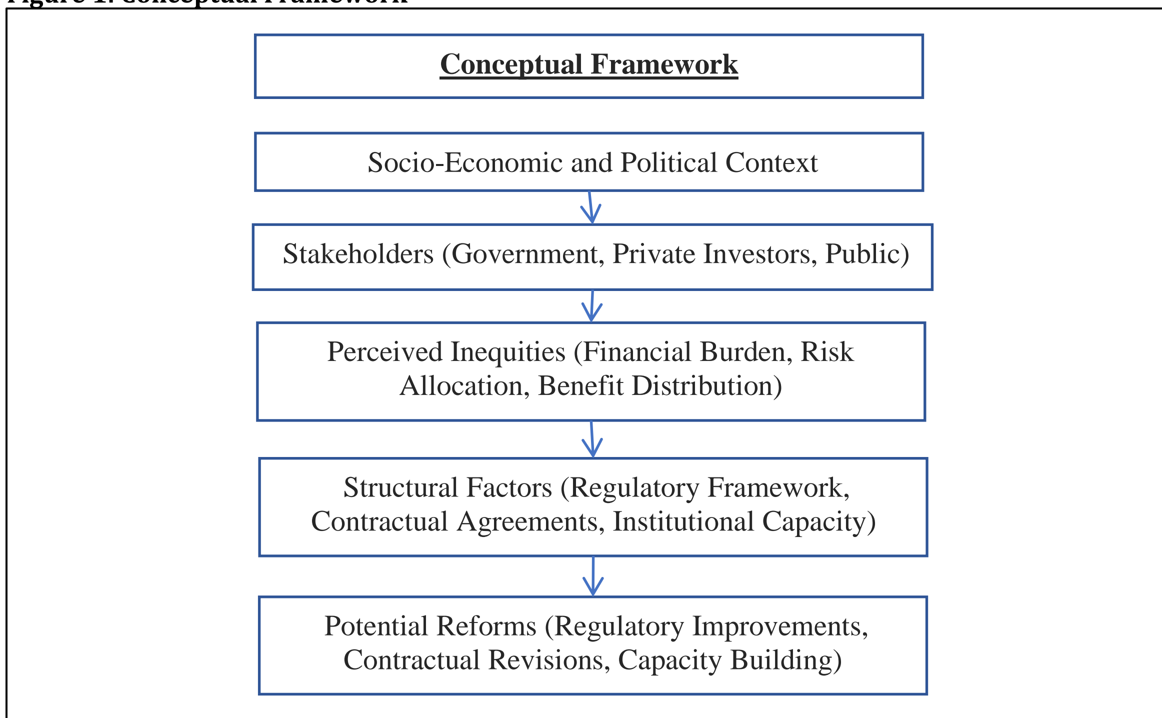
ii. Financial burden, risk allocation, and benefit distribution are all perceived as unfair in PPP frameworks, favoring private investors at the expense of the general public (He, Shi, and Li, 2021). High fees and costs, an unequal risk distribution for the project, and disproportionate rewards that benefit private investors are some examples of these imbalances.

iii. Public-private partnership (PPP) agreements are shaped and affected by structural elements (Brogaard, 2021). These elements include the contractual agreements, which show the bargaining power of private investors, and the regulatory environment, which might not include provisions for justice and transparency. Furthermore, the ability of government agencies to efficiently manage and supervise PPP projects is referred to as institutional capacity.

iv. According to Shen et al. (2016), reforms that have the potential to be implemented are meant to rectify perceived injustices and enhance the efficacy and fairness of PPPs. These include: strengthening capability, amending contracts, and streamlining regulations. Enhancement of regulations guarantees openness, responsibility, and fair risk distribution. While capacity building improves government entities' ability to successfully oversee and enforce PPP projects, contractual modifications create balanced agreements.

v. The socioeconomic and political environment of Zimbabwe influences how these elements interact. The success and fairness of PPPs are influenced by various factors, including social expectations, political dynamics, and economic instability.

Figure 1: Conceptual Framework



Empirical Studies

Together, these empirical studies show how PPP frameworks are unfair and how changes are necessary to guarantee more equitable results in Zimbabwe.

The usefulness of PPPs in infrastructure projects in several African nations, including Zimbabwe, has been examined by Mutambatsere (2017). The analysis draws attention to the operational and financial advantages of PPPs, but it also exposes the disparities in risk-sharing and public financial obligations. According to Mutambara, PPPs frequently lead to higher service prices and cost overruns, which disproportionately impact the populace. Stronger regulatory frameworks are necessary to safeguard the public interest, as highlighted. The study offers a general picture, but it falls short of providing a concentrated, in-depth investigation of Zimbabwe-specific stakeholder perspectives, especially qualitative information from local officials and impacted populations.

In contrast, Vallé and Stucchi's (2024) study analyses the PPP frameworks in Zimbabwe and Nigeria,

highlighting issues that both countries face as well as possible changes. It highlights the differences between the gains made by the public sector and the rewards reaped by private investors. Public displeasure is captured in the study's substantial revelations regarding PPP agreements' accountability and transparency. The study calls for increased public involvement in PPP project design and implementation. Although the comparison method is useful, the study just briefly explores the subjective experiences and views of specific Zimbabwean stakeholders.

Nkomo and Nhema (2015) examine the financial aspects of PPPs in Zimbabwe, examining the economic ramifications and the difficulties in obtaining long-term funding for infrastructure projects. According to Nkomo and Nhema (2015), there is a mismatch between the interests of the general public and private investors' profit goals, which results in unfair outcomes. Better risk management techniques and financial changes are recommended by the report. The study focuses on financial opportunities and problems, but it does not examine stakeholder perspectives or provide qualitative information on perceived injustices.

Ittmann's (2017) analysis highlights concerns about justice and fairness and offers insights into the perspectives of many stakeholders involved in PPPs within the transportation industry. The study discovers that private investors frequently put profit ahead of the interests of the general public, making stakeholders—especially the public—feel excluded from the decision-making process. The study recommends enhancing transparency and boosting stakeholder participation. While providing insightful qualitative data on attitudes, the study only looks at the transportation industry; it leaves out other critical infrastructure sectors like electricity and healthcare.

Chilunjika (2023) assesses the total effect of PPPs, taking into account both achievements and shortcomings on the development of Zimbabwe's infrastructure. The report emphasizes that although PPPs have helped to enhance infrastructure, the gains have not been properly shared, with the general population frequently paying more and having less access to services. It suggests stronger regulatory control and extensive policy changes. The assessment is quantitative and lacks a comprehensive qualitative examination of the viewpoints of stakeholders or the particular injustices encountered by the general population.

Public-Private-Partnerships with the Zimbabwean Context

Public-Private Partnerships (PPPs) have emerged as a strategic approach to infrastructure development in Zimbabwe, aiming to bridge the funding gap and enhance service delivery. Despite their potential benefits, PPPs have raised concerns regarding inequities, accountability, and sustainability. Zimbabwe's PPP landscape is characterized by inadequate regulatory frameworks, limited institutional capacity, and insufficient stakeholder engagement (Ncube, 2019; Chirisa et al., 2019). The country's PPP policy framework, established in 2011, lacks clarity and coherence, leading to inconsistencies in implementation (Mushanyuri, 2018). Researchers emphasize the need for robust legal frameworks to ensure accountability and transparency (Chirisa et al., 2019; Ncube, 2019). For instance, a study by Bandauko et al. (2020) highlighted the significance of community participation to ensure project sustainability.

Zimbabwe's infrastructure sector faces significant challenges, including aging infrastructure, inadequate funding, and inefficient management (Mhlanga et al., 2020). PPPs have been proposed as a solution, particularly in the transportation, energy, and water sectors (Moyo et al., 2020). However, existing research primarily focuses on transportation infrastructure, neglecting other critical sectors (Gukurume, 2017). A study by Mushanyuri (2018) explored PPPs in Zimbabwe's water sector, revealing issues with project implementation and management. The Zimbabwean government has initiated efforts to promote PPPs, including establishing the Zimbabwe Investment and Development Agency (ZIDA) and the Public-Private Partnership Unit (PPPU) (Republic of Zimbabwe, 2021). Researchers emphasize the importance of effective institutional frameworks in facilitating successful PPPs (Ncube, 2019; Chirisa et al., 2019). Community engagement and participation are crucial in ensuring project acceptance and sustainability (Bandauko et al., 2020; Gukurume, 2017).

To address perceived inequities, Zimbabwe requires tailored PPP approaches prioritizing transparency, accountability, and community engagement (Ncube, 2019). Collaborative research between academics, policymakers, and practitioners can inform evidence-based reforms. Zimbabwe's National Development Strategy 1 (2021) emphasizes infrastructure development through PPPs, which underscores the research's

significance. Effective PPP implementation necessitates robust monitoring and evaluation frameworks (Chirisa, 2020). Zimbabwe lacks standardized monitoring and evaluation frameworks, thereby hindering the assessment of PPP effectiveness (Mhlanga et al., 2020). Researchers recommend developing context-specific monitoring frameworks to ensure PPP projects align with national development objectives.

Zimbabwe's socio-economic context presents unique challenges for PPP implementation. Economic instability, political uncertainty, and corruption pose significant risks (Mushanyuri, 2018). Researchers emphasize the need for PPP frameworks to address these contextual factors (Ncube, 2019). Future research should explore strategies mitigating these risks which, ensure that PPPs contribute meaningfully to Zimbabwe's development.

Research Gaps

Although the first study offers a comprehensive overview, it falls short of providing a targeted, in-depth investigation of Zimbabwe-specific stakeholder viewpoints, especially the qualitative information that local officials and impacted communities would need to contribute. This makes it harder to understand how various groups view and interact with PPP initiatives locally. The second study, while taking a comparative approach, falls short in exploring the qualitative experiences and perspectives of specific stakeholders in Zimbabwe, which are essential for placing PPP consequences in context. The third study covers financial issues, but it falls short of capturing the entire spectrum of socioeconomic effects by omitting a convincing investigation of stakeholder perspectives and qualitative data on perceived disparities. Furthermore, the fourth study only looks at the transportation sector, it ignores other important infrastructure sectors like electricity and healthcare, which are equally important for a comprehensive evaluation of the societal effects of PPPs. Last but not least, Chilunjika's quantitative evaluation method ignores the complex qualitative analysis required to comprehend stakeholder viewpoints and particular injustices faced by the general public, thus limiting the breadth of understanding regarding the human and community aspects of PPP implementations.

The existing literature on Public-Private Partnerships (PPPs) in Zimbabwe's infrastructure development highlights significant gaps, necessitating further research. Despite Zimbabwe's reliance on PPPs, studies focusing exclusively on the Zimbabwean context are scarce (Chirisa et al., 2019; Mushanyuri, 2018). This analysis identifies key research gaps. Institutional Frameworks and Policy: Research on Zimbabwe's PPP policy framework reveals inconsistencies and inadequacies (Ncube, 2019; Chirisa et al., 2019). Gaps exist in understanding institutional capacity, regulatory environments, and stakeholder engagement (Mhlanga et al., 2020). Studies have not adequately explored Zimbabwe's Public-Private Partnership Unit (PPPU) and Zimbabwe Investment and Development Agency (ZIDA) roles (Republic of Zimbabwe, 2021). Future research should investigate the effectiveness of existing PPP institutional frameworks. Sector-Specific Research: Existing research primarily focuses on transportation infrastructure (Mhlanga et al., 2020). Other critical sectors, such as healthcare (Moyo et al., 2020), energy, and water (Mushanyuri, 2018), require attention. Sector-specific studies can identify unique challenges and opportunities. Research gaps exist regarding PPPs in Zimbabwe's social infrastructure, including education and housing. Community Engagement and Participation: Community engagement is crucial for PPP project acceptance and sustainability (Bandauko et al., 2020; Gukurume, 2017).

However, research on community participation mechanisms and effectiveness in Zimbabwean PPPs is limited. Studies should explore community engagement strategies, benefits, and challenges. Monitoring and Evaluation Frameworks: Zimbabwe lacks standardized monitoring and evaluation frameworks for PPPs (Chirisa, 2020). Research gaps exist regarding performance metrics, evaluation methodologies, and impact assessments. Developing context-specific monitoring frameworks can ensure PPP alignment with national development objectives. Socio-Economic Context: Zimbabwe's socio-economic context presents unique challenges, including economic instability, political uncertainty, and corruption (Mushanyuri, 2018). Research should investigate strategies for mitigating these risks. Exploring contextual factors' impact on PPP effectiveness can inform policy reforms.

3. Research Methodology

By offering in-depth qualitative insights into the experiences and viewpoints of many stakeholders, this research seeks to close the above-mentioned gaps and contribute to the development of more fair and efficient PPP frameworks.

Research Design

This study adopts an exploratory and descriptive research design to examine perceived injustices and possible changes to Zimbabwe's PPPs for infrastructure development. The intricacies and nuances of the diverse viewpoints of PPP stakeholders are well captured by this design which facilitates a comprehension of the obstacles and prospects for change.

Research Approach

The study uses a qualitative research methodology, which Denny and Weckesser (2022) say is suitable for examining stakeholders' experiences, views, and insights. This methodology enables a comprehensive analysis of the subjective elements of PPPs, encompassing the varying perspectives of stakeholders about disparities and the possible modifications they deem imperative. The richness of stakeholder perspectives, which is crucial for this study, can best be captured through qualitative methodologies (Denny and Weckesser, 2022).

Research Population

Various stakeholders involved in Zimbabwe's PPPs for infrastructure development were included in this study. Key government representatives shared their knowledge of regulatory obstacles, policy frameworks, and government viewpoints on PPP efficacy and equity. Their views on partnership structures, risk assessments, and motivations were presumably understood by private investors. Three companies that submitted bids for PPP projects also provided valuable insights into the phenomena under study. Three members of the general public were also interviewed to learn more about the expectations, worries, and societal impact of PPPs. The participant selection process aimed to guarantee diverse viewpoints, enhancing the authenticity and dependability of the results. Twelve participants were categorized into four roles: Government Officials (GO), responsible for policy formulation and implementation; Private Investors (PI), providing financial expertise; Company Representatives (CT), overseeing project execution; and General Public (GP) members, affected by PPP projects. This strategic purposive sampling approach ensured representation from various sectors, including transportation, energy, and healthcare, and geographic representation from urban and rural areas. By selecting participants with direct PPP experience, the study gathered rich, qualitative data, providing nuanced insights into Zimbabwe's PPP landscape.

Data Collection Methods

This study employed a mixed-methods approach, combining semi-structured interviews and focus groups to gather comprehensive data (Denny & Weckesser, 2022). Semi-structured interviews were conducted with key stakeholders, including public officials, business investors, and community leaders. These interviews ensured coverage of essential topics while allowing flexibility to explore specific issues in-depth. Open-ended questions encouraged participants to share experiences, perceptions, and insights, providing rich qualitative data. Interviews lasted approximately 60 minutes were audio-recorded, and transcribed verbatim.

Focus groups comprising community members facilitated collaborative exploration of shared concerns and experiences related to Public-Private Partnerships (PPPs). Moderated discussions encouraged active participation, fostering dynamic interactions among participants. Focus groups consisted of 8-12 participants, lasted 90 minutes, and were audio-recorded. Trained facilitators ensured open-ended questioning and active listening. Data collection continued until saturation was achieved, where no new themes emerged. This mixed-methods approach provided a nuanced understanding of stakeholder perspectives, enhancing validity and reliability.

Sampling Strategy

A purposive sampling technique was employed to select participants with extensive expertise and experience in Zimbabwe's Public-Private Partnerships (PPPs). This strategic approach ensured the selection of information-rich cases thereby optimizing data quality. Participants included public servants directly involved

in PPP projects, private sector executives managing PPP initiatives, and local leaders impacted by PPP projects. Criteria for selection comprised: (1) minimum 2 years experience in PPP-related roles; (2) direct involvement in PPP project planning, implementation, or evaluation; and (3) representation from diverse sectors (e.g., transportation, energy, healthcare).

Data Analysis Techniques

Thematic analysis, a qualitative research methodology, was employed to identify, examine, and synthesize patterns within the collected data (Kiger & Varpio, 2020). This approach enabled the extraction of rich insights from stakeholder perspectives on perceived injustices and potential solutions. The analysis commenced with coding, where raw data was systematically categorized to reveal emergent themes and sub-themes. This iterative process involved continually refining and revising themes as new data emerged, ensuring a comprehensive understanding.

To facilitate meticulous data administration and analysis, NVivo software was utilized, providing a systematic framework for organizing and synthesizing findings. Coding processes involved assigning descriptive labels to segments of text, enabling pattern identification. Themes were subsequently grouped into categories, revealing relationships between perceived injustices and proposed solutions. Data interpretation focused on contextualizing themes within Zimbabwe's socio-economic landscape, considering factors influencing PPP effectiveness. By integrating empirical evidence with theoretical frameworks, the analysis provided nuanced insights into addressing inequities in Zimbabwe's PPP frameworks, informing evidence-based policy recommendations.

Procedures

A multi-phase approach was used to address the research questions. First, a review of the literature was done to place the study in the perspective of previous research. After that, focus groups and semi-structured interviews were held to gather primary data. To find important themes about perceived injustices and possible reforms, the data were transcribed and then thematically analyzed. Conclusions were drawn based on the findings and recommendations were informed by comparing the findings with the literature to establish similarities and differences. Throughout the research procedure, ethical principles such as informed consent and confidentiality were closely followed.

4. Findings of the Study

The research findings are presented in this section, using text and tables to highlight important information on examining and comprehending the apparent injustices in Zimbabwe's current PPP arrangements.

Demographics of Research Participants

The following data in Table 1 describes the characteristics of the participants involved in the research:

Table 1: Demographics of Research Participants

Code	Role	Age	Gender	PPPs Experience (years)
GO1	Government Official	45	Male	10
GO2	Government Official	52	Female	15
GO3	Government Official	38	Male	8
PI1	Private Investor	50	Female	20
PI2	Private Investor	42	Male	12
PI3	Private Investor	36	Female	7
CT1	Company Representative	48	Male	14
CT2	Company Representative	40	Female	10
CT3	Company Representative	35	Male	5
GP1	General Public	30	Female	2

GP2	General Public	25	Male	1
GP3	General Public	28	Female	3
Total				**107**

This dataset includes 12 groups of participants categorized by their roles: Government Officials (GO), Private Investors (PI), Company Representatives (CT), and members of the General Public (GP). The participants' ages ranged from 25 to 52 years, reflecting a broad representation of different age groups. Their experience with Public-Private Partnerships (PPPs) varies from 1 to 20 years, providing a spectrum of insights from both novices and seasoned professionals. Government Officials and Private Investors generally have more years of experience compared to Company Representatives and the General Public. This diverse dataset facilitates a comprehensive analysis of perspectives on PPPs across different roles, ages, genders, and experience levels.

The findings reveal significant disparities in Public-Private Partnership (PPP) experience among stakeholders ranging from 1 to 20 years, providing a spectrum of insights from both novices and seasoned professionals. Government Officials (GO) and Private Investors (PI) possess substantially more experience (10-20 years) compared to Company Representatives (CT) and the General Public (GP) (1-7 years) (GO1, GO2, PI1, PI2). This means Government Officials and Private Investors generally have more years of experience compared to Company Representatives and the General Public. This experience gap underscores perceived inequities in PPP decision-making processes, echoing concerns raised by scholars (Chirisa et al., 2019; Mushanyuri, 2018). For instance, GO1 emphasized the importance of community engagement, while GP1 highlighted limited access to information. These divergent perspectives suggest that PPP reforms should prioritize stakeholder capacity-building and inclusive decision-making (Ncube, 2019). This diverse dataset facilitates a comprehensive analysis of perspectives on PPPs across different roles, ages, genders, and experience levels.

The findings also indicate gender disparities in PPP experience, with female participants (GO2, PI1, CT2, GP1) generally having fewer years of experience. This echoes concerns raised by researchers regarding gender inequities in infrastructure development (Gukurume, 2017; Moyo et al., 2020). To address this, reforms should prioritize gender-sensitive capacity building and inclusive decision-making processes. Zimbabwe's National Development Strategy 1 (2021) emphasizes gender mainstreaming in development projects. Effective implementation of such strategies can enhance PPP equity and socio-economic impacts (Chirisa et al., 2019; Ncube, 2019).

Perceived Inequities in Current PPP Structures in Zimbabwe

The thematic analysis tables below synthesize perspectives from diverse stakeholders in Zimbabwe's PPP sector, revealing widespread concerns about inequities in benefit distribution and risk allocation. Government officials, private investors, companies awarded tenders, and the general public highlighted disparities in accessing PPP opportunities, influenced by factors such as gender, organizational size, and socioeconomic status. These insights underscore the complexity of challenges within current PPP structures and emphasize the need for targeted reforms to enhance fairness and transparency in future projects.

Table 2: Inequities in Current PPP Structures in Zimbabwe

Super-ordinate Theme	Subordinate Themes	Description of Theme	Quotations
Inequitable Benefit Distribution	Unequal distribution of economic benefits	Government officials perceive that PPP projects often result in unequal distribution of economic gains, favoring private partners over public interests.	"Private investors seem to reap substantial profits from PPP projects while public benefits are less evident." (Government Officials)

	Limited access to decision-making	Officials feel marginalized in key decision-making processes, leading to unequal power over project outcomes.	"Decisions regarding PPP project priorities are often made without adequate consultation with government stakeholders." (Government Officials)
Access and Opportunity	Access to project information	Private investors express concerns over limited access to comprehensive project details, affecting their ability to make informed investment decisions.	"Critical project information such as financial projections and risks are often not disclosed adequately." (Private Investors)
	Barriers to entry	Investors perceive bureaucratic hurdles and opaque tender processes as barriers that favor established firms, limiting fair competition.	"The tender process seems to favor companies with political connections and large financial reserves." (Private Investors)
Transparency	Lack of transparency	Companies note a lack of transparency in contract negotiations and project execution, leading to suspicions of favoritism and corruption.	"The awarding of tenders often lacks clarity, making it difficult to ascertain if decisions are based on merit." (Company Given a Tender)
	Accountability	Companies perceive a lack of accountability in PPP projects, with delays and cost overruns often blamed on unclear responsibilities.	"When issues arise, there is often a blame game between public and private partners, delaying project progress." (Company Given a Tender)
Social Equity	Unequal service delivery	The public identifies disparities in service quality across regions, with PPP projects benefiting urban areas more than rural communities.	"Infrastructure improvements from PPPs seem to bypass rural areas where they are most needed." (General Public)
	Affordability	Concerns are raised about the affordability of services provided through PPPs, often leading to the exclusion of low-income households.	"The cost of accessing newly privatized services is beyond the reach of many ordinary citizens." (General Public)

The thematic analysis highlights significant concerns about the unequal distribution of benefits and risks in Zimbabwe's Public-Private Partnerships (PPPs). Stakeholders from the government, private sector, businesses, and the public point to disparities in access to PPP opportunities, influenced by factors such as gender, company size, and socioeconomic status (Chirisa et al., 2019; Mushanyuri, 2018). These concerns align with findings in the literature which show that economic benefits in PPPs often favor private investors (Eberhard et al., 2019). For example, government officials feel that while private investors enjoy significant profits, the public benefits are less clear. This reflects Ncube's (2019) concerns about weak regulatory frameworks that enable unfair benefit distribution. On the other hand, some studies argue that PPPs can foster economic growth and infrastructure development (Moyo et al., 2020). Nevertheless, Zimbabwe's situation requires reforms specifically designed to address these inequalities.

The analysis also brings attention to social equity issues, such as unequal service delivery and affordability challenges (Gukurume, 2017). The general public observes that infrastructure projects tend to favor urban

areas, leaving rural communities underdeveloped. This mirrors findings in Mushanyuri's (2018) research on Zimbabwe's water sector, which highlights disparities in service distribution. Literature suggests that these inequalities can be addressed by more inclusive decision-making (Chirisa et al., 2019) and greater community engagement (Bandauko et al., 2020). Zimbabwe's National Development Strategy 1 (2021) emphasizes the need for inclusive economic growth. To address these issues effectively, reforms could focus on building stakeholder capacity, ensuring transparency in decision-making, and conducting social impact assessments (Ncube, 2019). Case studies from South Africa's renewable energy IPP procurement program show the positive outcomes of successful stakeholder collaboration and fair benefit distribution (Eberhard et al., 2019).

Table 3: Perceptions of Benefit and Risk Distribution Disparities in Access to PPP Opportunities

Super-ordinate Theme	Subordinate Themes	Description of Theme	Quotations
Perceptions of Benefit and Risk Distribution	Economic Benefits	Officials perceive economic benefits from PPPs tend to favor private partners over public interests.	"Private investors often enjoy higher profit margins, while public benefits remain uncertain." Government Officials
	Risk allocation	Risks are disproportionately allocated to the government, potentially straining public finances.	"Governments bear most of the financial risks, which can strain public finances when projects face setbacks." Government Officials
	Profitability	PPPs offer potentially higher returns due to guaranteed revenue streams and government-backed contracts.	"Investors see PPPs as lucrative due to guaranteed revenue streams and government-backed contracts." Private Investors
	Risk-sharing agreements	Risk-sharing agreements in PPP contracts mitigate financial exposure compared to solely public-funded projects.	"Shared risks with public entities make PPPs more attractive despite initial investment challenges." Private Investors
	Contractual Obligations	Profitability hinges on favorable contract terms negotiated with public entities.	"Profitability hinges on favorable contract clauses such as payment schedules and performance incentives." Company Given a Tender
	Risk mitigation strategies	Companies employ diverse risk mitigation strategies to ensure financial stability throughout the project lifecycle.	"Effective risk management includes contingency plans for potential delays and cost overruns." Company Given a Tender
	Service Quality	Disparities in service quality across different communities affect public satisfaction with PPP projects.	"Urban areas often receive better-maintained infrastructure compared to rural regions under PPP schemes." General Public
	Affordability	Rising costs of privatized services pose financial challenges for low-income households.	"Rising costs of privatized services pose financial challenges for households already struggling with basic living expenses." General Public
Disparities in Access to PPP Opportunities	Socio-economic Factors	Gender disparities exist in accessing PPP opportunities, with fewer women in decision-making roles.	"Women are underrepresented in leadership positions within PPP project teams." Government Officials

	Age and organizational capacity	Emerging professionals and smaller organizations face barriers in competing for PPP tenders.	"Smaller firms often struggle to meet the financial and technical requirements set by PPP project specifications." Government Officials
	Financial Resources	Access to capital remains a critical barrier for smaller firms and start-ups.	"Start-ups struggle to secure financing for upfront project costs required in PPP bids." Private Investors
	Market knowledge	Companies with prior experience and market knowledge have a competitive advantage in winning PPP tenders.	"Experienced firms leverage industry contacts and insights to navigate complex tender processes effectively." Private Investors
	Size and Capability	Larger firms have an advantage in securing PPP contracts due to their financial capacity and project execution capabilities.	"Larger firms can absorb higher upfront costs and have established track records in delivering large-scale infrastructure projects." Company Given a Tender
	Technological expertise	Firms with advanced technological capabilities are better positioned to meet PPP project requirements and innovate within project frameworks.	"Technological advancements play a crucial role in optimizing project performance and attracting future PPP opportunities." Company Given a Tender
	Socioeconomic Factors	Socioeconomic status influences access to PPP benefits, with wealthier individuals having greater access to quality services.	"Low-income communities often face barriers in accessing services upgraded through PPP investments." General Public
	Geographic location	Urban centers receive more attention in PPP investments, limiting rural communities access to essential infrastructure improvements.	"Rural areas struggle to attract PPP investments despite pressing infrastructure needs." General Public

Stakeholder Perspectives on Key Challenges and Concerns in Existing PPP Agreements

This thematic analysis table provides a structured overview of the main challenges and concerns associated with existing PPP agreements in Zimbabwe, as perceived by different stakeholders. Each theme is supported by relevant quotations that illustrate the perspectives and experiences of government officials, private investors, companies awarded tenders for PPP projects, and the general public.

Table 4: Thematic Analysis of Challenges and Concerns in PPP Agreements: Stakeholder Perspectives

Super-ordinate Theme	Subordinate Themes	Description of Theme	Quotations
Challenges in PPP Implementation	Operational Challenges	Challenges related to project delays, cost overruns, and technical complexities in PPP execution.	"One of the main challenges we face is the lengthy approval processes which delay project timelines significantly." - Government Official

	Financial Challenges	Issues concerning funding gaps, budget constraints, and financial viability of PPP projects.	"Securing adequate financing remains a persistent challenge, often leading to compromises in project quality." - Private Investor
	Legal and Regulatory Challenges	Difficulties associated with navigating complex legal frameworks and inconsistent regulatory practices.	"The regulatory environment lacks clarity, leading to disputes and delays in project implementation." - Company Representative
Fairness and Transparency Concerns	Transparency in Decision-Making	Concerns regarding the lack of openness and accountability in decision-making processes related to PPPs.	"Transparency is crucial; decisions on project allocations should be more inclusive and publicly accessible." - General Public Participant
	Equity in Risk Sharing	Issues related to unequal distribution of risks between public and private sectors, often favor private investors.	"The risk-sharing agreements heavily favor private investors, exposing the public to excessive financial liabilities." - Government Official
	Contractual Terms and Conditions	Criticisms about the fairness and clarity of contractual terms, including procurement practices and contract renegotiations.	"Contract terms are often skewed, with frequent amendments that disadvantage local businesses." - Company Representative

Challenges in PPP Implementation and Socio-Economic Impacts
Stakeholders have highlighted issues about the challenges involved in implementing PPPs, such as operational, financial, legal, and regulatory complexities, which align with findings in the literature on the difficulties faced by developing countries (Akintoye et al., 2020; Osei-Kyei et al., 2020). Government officials have highlighted the delays caused by lengthy approval processes, while private investors point to financing constraints, both of which highlight the need for more efficient regulatory frameworks and innovative financing solutions (Ahadzi et al., 2020). Effective reforms could include building stakeholder capacity, ensuring transparent decision-making, and conducting social impact assessments (Tchouamou Njoya et al., 2020; Ansah et al., 2020).

Fairness, Transparency, and Equity Concerns
Furthermore, the research findings raise concerns about fairness, transparency, and equity in PPP agreements, aligning with research that highlights the importance of inclusive decision-making and community involvement (Kwak et al., 2020; Sharma et al., 2020). Stakeholders have expressed concerns about the unequal distribution of risks and contractual terms that disadvantage local businesses, underscoring the need for more equitable PPP frameworks (Osei-Kyei et al., 2020; Alfen et al., 2020). To address these issues, Zimbabwe's PPP reforms should focus on transparency, accountability, and socio-economic equity; incorporating stakeholder forums, capacity-building initiatives, and social impact assessments.

Impact of PPPs on Financial Well-being and Development Prospects of Zimbabwean Citizens
The following table allows for a more detailed analysis of the impacts of PPP projects on financial well-being, development prospects, and various other dimensions relevant to Zimbabwean citizens and stakeholders.

Table 5: Impact of PPP Projects on Financial Well-being and Development Prospects in Zimbabwe

Super-ordinate theme	Subordinate themes	Description of theme	Quotations
Impact of PPP Projects on Financial Well-being and Development Prospects in Zimbabwe	Financial obligations and economic opportunities for local communities	Examining how PPP projects impact local finances and economic prospects.	"PPP projects have increased local employment and income levels, benefiting our community." - Local Resident
		Assessing any additional financial burdens imposed on local governments.	"The maintenance costs of the new infrastructure are straining our municipal budget." - Government Official
	Socio-economic impacts on marginalized groups	Analyzing whether PPP projects have addressed or exacerbated inequalities.	"The new housing project under PPP has improved living conditions for low-income families." - Social Worker
	Environmental sustainability of infrastructure developments	Evaluating the ecological impact of PPP-funded projects.	"The new renewable energy plant has reduced our carbon footprint, promoting sustainable development." - Environmental Activist
	Public perception & community engagement	Exploring how PPP projects are perceived and engaged with by the community.	"There was insufficient public consultation regarding the new development, leading to community discontent." - Community Leader
	Long-term sustainability & maintenance of infrastructure	Assessing the sustainability of PPP projects beyond initial construction.	"Ensuring adequate funding for maintenance is crucial to the longevity of these infrastructure projects." - Infrastructure Planner

Financial Well-being and Socio-Economic Impacts

The findings reveal a mixed impact of Public-Private Partnerships (PPPs) on Zimbabwe's financial well-being and development prospects. While some PPP projects have contributed to higher local employment and income (Manyika et al., 2018), they have also placed additional financial strain on local governments (Kwak et al., 2018). The socio-economic effects on marginalized groups are varied, with some projects helping to reduce inequalities (UNDP, 2020), while others may have worsened them (World Bank, 2018). Research suggests that targeted interventions are necessary to ensure that PPPs benefit underserved communities (OECD, 2019). Case studies from South Africa's renewable energy IPP procurement program highlight successful community involvement and fair distribution of benefits (Eberhard et al., 2019).

Environmental Sustainability and Long-term Maintenance

The findings also raise concerns about the environmental sustainability and long-term upkeep of infrastructure funded through PPPs. Stakeholders stress the importance of considering ecological factors (UN Environment, 2020) and ensuring sufficient funding for ongoing maintenance (Asian Development Bank, 2019). Research highlights the need for a holistic approach that addresses both socio-economic and environmental impacts (World Health Organization, 2019). To achieve sustainable development, PPP reforms should prioritize transparency, accountability, and active community engagement (Transparency International, 2020). Thus, Zimbabwe's PPP framework must include environmental impact assessments and strategies for long-term maintenance.

Potential Reforms and Strategies for Restructuring PPPs

This structured approach examines reforms and strategies for restructuring PPPs in Zimbabwe, emphasizing fairness, transparency, and public benefit. It integrates perspectives and recommendations from diverse

stakeholders involved in PPP projects. The strategic focus is on maximizing public value, strengthening oversight, and ensuring financial sustainability, aiming to enhance the contribution of PPPs to national development objectives while protecting public interests and resources.

Table 6: Reforms and strategies for restructuring PPPs in Zimbabwe

Super-ordinate theme	Subordinate themes	Description of theme	Quotations
Reforms and Strategies for Restructuring PPPs in Zimbabwe	Equity in PPP agreements	Discussing necessary reforms to ensure equitable distribution of risks and benefits.	"We need clearer guidelines on risk allocation to avoid disproportionate burdens on public finances." - Government Official
	Transparency and accountability mechanisms	Suggesting strategies to enhance project oversight and accountability.	"Regular audits and public reporting are crucial to maintaining trust and ensuring PPP funds are used effectively." – Auditor
	Stakeholder participation and engagement	Exploring ways to increase public and stakeholder involvement in PPP decision-making.	"Consultative forums should be mandatory to gather community input and address concerns early in the project cycle." - Community Representative
Restructuring PPPs for Government and Public Benefit in Zimbabwe	Maximizing public value and benefits	Discussing ways to ensure PPP projects deliver substantial public goods and services.	"PPP agreements should prioritize projects that directly improve public infrastructure and services, such as healthcare and education." - Government Official
	Enhancing government oversight and control	Exploring measures to strengthen regulatory frameworks and improve project monitoring.	"The government should have greater involvement in project planning and implementation to safeguard public interests." - Policy Analyst
	Ensuring financial sustainability	Analyzing methods to mitigate financial risks and ensure long-term project viability.	"PPP contracts should include provisions for lifecycle cost assessments and funding mechanisms for maintenance." - Financial Advisor

Restructuring Public-Private Partnerships (PPPs)

Restructuring Public-Private Partnerships (PPPs) in Zimbabwe requires a strong focus on equity, transparency, and accountability. Clear guidelines on risk allocation are essential to prevent undue financial strain on public resources. Regular audits, public reporting, and consultative forums can help ensure community concerns are addressed early in the project lifecycle while promoting openness and trust. Research highlights the importance of robust transparency and accountability measures in building confidence and ensuring funds are used effectively (Kwak et al., 2018; OECD, 2019). A notable example is South Africa's renewable energy IPP procurement program, which showcases the benefits of effective stakeholder collaboration and fair distribution of outcomes (Eberhard et al., 2019).

Maximising public value and benefits

To ensure maximum public value and benefit, PPP agreements should focus on projects that improve essential infrastructure and services, such as healthcare and education. Strengthening government oversight through robust regulatory frameworks and thorough project monitoring is crucial (Manyika et al., 2018; UNDP, 2020). Including lifecycle cost assessments and dedicated funding mechanisms for maintenance in PPP contracts is key to maintaining financial sustainability. Examples from Zimbabwe's health sector show how well-structured PPPs can enhance service delivery and outcomes (MEFMI, 2022). Reforms must carefully balance socio-economic and environmental factors, always prioritizing public interests and resources (World Bank, 2018; Transparency International, 2020).

Recommendations for Creating Balanced and Equitable PPP Frameworks

This thematic analysis table offers structured recommendations from diverse stakeholders for creating more balanced and equitable PPP frameworks in Zimbabwe. It focuses on policy improvements and stakeholder actions to enhance public benefits and equity, aiming to foster better outcomes and accountability in PPP projects. By incorporating perspectives from government officials, private investors, companies awarded tenders, and the general public, the table provides a comprehensive view that promotes transparency, fairness, and greater public benefit in future PPP projects.

Table 7: Recommendations for Creating Balanced and Equitable PPP Frameworks in Zimbabwe

Super-ordinate theme	Subordinate themes	Description of theme	Quotations
Recommendations for Creating Balanced and Equitable PPP Frameworks in Zimbabwe	Policy recommendations for policymakers	Suggestions to policymakers for improving fairness and effectiveness of PPP agreements.	"Policymakers should prioritize clear and balanced risk allocation in PPP contracts to avoid undue financial burdens on the public sector." - Government Official
	Measures for stakeholders to enhance public benefits and equity	Strategies for stakeholders to maximize public benefits and minimize inequities in PPP projects.	"Private investors should commit to transparent project planning and robust community engagement to ensure local needs are met." - Private Investor
	Perspectives from companies given tenders	Insights and opinions from companies involved in PPP projects on improving PPP frameworks.	"As a company involved in PPPs, we believe in stronger regulatory oversight and fairer bidding processes to foster competition and drive down costs." - Company Representative
	Perspectives from the general public	Insights and opinions from the general public on improving PPP frameworks.	"The public expects PPP projects to deliver tangible benefits like improved services and infrastructure without compromising affordability and accessibility." - Concerned Citizen

Balanced PPP Frameworks and Socio-Economic Impacts

Stakeholders agree on the importance of creating balanced and fair Public-Private Partnership (PPP) frameworks in Zimbabwe, with a focus on clear risk-sharing, transparency, and active community involvement (Kwak et al., 2018; OECD, 2019). Policymakers are urged to design PPP contracts that protect public interests, while private investors are expected to prioritize transparent project planning and meaningful community engagement (Manyika et al., 2018). Businesses involved in PPPs emphasize the need for stronger regulatory oversight and more equitable bidding processes to encourage healthy competition (UNDP, 2020). Research highlights the role of well-structured PPP frameworks in delivering socio-economic benefits, citing successful projects from South Africa's renewable energy sector as examples (Eberhard et al., 2019). Case studies from Zimbabwe's health sector also demonstrate how equitable PPPs can enhance service delivery and improve outcomes (MEFMI, 2022).

Stakeholder Perspectives and Accountability

Stakeholders from various backgrounds agree on the importance of transparency, fairness, and public benefit in PPP projects. Government officials, private investors, businesses, and the public all highlight the need for strong accountability mechanisms, active community engagement, and effective regulatory oversight (Transparency International, 2020). For PPPs to succeed, frameworks must include comprehensive lifecycle cost assessments, reliable funding strategies, and thorough monitoring systems (World Bank, 2018). The

research underscores the importance of stakeholders' involvement throughout the process, with examples from African infrastructure projects demonstrating the impact of inclusive engagement (AfDB, 2020). As Zimbabwe advances its PPP reforms, it must emphasize inclusivity, transparency, and accountability to ensure the greatest benefit for the public.

Discussion of Results

This section explains the findings of this study which sought to investigate and comprehend the perceived injustices in Zimbabwe's current PPP systems while highlighting significant accomplishments.

Demographics of Research Participants:

The dataset comprises 12 participants from diverse backgrounds, aged 25-52, with equal gender distribution, and varying experience levels with Public-Private Partnerships (PPPs). The demographic diversity ensures a comprehensive analysis of PPP perspectives across different roles and experience levels. This echoes Siemiatycki's (2019) observation that women and racial minorities are significantly underrepresented in senior leadership roles in the PPP industry worldwide thereby affecting project management outcomes.

Perceived Inequities in Current PPP Structures in Zimbabwe

Stakeholders identified disparities in accessing PPP opportunities influenced by gender, organizational size, and socioeconomic status. Key themes included unequal economic benefit distribution favoring private partners, limited decision-making access for government officials, transparency and accountability issues in contract negotiations, and social equity concerns such as service quality disparities. These insights underscore the complexity of challenges within current PPP structures which calls for reforms to enhance fairness, transparency, and inclusivity in future projects. This is supported by Krawiec (2016) who noted that the perception of women's statutory place within organizations has been influenced by gender bias, which has led to discrimination

Stakeholder Perspectives on Key Challenges and Concerns in Existing PPP Agreements

The research findings pointed out that operational challenges such as project delays and technical complexities, financial issues including funding gaps and budget constraints, and legal and regulatory hurdles characterized by complex frameworks and inconsistent practices. Fairness and transparency concerns emerged regarding decision-making transparency, equity in risk sharing between sectors, and criticisms of contractual terms and procurement practices. Stakeholders emphasized the need for improved governance and regulatory clarity to mitigate these issues effectively. This was similar to Jayasuriya, Zhang, and Yang (2019) who stated that poor stakeholder management, complexity of risk management models, project delivery time and cost overruns, inadequate consideration of whole life-cycle aspects, and over-reliance on Public Sector Comparator are key challenges in PPPs.

Impact of PPPs on Financial Well-being and Development Prospects

The impact of PPP projects on various dimensions crucial to Zimbabwean citizens and stakeholders included positive impacts which included increased local economic opportunities and improved infrastructure. This resonates with Chilunjika (2023) who noted that PPP arrangements in Zimbabwe led to faster completion of trunk roads, lower project lifecycle costs, better risk allocation, improved service quality, and additional revenue streams. However, concerns were raised about financial burdens on local governments, socio-economic inequalities, and environmental sustainability. Public perception and community engagement issues, such as insufficient consultation and long-term infrastructure maintenance, were also highlighted, suggesting a need for comprehensive planning and community involvement in PPP projects.

Potential Reforms and Strategies for Restructuring PPPs

The research also focused on reforms and strategies to restructure PPPs in Zimbabwe for enhanced fairness, transparency, and public benefit. It synthesized recommendations from stakeholders for equitable risk distribution, stronger accountability mechanisms, and increased stakeholder participation in decision-making. This was similar to Aimone and Pan (2020) who highlighted that stakeholders should hold trustees accountable for risky decisions based on outcomes and the degree to which their choices align with their own choices in similar situations. The strategic restructuring aims to maximize public value by prioritizing projects that

improve infrastructure and services while ensuring financial sustainability through rigorous oversight and life cycle cost assessments.

Recommendations for Creating Balanced and Equitable PPP Frameworks

Recommendations from stakeholders to create more balanced and equitable PPP frameworks in Zimbabwe included the need for clear and balanced risk allocation, transparent project planning, fair bidding processes, and prioritizing projects that deliver tangible benefits to communities. This resonates with Edson and Gideon (2021) who postulated that reworking the legislative framework, harnessing the demographic dividend, and ensuring community participation are key recommendations for creating more balanced and equitable PPP frameworks in Zimbabwe. Stakeholders emphasized the importance of regulatory oversight, community engagement, and affordability in ensuring PPP projects meet public needs effectively. These recommendations collectively aim to foster transparency, fairness, and greater public benefit in future PPP endeavors in Zimbabwe.

5. Conclusion and Recommendations

Conclusion

The thorough examination of Zimbabwe's PPP industry leads to a number of important findings and suggestions that may be used to solve the problems found and improve the efficacy of PPP initiatives in the future. First of all, it is clear that disparities in risk and benefit distribution provide major obstacles to attaining balanced results in PPPs. Stakeholders have drawn attention to differences in access to PPP opportunities caused by factors such as gender, organizational size, and socioeconomic level. These stakeholders include government officials, private investors, businesses, and the general public. Policymakers should give top priority to changes that guarantee open decision-making procedures and fair sharing of risks and rewards to lessen these disparities. As suggested by government authorities, this involves creating more precise standards for risk allocation to avoid placing an excessive financial load on the public sector. Furthermore, there is a need to increase stakeholder involvement through consultative forums

Recommendations

The stakeholder proposals highlight how urgently better governance and regulatory frameworks are needed to solve the practical, economical, and legal issues related to PPP agreements in Zimbabwe. Stronger accountability measures, such as frequent audits and open reporting, are supported by stakeholders to guarantee the effective use of PPP money and guard against instances of corruption or favoritism in project execution. Furthermore, increasing openness in contract negotiations and procurement procedures is crucial to fostering investor trust and reducing unfair practices. Businesses that participate in PPPs emphasize the significance of equitable bidding procedures and regulatory supervision to foster competition, reduce project costs, improve the efficiency of infrastructure development for the benefit of taxpayers and guarantee PPP projects' long-term viability.

Recommended for Reforms

i. Developing clear guidelines for distributing risks between the public and private sectors ensures shared accountability and better management of complex projects. Risk allocation frameworks should be regularly reviewed and updated to reflect evolving circumstances and stakeholder needs.
ii. Online platforms can facilitate information sharing, provide regular updates, and foster stakeholder engagement while project management tools enable real-time tracking and collaboration. Transparency in decision-making can be enhanced through clear communication channels on these platforms.
iii. Electronic tendering systems help reduce corruption and promote competition by standardizing bidding documents and evaluation criteria. Independent review committees play a critical role in ensuring fair and objective bid evaluations.
iv. Projects should prioritize tangible community benefits, aligning their socio-economic impacts with national development goals. Community needs assessments can inform project design, and advisory boards can provide valuable feedback throughout the project lifecycle.
v. Institutions responsible for monitoring PPPs must be strengthened to enforce compliance with laws and regulations. Clear regulatory frameworks and regular audits ensure accountability and adherence to established standards.

vi. Public participation can be encouraged through public hearings, surveys, and capacity-building programs. Establishing community liaison officers and grievance mechanisms ensures effective communication and addresses local concerns.
vii. Conducting cost-benefit analyses and value-for-money assessments is crucial for evaluating the financial sustainability of projects. Sensitivity analyses can test project viability under different economic conditions, while contingency plans prepare for potential financial risks.
viii. Key performance indicators (KPIs) should be developed to measure success, with regular evaluation cycles and data analytics guiding decision-making and implementation improvements.
ix. Clear dispute resolution procedures, including mediation and arbitration, help address conflicts effectively. Independent dispute resolution bodies can oversee these processes to ensure fairness.
x. Comprehensive environmental and social impact assessments (EIAs and SIAs) must be conducted to identify potential risks. Environmental management plans and social mitigation strategies should align with international standards to ensure compliance.
xi. Training programs focusing on PPP management, procurement, and contract management can build capacity among public sector officials. Collaborating with international organizations allows for valuable knowledge sharing, while mentorship initiatives can pair experienced professionals with junior officials for hands-on learning.
xii. Stakeholder engagement can also be strengthened through workshops, seminars, and public awareness campaigns that highlight the benefits and risks of PPPs. Accessible online resources, such as guidelines and FAQs, can further enable stakeholders to understand and participate in these initiatives.

Policy Recommendations

i. Updating Laws to Meet Global Standards: Modernize existing legislation to align with international best practices, such as those outlined by the OECD or World Bank, to boost credibility and effectiveness. Establish a regular review process to ensure laws remain relevant and responsive to emerging challenges.
ii. Leveraging the Demographic Dividend: With 70% of Zimbabwe's population under the age of 35, there's immense potential to engage the youth in PPP projects. Focusing skills-building programs in areas like construction and technology helps to improve employability. Additionally, support youth-led entrepreneurial ventures through mentorship and funding opportunities.
iii. Building Institutional Capacity: Strengthen the public sector's ability to manage PPPs by offering specialized training programs. Create a dedicated PPP unit within the government to oversee project implementation and coordination. Partner with international organizations like the World Bank or IMF to gain technical expertise and share best practices.
iv. Offering Fiscal Incentives: Encourage private sector investment in PPP projects by introducing targeted tax breaks and subsidies, particularly for infrastructure development in underserved areas. Implement a viability gap funding mechanism to support economically sound projects that might otherwise struggle to get off the ground.
v. Encouraging Public-Private Collaboration: Promote strong partnerships between the public and private sectors by forming joint committees for planning and implementing projects. Draft cooperative agreements that foster knowledge sharing and resource pooling to maximize impact.
vi. Creating an Infrastructure Development Fund: Establish a dedicated fund to finance critical infrastructure projects, using contributions from both the public and private sectors. Allocate resources to high-priority areas like transportation, energy, and water systems, while ensuring the fund is managed transparently and held accountable.

Strategies for Improved Implementation

To implement reforms effectively and efficiently, the following strategies are envisaged to assist:

i. Phased Implementation: Start by piloting reforms in specific sectors such as transportation or energy. This allows policymakers to test and refine initiatives before rolling them out on a larger scale. By closely monitoring these pilot projects, challenges can be identified and addressed early, ensuring smoother nationwide implementation and long-term sustainability.
ii. Stakeholder Training: Hosting workshops, seminars, and conferences for policymakers, private investors, and community leaders can build the necessary knowledge and skills for managing reforms. Tailored training programs help meet the unique needs of different stakeholders, particularly in areas

like managing Public-Private Partnerships (PPPs). Encouraging peer-to-peer learning also fosters collaboration and the exchange of best practices.

iii. Monitoring and Evaluation: Clear performance metrics aligned with project goals are essential for tracking progress. Regular reviews—whether quarterly or annually—help measure success and highlight areas for improvement. Independent audits and evaluations promote transparency and accountability while leveraging data analytics can refine and optimize strategies over time.

Potential Challenges and Limitations

Policymakers face significant hurdles when attempting to implement successful reforms, and recognizing these challenges is critical for building resilience and navigating potential roadblocks. Some of the key issues include:

i. Resistance to Change: Opposition often arises from stakeholders with vested interests who fear losing power or resources. This resistance can make it difficult to build consensus and generate widespread support for reform efforts.

ii. Capacity Constraints: Limited resources—whether financial, human, or technological—can hamper progress. Gaps in infrastructure or expertise may leave governments struggling to meet the demands for reform, particularly in complex or underdeveloped systems.

iii. Corruption Risks: Corruption poses a serious threat to the integrity of reforms. Without strong safeguards, reforms can be undermined by malfeasance, eroding public trust and derailing progress.

References

Abubakar, Y. M. (2019). The Role of Public-Private Partnerships in Infrastructure Development in Africa. Journal of African Development Studies, 34(2), 122-145.

Adams, J. S. (1965). Inequity in Social Exchange. In L. Berkowitz (Ed.), Advances in Experimental Social Psychology (Vol. 2, pp. 267-299). Academic Press.

AfDB. (2020). Stakeholder Engagement in PPPs: African Experience.

AIDDATA (2017). Project ID: 63958 - Zimbabwe's Beitbridge-Harare-Chirundu Highway Project. https://china.aiddata.org/projects/63958/

Aimone, J., & Pan, X. (2020). Blamable and imperfect: A study of risk-taking and accountability. Journal of Economic Behavior and Organization, 172, 196-216. https://doi.org/10.1016/j.jebo.2020.02.007.

Asian Development Bank. (2019). Sustainable Infrastructure Development.

Bandauko, E., Chirisa, I., & Mazhindu, E. (2020). Community Participation in Public-Private Partnerships: A Case Study of Zimbabwe. Journal of Community Development, 51(2), 149-163.

Black, P. (2020). Public Choice Theory. Economics and the Law. https://doi.org/10.2307/j.ctv131bw26.6.

Bloomfield, P. (2006). The Challenging Business of Long-Term Public–Private Partnerships: Reflections on Local Experience. Public Administration Review, 66, 400-411. https://doi.org/10.1111/J.1540-6210.2006.00597.X.

Boardman, A., Greve, C., & Hodge, G. (2015). Comparative Analyses of Infrastructure Public-Private Partnerships. Journal of Comparative Policy Analysis: Research and Practice, 17, 441 - 447. https://doi.org/10.1080/13876988.2015.1052611.

Brogaard, L. (2021). Innovative outcomes in public-private innovation partnerships: a systematic review of empirical evidence and current challenges. Public Management Review, 23, 135-157. https://doi.org/10.1080/14719037.2019.1668473.

Buchanan, J. M., & Tullock, G. (1962). The Calculus of Consent: Logical Foundations of Constitutional Democracy. University of Michigan Press.

Chigudu, D. (2018). Infrastructure Financing and Public-Private Partnerships in Zimbabwe: Challenges and Opportunities. African Journal of Economic and Management Studies, 9(3), 289-306. https://doi.org/10.1108/AJEMS-02-2018-0040

Chilunjika, A. (2023). Public Private Partnerships (PPPs), road tolling and highway infrastructure investment in Zimbabwe. International Journal of Research in Business and Social Science (2147- 4478). https://doi.org/10.20525/ijrbs.v12i3.2436.

Chirisa, I. (2020). Environmental Impact Assessment of Public-Private Partnerships in Zimbabwe. Journal of Environmental Planning, 63(5), 841-856.

Denny, E., & Weckesser, A. (2022). How to do qualitative research? Bjog, 129, 1166 - 1167. https://doi.org/10.1111/1471-0528.17150.

Dyeyeva, N., & Khmurova, V. (2018). PUBLIC-PRIVATE PARTNERSHIP: STAKEHOLDERS' INTERESTS. Economy of Ukraine. https://doi.org/10.15407/economyukr.2018.09.099.

Eberhard, A., et al. (2019). South Africa's Renewable Energy IPP Procurement Program. Energy Policy, 128, 253-262.

Edson, B., & Gideon, Z. (2021). Sustainable Frameworks of Public-Private-Partnerships in Zimbabwe: A Holistic, Sector-Wide Review. , 02, 17-28. https://doi.org/10.47505/IJRSS.2021.9156.

Freeman, R. E. (1984). Strategic Management: A Stakeholder Approach. Pitman Publishing Inc.

Gukurume, S. (2017). Community Engagement in Development Projects: A Case Study of Zimbabwe. Journal of Community Development, 48(3), 347-359.

He, Y., Shi, L., & Li, Z. (2021). The combined effect of marginal social and private benefit on the socially optimal equity structure of PPP projects. Construction Management and Economics, 39, 807 - 823. https://doi.org/10.1080/01446193.2021.1974503.

Ittmann, H. (2017). Private-public partnerships: A mechanism for freight transport infrastructure delivery? Journal of Transport and Supply Chain Management. 11. 10.4102/jtscm.v11i0.262.

Jayasuriya, S., Zhang, G., & Yang, R. (2019). Challenges in public-private partnerships in the construction industry. Built Environment Project and Asset Management. https://doi.org/10.1108/BEPAM-01-2018-0024.

Jensen, M. C., & Meckling, W. H. (1976). Theory of the Firm: Managerial Behavior, Agency Costs, and Ownership Structure. Journal of Financial Economics, 3(4), 305-360.

Kiger, M., & Varpio, L. (2020). Thematic analysis of qualitative data: AMEE Guide No. 131. Medical Teacher, 42, 846 - 854. https://doi.org/10.1080/0142159X.2020.1755030.

Krawiec, A. E. (2016). Socio-Economic Implications of Female Inclusion in Organizational Structures and Leadership Positions. Polish Connector for RSA, Royal Society for the Encouragement of Arts, Manufactures and Commerce, Great Britain. International Journal of Management and Economics, No. 49, January–March, pp. 106–134; http://www.sgh.waw.pl/ijme/

Kyei, R., & Chan, A. (2016). Developing Transport Infrastructure in Sub-Saharan Africa through Public-Private Partnerships: Policy Practice and Implications. Transport Reviews, 36, 170 - 186. https://doi.org/10.1080/01441647.2015.1077288.

Maguwu, F. (2018). Zimbabwe: Of Corrupt Tender Deals and Elite Enrichment. https://allafrica.com/stories/201804190611.html

Masekesa, L. (2021). The Potential of Public-Private Partnerships (PPPs) in the Pursuit of Sustainable Development Goal 11 in Zimbabwe. Potchefstroom Electronic Law Journal. https://doi.org/10.17159/1727-3781/2021/v24i0a9093.

Matabvu, D. (2019). US$1bn road rehab gathers momentum. https://www.sundaymail.co.zw/1bn-road-rehab-gathers-momentum

MEFMI. (2022). Public-Private Partnerships in Zimbabwe's Health Sector.

Mhizha, C. (2021). Stakeholder Perceptions of Public-Private Partnerships in Zimbabwe's Transport Sector. Journal of Infrastructure Development, 13(1), 45-63. https://doi.org/10.1177/09749306211007321

Mhlanga, D., Moyo, T., & Moyo, B. (2020). Public-Private Partnerships in Transportation Infrastructure: Zimbabwean Experience. Journal of Transportation Engineering, 146(10), 04020121.

Miraftab, F. (2004). Public-Private Partnerships. Journal of Planning Education and Research, 24, 101 - 89. https://doi.org/10.1177/0739456X04267173.

Moyo, T., & Muzondo, N. (2020). Public-Private Partnerships for Infrastructure Development in Sub-Saharan Africa: Perspectives from Nigeria and Zimbabwe. African Journal of Business and Economic Research, 15(1), 85-102. https://doi.org/10.31920/1750-4562/2020/v15n1a5

Moyo, T., Mhlanga, D., & Moyo, B. (2020). Public-Private Partnerships in Healthcare: A Systematic Review of the Literature. Journal of Healthcare Management, 65(4), 257-274.

Mushanyuri, W. (2018). Public-Private Partnerships in Zimbabwe's Water Sector: Challenges and Opportunities. Water Policy, 20(4), 761-774.

Mutambatsere, E. (2017). Infrastructure Development through Public–Private Partnerships in Africa☆. . https://doi.org/10.1108/978-1-78714-493-420171002.

Ncube, C. (2019). An Analysis of Zimbabwe's Public-Private Partnership Policy Framework. Journal of Public Administration, 54(1), 33-46.

Nhema, A. G. (2022). Evaluating the Impact of Public-Private Partnerships on Infrastructure Development in Zimbabwe. International Journal of Public Sector Management, 35(5), 678-695. https://doi.org/10.1108/IJPSM-06-2021-0154

Nkomo, K., & Nhema, A. (2015). Implementing Public Private Partnerships (PPPs) in the transport sector in Zimbabwe: challenges and prospects. Global Business and Economics Research Journal, 4, 40-70.

OECD. (2019). Principles for Public Governance of Public-Private Partnerships.

Osei-Kyei, R., et al. (2020). Risk allocation in PPP projects: A systematic review. Journal of Risk Research, 23(1), 1-18.

Republic of Zimbabwe. (2021). National Development Strategy 1 (2021-2025). Harare: Government Printers.

Shen, L., Tam, V., Gan, L., Ye, K., & Zhao, Z. (2016). Improving sustainability performance for public-private partnerships (PPP) projects. Sustainability, 8, 1-15. https://doi.org/10.3390/SU8030289.

Siemiatycki, M. (2019). The Diversity Gap in the Public–Private Partnership Industry: An Examination of Women and Visible Minorities in Senior Leadership Positions. Public Economics: National Budget. https://doi.org/10.1111/apce.12240.

Transparency International. (2020). Corruption Risks in Public-Private Partnerships.

UN Environment. (2020). Sustainable Infrastructure.

UNDP. (2020). Sustainable Development Goals and Public-Private Partnerships.

Vallée, M. and Stucchi, A. (2024). PPPs and the frameworks surrounding them: A new comparison tool for Africa. MARCH 14. https://blogs.worldbank.org/en/ppps/ppps-and-frameworks-surrounding-them-new-comparison-tool-africa

Wang, Y., & Liu, J. (2015). Evaluation of the excess revenue sharing ratio in PPP projects using principal-agent models. International Journal of Project Management, 33, 1317-1324. https://doi.org/10.1016/J.IJPROMAN.2015.03.002.

Węgrzyn, J., and Wojewnik-Filipkowska, A. (2022). Stakeholder Analysis and Their Attitude towards PPP Success. Sustainability. 14(3):1570. https://doi.org/10.3390/su14031570

Wojewnik-Filipkowska, A., & Węgrzyn, J. (2019). Understanding of Public–Private Partnership Stakeholders as a Condition of Sustainable Development. Sustainability. https://doi.org/10.3390/SU11041194.

World Bank. (2018). Public-Private Partnerships: Reference Guide.

World Health Organization. (2019). Public-Private Partnerships for Health.

Journal of Economics and Behavioral Studies (JEBS)
Vol. 17, No. 1, March 2025 (ISSN 2220-6140)

Institutional Environment and the Quest for Stable Exchange Rate in Nigeria

*Lawal Wasiu Omotayo[1], Zainab Abubakar[2], Zainab Said Suwaid[2]
[1]Skyline University Nigeria
[2]Federal University due-jigsaw State, Nigeria
*suki4wisdom@yahoo.com, zmodes@gmail.com, zsuwaid@gmail.com
Corresponding Author: Lawal Wasiu Omotayo

Abstract: This research empirically investigates the influence of Nigeria's institutional environment on exchange rate stability using annual data from 1981 to 2023. The study uses co-integration analysis to find a co-movement between exchange rate volatility and the institutional environment measures (measured by political risk and the unpredictability of revenue sources), with the expansion of the financial sector and adjustments to exchange rate policy serving as control variables. Political risk and the unpredictability of revenue sources have a positive and substantial short- and long-term impact on Nigeria's exchange rate volatility. The results suggest that exchange rate policy only has a negative and significant impact on exchange rate volatility over the long period, while financial sector expansion has a positive but insignificant influence in both periods. The causation test reveals a unidirectional correlation between the volatility of revenue sources and the volatility of currency rates, even though there is a bidirectional association between exchange rate volatility and both political risk and revenue source volatility. This suggests that the institutional environment is endogenous to the volatility of Nigeria's currency rate. The findings suggest that restructuring Nigeria's political system and diversifying its economy away from its reliance on oil could stabilize currency rate volatility and mitigate the effects of demand fluctuations and global oil price fluctuations.

Keywords: *Exchange rate, Institution, Political risk, exchange rate policy and financial sector development*

1. Introduction

One significant macroeconomic factor that affects a nation's economy is the exchange rate. It is the rate at which one's currency gets converted to another. Wide-ranging effects on growth may result from an open economy in which the demand for foreign currency outpaces the supply of exchange rate and economic activity (Schnabl, 2007). Nigeria relies on imports of technology, raw materials, and other associated goods to support its economy; the strain on foreign exchange resulting from a lack of foreign earnings to meet demand has frequently caused exchange rate volatility. Like other economies throughout the world, Nigeria's economy has suffered over time from the impact of consistently fluctuating exchange rates when compared to more developed nations. The currency rate has frequently been volatile as a result of not having enough foreign revenues to meet demand. Emerging markets like Nigeria attach importance to exchange rates because they determine the degree of uncertainty that characterizes their markets and the necessity of lowering the expenses and hazards related to foreign exchange transactions. A stable exchange rate depends on the level of industrialization, which can accelerate structural change and economic diversification, among other things.

Despite the implementation of many exchange rate policy regimes in Nigeria with the expectation that the economy would respond favorably, the attempt to stabilize the country's economy through exchange rate stability has failed (International Monetary Fund, 2021; World Bank, 2023). In the 1990s, Nigeria, in particular and Africa in general, implemented policy reforms that tended to rely on only macroeconomic conditions and the exchange-rate regime chosen by them; this cannot be said to be the case with Nigeria.

Policy measures aimed at addressing the economic challenges in Nigeria have had limited success, as the exchange rate remains volatile and unresponsive to the policies. Notable examples include the Inter-Bank Foreign Exchange Market (IFEM), which opened on October 25, 1999; the Autonomous Foreign Exchange Market (AFEM), established in 1995; and the Structural Adjustment Program (SAP), which was started in 1986. To assist the Naira in achieving a fair exchange rate, the IFEM was designed. However, like the AFEM, the IFEM's operations were disrupted due to supply-side constraints, ongoing expansionary fiscal policies, and the persistent excess liquidity in the system. As a result, a policy change occurred on July 22, 2002, when foreign exchange demand pressures increased and external reserves continued to decline. The apex bank reintroduced the Dutch Auction System (DAS) to replace the IFEM. The goal was to establish a more realistic exchange rate

for the Naira, control excessive foreign exchange demand, preserve volatile external reserves, and stabilize the exchange rate (Imoisi, Uzomba & Olatunji, 2010).

The exchange rate unification reform, which was implemented recently in 2023, was to combine all exchange rates into a single market-determined exchange rate to facilitate price discovery and transparency in the foreign exchange market, among other reasons. Regretfully, it is challenging to pinpoint the precise effects of exchange rate unification because Nigeria did so during a period of high inflation, a significant budget and balance of payments deficit, high government borrowing, high energy prices as a result of the removal of fuel subsidies, low government revenue, and a shortage of foreign exchange (FX). The success of Nigeria's currency rate unification process could be impacted by these unfavorable economic realities. (Ozili, 2024)

In a well-functioning market economy, a flexible exchange rate system is ideal, as exchange rates typically fluctuate around an equilibrium value, with excessive volatility generally arising only from occasional business cycles. However, for a developing, oil-dependent, open economy like Nigeria, adopting a flexible exchange rate would lead to significant volatility in the exchange rate between the domestic currency and the internationally referenced U.S. dollar for several reasons. First, as an oil-dependent economy, Nigeria’s exchange rate is heavily influenced by global oil prices, which are determined externally. Factors such as OPEC's quota system, artificial controls on global oil prices, and competitive strategies during oil surpluses contribute to market inefficiencies that affect exchange rates. These dynamics would have substantial implications for Nigeria’s exchange rate. Second, as a small, open economy, Nigeria is a price taker in the international market and more likely to follow global market trends. This results in high exchange rate volatility. Thus, a flexible exchange rate system would be detrimental to Nigeria’s balance of payments. Finally, Nigeria’s status as a developing economy suggests it lacks the necessary collateral resources to control the shocks from a market-driven system, further exacerbating exchange rate volatility.

Stylized facts in Nigeria suggest that exchange rate stability appears to be less affected by increased macroeconomic stability. In 2014, Nigeria's economy grew to be the biggest in Africa and the 26th largest globally. It is currently the ninth-largest exporter worldwide. Nigeria has mostly fallen short of the expectations following the initial oil boom in the 1970s despite these enormous potentials. The nation has had difficulty meeting its macroeconomic objectives, which include raising living standards, lowering unemployment, and managing inflation. During the period under review, throughout the 1980s and until 2023, the value of the naira fluctuated. It fluctuated around N 0.61 to N 3.57 from 1980 to 1990, and from 1991 to 2000, it fluctuated around N 21.886 to N 65.047 against the US dollar. Between 2001 and 2010, it continues to fluctuate around N 118.97 to N 198.65. The intended outcome of the policy to salvage the situation was not achieved, as it continued to oscillate between 2011 and 2024 from N 157.5 to N 1,533. (CBN, 2023). Some economists and financial analysts have posited that exchange rate intervention has been underpricing (that is, undervaluing) or overpricing (that is, overvaluing) the domestic currency and that the efforts to correct these imbalances would even introduce more volatility.

The situation outlined above clearly highlights the need to assess how macroeconomic policies contribute to supporting and stabilizing the exchange rate. Specifically, it raises the issue of whether the macroeconomic environment, together with the reforms implemented in Nigeria, is sufficient to ensure exchange rate stability. To establish a macroeconomic policy framework that supports sustainable economic growth and diversification, Fischer (1993) outlined five essential prerequisites. These consist of a controllable balance of payments, a low and steady rate of inflation, a real exchange rate that is competitive and predictable, a fiscal policy that is steady and sustainable, and an appropriate real interest rate. Thus, attaining exchange rate stability requires a robust macroeconomic strategy in addition to other elements. We add the significance of the institutional environment to Fischer's (1993) criteria, recognizing that weak institutions frequently cause problems for emerging nations.

Prior research has mostly concentrated on the link between exchange rate swings and policy volatility, suggesting that a stable economic policy environment is necessary to sustain exchange rate stability. For example, Mirchandani (2013) used correlation analysis to examine macroeconomic factors affecting exchange rate volatility in India and discovered a close connection between inflation and currency rates. Ismaila (2016) investigated how exchange rate depreciation affected Nigeria's economy after the implementation of structural

adjustment programs (SAP) and discovered that net exports, total government spending, and the broad money supply all had a major long-term impact on real output. However, findings depict exchange rate depreciation did not significantly affect Nigeria's economic growth in either the short or long term and recommended that policymakers avoid relying too heavily on exchange rate depreciation as a growth strategy. Danmola (2013) investigated the influence of exchange rate volatility on Nigeria's macroeconomic variables using least squares and Granger causality tests, recommending the implementation of exchange rate controls after concluding that exchange rate volatility had a major, direct, and substantial impact on economic growth.

Several studies have explored the impact of the institutional environment on exchange rates, with evidence showing a positive connection between the institutional environment and the exchange rates of emerging economies. Studies supporting this positive correlation include those by Meftah and Nassour (2020), Adegboye, Osabohien, Olokoyo, Matthew, and Adediran (2020), Kechhagia and Metaxas (2020), Sakanko, Obilikwu, and David (2020), Yakubu (2019), Aziz (2017), Nguyen (2015), Chaib and Siham (2014), and Chau et al. (2014). However, Jurcic, Franc, and Barisic (2020) found proof of a negative relationship between the exchange rate shocks and the institutional environment. Another important factor influencing exchange rates is the export dynamics of a country, which has led to studies examining the effect of institutions on export performance. Research by Lin, Flachsbarth, and von Cramon-Taubadel (2018) and Chetthamrongchai, Jermsittiparsert, and Saengchai (2020), among others, found a positive relationship between institutional environment and exports in developing countries, while Mehrara and Keikha (2013) reported the opposite. Jama (2020) simply identified a relationship between the two variables. Additionally, Lin, Lin, Wang, and Wu (2021) examined the quality of exports and found that a stronger institutional environment enhances the quality of a country's export commodities.

Bouraouri and Hammami (2017) examined the relationship between currency rates and institutional quality, which is a measure of political instability, in five Arab Spring nations. From 1991 to 2009, using panel pool data (PPD). Their findings showed that political instability negatively affected both the value and volatility of the domestic currencies in these nations. Similarly, Culiuc and Kyobe (2017) examined the influence of institutions, measured by the Ease of Doing Business, on real exchange rates in several developing countries from 1990 to 2003, employing Structural Vector Autoregression (SVAR). They discovered a robust correlation between the real exchange rate and several measures of ease of doing business. In another study, Belke and Vogel (2015) explored the linkage between exchange rate regimes and institutions (represented by economic freedom) in selected sub-Saharan African countries from 1992 to 2011, using fully modified ordinary least squares. Their findings showed that external liberalization and exchange rate arrangements had a negative association, with more advantageous regulatory business environments positively affecting investment, financial, and labor market sectors.

This research contributes to the corpus of empirical research by examining how Nigeria's attempts to attain exchange rate stability are impacted by the institutional context. A key gap in previous research on Nigeria is the limited focus on how the institutional environment influences exchange rate stabilization efforts in Nigeria. Despite various policies and reforms designed to address structural weaknesses, these efforts have largely not succeeded. The institutional environment, which may act as a conduit for policies and reforms that result in naira stability, is probably being overlooked. This forms the foundation of the current study. Another notable gap in prior research is the failure to account for potential time series breaks in data, which could compromise the reliability of their conclusions. This study addresses that issue. While earlier studies on Nigeria have separately studied the effects of policy and institutions on exchange rates to assess their combined effect on exchange rate volatility, this article integrates both components into a single framework. The paper's structure after the introduction is as follows: Section 2 outlines the methodology; Section 3 presents and discusses the empirical data and the final section offers the conclusion.

2. Methodology

Data set and description of variables

The analysis utilizes annual data from 1981 to 2023; this period is significant as it brings to fruition the imperative of an investigation into the nature and dynamics of the institutional environment and exchange rate stability in Nigeria. Data were sourced from a variety of published sources. The residuals of a regression on the

nominal exchange rate in a univariate generalized autoregressive conditional heteroscedasticity (ARCH) model are used to calculate exchange rate volatility; the study employs a second-generation governance indicator for the institutional context, namely, the political risk index and revenue source volatility. Three key benefits come from using second-generation governance indicators: (1) they have operational significance. , (2) they are suitable for in-depth quantitative research, and (3) they are politically acceptable. The analysis utilizes data from the International Country Risk Guide (ICRG, 2023) and the Central Bank of Nigeria's (CBN, 2023) Statistical Bulletin. The choice to focus on the political risk index and revenue source volatility is founded on two primary factors in the study. First, it evaluates the ability and efficacy of social institutions, taking into account the accomplishments of government initiatives and the level of public policy satisfaction. Therefore, the institutional environment's ability to deliver essential public services is vital for a country's pursuit of its macroeconomic goals. Second, there is no doubt that the composite index of political risk index is imperious to economic outcomes, as demonstrated in prior empirical studies on Nigeria (Kimberly, 2014; Ayinde, 2020).

The control variables used in the study are changes in exchange rate policy and financial sector development. The choice of these two variables is premised on one main reason. First, it is instructive to note that the Nigerian economy has witnessed many exchange rate policies owing to the various systems adopted and the different foreign exchange rate market structures (Ayinde, 2020). It is not out of place that whenever the monetary authority adopts a different exchange rate policy, the foreign exchange rate market will be distorted, at least in the short run, and if this distortion persists, it will lead to naira volatility in tandem with the international reference currency. Second, financial sector development remains one of the collateral effects of growth development for every economy (Ehigiamusoe and Lean, 2019). The extent to which the financial sector is developed determines how financial products would be valued in terms of price and variety. In a well-developed financial sector, the price of financial products is appreciably low, and there are many varieties of financial products. The information was taken from the Central Bank of Nigeria's Annual Statistics (CBN, 2023).

Model specification and estimation procedure

Stemming from the theoretical framework, the model's functional form is specified as follows:

$$\Delta InERVOL_t = \beta_0 + \sum_{i=l}^{\rho} \Phi_1 \Delta lnERVOL_{t-1} + \sum_{i=0}^{\rho} \phi_1 \Delta lnPOLITR_{t-i} + + \sum_{i=0}^{\rho} \text{d}_1 \Delta InRESV_{t-i} + \sum_{i=0}^{\rho} \delta_1 \Delta lnEXRP_{t-i} + \sum_{i=0}^{\rho} \delta_1 \Delta ln(FSD)_{t-i} + \gamma_5 ECT_{t-1} + \mu_t - -(1)$$

The control variable in Equation 1 above is proxied by changes in exchange rate policy (ΔEXRP) and the depth of financial sector development. $(\frac{M_2}{GDP})$. The measure of exchange rate volatility is the residual obtained from the GARCH (1, 1) estimation of a univariate autoregressive model of the nominal exchange rate. In a generic sense, a GARCH (1, 1) model is specified as;

$$y_t = \mu_t + u_t \quad (2)$$

Where;

$$\mu_t = 0(cons\tan t);\ u_t = \sigma_t \varepsilon_t$$

$$y_t = u_t = \sigma_t \varepsilon_t \quad (3)$$

$$Var(y_t \mid y_{t-1}) = \sigma_t^2 = \alpha_1 + \alpha_2 y_{t-1}^2 + \beta_1 \sigma_{t-1}^2; \alpha_1 >= 0; \alpha_2 >= 0$$

$$\varepsilon_t \sim i.i.d(\mu = 0, \sigma^2 = 1) \quad (4)$$

$$y_t = u_t = (\alpha_1 + \alpha_2 y_{t-1}^2)\varepsilon_t \quad (5)$$

A GARCH (1, 1) model models the variance over time t using the values of previous squared observations and variances. Where α_1 Is the offset term that denotes the lowest which the variance can assume at any point in time; σ_{t-1}^2 Is the instantaneous variance at time t-1? The restrictions $\alpha_1 >= 0; \alpha_2 >= 0$ Are imposed to avoid

negative variance. The variance of the series at time t is predicted by the lag value of the variable. As is the case, the variance of the series is the focus for exchange rate volatility if we assume that the mean value equals zero.

$$exr_t = u_t = (\alpha_1 + \alpha_2 exr_{t-1}^2)\varepsilon_t \quad (6)$$

Exchange rate volatility is first extracted from a univariate generalized autoregressive conditional heteroscedasticity (GARCH) framework as the first stage in the two-step estimation process. A pre-estimation test is a necessary condition before estimating the model. This was done by carrying out a unit root test using two stationarity techniques, i.e. Ng and Perron (2001) and Kwiatkowski-Philips-Schmidt-Shin (1992) tests were considered for the purpose. Perron and Vogelsang (1992) and Zivot and Andrews (1992) focus on unit root tests with structural breaks, the decision to use these tests was driven by the specific challenges encountered in most time series data. Overall, the use of four-unit root tests aims to enhance robustness, facilitate comparison, and prevent potential spurious regression results. The method of analysis used is the Autoregressive Distributed Lag (ARDL) model because it delivers more robust results, especially with small datasets. Banerjee and associates (1993). The ARDL model can be linearly transformed into a dynamic model. The first step is to examine the co-movement between the variables. In doing this, a Wald test was conducted to determine whether co-movement exists. To determine the rate of adjustment and equilibrium, the long-term connection was estimated first, followed by the short-term coefficient using the ARDL specification's error correction representation.

The modified paired Granger causality test Precisely, the Toda and Yamamoto (1995) test is employed in this investigation. This framework is based on an enhanced VAR model and employs a modified Wald test statistic. The TY method is a modified VAR model applied within a multivariate context, accommodating series with different integration orders. The primary benefit of this causation approach is that, unlike traditional Granger causality, the TY framework provides greater power when handling series with varying integration levels (Lawal et al., 2023). This enhances the likelihood of accurate model specification and reduces the risk of spurious causality. The bivariate model is stated as follows:

$$y_{1t} = \alpha_0 + \sum_{i=1}^{k} \alpha_{1i} y_{1t-i} + \sum_{j=k+1}^{k+d_{\max}} \alpha_{2j} y_{1t-j} + \sum_{i=1}^{k} \delta_{1i} y_{2t-i} + \sum_{j=k+1}^{k+d_{\max}} \delta_{2j} y_{2t-j} + \upsilon_{1t}$$

$$y_{2t} = \beta_0 + \sum_{i=1}^{k} \beta_{1i} y_{1t-i} + \sum_{j=k+1}^{k+d_{\max}} \beta_{2j} y_{1t-j} + \sum_{i=1}^{k} \phi_{1i} y_{2t-i} + \sum_{j=k+1}^{k+d_{\max}} \phi_{2j} y_{2t-j} + \upsilon_{2t}$$

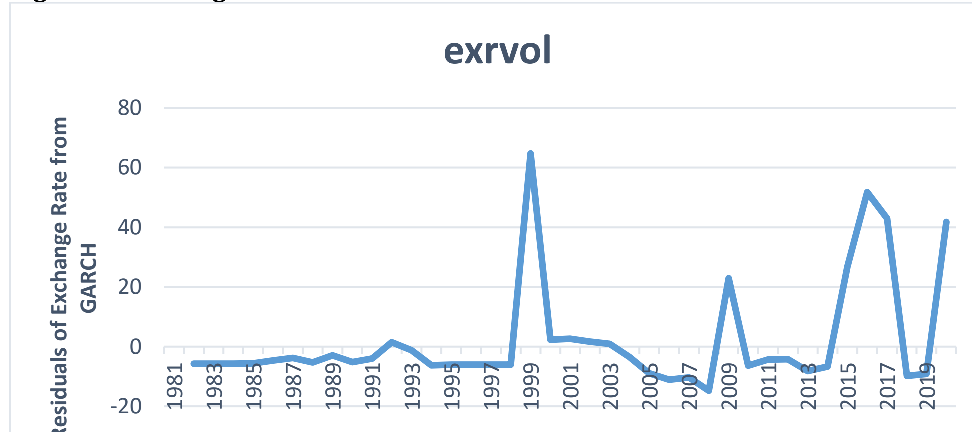
Where the ideal lag length is indicated by k, the maximum order of integration, or AIC and SIC, are among the common information factors that determine this. Once the orders of integration of each variable have been obtained, this will be ascertained.

3. Results and Discussion

The trend depicted in Figure 1 shows that exchange rates in Nigeria were relatively stable between the periods 1981 and 1986 and 1994 and 1998. The former period coincides with the period before the commencement of SAP in Nigeria, while the latter period relates to the time when the exchange rate was fixed. It was during the height of military incursion in Nigeria under General Sani Abacha. The general ruled Nigeria between 1993 and 1998. Aside from these two periods, however, indications of substantial fluctuations in currencies are seen in Nigeria in all other periods. Specifically, there was exchange rate volatility in the country somewhere between 1998 and 2000, 2008 and 2010, and 2014 and 2018 and since 2019. These periods are periods of high exchange rate spikes in Nigeria, and the exchange rate during these periods witnessed acute depreciation of the domestic currency. The period 1998 – 2000 birthed democratic dispensation in Nigeria; the period 2008 – 2010 signaled the era of the global economic cum financial crisis and the period between 2014 and 2018 witnessed another period of acute exchange rate depreciation in Nigeria. During this period, there was an economic recession and a stock market crash in Nigeria. Also, the COVID-19 pandemic has dire consequences on the stability of the exchange rate in Nigeria. Remarkably, only the period between 2004 and 2008 suggests that exchange in Nigeria witnessed acute appreciation. This period coincides with the period of banking sector reforms in the country. The bank recapitalization exercises that herald a series of mergers and acquisitions in Nigeria led to

the inflow of foreign capital. This led to an excessive supply of the foreign currency of the United States dollar over the demand. This leads to currency appreciation as the price (i.e., the exchange rate) of the domestic currency in terms of the foreign currency falls.

Figure 1: Exchange Rates Trend



The correlation matrix in Table 1 details the coefficients of correlation between the variables. The principal diagonal elements are the correlation coefficients of the variable on itself. These coefficients are unity (that is, 1). The upper triangular matrix and lower triangular matrix are the same, indicating both the direct and reverse causality among the variables. The correlation coefficients indicate that there is no issue with the series' collinearity or multicollinearity, as none of the correlation coefficients attain the 0.90 threshold. The correlation coefficient between revenue source volatility (RSV) and the growth of the financial sector is determined by the ratio of the gross domestic product to the broad money supply. (M2_GDP), is 0.83, this is still marginally less than the 0.90 threshold value for collinearity. This indicates that the correlation between these two respective variables is positively strong but could not warrant the problem of collinearity or multicollinearity since these coefficients are lesser than the 0.90 threshold value.

Table 1: Correlation Matrix

Variables	EXCERPT	EXRVOL	M2_GDP	POLIT_RISK	RESV
EXRP	1.00	0.10	0.17	-0.04	0.33
EXRVOL	0.10	1.00	0.28	0.09	0.27
M2_GDP	0.17	0.28	1.00	-0.16	0.83
POLIT_RISK	-0.04	0.09	-0.16	1.00	-0.22
RESV	0.33	0.27	0.83	-0.22	1.00

Sources: Author's Computation

The results from Ng and Perron, shown in Table 2 with trend and intercept, provide evidence that the variables display a heterogeneous order of integration; since none of the variables are integrated at order 2, it is logically reasonable to conclude that both results lead to the same outcome. Furthermore, Table 3 results show that for EXRVOL, POLITI-RISK, REVS, and M2_GDP, the break dates are generally stable, except for RESV and EXRVOL. For these variables, the break year is identified as 2013 with an intercept and 2010 for EXRVOL, while 1999 with an intercept and 2016 with both trend and intercept are reported for EXRVOL.

Table 2: Unit Root Test Result (with intercept and linear trend)

Variable	NG&PERRON	KPSS	order of int
EXRVOL	-8.1000	0.081	I (1)
EXRP	-5.2020	0.133**	I (0)
M2_GDP	-3.4111	0.133**	I (1)
POLIT_RISK	-8.9388	0.099	I (0)
RESV	1.5442	0.158**	I (1)

ΔEXRVOL	-17.001**	0.062	I (1)
ΔEXRP	-19.000**	0.045	I (1)
ΔM2_GDP	-14.4862*	0.059	I (1)
ΔPOLT_RISK	-13.8001*	0.079	I (1)
ΔRESV	-10.6397**	0.157	I (1)

Sources: Author's Computation

The outcomes of these tests at the unit root level show two essential implications for modeling. First, the mix of the I (0) and I (1) variables included within the same modeling framework supports the use of an autoregressive distributed lag (i.e., ARDL) model. Again, the presence of structural fractures lends credence to the fact that the link between exchange rate volatility and the institutional environment in Nigeria can also be investigated with the use of symmetric as well as linear models.

Table 3: Structural Break Unit Root Test

	Intercept		Intercept and trend	
Variable	**T-Statistics**	**Break Date**	**T- Statistics**	**Break Date**
EXRVOL	-5.2957*	1999	-5.5861*	2016
POLITE	-6.2171**	1999	-5.8087**	1999
RESV	-5.7643*	2013	-4.6365*	2010
FD	-5.4810**	2007	-5.4486*	2007
EXRP	-3.3752	2010	-3.6741*	2010

Sources: Author's Computation

Long run dynamics

In the long run, as detailed in Table 4, the exchange rate volatility at lag 1 indicates that the autoregressive components of the model are well suited with a -0.407 coefficient and corresponding probability values of 0.030. Even at the 5 percent level, this is noteworthy. The one-period lag effect of exchange rate volatility has a substantial detrimental impact on its present dynamics, according to economic intuition. The findings indicate that both the political risk factor and revenue sources, at their current levels, positively affect exchange rate volatility in Nigeria. Political risk has a 3.249 coefficient and 0.001 probability value, while the corresponding values for revenue source volatility are 8.511 and 0.000, respectively. This suggests that a unit increase in political risk results in a 3.249 unit increase in the exchange rate's volatility, while an increase in revenue source volatility leads to an 8.511 increase in exchange rate volatility. The implication is that the more the increases in these two components of the institutional environment, the more volatile the behavior exhibited by the exchange rate. These two variables aggravate the volatility of the exchange rate in Nigeria. These align with theoretical expositions and empirical evidence obtained from the literature. Evidence for this has been obtained for Nigeria to suggest that sound political culture is required to stabilize the exchange rate in Nigeria. Similarly, revenue source volatility should also be considered if the government intends to lessen exchange rate volatility in the country. This finding also aligns with logic and theoretical expositions. First, it is logical that revenue from oil is the mainstay of the Nigerian economy, and the revenues generated from the source are bound to be volatile as the sales of these oil products are traded at international prices, largely determined by the exchange rate. A preponderance of empirical evidence supports these findings of the effects of the institutional environment in determining the volatility of the exchange rate in Nigeria. These studies include Chau et al. (2014), Freeman et al. (2000), Asteriou and Sarantidis (2016), and Bouraouri and Hammami (2017), among others.

Table 4: Long-Run Result

Variables	Coefficients	T-statistics	Probability
C	-5.920	-2.494	0.030
Exrvol (-1)	-0.407	-2.472	0.031
Polit_risk	3.249	4.320	0.001
Resv	8.511	6.569	0.000
Exrp(-2)	-2.645	-2.853	0.016
M2_gdp	0.674	0.561	0.586
Dummy_exrvol	2.902	2.706	0.020

R^2= 0.951, Adjusted R^2, 0.843, F- Statist 8.85 (0.0000), DW: 2.315

According to estimations for the long term, exchange rate policy has a negative and substantial impact on Nigeria's exchange rate volatility. The exchange rate policy has a coefficient of -2.645, a -2.853 T-statistics value and a 0.016 probability value. Nonetheless, the higher the exchange rate policy, the lower the volatility of the exchange rate in the country. This finding is seriously circumspect, as it tends to suggest that policymakers are not doing enough to ensure that appropriate policy is in place for managing exchange rates toward stability. Heuristically, it is an indication that there is a need for more intentional and proactive policies of exchange rate management in Nigeria. However, the nation's currency rate volatility has been made worse by the degree of financial development, albeit insignificantly. This is evident in the coefficient of 0.674 and probability value of 0.586. The implication is that for the exchange rate to stabilize in Nigeria, there is a need for the financial sector to be developed to provide the needed collateral effects to stimulate investment and enhance growth altogether. Additionally, 2.902 T-statistics and 0.020 related probability values indicate that at the five percent significance level, the dummy variable that the model uses to reflect the structural break problem is significant. The adjusted coefficient of determination (adjusted R-squared) is 0.843. This indicates that the independent variables explained 84.3 percent movement, the remaining 15.7 percent could be explained by extraneous factors beyond the reach of this study. More so, Durbin-Watson statistics of 2.31 indicate that there is no autocorrelation problem in the estimation, as the DW statistics fall within the acceptable threshold of 1.6 – 2.4 for the absence of an autocorrelation problem. The F-statistics value of 8.85 and probability value of 0.000 imply that the model does not suffer any specification bias and or problem. This lends credence to the overall fitness of the model.

Short run dynamics

As seen in Table 5, in the short run, the error correction term (proxied as ECT) is properly signed with a negative value of -0.9113 for the coefficient, a T-statistics value of -11.189 and a corresponding probability value of 0.000. The -0.9113 coefficient of the ECT suggests that about 91% of disequilibrium is corrected in the current year. Hence, there would be a full recovery back to the equilibrium of the exchange rate in less than a year once affected by economic shock. This implies that about 91 percent adjustment to equilibrium is achieved during the recovery period of a year. Also, the lagged exchange rate volatility (proxied as it is) is significant, with a -0.394 coefficient and a 0.002 probability value. This short-term influence is consistent with the long-term, one-period-lag effects on the present exchange rate level. The conclusion is that if the exchange rate had been more volatile the year before, it would be less volatile this year. Additionally, Dummy Exrvol indicates that the coefficient of 2.902 is significant even at the 1 percent level, supporting the idea that structural breaks influence Nigeria's currency volatility. This verifies the ARDL with the structural break analysis technique.

Table 5: Short-run Result

Variables	Coefficients	T-statistics	Probability
D(exrvol(-1)	-0.394	-3.942	0.002
D(poli_risk(-1))	3.249	7.263	0.000
D(M2_gdp(-1))	-0.971	-1.512	0.159
D(resv(-1)	15.071	10.109	0.000
D(extra(-1))	9.533	2.119	0.058
Dummy_exrvol	2.902	7.083	0.000
ECT (-1)	-0.9113	-11.189	0.000

R^2= 0.966, Adjusted R^2=0.930, DW= 2.32,

Sources: Author's computation

When taking into account how the institutional environment affects short-term exchange rate volatility, the findings indicate that political risk and revenue source volatility are positive and impact positively. Specifically, the coefficient of political risk is 3.249 with a 7.263 T-statistics value and a 0.000 probability value. Revenue source volatility has a 15.071 coefficient with a 10.109 T-statistics value and a 0.000 probability value. Also, only the degree of development of the financial industry is insignificant of all the two control variables. In the short term, exchange rate policy has a positive and substantial influence on exchange rate volatility. The coefficient is 9.533 with a 2.119 T-statistics value and a 0.000 probability value. This suggests that a unit rise in exchange rate policy in the short run would aggravate domestic currency volatility. This contrasts sharply with the findings obtained in the long run, where more exchange rate policy would be needed to reduce its

volatility. The intuition from here is that exchange rate policy has a time-variant influence on the volatility of the exchange rate in the country.

The adjusted coefficient of determination of 0.930 reveals that 93% of the movement in exchange rate volatility is largely accounted for by the independent variables included in the model, with only 7 percent of the variations remaining unexplained. These unexplained variables are extraneous endogenous. The Durbin-Watson statistic of 2.32 suggests no autocorrelation problem, as it ranges between the expected thresholds of 1.60 and 2.40.

Causality Test Result
By the selection criteria, the initial lag length for estimation is set to 3, while the lag length used is 4. The results of the autocorrelation test, with a value of 46.4113 and a corresponding p-value of 0.3712, indicate no autocorrelation up to 4 lags. The general direction of the causal link between institutional indicators and exchange rate volatility is clarified by these findings, suggesting that institutional environment measures in Nigeria do not Granger cause exchange rate volatility. This hypothesis is tested at a 10 percent significance level. The findings of the causality test are presented in Panel C of Table 7.

Table 6: VAR Residual Serial Correlation LM –Test Results

Lags	LM-stat	Prob.
1	66.7421	0.4170
2	71.3381	0.4229
3	53.8213	0.5812
4	46.4113	0.3712

Source: Author's computation

As a consequence, the findings show which way institutional quality metrics and exchange rate volatility are causally related overall. According to the null hypothesis, Nigeria's institutional quality metrics do not contribute to the nation's exchange rate volatility.

Table 7: Causality Test
Panel C: Causality from other variables to EXRVOL
Dependent Variable: EXRVOL

Variables	Chi-Square	Prob. Values
POLITR	2.3189	0.5089
RESV	7.162	0.0669
FD	2.4215	0.4896
EXRP	1.8194	0.6107
ALL	27.0043	0.0789

Source: Author's computation

Revenue source volatility is the only individual institutional quality measure that significantly impacts Nigeria's exchange rate volatility at the 10 percent significance level, as shown in Panel C of Table 7 above. Nevertheless, collective Granger causality between institutional environment measures and exchange rate volatility in Nigeria cannot be precluded at the 10 percent level, as depicted by the 27.0043 chi-square value and the 0.0789 probability value.

Panel D: Causality from EXRVOL to other variables

Variables	Chi-Square	Prob. Values
POLITR	13.82544	0.0032
RESV	6.604382	0.0856
FD	2.208451	0.5303
EXRP	0.060161	0.9961

Source: Author's computation

The second set of causal relationships is shown in Panel D of Table 7; the findings show that at the five and ten percent significant levels, the null hypotheses cannot be disproved. These results are instructive because they demonstrate that only revenue source volatility and political risk cause exchange rate volatility. Overall, the results demonstrate a causal correlation in both directions between exchange rate volatility and the institutional environment. This may be seen in the results combining panels C and D of Table 7. It is obvious from the empirical result that the institutional environment variables are endogenous to exchange rate volatility in Nigeria.

4. Conclusion

This article's primary goal is to investigate the connection between Nigeria's institutional environment and exchange rate volatility. The analysis covers the years 1981–2023 using annual data. A two-step procedure was adopted in the estimation process. The findings from this study have some policy implications. First, the GARCH (1,1) estimation shows that the exchange rate is truly volatile in Nigeria. This indicates that the government should institute an exchange rate policy that will stabilize the exchange rate in Nigeria. This is necessary since Nigeria is a small, open, oil-dependent economy. Second, the results of the autoregressive distributed lag model demonstrate that the exchange rate's volatility exhibits a countercyclical behavior in the long-run situation in Nigeria. Third, an increase in these two components of the institutional environment (political risk and revenue sources volatility), the more volatile the behavior exhibited by the exchange rate in Nigeria. In line with this, development programs must incorporate institutional-stimulating measures that particularly address various dimensions of the institutional environment, especially political and economic institutions with and among various sectors of the economy. Suggesting that political restructuring, aimed at curbing arbitrary manipulation of the domestic currency's exchange rate and reducing its volatility, along with policies that foster financial sector development, are important policy recommendations.

References

Adegboye, F. B., R., Osabohien, F. O., Olokoyo, O., M., & Adediran, O. (2020). Institutional quality, foreign direct investment, and economic development in sub-Saharan Africa, Humanities and Social Sciences Communications, https://doi.org/10.1057/s41599-020-0529-x

Aizenman, J. & Marion. N. (1993). Policy uncertainty, persistence and growth. Review of International Economics 1(4), 145-163.

Alagidede, P. & Ibrahim, M. (2017). On the causes and effects of exchange rate volatility on economic growth. Evidence from Ghana. Journal of African Business, 18 (2), 169-193.

Akinci, O. & Olcay, Y. C., Umit, O. & Gulbin, S. (2005). Causes and effectiveness of foreign exchange interventions for the Turkish economy. Central Bank of the Republic of Turkey. Working paper, research and monetary policy department central bank of the Republic 5(5), 17-33.

Akinci, Ö., Çulha, O. Y., Özlale, Ü., & Şahinbeyoğlu, G. (2006). The effectiveness of foreign exchange interventions under a floating exchange rate regime for the Turkish economy: a post-crisis period analysis. *Applied Economics*, *38*(12), 1371–1388.

Asteriou, D., & Sarantidis, A. (2016). Political instability and exchange rate uncertainty. Evidence from OECD Countries. *Economics and Business Letters* 5 (4), 113-124

Ayinde. T. O. (2020). Policy lag and exchange rate dynamics in Nigeria: Any evidence? *Journal Ekonomi Pembangunan*, 18(1), 1-12

Aziz, O. (2017). Institutional quality and exchange rate volatility in Arab economies. Finance Research Letters, doi: 10.1016/j.frl.2017.10.026

Banerjee, A., Dolado, J., Glabraith, W., & Hendry, F. (1993). Co-integration error correction and the econometric analysis of Non-Stationary Data January 1993 *The Economic Journal* 106(439) DOI:10.1093/0198288107.001.0001SourceRePEc

Baxter, M. & Stockman, A. (1989). Business cycles and the exchange-rate regime. Journal of Monetary Economics. 23(3), 377-400

Belke, A. & Vogel, L. (2015). Economic freedom and exchange rate: A dynamic panel analysis for transition Economics. International Economics and Economic Policy 12(3), 375-392

Bouraoui, T. & Hammami, H., (2017). Does political instability affect exchange rates in Arab Spring countries? Applied Economics 49 (55), 5627-5637.

Buchanan. J. M. (1977). The limits of liberty between anarchy and Leviathan. Chicago University Press.

Calvo, F., & Reinhart. P. (2000). Fear of floating. *Quarterly Journal Economics. 117*, 379-408.

Central Bank of Nigeria (2023), Statistical Bulletin. Central Bank of Nigeria (CBN).Abuja, Nigeria.

Chaib, B. & Siham. M. (2014). The impact of institutional quality in attracting foreign direct investment in Algeria. Topics in Middle Eastern and African Economies, 16(2), 142-163.

Chau, F., Deesomsak, R., & Wang, J. (2014). Political uncertainty and stock market volatility in the Middle East and North African (MENA) countries. *Journal of International Financial Markets Institutions and Money,* 25 (1), 1-19.

Chetthamrongchai, P., Jermsittiparsert, K., &, Saengchai, S. (2020). How the nexus among the free trade, institutional quality and economic growth affect the trade from ASEAN Countries, Entrepreneurship and Sustainability Issues, 7(3), 2079 – 2094.

Chousa, J., Pineriro, K., Haider, A., Melikyan, D. & Tamazian, A. (2005). Assessing institutional efficiency, growth and integration. Emerging market review 6, 69- 84.

Culiuc, A. & Kyobe, A. (2017). Ease of doing business and real exchange rate. IMF Working Paper, No. 182.

Danmola, R. A. (2013). The impact of exchange rate volatility on the macroeconomic variables in Nigeria. *European Scientific Journal*, 9(7), 152-165.

Domac, I. & Mendoza, A. (2002). Is there room for forex interventions under the inflation-targeting Framework? Evidence from Mexico and Turkey. Central Bank of Turkey, Discussion Paper.

Dominguez, K. (1998).Central bank intervention and exchange rate volatility. Journal of International Money and Finance, 1998, 17 (1), 161-190

Ehigiamusoe, K.U., & Lean, H. H. (2019) Influence of real exchange rate on the finance-growth nexus in the West African Region. Economies 7(1), 23- 45.

Fischer, S. (1993). The Role of Macroeconomic Factors in Growth. Journal of Monetary Economics, 32(3), 485-512.

Freeman, C. (1976). The Economics of Industrial Innovation, London: Penguin Books.

Friedman, P. (1953). Short-run fluctuations in foreign exchange rates. Evidence from the data 1973-1979. Journal of International Economics. 13,171-186.

Ghosh, A., Gulde, A. M., & Wolf, H.C. (2003). Exchange rate regimes, choices and consequences. Massachusetts (US). Massachusetts Institute of Technology Press.

Guimarães, F. R., & Karacadag, C. (2004). The empirics of foreign exchange intervention in emerging Market Countries. The Cases of Mexico and Turkey. *IMF Working Paper, WP/04/123*.

Imoisi, A. I., Uzomba, P. C. & Olatunji, L. M. (2010). An analysis of interest and exchange rates effect on the Nigerian economy: 1975–2008. *Asian Economic and Financial Review* 2(6), 648-657.

International Monetary Fund. (2021). Global Trade Liberalization and the Developing Countries. IMF Issue Brief, November

Ismaila, M. (2016). Exchange rate depreciation and Nigeria's economic performance after structural adjustment programs (saps). *NG-Journal of Social Development*, 5(2), 122-132.

Iyoboyi, M., Muftau,O. O.,& Ademola, A.S. (2016). The Institutional and Policy Environment and the Quest for Industrialization in Nigeria. Journal of Economics and Behavioral Studies, 8(2), 13-25.

Jama, A. B. (2020). The effect of institutional quality on export performance of the Middle East & North-Africa Region. International Journal of Research and Innovation in Social Science. 4(1), 14 – 20.

Jurcic, L., S., Franc, A., & Barisic, A. (2020). Impact of institutional quality on foreign direct investment inflow: Evidence from Croatia, Business Systems Research, 11(1), 44-58.

Kechhagia, P. & Metaxas, T. (2020). Institutional quality and FDI Inflows: An empirical investigation for Turkey. *MPRA* Paper No. 104309,https://mpra.ub.uni-muenchen.de/104309/

Kimberly, A. (2014). Volatility definitions and types in US economy, use economy about.com

Kwiatkowski, D., Phillips, P. C., Schmidt, P., & Shin, Y. (1992). Testing the null hypothesis of stationarity against the alternative of a unit root: How sure are we that economic time Series have a unit root? Journal of 82 Central Bank of Nigeria Economic and Financial Review September 2020 econometrics, 54 (1-3), 159-178

Lawal W. O., iyoboyi, M. & Odetokun, B. O. (2022). Institutional quality and exchange rate volatility: A non-linear approach. Lafia Journal of economics and management. 7(1), 85-108 Published by Department of economics, federal university life, and Nigeria.

Lawal W. O., Nahallaa, A. & Iyoboyi, M. (2023). Institutional quality and exchange rate volatility in Nigeria: a causality implication. : Al-hikmah Journal of economics AJEC 4(1), 1-20.2023.

Lin, J. I., Flachsbarth, S., & Von Cramon,T. V. (2018). The Role of institutional quality on the performance in the export of coconut products, Global Food Discussion Papers 126

Lin, Y. S., Lin, X., Wang & Wu. J. U. (2021). Does institutional quality matter for export product quality? Evidence from China. The Journal of International Trade & Economic Development, 25(5), 23-40

Meftah, S., & Nassour, A. (2020). Analysis of the relationship between quality institutional and foreign direct investment in Algeria - Econometric study. *Economic and Management Research Journal*, 14(5), 173 – 186.

Mehrara, M., & Keikha, A. (2013). The Effect of Institutional Quality on the Export of Developing Countries. Journal of Empirical Economics, Research Academy of Social Sciences 1(3), 104-106.

Mirchandani, A. (2013). Analysis of Macroeconomic Determinants of Exchange Rate Volatility in India. *International Journal of Finance & Economics*, 3, 172-179.

Ng, S., & Perron, P. (2001). Lag length selection and the construction of unit root tests with good size and power. *Econometrica, 69*, 1519-1554.

Nguyen, V. B. (2015). Effect of institutional quality on FDI in provinces of Vietnam; Empirical evidence based on difference panel GMM. Journal of Economic Development, DOI: 10.24311/Jed/2015.22.3.04

North, D. C. (1990). Institutions, institutional change and economic performance. New York, Cambridge University Press.

North, D. (1981). Structure and change in economic history New York: W.W. Norton.

Orlowski, L. T. (2003). Monetary and exchange rate strategies for the European Union's Eastern Enlargement. HYPERLINK http://link.springer.com/journal/11079 Open Economies Review. 14 (3), 219-220

Ostrom, E. (2015). Governing the commons. Cambridge. Cambridge University Press.

Ozili, P. K. (2024). Exchange Rate Unification in Nigeria: Benefits and Implications. Recent Developments in Financial Management and Economics. 1-14 IGI Globa Online at https://mpra.ub.uni-muenchen.de/120441/ MPRA Paper No. 120441, posted 23 Mar 2024 10:29 UTC

Perron, P., & Vogelsang, T. J. (1992). Non-stationarity and level shifts with an application to purchasing power parity. Journal of Business and Economic Statistics*, 10*, 301–320.

PRS Group. (2023). International Country Risk Guide (ICRG) Researchers Dataset, https://doi.org/10.5683/SP3/HVASXW,Borealis,V11,UNF:6:ay+aVDktplU/TpZxygRE/Q= [fileUNF]

Schnabl, G. (2007). Exchange rate volatility and growth in emerging Europe and East Asian *CESifo Working Paper* No. 2023

Sakanko, M.A., Obikulu, J., & David, J. (2020). The effect of aggregate institutional quality on foreign direct investment in Nigeria: Evidence from NARDL. Economics and Law, 2(2), 1-13.

Searle, J. (2005). what is an institution? *Journal of Institutional Economics*, 1, 1-2

Toda, H.Y. & Yamamoto, T. (1995). Statistical inferences in vector autoregressive with possibly integrated processes. Journal of Econometrics 66*,* 225-250.

World Bank. (2023). World Development Indicators. The World Bank, Washington DC

Yakubu, I. N. (2019). Institutional quality and foreign direct investment in Ghana: a bounds-testing cointegration approach. Review of International Business and Strategy, 30(1), 109 – 122.

Yıldırım, A. (2015). Institutional structure and international competitiveness. A review on Turkey. Unpublished Ph.D. Thesis, Mugla: Muğla Sıtkı Koçman University, Institute of Social Sciences.

Yildirim, A., & Gokalp, M. F. (2016). Turkey institutions and economic performance: A review on the developing countries. Procedia Economics and Finance. 38, 347 – 359.

Zivot, E., & Andrews, D. (1992). Further evidence of the great Crash, the oil price and the unit-root hypothesis. Journal of Business and Economics Statistics 10, 251-270.

Journal of Economics and Behavioral Studies (JEBS)
Vol. 17, No. 1, March 2025 (ISSN 2220-6140)

An assessment of the Altman Z Score on predicting corporate failure. A case of insolvent financial companies listed on the Zimbabwe Stock Exchange

[1]Lorraine S Sibanda, [2]Julius Tapera
[1]NetOne Cellular, Zimbabwe
[2]Lupane State University, Zimbabwe
lsibanda@netone.co.zw, *juliustapera@gmail.com
Corresponding Author: Dr Julius Tapera

Abstract: The study explored the causes of corporate failure among financial institutions using the Altman Z-scores. Traditionally, most finance professionals and firms depend on ratio analysis to determine performance, but the application of models like the Altman Z-Scores has hardly been utilized to analyze firm performance and predict potential failure. The major objective of this study was to assess the level to which Altman Z-scores can be used in determining corporate failures a year or two years before insolvency. The research used a mixed methods approach in gathering data. Financial data from annual reports and statements were quantitatively analyzed to compute key financial ratios essential for deriving the Altman Z-Score. Qualitative methods were also employed to explore best financial practices that can mitigate corporate failure risks in Zimbabwean financial institutions. A total of 20 industry experts, including financial analysts, regulators, and financial institution executives, were purposively selected based on their qualifications and experience, for interviews to gather qualitative data. The findings of the study highlight the Altman Z-Score model's effectiveness in predicting financial distress well in advance while also highlighting governance, risk management, regulatory compliance, and operational efficiency as critical areas for mitigating corporate failure. The effectiveness of the Altman Z-Score model and its reliability in identifying at-risk companies both two years and one year before failure was confirmed and the findings give pointers to consider in developing policies that promote financial stability and resilience in the corporate sector.

Keywords: *Corporate failure, insolvent, Altman Z Score, financial banks, Zimbabwe Stock Exchange,*

1. Introduction

Corporate failure has been the major concern of many countries, and Zimbabwe has several financial institutions closing due to several reasons, chiefly poor corporate governance and poor risk management practices. There is also mention of poor level of capitalization as the major cause of company failure in the financial sector. The study was informed by the limited application and interrogation of models that are robust in predicting financial strain in financial institutions. Understanding the reasons behind corporate failure is paramount for stakeholders, including investors, management, regulators, and policymakers, who need to mitigate risks and safeguard economic stability. (Ahamed, 2021; Priyadi, 2021). Corporate failure in the financial sector is particularly concerning due to its potential to disrupt economies, given the interconnected nature of financial institutions. The ability to effectively analyze corporate financial performance and timely predict financial distress is very critical to inform the timely implementation of mitigatory interventions to avert institutional collapse (Molla, 2022; Priyadi, 2021). One of the predictive models is the Altman Z-Score, which has become eminent for its capacity to evaluate corporate health and predict insolvency risk. This study, therefore, focused on assessing the effectiveness of the Altman Z-Score model in predicting corporate failure, specifically targeting insolvent financial companies listed on the Zimbabwe Stock Exchange (ZSE). This focus is justified by the critical role financial institutions play in economic stability, making early prediction models essential for proactive risk management (Haider, 2019; Altman and Hotchkiss, 2019). The Altman Z-Score, developed by Edward Altman in 1968, utilizes various financial ratios from a firm's statement of financial position to produce a single score that communicates the firm's financial health. The Z-Score is used to categorize companies into three zones: safe, grey and distress zones.

Zimbabwe's financial sector has faced significant challenges over the past decades, with several high-profile bank failures. In addition, the Zimbabwean financial services sector has faced several macroeconomic challenges, including hyperinflation, currency volatility, and economic downturns. This has resulted in the insolvency and collapse of various financial institutions such as Kingdom Bank, Zimbabwe Allied Bank Group (ZABG), Interfin Bank, Trust Bank, Royal Bank of Zimbabwe, Renaissance Merchant Bank, Tetrad, and Century

Discount House, highlighting the sector's vulnerabilities (Ncube, 2014; Gumbo, 2016). These failures underscore the need for robust predictive tools to foresee and mitigate financial distress. Research on the local application of bankruptcy prediction models has indicated that while these models are generally effective, there is a notable gap in local knowledge and utilization (Ncube, 2014; Gumbo, 2016). The Altman Z Score presents an opportunity to evaluate the financial health of these institutions and understand their effectiveness within the unique context of the Zimbabwe Stock Exchange (ZSE). To this end, there is a need to adapt and apply proven predictive models like the Altman Z-Score to the Zimbabwean context, addressing local gaps in its understanding and utilization.

The Altman Z-Score has been applied to various economic sectors and different markets, signifying its adaptability and relevance to various industries. Its application to the financial services sector has, however, been limited, leaving a dearth of both theoretical and empirical literature on its application to this sector. This study, therefore, seeks to close this knowledge gap by contributing to the limited extant literature, theoretically and empirically, and also contributing to policy direction based on the findings of the study.

By exploring the relationship between the Altman Z Score and corporate insolvency in Zimbabwe, this study contributes to the understanding of financial distress prediction and its practical applications in emerging markets. It further creates scope for the timely detection of distress indicators that can become the basis for formulating and implementing mitigatory strategies to save financial institutions from collapse.

The structure of the paper comprises a theoretical framework and a review of extant literature review on the Altman Z Score and corporate failure prediction, an overview of the methodology used for data collection and analysis, and a presentation of findings highlighting the Z Score outcomes for the selected insolvent companies. This is followed by a discussion of the results in the context of Zimbabwe's economic environment, conclusions and recommendations for future research, policy and practice.

2. Theoretical Framework

The Agency Theory

The Agency Theory is a key component of corporate governance literature that explores the relationship between principals (such as shareholders) and agents (typically management) within organizations. It posits that conflicts of interest arise due to the divergence in goals between these parties, where agents may act in their self-interest rather than maximizing shareholder wealth (Meckling and Jensen, 1976). The theory suggests that agency problems occur when agents (management) prioritize personal goals or short-term gains over the long-term financial health of the organization (Eisenhardt, 1989).

In the context of financial distress, agency problems can manifest in several ways. For instance, managers might engage in risky investment strategies to boost short-term performance metrics or pursue mergers and acquisitions that benefit their prestige rather than the company's financial stability (Jiang et al., 2019). These actions can lead to increased leverage, operational inefficiencies, or inadequate risk management practices, ultimately contributing to financial distress (Xu, 2020).

The principal-agent relationship forms the core of the Agency Theory, where shareholders delegate decision-making authority to managers. This delegation creates a situation where managers may prioritize their interests, such as job security or compensation incentives, over shareholder wealth maximization. (Xu, 2020). Incentive mechanisms, such as executive compensation packages tied to short-term performance metrics, can exacerbate agency problems by encouraging managers to take excessive risks to achieve immediate financial gains. (Edmans, 2011).

Empirical studies have shown that poorly designed incentive structures can lead to adverse outcomes, including financial distress and even bankruptcy. For example, excessive use of debt to finance growth initiatives or to fund shareholder dividends can strain the financial resources of the firm, especially during economic downturns or industry-specific challenges (Hansen, 2018; Tien, 2020). Such actions reflect the agency conflict where managers prioritize their own compensation and career advancement over the long-term sustainability of the organization.

In the context of this study, whose thrust is aimed at assessing the effectiveness of the Altman Z-Score model in predicting corporate failure among Zimbabwean financial institutions, Agency Theory provides a crucial theoretical framework. It helps establish how agency problems between shareholders and management can influence financial decision-making, which may end up resulting in firm distress, especially if self-interest among the agents goes unchecked, to the detriment of the shareholders' wealth maximization objective and the general concern of the firm. By understanding these dynamics, the study can explore whether misaligned incentives and agency conflicts contribute to the failure of financial companies on the Zimbabwe Stock Exchange. Moreover, the Agency Theory underscores the importance of effective corporate governance mechanisms and incentive structures in mitigating agency problems. For instance, aligning executive compensation with long-term performance metrics and shareholder interests can incentivize managers to make decisions that enhance financial stability rather than short-term gains (Faleye, 2017).

The Signaling Theory

The Signaling theory posits that firms use various signals, such as financial ratios, to communicate their financial health and prospects to external stakeholders. In the context of financial distress prediction, the Altman Z-Score model utilizes five financial ratios to signal a firm's likelihood of bankruptcy. These ratios include Working Capital to Total Assets, Retained Earnings to Total Assets, Earnings Before Interest and Taxes to Total Assets, Market Value of Equity to Total Liabilities, and Sales to Total Assets (Altman, 1968). Each ratio serves as a signal of different aspects of a firm's financial health, reflecting liquidity, profitability, leverage, and operational efficiency (Hosaka, 2019; Sun, 2020; Shen, 2024).

Transparency plays a crucial role in the signaling theory by enhancing the credibility and reliability of these signals. When firms disclose accurate and timely financial information, it reduces information asymmetry between management and external stakeholders (Tsai et al., 2021). This transparency allows stakeholders to make informed decisions based on the signals provided by financial ratios like those in the Altman Z-Score model. However, in environments with higher information asymmetry, such as emerging markets or during financial crises, the effectiveness of these signals may be compromised. (Jones, 2017).

In this study's context, the rationale for applying the signaling theory lies in its ability to explain how financial ratios act as signals of a firm's financial health and potential distress. By evaluating the Altman Z-Score model within this framework, the study aims to assess the model's effectiveness in predicting corporate failure among financial companies listed on the Zimbabwe Stock Exchange (ZSE). The empirical validation of these ratios as signals of distress can provide valuable insights into their predictive power in a specific economic and regulatory environment, contributing to proactive risk management and regulatory oversight (Haider, 2019; Altman and Hotchkiss, 2019)

The Stakeholder Theory

The Stakeholder Theory suggests that organizations need to consider the interests and concerns of all stakeholders affected by their decisions and actions rather than solely focusing on maximizing shareholder wealth (Freeman, 1984). In the context of financial distress within companies listed on the ZSE, stakeholders such as employees, creditors, and shareholders are significantly impacted. For instance, employees face job insecurity and potential layoffs during financial crises, affecting their livelihoods and morale. Creditors, on the other hand, may experience delayed or reduced payments, impacting their financial stability and trust in the company. (Peetz, 2020). Shareholders face potential loss of investment value and diminished confidence in the company's ability to recover (Miller, 2021).

The application of Stakeholder Theory in mitigating financial distress involves recognizing and prioritizing the diverse interests of stakeholders to enhance corporate resilience. By adopting strategies that consider stakeholder interests, companies can foster trust, loyalty, and support during times of crisis. For instance, active communication with employees about financial challenges and transparent decision-making can help mitigate uncertainty and maintain morale (Schneider and Scherer, 2020). Similarly, negotiating repayment plans with creditors based on shared understanding and mutual benefit can preserve relationships and improve liquidity management (Bellovary et al., 2021). For shareholders, implementing strategies that demonstrate a commitment to long-term value creation and sustainability can rebuild confidence and attract investment (Shen et al., 2022).

The Stakeholder Theory also informs the development of corporate strategies aimed at enhancing resilience against financial distress. By prioritizing stakeholder interests, companies can align their strategic objectives with broader societal expectations and regulatory requirements (Shen et al., 2022). For instance, integrating environmental, social, and governance (ESG) criteria into corporate governance practices not only meets stakeholder demands but also mitigates risks associated with regulatory non-compliance and reputational damage. Moreover, fostering stakeholder engagement through participatory decision-making processes can lead to innovative solutions and adaptive responses to financial challenges (Schneider and Scherer, 2020).

In the context of this study, the Stakeholder Theory provides a holistic framework for understanding and addressing the multifaceted impacts of financial distress on various stakeholders within companies listed on the ZSE. By prioritizing stakeholder interests and adopting inclusive strategies, organizations can mitigate risks, enhance corporate resilience, and sustain long-term value creation. This approach not only aligns with ethical principles but also contributes to sustainable business practices and stakeholder trust in the face of economic uncertainties.

Empirical Studies

Mwangi, et al (2023) focused on Kenyan banks and identified the debt-to-equity ratio (DER) and asset turnover ratio (ATO) as pivotal indicators within the Altman Z-Score model. They found that higher DER was associated with increased bankruptcy risk ($r = 0.52, p < 0.05$), while lower ATO was linked to financial instability ($r = -0.48, p < 0.05$) among Kenyan banks. These statistical relationships highlighted the importance of leverage and operational efficiency in assessing the likelihood of corporate failure in developing economies.

Ncube and Ndlovu (2021) conducted a study on South African banks, revealing additional insights into the Altman Z-Score model's applicability. They reported that earnings before interest and taxes (EBIT) to total assets and market indicators such as the market value of equity to book value of total liabilities were robust predictors of bank failures. Specifically, EBIT/TA showed a strong negative correlation with bankruptcy probability ($r = -0.58, p < 0.05$), indicating that higher earnings relative to total assets reduced the likelihood of financial distress. Meanwhile, the market value of equity to book value of liabilities (MV/BVL) demonstrated a positive correlation with financial stability ($r = 0.50, p < 0.05$), suggesting that higher market valuation relative to liabilities was associated with lower bankruptcy risk.

Elia et al. (2021) carried out a study to prove the validity of the Altman Z"-score model to predict financial distress in Lebanese Alpha banks from 2009 to 2018. The study findings confirmed that most of the banks under study were in distress during the study period. The authors, therefore, recommended the adoption of the Z"-score model as an instrumental indicator for both external and internal application in the analysis of banks' financial statements by the likes of auditors, financial managers, investors, and lenders to inform decision-making and avert failure of these financial institutions from distress.

Setegn (2021) applied the Altman Z-Score model in analyzing the financial health of 14 Ethiopian Commercial Banks and the National Bank of Ethiopia. The findings indicate that, on average, the participating commercial banks were categorized under the 'Gray Zone' given that the average Z-Score was 1.47, which fell between 1.1 and 2.6 cut-off points. The author, therefore, recommended that banks adopt the consistent application of the Z-Score model to evaluate financial health and take corrective action in good time to avert potential collapse from distress.

In another study of the Ethiopian banks by Molla (2022) covering a period of 5 years (2017-2021), the findings also confirmed that Altma's Z-Score is an effective predictor of financial distress among financial firms. The main cause of financial distress was the banks' liquidity position. Thus, the researcher recommended that senior managers should work together with the board of directors to enhance the dividend policy and financial prudence practices of the banks.

Contrary to the above studies, in which the findings largely reflected the Z-Score as a reliable predictor of financial distress and potential insolvency, in a study by Gyawali (2023) involving 16 commercial banks in Nepal, the findings indicated that only 6 out of the 16 banks were under distress while the other 10 were in the 'undecided zone." It was, therefore, the author's conclusion that the Z-Score model was inconclusive and could

not be entirely relied on in predicting financial distress and potential insolvencies in Nepalese banks. These empirical studies largely demonstrate that there is scope to apply the Altman Z-Score in evaluating the financial health of financial services firms and predicting potential insolvency.

Causes of Insolvency in Financial Institutions

Various factors can contribute to the insolvency in financial institutions. An understanding of these factors is important for equipping bank managers with the requisite information to formulate and implement strategies that enhance a bank's financial soundness and avert failures that can emanate from distress. Some of the contributing factors to financial distress are briefly discussed below.

Poor Risk Management

Inadequate Assessment: The inability to adequately assess and manage risks associated with lending, investment, and operational activities can lead to significant losses, contributing to the bank's financial distress and ultimately insolvency if not detected and arrested in good time. In addition, the lack of diversification, which can result in over-exposure to specific sectors or asset classes, can significantly increase the bank's risk, particularly during times of economic turbulence, where firms in a certain industry may suffer losses and struggle with servicing their obligations to the banks. (Aloqab, 2018; Mishchenko, 2021).

Economic Factors

Sometimes, economies may face recessions that can cause a decline in demand for new loans and increase defaults on existing debts, resulting in high rates of non-performing loans (NPLs). High inflation can also erode the real value of assets and reduce profit margins, negatively impacting liquidity. These developments can contribute to financial distress among financial institutions. (Liou, 2007; Isayas, 2021).

Regulatory Challenges

Challenges associated with a weak Regulatory Framework leading to insufficient regulatory oversight can lead to risky practices and inadequate capital reserves. Conversely, a too stringent regulatory framework might also constrain the working environment, leading to structural bottlenecks hampering the free flow of liquidity within the financial services sector. Banks' failure to comply with regulatory provisions and guidelines can also result in penalties and increased scrutiny, negatively affecting operations. (Challoumis, 2024; Younas, 2021).

Management Risk

If institutional managers are not adequately qualified or inexperienced, there is a risk of poor decision-making. Such ineffective leadership and lack of strategic oversight and direction can lead to poor investment decisions and operational inefficiencies that may lead to loss of capital or negative return on investment. (Li, 2021). The lack of adequate controls may also lead to serious system vulnerabilities and the failure to detect fraud or any other irregular conduct by bank employees. In addition, mismanagement of resources can also drain financial resources, culminating in financial distress and insolvency (Li, 2021; Younas, 2021).

Liquidity Problems

If the bank management fails to effectively and efficiently manage its cash flows, the result could be insufficient liquidity to meet short-term obligations, which may ultimately lead to insolvency and bankruptcy. Sometimes, banks overly depend on short-term finance to fund medium to long-term positions, leading to the risk of creating vulnerabilities if there are significant changes to market conditions (Abdu, 2022; Chen, 2022).

Market Conditions

The operating environment can be volatile, uncertain, complex and ambiguous, leading to certain shocks and adverse market conditions that may lead to significant losses, particularly in trading and investment activities. Such changes and the resultant losses may lead to financial distress and insolvency. Where the industry is highly competitive, intense competition may exert significant pressure on banks to reduce their profit margins, making it difficult for institutions to maintain financial health (Aloqab, 2018; Molla, 2022).

Technological Challenges

With the advent of rapid technological advancement globally, cybersecurity threats are on the rise. The banks' increasing reliance on financial technology exposes institutions to cyber threats that can result in financial

losses through hacking, phishing, and other cyber-attacks on banks' systems. On the other hand, obsolete systems may hamper operational efficiency and adaptability to changing market conditions, leading to financial distress (Xu, 2020).

External Shocks

Other external shocks, such as political instability, geopolitical tensions, and natural disasters, can also negatively affect the banks' operations. Political unrest, for example, can disrupt the smooth operations of the financial services sector and erode investor confidence. Geopolitical tensions may also affect the flow of capital, leading to structural inefficiencies in the market. Natural disasters such as earthquakes or floods can physically damage infrastructure and disrupt business activities, directly affecting the banks and indirectly affecting their operations through the negative effects they may have on the bank's clients (Peetz, 2020).

Financial distress in financial institutions results from a myriad of both internal and external factors that have a complex interplay. Comprehending these factors is critical for formulating the requisite strategies and their effective implementation for mitigating associated risks and enhancing the resilience of the financial sector. Proactively addressing these factors can contribute to a more stable and secure financial environment, reducing the risk of financial distress and potential insolvency among financial institutions. The section below discusses some of the mitigatory strategies for addressing the above-mentioned causes of financial distress in financial institutions.

Mitigatory Strategies for Guarding Against Insolvency in Financial Institutions

To safeguard against distress and potential insolvency, financial institutions can formulate and implement various strategies that enhance their resilience and stability. Below are key mitigatory strategies:

Robust Risk Management Framework

Banks need to institute robust risk management systems and regularly evaluate and identify potential risks across all operations, including credit, market, operational, and liquidity risks. Early detection of risks creates scope for implementing mitigatory measures in good time before the risks are pronounced and adversely affect the bank's operations. In addition, banks have also been able to create diverse portfolios of products services and asset classes to spread risk across different asset classes, sectors, and geographic areas, reducing exposure to any single source of risk (Mishchenko, 2021).

Adequate Capital Buffers

There is a need for banks to maintain adequate capital reserves that are more than the minimum regulatory requirements to create the capacity to absorb potential shocks and their potential attendant losses. In addition, banks should regularly carry out stress tests to evaluate the extent to which capital levels would withstand adverse economic scenario (Antoun, 2021; Farooq, 2025).

Effective Liquidity Management

Effective management of the cash flow is very critical for ensuring that the bank can meet short-term obligations. This follows that banks should institute robust liquidity management strategies to ensure adequate cash flow at all times. In addition, there is also a need to establish diverse funding sources, including lines of credit and interbank loans, as a strategy to enhance liquidity resilience (Chen, 2022; Rafid, 2024).

Strong Governance and Leadership

Good corporate governance practices assist in ensuring that the bank is efficiently and effectively run, with minimal disruptions to the smooth flow of operations. There is, therefore, a need to ensure that the board is carrying out its fiduciary duty in providing adequate oversight and strategic direction and is actively involved in risk governance and strategic decision-making. Banks also need to foster a culture of accountability, transparency and integrity, where management is responsible for maintaining the financial health of the banks and their compliance with regulatory requirements (Isayas, 2021; Younas, 2021).

Compliance and Regulatory Adherence

It is incumbent upon banks to implement robust compliance programs to ensure adherence to laws and regulations, reducing the risk of penalties and operational disruptions. There is also a need to conduct regular

internal and external audits to proactively identify compliance issues and take corrective measures (Challoumis, 2024; Younas, 2021).

Investment in Technology and Cybersecurity

To enhance operational efficiency and reduce system vulnerabilities related to outdated systems, banks need to invest in modern technology solutions. Cybersecurity protocols also need to be strengthened to protect the banks against data breaches and financial fraud. (Kharisma, 2021; Yasir, 2022).

Enhanced Customer Relationships

Effective customer engagement and building strong relationships with customers assist banks in fostering loyalty and reducing the risk of sudden withdrawals or defaults. In addition, banks should also focus on customized financial products and services that meet the needs of diverse customer segments, improving satisfaction and customer retention (Kumar, 2022; Pambudi, 2021).

Market Intelligence and Adaptability

To keep abreast with market developments and economic indicators and anticipate changes that may affect the institution's stability, banks should continuously monitor market trends and be proactive in responding to market developments that may adversely affect their operations. Agility and flexibility in adapting to the dynamism of the market are thus crucial in responding to emerging risks (Isayas, 2021; Younas, 2021).

Crisis Management Planning

Given the volatility, uncertainty, complexity and ambiguity that characterize the operating environment, banks need to develop contingency plans and create comprehensive crisis response strategies that outline procedures for responding to financial distress. In addition, they could also conduct regular training and simulation exercises to prepare staff for crises, ensuring efficient and effective responses (Crespí-Cladera, 2021; Lone, 2022).

Through the astute formulation and effective implementation of these mitigatory strategies, financial institutions have scope to enhance their resilience against insolvency and build a more secure operational framework. Proactive measures in risk management, capital adequacy, liquidity planning, and governance are essential for navigating the complexities of the financial landscape and safeguarding the institution's long-term viability.

Conceptual framework

The conceptual framework for this study revolved around the evaluation of the Altman Z-Score model's effectiveness in predicting corporate failure among financial institutions listed on the Zimbabwe Stock Exchange (ZSE). The dependent variable in this framework is corporate failure; the independent variables entail key financial ratios and indicators derived from the Altman Z-Score model.

Fig 1: Visual depiction of the study's conceptual Framework (Source: Researcher's visualization)

The dependent variable for this study (Corporate Failure) entails an event where a financial institution becomes insolvent or faces severe financial distress leading to bankruptcy or liquidation. This outcome will be identified based on financial data and regulatory filings indicating insolvency or delisting from the ZSE due to financial difficulties.

Independent variables for this study consist of key financial ratios and indicators derived from the Altman Z-Score model. These variables are hypothesized to significantly contribute to the predictive accuracy of the model in identifying corporate failure. The primary financial ratios and indicators include the Working Capital to Total Assets (WC/TA), which measures short-term liquidity and operational efficiency (A higher WC/TA ratio indicates better liquidity management, potentially reducing the risk of corporate failure (Altman, 1968)); Retained Earnings to Total Assets (RE/TA) which reflects profitability and the company's ability to generate earnings from its assets over time. (Higher RE/TA ratios signify stronger profitability and financial stability. (Ohlson, 1980); Earnings Before Interest and Taxes to Total Assets (EBIT/TA) which indicates operational profitability and efficiency (Companies with higher EBIT/TA ratios are generally better equipped to cover their interest and tax obligations, lowering the risk of financial distress (Altman, 1968); the Market Value of Equity to Book Value of Total Liabilities (MVE/BVL) which represents the market's valuation of the company relative to its debt obligations (Higher MVE/BVL ratios suggest that the market perceives the company as financially stable and less likely to face bankruptcy (Altman, 1968) and the Sales to Total Assets (S/TA): Measures the efficiency of asset utilization in generating sales revenue (Higher S/TA ratios indicate effective use of assets to generate revenue, which can contribute to financial stability (Altman, 1968).

3. Methodology

The study made use of a mixed methods research approach, which uses both qualitative and quantitative methods, as advised by Creswell and Clark (2017) and earlier on by Johnson and Onwuegbuzie (2004). The primary quantitative research instruments included financial statements and numerical data extracted from publicly available sources such as the Zimbabwe Stock Exchange (ZSE) archives, company websites, regulatory filings, and financial databases like Bloomberg and Reuters. These sources provided essential financial metrics, including total assets, total liabilities, working capital, retained earnings, earnings before interest and taxes (EBIT), market value of equity, and sales. These quantitative measures are pivotal for computing the Altman Z-Score, a well-established model used to predict corporate failure based on financial ratios (Altman, 1968**).**

In addition to quantitative data, qualitative research instruments were utilized to gather insights from industry experts. A structured interview protocol was employed to conduct interviews with selected financial industry experts. This qualitative research instrument allowed for in-depth exploration and understanding of best financial practices that can mitigate the risk of corporate failure in Zimbabwean financial institutions. (Guest, 2006).

Publicly available financial statements for the identified institutions were accessed through multiple sources, including official Zimbabwe Stock Exchange (ZSE) databases and archives, which provided annual reports, balance sheets, income statements, and cash flow statements. Additionally, financial disclosures and regulatory filings available on the respective companies' websites and through the Reserve Bank of Zimbabwe were utilized. Comprehensive and historical financial data were also obtained from subscription-based financial databases such as Bloomberg, Reuters, and other financial research platforms.

The financial statements were closely reviewed to extract the necessary financial data for the two years preceding each firm's bankruptcy. The specific financial data collected from these statements were standardized as per ZSE requirements and are common to all financial institutions. This basic data included Total Assets, which represent the sum of all current and non-current assets owned by the firm; Total Liabilities, indicating the total amount of short-term and long-term liabilities owed by the firm; Working Capital, defined as the difference between current assets and current liabilities; Retained Earnings, the cumulative amount of net income retained by the firm rather than distributed as dividends; Earnings Before Interest and Taxes (EBIT), which is the firm's operating profit before deducting interest and taxes; Market Value of Equity, calculated by multiplying the firm's current stock price by the total number of outstanding shares; and Sales (Revenue), the total revenue generated from the firm's primary business operations.

Using the collected financial data, the following Altman Z-Score ratios were computed: Working Capital to Total Assets (WC/TA), calculated by dividing working capital by total assets; Retained Earnings to Total Assets (RE/TA), calculated by dividing retained earnings by total assets; Earnings Before Interest and Taxes to Total Assets (EBIT/TA), calculated by dividing EBIT by total assets; Market Value of Equity to Total Liabilities (MVE/TL), calculated by dividing the market value of equity by total liabilities; and Sales to Total Assets (S/TA), calculated by dividing sales by total assets. These ratios were computed for each financial institution for each of the two years leading up to their bankruptcy.

On the other hand, qualitative data collection was conducted through structured interviews with the 20 industry experts through the use of video-based multimedia communication platforms. The experts were purposively selected based on their perceived knowledge and understanding of the financial services sector and possession of expert knowledge of the industry. Their selection was based on criteria to ensure their seniority in financial leadership roles, specialization in risk management practices, significant experience in decision-making related to corporate risk assessment, and recognized contributions to the financial sector through publications or advisory roles. The participants thus comprised financial analysts, regulators, and financial institution executives, The interviews were designed to delve deeply into the perceptions and insights of these experts regarding best financial practices to mitigate corporate failure risks among financial institutions listed on the Zimbabwe Stock Exchange (ZSE). Each interview was carefully structured using a semi-structured interview protocol, which provided a framework while allowing flexibility for exploratory discussions. This approach ensured consistency across interviews while enabling the capture of in-depth responses and varied perspectives. The interview protocol included open-ended questions designed to elicit detailed explanations and examples from participants, thereby enriching the qualitative data with contextual insights and practical experiences.

During the interviews, techniques were employed to record and manage data effectively. All interviews were audio-recorded with the consent of the participants to ensure accurate capture of responses and to facilitate later transcription. This methodical recording process minimized the risk of data loss or misinterpretation, preserving the integrity of the qualitative data collected.

Following each interview, detailed transcripts were created from the multimedia recordings. These transcripts underwent thorough analysis to identify recurring themes, patterns, and divergent viewpoints relevant to the research objectives. Coding and thematic analysis techniques were applied to systematically organize and interpret the qualitative data, extracting meaningful insights into the perspectives of industry experts on effective risk management practices. Furthermore, data saturation was monitored throughout the interview process to ensure that sufficient depth and breadth of information were obtained to address the research questions comprehensively. This iterative approach allowed for the refinement and validation of emerging themes, enhancing the credibility and reliability of the qualitative findings.

To enhance validity, methodological triangulation was employed, combining multiple data collection methods (in-depth interviews) and sources (diverse industry experts) to capture a comprehensive range of perspectives on financial risk management and corporate failure mitigation. This approach helped mitigate bias and ensured that findings were grounded in a broad spectrum of expert insights. (Creswell, 2017). Furthermore, the credibility of qualitative data was strengthened through the use of a detailed interview protocol and semi-structured interviews.

4. Discussion of Findings

This discussion was divided into thus the quantitative analyses and qualitative analyses.

Quantitative analyses

The Altman Z-Score model is as follows:

Z-score **= (1.2 × X1) + (1.4 × X2) + (3.3 × X3) + (0.6 × X4) + (1 × X5)**

Where:

Z = Bankruptcy Index

X1 = Working Capital ÷ Total Assets (This Ratio Assesses liquidity by measuring short-term financial health)

X2 = Retained Earnings ÷ Total Assets (This ratio indicates the cumulative profitability of the firm)
X3 = EBIT ÷ Total Assets (This ratio measures operational Efficiency)
X4 = Market Capitalization ÷ Total Liabilities (This ratio gauges leverage)
X5 = Sales ÷ Total Assets (This ratio evaluates asset efficiency)
The following information was revealed after performing an Altman Z score for the selected industry players:

Table 1: Z score two years before the collapse

Firm	X_1	Factor 1	X_2	Factor 2	X_3	Factor 3	X_4	Factor 4	X_5	Factor 5	Z-Score
F1	0.1854	1.2	0.0577	1.4	0.0388	3.3	0.3616	0.6	0.2103	1	0.8586
F2	(0.0843)	1.2	0.0843	1.4	0.3430	3.3	0.1404	0.6	0.5291	1	1.7621
F3	0.1854	1.2	0.0306	1.4	0.0388	3.3	0.3616	0.6	0.2103	1	0.8206
F4	0.1576	1.2	0.2612	1.4	0.3025	3.3	0.1223	0.6	0.0821	1	1.7085
F5	0.9870	1.2	0.0492	1.4	0.1817	3.3	0.8335	0.6	1.0895	1	3.4425

The above computations of the Z-scores were for the selected financial firms two years before their corporate failure. The Z-score for each institution is displayed in the table. The Z-scores calculated two years before bankruptcy accurately predicted 4 out of the five bankruptcy cases, as indicated in the table. A bankruptcy situation is indicated when the Z-Score is ≤ 1.81. This resulted in an 80% accuracy rate for predicting failure. These findings imply that if the Altman Z-Score had been consistently applied in evaluating the financial health of these financial institutions, the financial distress could have been detected in good time, and mitigatory interventions could have been implemented to save the financial institutions from insolvency and collapse.

Table 2: Financial statement for the firms that collapsed (Figures are in 000s)

Firm	Working Capital '\$000	Total Assets '\$000	Retained Earnings '\$000	EBIT '\$000	Sales (Net Operating Income) '\$000	Market Value of Equity '\$000	Book Value of Debt '\$000
F1	1073	27943	375	7391	3357	2593	10341
F2	-1429	9745	1071	2005	3113	12899	48007
F3	-4427	64211	1486	1397	7992	10934	30406
F4	1723	14972	2978	3783	1034	8403	64321
F5	16019	32726	921	3402	945	18437	131086

The data shown in Table 2 was retrieved from the financial statements of the firms that had suffered a corporate failure. The data was from the financial statements prepared one year before corporate failure. The data was deliberately used to calculate the Altman Z-Scores of the respective firms to determine the extent to which the Z-score model could accurately predict the "Corporate failure" of the respective financial institutions one year before bankruptcy. This was in line with the second research objective of this study.

Table 3 Z-scores for the selected financial firms one year before their corporate failure

Firm	X_1	Factor 1	X_2	Factor 2	X_3	Factor 3	X_4	Factor 4	X_5	Factor 5	Z-Score
F1	0.0384	1.2	0.0134	1.4	0.2645	3.3	0.2507	0.6	0.1201	1	1.2083
F2	(0.1466)	1.2	0.1099	1.4	0.2057	3.3	0.2687	0.6	0.3194	1	1.1375
F3	(0.0689)	1.2	0.0231	1.4	0.0218	3.3	0.3596	0.6	0.1245	1	0.3617
F4	0.1151	1.2	0.1989	1.4	0.2527	3.3	0.1306	0.6	0.0691	1	1.3978
F5	0.4895	1.2	0.0281	1.4	0.1040	3.3	0.1406	0.6	0.0289	1	1.0831

Table 3 presents the computations of the Z-scores for the selected financial firms one year before their corporate failure. The Z-score for each institution is displayed in the table. The Z-scores calculated one year

before corporate failure successfully predicted all five cases of failure, as shown in Table 3. Corporate failure is indicated by a Z-Score ≤ 1.81. The prediction accuracy was 100%.

The findings demonstrate that the Altman Z-Score model can be effectively used to predict corporate failure, as Z-scores for the two successive years indeed indicated that the financial institutions were in distress, leading to their failure. These findings are consistent with similar studies whose findings were similar (Elia, 2021; Molla, 2022; Setegn, 2021). There are, however, other studies (Gyawali, 2023), whose findings indicate that the Z-Score could not successfully predict financial distress and corporate failure. This could be explained by differences in contexts in which the model was applied. Predominantly, the model has been applied successfully to predict financial distress and the risk of corporate failure in both developed and developing economies. While the application in this study is retrospective (post failure of the banks being reviewed), its successful application in the Zimbabwean scenario on the sampled banks over that period of turbulence in the financial services sector implies that the model has scope for effective application to detect distress indicators and give basis to bank executives to formulate and implement strategies to timely mitigate against the causes of the identified distress factors. Its regular application during the banks' going concern tenure can be a prudent measure to avert possible insolvency among financial institutions.

Qualitative data

The qualitative data gathered through the semi-structured interviews were thematically analyzed and the following themes were quite prominent from the analysis: composition of boards, the role of independent directors, audit integrity, risk management, regulatory compliance, operational efficiency, ethical standards, the agency problem, and the importance of transparency and accountability. The major themes from the findings are discussed below.

Diverse Board Composition and Good Corporate Governance practices

Findings from the interviews revealed that there is a need for a robust corporate governance framework in mitigating corporate failure. Respondents indicated that there was a need for a good balance of executive and non-executive independent directors on the board for objectivity in evaluating management decisions and making strategic resolutions that had a bearing on the financial well-being of the financial institution. The respondents also emphasized the need for high levels of accountability and transparency among the firm's management and board members. Such good corporate governance practices were envisaged to safeguard the financial well-being and ongoing concern status of the organization. The other critical factor that was raised, which is governance-related, was audit integrity, wherein the participants questioned whether there was integrity in the conduct of annual financial audits of the failed firms, given that they were listed in the Zimbabwe Stock Exchange and the production of audited financial statements annually was a listing requirement. While audits are not fool-proof, the feeling was that if audits had been conducted with integrity, there was scope to identify some of the 'tell-tell' signs that these financial institutions were now heading for bankruptcy.

Robust Risk Management Systems

The participants highlighted the importance of robust risk management practices, including the implementation of enterprise risk management systems (ERM), comprehensive risk identification, assessment methodologies, and mitigation strategies, with more emphasis on stress testing and situational analyses. Narratives provided insights into successful risk management strategies. Discussions around risk management revealed the importance of effective risk management practices in mitigating financial distress and possible collapse. Risk identification, ERM implementation, stress testing, and scenario analysis were quite prominent in the discussions, reflecting their importance in mitigating corporate failure.

Regulatory Compliance

In the case of regulation, experts emphasized the importance of adherence to regulatory standards such as Basel III, capital adequacy ratios, and liquidity requirements. The participants highlighted the role of regulatory bodies, compliance challenges, and the need for robust supervisory frameworks to ensure consistent compliance. There was strong consensus among experts on the critical role of regulatory adherence in mitigating systemic risks and some of the factors highlighted as most important included diligently tackling the compliance challenges, complying with the regulatory standards of Basel III, ensuring capital adequacy and regulatory oversight.

Operational Efficiency

In terms of operational efficiency, participants identified cost management as a key practice for financial stability. They also highlighted technological adoption and process optimization as other critical factors that could potentially contribute to operational efficiency. Technology adoption emerged as the most important factor, with some participants highlighting the rapid technological advancement and the need for banks to provide fintech solutions to customers' problems. Cost management and process optimization were also highlighted as important. The highlight of these factors underscored the importance of operational efficiency strategies in enhancing institutional resilience and guarding against insolvency. Measures of central tendency helped identify the most frequent strategies and provided insights into their typical distribution across responses.

Ethical Standards

Participants highlighted the critical role played by adhering to ethical standards in the financial services sector, as they not only shape the behaviour of institutions but also their stability and resilience. Ethical conduct by bank employees can mitigate financial distress, enhance trust, and foster sustainable practices. During the interviews, the participants intimated that upholding ethical standards had the potential to foster trust and reputation among key stakeholders such as customers, suppliers, investors and regulators. In addition, it was observed that ethical conduct would enhance institutional reputation, which in turn would contribute towards customer loyalty and retention and attraction of investors, which would minimize the chances of the bank experiencing financial distress. Conversely, the absence of ethical standards could lead to practices that contribute to financial instability and crises, for example, fraudulent activities, insider trading and misrepresentation of financial statements. Those unethical behaviors were contributors to financial losses and could potentially trigger non-compliance to regulatory provisions. Participants also cited the other risks associated with unethical practices, such as predatory lending and insufficient risk assessment, which could lead to non-performing loans, ultimately contributing to financial distress. Unethical behavior could also mislead investors, resulting in significant financial losses and waning investor confidence.

The Agency Problem

The agency problem emanates from the conflict of interest between principals (owners or shareholders) and agents (managers or executives) in an organization. In the banking sector, this problem can significantly contribute to financial distress, as the interests of managers may not always align with those of the shareholders. During the interviews, participants asserted that sometimes bank executives pursued risky strategies for short-term profitability to secure their job contracts and be guaranteed performance bonuses, but at the expense of shareholders' long-term sustainability in terms of the bank's stability and long-term profitability. They cited that the agency problem is sometimes worsened by a lack of effective board oversight, where the board of directors does not effectively and regularly monitor the management activities, resulting in managers exploiting their privileged positions for personal gain, which then leads to an increased likelihood of financial distress. The experts interviewed also intimated that the banks' compensation structures also contributed to the agency problem as their compensation packages for bank executives seemed to emphasize short-term performance as part of incentivizing the executives. While these structures seemed noble, their disadvantage was that they led to the prioritization of short-term results at the expense of long-term stability and sustainability. The sentiments coming from the interviewees were that sometimes bank managers' excessive risk-taking behaviors for short-term profitability may lead to significant financial losses and distress. That could also result in increased vulnerability to economic turbulence and lack of stakeholder confidence, investors, depositors and regulators, leading to the latter exercising more stringent regulatory controls. This may, in turn, exacerbate the bank's distressed position due to limited flexibility.

Transparency and Accountability

Transparency and accountability are fundamental governance tenets that underpin the stability and integrity of financial institutions. These principles foster trust among stakeholders, enhance regulatory compliance, and promote effective governance. In an era of increasing scrutiny and complexity in financial markets, their importance cannot be overstated. During the interviews, the experts bemoaned the continuously declining transparency and accountability in the financial services sector, citing that it had led to waning confidence in the banking system over the years. The interviewees highlighted that transparency was critical for building trust among key stakeholders. In addition, it was fundamental for informing decision-making as shareholders,

for example, would require transparent reporting on the bank's operations, risks and the overall stability of the bank. This was critical for investment decisions and misinformation would be misleading to the investors. The respondents indicated that transparency was important in enhancing institutional reputation and facilitating regulatory compliance, both of which are key in ensuring the financial health of the bank and reducing the risk of distress and insolvency. It was also the experts' contention that accountability was key in holding bank executives and their employees responsible for the decisions and actions, managing risk, ensuring stakeholder confidence, and overall improvement of good governance. Effective implementation of transparency and accountability was envisaged to improve the banks' integrity and enhance market confidence, positively contributing towards financial stability and reducing the risk of insolvency.

The analysis of quantitative Z-score predictions and qualitative insights from participating financial experts provide an in-depth understanding of factors influencing corporate failure in Zimbabwean financial institutions. The study's findings highlight the Altman Z-Score model's effectiveness in predicting financial distress well in advance while also highlighting governance, risk management, regulatory compliance, operational efficiency, ethical standards, the agency problem, and transparency and accountability as critical areas needing attention for mitigating financial distress and corporate failure.

5. Conclusion and Recommendations

The Altman Z-Score model, developed by Edward Altman in 1968, has garnered recognition for its robust predictive accuracy in assessing corporate distress globally, including in emerging markets such as Zimbabwe. This study reaffirms the model's efficacy in forecasting financial distress among Zimbabwean financial institutions, consistent with previous research (Altman, 1968; Ohlson, 1980). The model's reliance on financial ratios like working capital, total assets, and EBIT underscores its alignment with fundamental indicators of corporate health and its theoretical underpinnings. The findings resonate well with findings from similar studies in the financial services sector (Elia, 2021; Molla, 2022; Mwai and Mwangi, 2019; Ncube and Ndlovu, 2021; Setegn, 2021). Based on the findings of this study, it can be concluded that the Altman Z-Score can be effectively applied in assessing financial distress and the risk of corporate failure in the financial services sector. It is, therefore, recommended that the Reserve Bank of Zimbabwe (RBZ), Zimbabwe Stock Exchange (ZSE) the Securities Exchange Commission (SEC), and other regulatory bodies for the financial services sector, consider making the Altman Z-Score model part of the regulatory framework to ensure that banks are regularly evaluating their financial well-being using a composite model that encompasses several financial ratios. Such regular assessments and reporting will assist banks in keeping themselves in check in terms of their financial health, and where there are signs of distress, such information will be critical for informing the implementation of mitigatory strategies to avert insolvency and eventual collapse.

Qualitative analysis revealed a complex interplay between governance dynamics and risk management strategies in mitigating corporate failure. Theoretical perspectives on corporate governance underscore the pivotal role of board independence, ethical conduct, and transparent governance structures in mitigating financial risks (Adams, 2010; Yermack, 1996). This study's findings corroborate these theoretical arguments, highlighting the positive influence of effective governance practices on organizational stability, as also indicated by various authors (Isayas, 2021; Jun, 2024; Younas, 2021). From the experts' submissions, good risk management practices also contribute towards ensuring good financial health for the financial institutions, minimizing the chances of insolvency. Banks should institute robust risk management systems and regularly evaluate and identify potential risks across all operations, including credit, market, operational, and liquidity risks. These sentiments are consistent with the literature as postulated by Mishchenko (2021), Li (2021) and Younas (2021). The study findings also indicate that regulatory compliance, operational efficiency, ethical standards, managing the agency problem, and transparency and accountability are some of the critical areas needing attention for mitigating financial distress and corporate failure. These findings corroborate existing literature as these factors have been earlier cited as fundamental in ensuring sound bank management and sustainability. (Challoumis, 2024; Crespí-Cladera, 2021; Kharisma, 2021; Kumar, 2022; Lone, 2022; Pambudi, 2021; Yasir, 2022). It can, therefore, be concluded that all these facets of bank management are very important and can complement the Altman Z-Score model and another existing framework in ensuring that bank solvency is regularly ensured and enhanced, minimizing or eliminating, where possible, the risk of corporate failure. Ensuring adherence to Codes of Ethics for the banking industry, continuous training and development,

enhancing transparency and accountability mechanisms and ensuring leadership commitment are some of the strategies that can also go a long way in averting financial distress and corporate failure in the financial services sector (Bătae, 2021; Salehi, 2023; Younas, 2021).

Implications for Theory, Policy and Practice

The study contributes to theory, policy and practice. Below are the implications of the study.

Implications for Theory

The study contributes to new knowledge as it adds to the existing body of literature on the use of Altman's Z-Score in evaluating the firm's financial performance to detect financial distress and the risk of bankruptcy. While the model has been extensively applied to various industries, its application to the financial services sector has not been hitherto nuanced. Thus, this study complements the few previous studies that focused on the model's application to the financial services sector. The application of the three theories, Agency Theory, Signaling Theory and Stakeholder Theory, as lenses through which the Altman Z-Score's predictive capabilities can be applied to the financial services sector is also novel. While these theories have been utilized individually in previous studies, their complementarity provides lenses through which the concept under study can be viewed as a new dimension, which contributed new knowledge and profound application of theoretical framework triangulation.

Implications for Policy

The findings from this study have significant implications for policy in the realm of financial risk management, particularly within the context of emerging markets like Zimbabwe. The effective use of the Altman Z-Score model in predicting corporate failure underscores the need for regulatory bodies and financial institutions to adopt robust, evidence-based tools for early warning, risk assessment and mitigation. From a policy perspective, the validation of the Altman Z-Score model's predictive capability suggests that regulatory bodies should consider mandating the use of such predictive models as part of the financial reporting requirements for publicly listed companies. By incorporating these models into the regulatory framework, policymakers can enhance market transparency and stability, allowing for timely intervention to mitigate broader economic impacts. Also, policymakers can use the study's findings to develop policies that promote financial stability and resilience in the corporate sector. By encouraging the adoption of effective financial distress prediction models and the integration of qualitative factors, policymakers can create an environment that supports sustainable business practices. Policies that enhance corporate governance standards, improve transparency, and strengthen regulatory frameworks can further mitigate the risk of corporate failure. Policymakers can also look at instituting stiffer penalties for non-compliance to various regulatory provisions as a deterrent to non-compliance. Additionally, policymakers can use these insights to design training and development programs aimed at improving the financial and managerial skills of executives in the financial sector.

Implications for Practice

From a practical standpoint, financial institutions should integrate the Altman Z-Score model into their regular risk management processes, serving as an early warning system to identify and address potential financial distress before it escalates into insolvency. Training and capacity-building programs for financial analysts on the use of predictive models can further enhance these practices. The importance of qualitative factors in predicting corporate failure suggests that financial institutions should adopt a more holistic approach to assessing financial health, incorporating governance metrics, management quality evaluations, and compliance audits into their risk assessment protocols. This holistic approach can provide a deeper understanding of operational vulnerabilities and facilitate the development of more effective mitigation strategies. The study's findings can also inform strategic decision-making processes within financial institutions, guiding investment decisions, resource allocation, and strategic planning. By leveraging predictive models and qualitative insights, institutions can make more informed decisions that enhance their long-term stability and profitability. Additionally, effective communication with stakeholders is crucial in managing financial distress.

Recommendations for Further Studies

Future studies could develop and validate hybrid models that combine financial ratios with qualitative metrics, thereby providing a more comprehensive assessment tool. Research could explore methodologies for

quantifying qualitative data, such as developing scoring systems or using artificial intelligence and machine learning techniques to analyze unstructured data from financial reports and news articles.

References

Abdu, E. (2022). Financial distress situation of financial sectors in Ethiopia: A review paper. *Cogent Economics & Finance, 10*(1), 1996020.

Adams, R. B. (2010). The role of boards of directors in corporate governance: A conceptual framework and survey. *Journal of Economic Literature, 48*(1), 58-107.

Ahamed, F. (2021). Determinants of Liquidity Risk in the Commercial Banks in Bangladesh. *European Journal of Business and Management Research, 6*(1), 164–169. doi:https://doi.org/10.24018/ejbmr.2021.6.1.729

Aloqab, A. A. (2018). Operational risk management in financial institutions: An overview. *Business and economic research, 8*(2), 11-32.

Altman, E. I. (1968). Financial ratios, discriminant analysis and the prediction of corporate bankruptcy. Journal of Finance, 23(4), pp. 589-609.

Altman, E. and Hotchkiss, E. (2006). Corporate Financial Distress and Bankruptcy: Predict and Avoid Bankruptcy, Analyze and Invest in Distressed Debt (3rd Ed.). Hoboken, New Jersey: Wiley.

Altman, E. I., Hotchkiss, E. and Wang, W. (2019). Corporate Financial Distress, Restructuring, and Bankruptcy: Analyze Leveraged Finance, Distressed Debt, and Bankruptcy. Hoboken, New Jersey: Wiley.

Altman, E. I., Iwanicz-Drozdowska, M., Laitinen, E. K. and Suvas, A. (2020). Financial distress prediction in an international context: A review and empirical analysis of Altman's Z-score model. Journal of International Financial Markets, Institutions and Money, 65, pp. 101-140.

Antoun, R. C. (2021). Bank-specific, macroeconomic, and institutional factors explaining the capital buffer and risk adjustments in banks: a simultaneous approach. *Eastern European Economics, 59*(2), 103-124.

Apoorva D.V, Sneha P. Curpod N. M (2019) Application of Altman Z Score Model on Selected Indian Companies to Predict Bankruptcy" International Journal of Business and Management Invention 8(1) pp 77-82

Bafera J and Klenert. S (2022) Signaling Theory in Entrepreneurship Research: A Systematic Review and Research Agenda Entrepreneurship Theory and Practice 47(1)

Basel Committee on Banking Supervision. (2011). Basel III: A global regulatory framework for more resilient banks and banking systems. Basel: The Basel Committee on Banking Supervision

Bătae, O. M. (2021). The relationship between environmental, social, and financial performance in the banking sector: A European study. *Journal of cleaner production, 290*, 125791.

Bellovary, J. L., Giacomino, D. E. and Akers, M. D. (2021). Creditors' responses to borrower distress. Journal of Corporate Finance, 67, 101879.

Biesta, G. (2010). Pragmatism and the philosophical foundations of mixed methods research. In Tashakkori, A. and Teddlie, C. (Eds.), SAGE Handbook of Mixed Methods in Social and Behavioral Research (2nd Ed., pp. 95-117). Thousand Oaks, California: SAGE Publications.

Bonga, W. G. (2019). Hyperinflation in Zimbabwe: Causes and effects. Journal of Economic and Financial Research, 2(1), pp. 1-11.

Challoumis, C. &. (2024). A historical analysis of the banking system and its impact on the Greek economy. *Edelweiss Applied Science and Technology, 8*(6), 1598-1617.

Chen, T. H. (2022). Liquidity indicators, early warning signals in banks, and financial crises. *The North American Journal of Economics and Finance, 62*, 101732.

Chowdhury, J. (2019). Risk management in financial institutions: Practices from developing countries. Journal of Risk Management in Financial Institutions, 12(3), pp. 280-296.

Colombo, M., et al (2019). Signaling in science-based IPOs: The combined effect of affiliation with prestigious universities, underwriters, and venture capitalists. Journal of BusinessVenturing,34(1), 141–17

Crespí-Cladera, R. M.-O.-F. (2021). Financial distress in the hospitality industry during the Covid-19 disaster. *Tourism Management, 85*, 104301.

Creswell, J. W. (2017). *Designing and conducting mixed methods research.* Los Angeles: Sage Publications.

Donaldson, T. and Preston, L. E. (1995). The stakeholder theory of the corporation: Concepts, evidence, and implications. Academy of Management Review, 20(1), pp. 65-91.

Edmans, A. (2011). Short-term termination without deterring long-term investment: A theory of debt and buyouts. *Journal of Financial Economics, 102*(1), 81-101.

Eisenhardt, K. M. (1989). Agency theory: An assessment and review. *Academy of Management Review, 14*(1), 57-74.

Elia, J. (2021). Using Altman Z"- Score to Predict Financial Distress: Evidence from Lebanese Alpha Banks. *Management Studies and Economic Systems, 6*(1/2), 47-57.

Faleye, O. &. (2017). Risky lending: does bank corporate governance matter? *Journal of Banking & Finance, 83*, 57-69.

Farooq, M. O. (2025). The impact of banks' capital buffer on equity return: evidence from Islamic and conventional banks of GCC countries. *Journal of Islamic Accounting and Business Research, 16*(1), 188-217.

Guest, G. B. (2006). How many interviews are enough? An experiment with data saturation and variability. *Field Methods, 18*(1), 59-82.

Gumbo, P. (2016). Bankruptcy prediction models in Zimbabwe: A review of the efficacy of Altman Z-Score. Journal of Business Studies Quarterly, 7(3), pp. 45-59.

Gyawali, S. (2023). Exploring financial distress through Altman Z" score: example of selected private commercial banks in Nepal. *Journal of Emerging Management Studies, 1*(1), 94-107.

Haider, A. (2019). Predicting financial distress: A review of the Altman Z-Score model. Journal of Finance and Accounting, 7(1), pp. 20-31.

Hansen, E. &. (2018). Response to the global financial crisis: A follow-up study. *Journal of Innovation and Entrepreneurship, 7*(1), 7. doi: https://doi.org/10.1186/s13731-018-0087-2

Isayas, Y. N. (2021). Financial distress and its determinants: Evidence from insurance companies in Ethiopia. *Cogent Business & Management, 8*(1), 1951110.

Jiang, Y. L. (2019). Financial stability and sustainability under the coordination of monetary policy and macroprudential policy: New evidence from China. *Sustainability, 11*(6), 1616.

Jones, S. J. (2017). Predicting corporate bankruptcy: An evaluation of alternative statistical frameworks. *Journal of Business Finance & Accounting, 44*(1-2), 3-34.

Jones, M. (2022). Principles of Corporate Insolvency Law (5th Ed.). Oxford: Oxford University Press.

Jun, L (2024). A Study on The Impact Of Corporate Governance On Personal Finance Management. Universiti Utara Malaysia (UUM) pp.14

Kharisma, D. B. (2021). Urgency of financial technology (Fintech) laws in Indonesia. *International Journal of Law and Management, 63*(3), 320-331.

Kumar, P. M. (2022). Electronic customer relationship management (E-CRM), customer experience and customer satisfaction: evidence from the banking industry. *Benchmarking: An International Journal, 29*(2), 551-572.

Li, Z. C. (2021). Predicting the risk of financial distress using corporate governance measures. *Pacific-Basin Finance Journal, 68*, 101334.

Liou, D. K. (2007). Macroeconomic Variables and Financial Distress. *Journal of Accounting, Business & Management, 14*.

Lone, U. M. (2022). Impact of financial literacy on financial well-being: a mediational role of financial self-efficacy. *Journal of Financial Services Marketing, 1*.

Meckling, W. H. (1976). Theory of the Firm. Managerial Behavior, Agency Costs and Ownership Structure. *Journal of Financial Economics, 3*, 305-360.

Meyer, D. F. and Meyer, N. (2020). Validating financial data: An empirical investigation into the accuracy and reliability of financial disclosures. Financial Accountability and Management, 36(4), pp. 379-397.

Miller, D. &.-M. (2021). Family firms: a breed of extremes? *Entrepreneurship Theory and Practice, 45*(4), 663-681.

Mishchenko, S. N. (2021). Innovation risk management in financial institutions. *Investment Management and Financial Innovations, 18*(1), 191-203.

Molla, S. (2022). Assessment of Financial Distress Condition of Commercial Banks in Ethiopia: Assessment of Trends using Altman's Z-score Model. *Research Journal of Finance and Accounting, 13*(9), 1-9. doi: DOI: 10.7176/RJFA/13-19-01

Mwangi, M. N., Wanjiru, M. and Kiprono, R. (2023). Assessing the predictive power of financial ratios: An empirical analysis using the Altman Z-Score model in developing economies. International Journal of Finance and Economics, 28(1), pp. 104-122.

Mwonzora, T. (2020). Best practices in financial management for emerging markets: Insights from Zimbabwe. Journal of Emerging Market Finance, 19(3), pp. 256-273.

Ncube, M. (2014). The efficacy of bankruptcy prediction models in Zimbabwe. African Development Review, 26(1), pp. 132-146.

Ohlson, J. A. (1980). Financial Ratios and The Probabilistic Prediction of Bankruptcy. *Journal of Accounting Research., 18*(1), 109-131.

Pambudi, A. W. (2021). Trust and acceptance of E-banking technology effect of mediation on customer relationship management performance. *ADI Journal on Recent Innovation, 3*(1), 87-96.

Peetz, D. C. (2020). The shock doctrine and industrial relations. *Journal of Australian Political Economy, 85*, 138-146.

Priyadi, U. U. (2021). Determinants of the credit risk of Indonesian Sharīʿah rural banks. *ISRA International Journal of Islamic Finance, 13*(3), 284-301. doi:https://doi.org/10.1108/IJIF-09-2019-0134

Rafid, M. S. (2024). Analysis Of Liquidity Ratios, Profitability Ratios, And Capital Structures On Financial Distress Conditions In Service Companies During The Covid-19 Period. *urnal Darma Agung, 30*(3), 614-622.

Saeedi, A. and Shavvalpour, S. (2020). Bankruptcy prediction models: A comparative study of Altman and Ohlson models. International Journal of Business and Management, 15(5), pp. 45-57.

Salehi, M. A. (2023). The relationship between corporate governance and financial reporting transparency. *Journal of Financial Reporting and Accounting, 21*(5), 1049-1072.

Schneider, A. and Scherer, A. G. (2020). Crisis management and stakeholders' trust. Journal of Business Ethics, 162(1), pp. 41-54.

Setegn, R. Y. (2021, March). *Financial Distress Conditions of Commercial Banks in Ethiopia: An Application of Altman's Z-Score 1993 Model.* Retrieved from https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3806360

Shen, H. Q. (2024). Digital finance and industrial structure upgrading: Evidence from Chinese counties. *International Review of Financial Analysis, 95*, 103442.

Tien, N. H. (2020). Corporate financial performance due to sustainable development in Vietnam. *Corporate social responsibility and environmental management, 27*(2), 694-705.

Tsai, Y. S. (2021). Information Asymmetry, Market Liquidity and Abnormal Returns. In *Innovative Mobile and Internet Services in Ubiquitous Computing: Proceedings of the 14th International Conference on Innovative Mobile and Internet Services in Ubiquitous Computing (IMIS-2020)* (pp. 510-518). Springer International Publishing.

Tumasjan, A. Braun, R and Stolz. B (2021). Twitter sentiment as a weak signal in venture capital financing. Journal of Business Venturing,36(2),

Xu, L. Q. (2020). Early-warning model of the financial crisis: an empirical study based on listed companies of the information technology industry in China. *Emerging Markets Finance and Trade, 56*(7), 1601-1614.

Yasir, A. A.-K. (2022). How Artificial Intelligence Is Promoting Financial Inclusion? A Study On Barriers Of Financial Inclusion. *In 2022 International Conference on Business Analytics for Technology and Security (ICBATS)* (pp. 1-6). IEEE.

Yermack, D. (1996). Higher market valuation of companies with a small board of directors. *Journal of financial economics, 40*(2), 185-211.

Younas, N. U. (2021). Corporate governance and financial distress: Asian emerging market perspective. Corporate Governance. *The International Journal of Business in Society, 21*(4), 702-715.

Journal of Economics and Behavioral Studies (JEBS)
Vol. 17, No. 1, March 2025 (ISSN 2220-6140)

Exploring the Motivations, Challenges and Support Needs of Rural Entrepreneurs in Zimbabwe

*Bukhosi Dumoluhle Mpofu, Melissa Sibonginkosi Ncube
Department of Human Capital Development, Lupane State University, Zimbabwe
*bukhosimpofu@gmail.com, msncube@lsu.ac.zw
Corresponding Author: Bukhosi Dumoluhle Mpofu

Abstract: Rural entrepreneurship has gained increasing attention as a crucial driver of sustainable development in Zimbabwe, with the potential to create jobs, foster inclusive economic growth, and improve livelihoods in marginalized communities. However, rural entrepreneurs in the country face unique challenges that often inhibit their ability to thrive and scale their ventures. This study aims to explore the experiences and support needs of rural entrepreneurs in Zimbabwe, to inform the design of more effective, context-specific interventions. Through in-depth interviews with 30 rural entrepreneurs across various sectors in three rural development councils, the research delves into the key barriers they encounter, including limited access to finance, skills gaps, underdeveloped infrastructure, and fragmented entrepreneurial ecosystems. The findings reveal that rural entrepreneurs in Zimbabwe require a multidimensional support system that addresses their complex, interrelated needs. Tailored access to credit, business development services, and entrepreneurial training emerge as crucial components of this support structure. Additionally, the study underscores the importance of investing in rural infrastructure, fostering entrepreneurial networks and clusters, and leveraging the expertise of development organizations, private sector partners, and academic institutions. By adopting a holistic, collaborative approach to supporting rural entrepreneurs, Zimbabwe can harness the transformative potential of rural entrepreneurship to drive inclusive economic growth, create jobs, and improve livelihoods in marginalized communities. The insights from this study provide a valuable roadmap for policymakers, practitioners, and stakeholders to develop impactful, context-relevant interventions that unlock the full potential of rural entrepreneurship in the country.

Keywords: *Rural Entrepreneurship, Entrepreneurship Ecosystem, Sustainable Development, Support Needs*

1. Introduction

Rural entrepreneurship plays a crucial role in the economic development of developing countries like Zimbabwe (Naudé, 2010; Minniti, 2008). The economic landscape of Zimbabwe has been characterized by significant challenges in recent years, including hyperinflation, high unemployment rates, and a declining agricultural sector. Despite these obstacles, rural entrepreneurship has emerged as a critical avenue for economic survival and resilience for many households. However, the unique experiences and requirements of rural entrepreneurs in Zimbabwe remain understudied, as existing research on entrepreneurship in the country has primarily focused on urban settings (Matunhu & Mago, 2013; Lekhanya & Mason, 2014). This knowledge gap hinders the design and implementation of effective policies and interventions to foster a vibrant entrepreneurial ecosystem in Zimbabwe's rural communities.

Rural entrepreneurs in Zimbabwe often engage in small-scale agricultural activities, informal trading, and service provision, contributing to local economies and providing livelihoods for their families. However, they face numerous challenges, including limited access to finance, inadequate infrastructure, and a lack of market information.

Recent studies (Chikozho, 2021; Mavhunga et al., 2023)have highlighted the pressing issues that rural entrepreneurs encounter, such as the impact of climate change on agricultural productivity and the role of informal networks in facilitating business operations. This study aims to explore the motivations, challenges, and support needs of rural entrepreneurs in Zimbabwe, addressing the gap in the literature regarding their specific circumstances and experiences. By understanding these dynamics, the research will provide valuable insights that can inform policy and program development to better support rural entrepreneurship.

The motivation for this study stems from the recognition that rural entrepreneurship is a vital driver of economic growth and inclusive development in Zimbabwe (Bhuiyan et al., 2013), yet little is known about the specific circumstances and needs of entrepreneurs operating outside of urban centers. By exploring the key

factors that motivate individuals in rural areas to start and operate their businesses, as well as the primary challenges and barriers they face (Ansari et al., 2013; Charles, 2015), this research seeks to provide valuable insights that can inform policy decisions and entrepreneurial support initiatives. Additionally, the study aims to evaluate the current state of entrepreneurial support available to rural communities in Zimbabwe, including access to financing, training, infrastructure, and government programs, and to assess rural entrepreneurs' perspectives on the types of support and resources needed to foster a more enabling environment for entrepreneurship (Lekhanya & Mason, 2014; Matunhu & Mago, 2013).

By addressing these objectives, this study aims to contribute to the broader literature on rural entrepreneurship in developing economies (Naudé, 2010; Minniti, 2008), while also providing practical insights that can inform the design and implementation of more effective entrepreneurial support initiatives in Zimbabwe's rural communities.

2. Literature Review

Entrepreneurship has been widely recognized as a critical driver of economic growth, job creation, and innovation, particularly in developing countries (Naudé, 2010; Minniti, 2008). Within the broader field of entrepreneurship, rural entrepreneurship has garnered increasing attention due to its potential to promote inclusive development and uplift marginalized communities (Bhuiyan et al., 2013; Reardon et al., 2007). However, the existing literature on rural entrepreneurship in developing countries, specifically in the context of Zimbabwe, remains limited.

The relationship between entrepreneurship and economic growth has been explored in various studies, which suggest that entrepreneurship fosters innovation, creates jobs, and stimulates competition (Acs & Szerb, 2021; Ratten, 2022). In Zimbabwe, rural entrepreneurship plays a vital role in enhancing livelihoods and contributing to food security, particularly in the face of national economic challenges. Recent literature emphasizes the importance of understanding the specific motivations and support needs of rural entrepreneurs, as these factors are intrinsically linked to their success and sustainability (Mavunganidze & Mpofu, 2022). Furthermore, the role of traditional authorities in facilitating access to resources and networks has been highlighted as a potential avenue for enhancing rural entrepreneurship (Chikwenje & Moyo, 2023).

Much of the research on entrepreneurship in Zimbabwe has focused on urban settings, overlooking the unique challenges and support needs of entrepreneurs operating in rural areas (Matunhu & Mago, 2013; Lekhanya & Mason, 2014). Studies that have explored rural entrepreneurship in the country have identified a range of barriers, including limited access to finance, infrastructure deficiencies, skills shortages, and poor market connectivity (Charles, 2015; Ansari et al., 2013). These challenges often stem from the geographical isolation and resource constraints that characterize many rural communities in Zimbabwe.

The motivations of rural entrepreneurs in Zimbabwe have received relatively less attention in the literature. Existing studies suggest that necessity, rather than opportunity, is a primary driver of rural entrepreneurship, as individuals in these communities often turn to self-employment as a means of survival and income generation due to a lack of alternative employment options (Majukwa et al., 2020; Lekhanya & Mason, 2014). Additionally, the desire for independence, self-fulfillment, and contributing to one's local community have been identified as important motivating factors for rural entrepreneurs in Zimbabwe (Majukwa et al., 2020).

However, the existing literature provides limited insight into the nuanced and multifaceted nature of rural entrepreneurial motivations, as well as the complex interplay between individual, community, and contextual factors that shape the entrepreneurial decision-making process in rural Zimbabwe. Furthermore, research on the specific types of support and resources required to foster a more enabling environment for rural entrepreneurship in the country remains scarce.

To address these gaps, this study provides a more comprehensive exploration of the motivations, challenges, and support needs of rural entrepreneurs in Zimbabwe, drawing on a diverse range of theoretical perspectives and empirical evidence from the broader literature on rural entrepreneurship in developing economies. By doing so, the research sought to contribute to a deeper understanding of the rural entrepreneurial ecosystem

in Zimbabwe and inform the design of more effective policies and interventions to promote sustainable, community-driven entrepreneurial activity in the country's rural communities.

The literature on rural entrepreneurship in Zimbabwe and similar contexts provides valuable insights. A study on rural banking in Zimbabwe found that the opportunities and challenges for establishing rural banks are social, political, and economic, highlighting the complex environment in which rural entrepreneurs operate (Matunhu & Mago, 2013). Another study on small and medium enterprises (SMEs) in rural South Africa identified access to finance and skills shortages as the most significant factors differentiating between successful and less successful rural businesses (Lekhanya & Mason, 2014).

Rural Entrepreneurship in Developing Economies

Entrepreneurship plays a crucial role in driving economic growth and development, particularly in emerging and developing economies (Naudé, 2010). In the context of developing countries, rural entrepreneurship has been identified as a key strategy for reducing poverty, creating employment, and fostering inclusive growth (Minniti, 2008). Rural entrepreneurs often leverage local resources, knowledge, and networks to establish small and medium-sized enterprises that address the unique needs of rural communities (Bhuiyan et al., 2013). However, rural entrepreneurs in developing economies frequently face a range of challenges that hinder their ability to start, grow, and sustain their ventures. These challenges include limited access to finance, infrastructure deficiencies, skills gaps, and lack of access to markets and information (Naudé, 2010; Bhuiyan et al., 2013). Overcoming these obstacles requires targeted support interventions and the creation of an enabling environment for rural entrepreneurship (Minniti, 2008).

The challenges faced by rural entrepreneurs in developing economies are well-documented in the literature. Studies have highlighted the predominance of informal and subsistence-level enterprises in rural areas, which often lack access to formal sources of credit and financing (Naude, 2010; Welter et al., 2017). The underdeveloped physical and digital infrastructure in many rural regions of developing countries further exacerbates the difficulties faced by these entrepreneurs in accessing markets, information, and business support services (Balogun et al., 2020; Mungai & Ogot, 2017).

Researchers have also emphasized the critical role of rural entrepreneurship in addressing poverty, unemployment, and income inequality in developing countries (Naudé, 2010; Gries & Naudé, 2010). Successful examples of rural entrepreneurship initiatives that have contributed to inclusive economic development include the promotion of agribusiness cooperatives in India (Basargekar, 2011) and the establishment of rural enterprise hubs in Indonesia (Tambunan, 2019). These initiatives have demonstrated the potential for targeted policy interventions and support mechanisms to foster a more enabling environment for rural entrepreneurs in developing economies.

Rural Entrepreneurship in Zimbabwe

Zimbabwe's economy has undergone significant transformations in recent decades, with the agricultural and rural sectors playing a crucial role. Rural entrepreneurship has emerged as a means for individuals to create economic opportunities and contribute to the development of their communities (Matunhu & Mago, 2013). However, the existing literature suggests that rural entrepreneurs in Zimbabwe confront a range of social, political, and economic challenges that limit their ability to establish and grow their businesses. Rural entrepreneurs in Zimbabwe are often driven by necessity, with limited alternative income sources and high rates of unemployment pushing them to start their businesses.

Zimbabwe's economy has been characterized by a predominantly agrarian and rural-based structure, with a significant proportion of the population relying on subsistence farming and small-scale entrepreneurial activities (Majukwa et al., 2020). However, the country has faced numerous economic and political challenges in recent decades, leading to high levels of poverty, unemployment, and a decline in formal employment opportunities (Lekhanya & Mason, 2014).

In this context, rural entrepreneurship has emerged as a vital coping mechanism and pathway to economic empowerment for many Zimbabweans (Charles, 2015). Studies have found that rural entrepreneurs in Zimbabwe are often driven by necessity, as they seek to create their sources of income and livelihood in the

absence of formal employment (Majukwa et al., 2020). Motivations also include a desire for independence, self-fulfillment, and the ability to contribute to their local communities (Majukwa et al., 2020).

The development of rural entrepreneurship in Zimbabwe has been shaped by a complex interplay of socioeconomic, political, and cultural factors. The legacy of land reform and its impact on rural livelihoods has been a significant influence, with studies highlighting the challenges faced by rural entrepreneurs in accessing land and resources (Moyo, 2011; Scoones et al., 2018). Traditional social structures and norms have also been found to influence entrepreneurial activities in rural Zimbabwe, as entrepreneurs navigate the tensions between cultural expectations and the pursuit of economic opportunities (Ncube & Zengeni, 2014; Hlatshwayo & Sigauke, 2019).

The economic and political instability that has characterized Zimbabwe's recent history has also had a profound impact on rural entrepreneurs, with studies documenting the difficulties in accessing finance, markets, and basic infrastructure (Ndiweni & Verhoeven, 2013; Mhizha, 2014). Researchers have identified sector-specific challenges and opportunities for rural entrepreneurs in Zimbabwe, such as the potential for agribusiness and tourism development in rural communities (Moyo, 2011; Ndiweni & Verhoeven, 2013).

While various entrepreneurial support mechanisms, such as government programs and NGO initiatives, are available to rural entrepreneurs in Zimbabwe, studies have highlighted gaps and inefficiencies in the current support ecosystem (Ncube & Zengeni, 2014; Hlatshwayo & Sigauke, 2019). Addressing these gaps and fostering a more enabling environment for rural entrepreneurship in Zimbabwe remains a critical challenge for policymakers and development practitioners.

Nonetheless, rural entrepreneurs in Zimbabwe face significant obstacles, including limited access to finance, skills shortages, inadequate infrastructure, and poor market connectivity (Lekhanya & Mason, 2014; Ansari et al., 2013). The lack of access to capital is a particularly acute challenge, as rural entrepreneurs often lack the collateral required to secure loans from traditional financial institutions (Lekhanya & Mason, 2014).

To address these challenges and foster a more enabling environment for rural entrepreneurship, researchers have called for the implementation of targeted support measures, such as improved access to financing, business development services, and infrastructure investments (Lekhanya & Mason, 2014; Ansari et al., 2013). However, there is a dearth of in-depth, contextual research exploring the lived experiences and support needs of rural entrepreneurs in Zimbabwe.

This proposed study aims to address this research gap by providing a deeper understanding of the motivations, challenges, and support requirements of rural entrepreneurs in Zimbabwe, ultimately informing the design of more effective policies and interventions to promote rural entrepreneurship and sustainable development in the country.

3. Methodology

This qualitative study employed a phenomenological research design to explore the lived experiences of rural entrepreneurs in Zimbabwe. The study utilized semi-structured interviews to gather data from a diverse population of 30 rural entrepreneurs across three rural district councils in the Matabeleland North province: Binga, Hwange, and Tsholotsho. A convenience sampling approach was used to identify and recruit participants for the study. The interview questionnaire was adapted from the Global Entrepreneurship Monitor framework, ensuring its relevance and reliability. The target population included entrepreneurs operating in various sectors, such as agriculture, retail, and services, to capture a comprehensive understanding of their experiences.

The interview questions covered a range of topics, including the entrepreneurs' background and motivation, the challenges they face, their support needs, and the impact of their ventures on their personal lives and local communities. Each interview lasted approximately 60-90 minutes and was conducted in the participants' preferred language, either English or the local Ndebele language.

All interviews were audio-recorded, transcribed, and translated (where necessary) into English. The transcripts were then analyzed using a thematic analysis approach, where the research team identified recurring patterns, themes, and subthemes that emerged from the data. The analysis was an iterative process, with the researchers continuously revisiting the data and refining the coding framework to ensure the trustworthiness and credibility of the findings.

To supplement the interview data, the researchers also reviewed relevant policy documents, industry reports, and academic literature on rural entrepreneurship in Zimbabwe and other developing countries. This secondary data helped to contextualize the primary findings and situate the study within the broader discourse on rural entrepreneurship and economic development. The study received ethical approval from the Lupane State University ethics review board before data collection. All participants provided informed consent, and their anonymity and confidentiality were strictly maintained throughout the research process.

The interview data were transcribed verbatim and analyzed using a thematic analysis approach (Braun & Clarke, 2006). The analysis involved a systematic process of coding, categorizing, and identifying recurring patterns and themes within the data. To enhance the rigor and trustworthiness of the analysis, the coding and theme development were conducted by two independent researchers, with any discrepancies resolved through discussion and consensus.

The qualitative analysis was further strengthened by incorporating elements of grounded theory, which allowed for the inductive generation of theoretical insights from the empirical data (Charmaz, 2006). This approach enabled the researchers to develop a more nuanced understanding of the rural entrepreneurial experience in Zimbabwe, grounded in the perspectives and lived realities of the participants.

Throughout the data collection and analysis process, the researchers maintained a reflexive stance, critically examining their own biases and assumptions, and seeking to minimize the influence of personal perspectives on the interpretation of the findings. Regular debriefing sessions and peer-review of the analysis were also conducted to ensure the validity and credibility of the study's conclusions.

4. Findings

The thematic analysis of the interview data resulted in the identification of three overarching themes that capture the key motivations, challenges, and support needs of rural entrepreneurs in Zimbabwe. The development of these themes followed a rigorous, systematic process informed by the Gioia methodology (Gioia et al., 2013) and principles of grounded theory (Charmaz, 2006).
First-Order Codes

The initial stage of the data analysis involved open coding, whereby the researchers carefully reviewed the transcripts and identified a set of first-order codes that reflected the key concepts, experiences, and perspectives expressed by the participants. This process yielded a total of 42 first-order codes, such as "desire for independence," "lack of access to finance," "need for business training," and "importance of community support."

Second-Order Codes
In the next stage, the researchers engaged in axial coding, clustering the first-order codes into broader, more conceptual second-order codes. This process of abstraction and pattern recognition led to the identification of 12 second-order codes, such as "entrepreneurial motivations," "resource constraints," "institutional voids," and "social capital development."
Aggregate Dimensions

Finally, the researchers engaged in selective coding, further aggregating the second-order codes into three overarching themes that encapsulate the key aspects of the rural entrepreneurial experience in Zimbabwe:
Drivers of Rural Entrepreneurship: This theme captures the primary motivations and aspirations that compel individuals in rural Zimbabwe to pursue entrepreneurial ventures, including the desire for self-determination, the need for economic security, and the drive to contribute to their local communities.

Challenges of the Rural Entrepreneurial Ecosystem: This theme highlights the various structural, institutional, and social barriers that rural entrepreneurs in Zimbabwe face, including limited access to financial resources, insufficient business development support, and the challenges of operating in remote, resource-constrained environments.

Pathways to Sustainable Rural Entrepreneurship: This theme explores the strategies and support mechanisms that could help rural entrepreneurs in Zimbabwe overcome the barriers they face and develop sustainable, resilient businesses, such as targeted training and mentorship programs, improved access to finance, and the leveraging of social networks and community-based resources.

The iterative process of moving between the empirical data, the emergent codes, and the aggregated themes allowed the researchers to develop a nuanced, grounded understanding of the rural entrepreneurial experience in Zimbabwe, informed by the perspectives and lived realities of the participants.

Motivations for Rural Entrepreneurship

The majority of the rural entrepreneurs interviewed were driven by a combination of push and pull factors. Many were motivated by the lack of formal employment opportunities in their local areas, as one participant noted: "*I started this business because I had no other choice. There were simply no jobs available, and I knew I had to do something to support my family*." This aligns with the findings of Matunhu and Mago (2013), who observed that the scarcity of wage-earning opportunities in rural Zimbabwe often compels individuals to pursue entrepreneurial ventures as a means of survival and income generation.

At the same time, these entrepreneurs were also drawn to the prospect of financial independence and the ability to provide for their loved ones. As one participant expressed, "*I wanted to create something of my own and contribute to the development of my village. Being my boss and having the freedom to make my own decisions was very appealing*." This sentiment is echoed in the work of Charles (2015), who suggests that the desire for self-determination and the ability to address community needs are powerful motivators for rural entrepreneurs in developing countries.

Beyond the need for income and self-sufficiency, several respondents also cited a deep passion for their work and the ability to leverage local resources and knowledge to address the unique needs of their communities. One entrepreneur explained, "*I'm truly passionate about [the product/service I provide]. I've lived in this village my whole life and I know the challenges our people face. Starting this business allows me to use my skills and expertise to make a real difference.*" This aligns with the findings of Gladwin et al. (1989), who observed that rural entrepreneurs often possess a strong sense of place-based identity and a commitment to using their local knowledge and resources to benefit their communities.

Challenges Faced by Rural Entrepreneurs

The rural entrepreneurs in this study faced a range of daunting challenges that hindered their ability to establish and grow their businesses. The most frequently cited obstacle was the lack of access to finance and credit. As one participant lamented, "*Without any collateral, it's nearly impossible for us to secure loans from the banks. We're left to rely on our limited savings or turning to informal lenders, which can be risky and expensive*." This challenge is well-documented in the literature, with Nwankwo and Okeke (2017) identifying the limited availability of formal financial services as a major constraint for rural entrepreneurs in sub-Saharan Africa.

In addition to the financial constraints, many entrepreneurs also grappled with significant skills and knowledge gaps, particularly in areas such as business management, marketing, and the use of digital technologies. As one respondent shared, "*I've been running this business for years, but I still struggle with things like bookkeeping, pricing strategies, and reaching customers online. I wish there were more training and support available to help us improve these critical business skills*." The need for targeted capacity-building support for rural entrepreneurs has been emphasized by various scholars, including Gladwin et al. (1989), who called for the development of tailored training and advisory services to address the unique challenges faced by this population.

The poor state of rural infrastructure also posed a major hindrance to the entrepreneurs' operations. As one participant described, "*The roads are in terrible condition, and the electricity and internet are constantly unreliable. It's so difficult to transport our products to the markets or communicate with suppliers and customers. We're constantly at the mercy of these infrastructural challenges*." This issue is well-documented in the literature, with Timungpi and Kro (2019) highlighting the critical importance of investing in rural infrastructure to enable the growth and development of entrepreneurial ventures in remote areas.

Furthermore, the rural entrepreneurs expressed a sense of isolation and a lack of access to essential business support services and networks. As one respondent noted, "*It can be very lonely running a business out here. We don't have the same access to mentors, associations, or even other entrepreneurs who can provide advice and support. It's like we're on an island, trying to figure everything out on our own*." The need for strengthening entrepreneurial ecosystems in rural areas has been emphasized by various scholars, including Nwankwo and Okeke (2017), who called for the establishment of incubators, cooperatives, and other collaborative platforms to support rural entrepreneurs.

Lastly, the unstable political and economic conditions in the country, including policy uncertainty and high inflation rates, created an unpredictable operating environment that added to the challenges faced by these rural entrepreneurs. As one participant lamented, "*You never know what's going to happen next. The government's policies keep changing, and the economy is always in flux. It's incredibly stressful trying to plan and grow our businesses amid all this instability*." The impact of macro-level factors on the ability of rural entrepreneurs to thrive has been well-documented in the literature, with scholars such as Nwankwo and Okeke (2017) highlighting the need for coherent and supportive policy frameworks to create an enabling environment for rural entrepreneurship.

Support Needs and Recommendations

The rural entrepreneurs in this study emphasized the critical need for multifaceted support to address the various challenges they face. In terms of financial support, they called for improved access to affordable products and services, such as microcredit, venture capital, and loan guarantee schemes that are tailored to the unique needs of rural entrepreneurs. As one participant pleaded, "*We need more options for financing that don't require the kind of collateral the banks demand. Something more flexible and designed with our rural realities in mind*." This aligns with the recommendations of Nwankwo and Okeke (2017), who advocated for the development of innovative financial instruments and services to better serve the needs of rural entrepreneurs in sub-Saharan Africa.

Alongside the financial support, the entrepreneurs also highlighted the importance of targeted business development assistance. As one respondent explained, "Training, mentorship, and advisory services would be so valuable. We need help developing our management skills, learning marketing strategies, and leveraging digital tools to grow our businesses." Another participant added, "It would be great to have access to a network of other rural entrepreneurs where we could share experiences, learn from each other, and collaborate on solutions." The need for comprehensive capacity-building support for rural entrepreneurs has been emphasized by various scholars, including Gladwin et al. (1989), who called for the provision of tailored training and advisory services to address the unique challenges faced by this population.

In addition to strengthening the entrepreneurial capabilities of rural business owners, the respondents also emphasized the critical need for investment in rural infrastructure. As one entrepreneur expressed, "*If the roads, electricity, and internet were more reliable, it would make such a difference. We'd be able to reach more customers, connect with suppliers, and operate our businesses much more effectively*." The importance of investing in rural infrastructure to support the growth and development of entrepreneurial ventures has been highlighted by scholars such as Timungpi and Kro (2019).

Finally, the rural entrepreneurs called for the establishment of robust entrepreneurial ecosystems in their communities, including incubators, cooperatives, and networks to foster collaboration and knowledge-sharing. As one participant explained, "*Having access to resources, mentors, and a community of fellow rural entrepreneurs would be invaluable. We need a supportive environment that nurtures our businesses and helps us overcome the unique challenges we face*." The need for strengthening entrepreneurial ecosystems in rural areas

has been emphasized by various scholars, including Nwankwo and Okeke (2017), who advocated for the creation of collaborative platforms to support rural entrepreneurship.

Overall, the rural entrepreneurs in this study underscored the importance of a comprehensive, multi-pronged approach to support their entrepreneurial endeavors, addressing the financial, skills, infrastructure, and ecosystem-level constraints they encounter in their day-to-day operations. This aligns with the recommendations of scholars who have called for holistic, context-specific strategies to foster the growth and development of rural entrepreneurship in Zimbabwe and other developing countries.

5. Conclusion and Recommendations

This study provides valuable insights into the unique experiences and support needs of rural entrepreneurs in Zimbabwe. The findings underscore the importance of tailored, multidimensional support to address the complex challenges faced by rural entrepreneurs. Key issues identified include limited access to finance, skills gaps, underdeveloped infrastructure, and fragmented entrepreneurial ecosystems.

To unlock the potential of rural entrepreneurship as a driver of sustainable development in Zimbabwe, a concerted, collaborative effort is required. Policymakers must prioritize the design and implementation of holistic, context-specific interventions that cater to the specific needs and realities of rural entrepreneurs. This could involve improving access to credit and business development services, investing in rural infrastructure, and fostering rural entrepreneurial networks and clusters.

Additionally, leveraging the expertise and resources of development organizations, private sector partners, and academic institutions will be crucial in developing robust support structures for rural entrepreneurs. By taking a systemic approach that addresses the multifaceted barriers faced by rural entrepreneurs, Zimbabwe can harness the power of rural entrepreneurship to drive inclusive economic growth, create jobs, and improve livelihoods in marginalized communities.

Ultimately, empowering and supporting rural entrepreneurs is not only an economic imperative, but a social and developmental necessity for Zimbabwe. The findings of this study provide a valuable roadmap for policymakers, practitioners, and stakeholders to develop impactful, context-relevant interventions that unleash the full potential of rural entrepreneurship in the country.

Recommendations for Future Studies

Future research should explore the impact of digital technologies on rural entrepreneurship and the potential for innovation to drive economic growth in Zimbabwe. Additionally, longitudinal studies could provide insights into the evolving challenges faced by rural entrepreneurs and the effectiveness of support programs over time.

References

Acs, Z. J., & Szerb, L. (2021). The Global Entrepreneurship Index 2021. Global Entrepreneurship and Development Institute.

Ansari, B., Mirdamadi, S. M., Zand, A., & Arfaee, M. M. (2013). Identifying and prioritizing the factors affecting entrepreneurship development in the small and medium-sized enterprises (SMEs) in rural regions of Iran. International Journal of Agricultural Management and Development, 3(2), 137-148.

Ansari, B., Munir, S., & Gregg, D. (2013). Impact of market-based instruments of government on entrepreneurship development: A case of Pakistan. Journal of Entrepreneurship in Emerging Economies, 5(1), 83–98.

Balogun, O. L., Akinyemi, O., & Afolabi, B. (2020). Rural entrepreneurship and rural development in developing countries: Evidence from Nigeria. The Journal of Entrepreneurship, 29(1), 166-190.

Basargekar, P. (2011). Measuring effectiveness of social capital in microfinance for empowering rural poor. Journal of Asia-Pacific Business, 12(2), 120-131.

Bhuiyan, A. B., Siwar, C., Ismail, A. G., & Islam, R. (2013). Microfinance and sustainable livelihood: A conceptual linkage of microfinancing approaches towards sustainable livelihood. American Journal of Environmental Sciences, 9(4), 396-407.

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. Qualitative Research in Psychology, 3(2), 77-101.

Charles, G. (2015). An analysis of the challenges facing small to medium enterprises in Zimbabwe. International Journal of Business and Management Review, 3(6), 36-46.

Charmaz, K. (2006). Constructing grounded theory: A practical guide through qualitative analysis. Sage Publications.

Chikozho, C. (2021). The impact of climate change on rural entrepreneurship in Zimbabwe. Journal of Rural Studies, 85, 123-134.

Chikwenje, M., & Moyo, T. (2023). Traditional authorities and rural entrepreneurship: A case study in Zimbabwe. Journal of African Business, 24(1), 67-82.

Creswell, J. W., & Poth, C. N. (2016). Qualitative inquiry and research design: Choosing among five approaches. Sage publications.

Gladwin, C. H., Long, B. F., Mullins, D. E., Philipp, D. P., Sealey, S. T., & Zimet, D. J. (1989). Rural entrepreneurship: One key to rural revitalization. American Journal of Agricultural Economics, 71(5), 1305-1314.

Gioia, D. A., Corley, K. G., & Hamilton, A. L. (2013). Seeking qualitative rigor in inductive research: Notes on the Gioia methodology. Organizational Research Methods, 16(1), 15-31.

Gries, T., & Naudé, W. (2010). Entrepreneurship and structural economic transformation. Small Business Economics, 34(1), 13-29.

Hlatshwayo, R. E., & Sigauke, E. (2019). Challenges faced by rural entrepreneurs in Zimbabwe. African Journal of Hospitality, Tourism and Leisure, 8(3), 1-14.

Lekhanya, L. M., & Mason, R. B. (2014). Selected key external factors influencing the success of rural small and medium enterprises in South Africa. Journal of Enterprising Culture, 22(3), 331-348.

Majukwa, O., Mloyi, G., & Mago, S. (2020). The impact of the informal economy on rural livelihoods: The case of Honde Valley, Zimbabwe. Journal of Rural and Community Development, 15(2), 1-21.

Majukwa, T., Chikungwa, T., & Matamanda, A. R. (2020). Exploring the motivations for rural entrepreneurship in Zimbabwe. International Journal of Entrepreneurship and Small Business, 40(2), 169-190.

Matunhu, J., & Mago, S. (2013). Rural banking in Zimbabwe: A case for the establishment of rural banks. International Journal of Academic Research in Business and Social Sciences, 3(1), 444-453.

Matunhu, J., & Mago, S. (2013). Rural entrepreneurship in Zimbabwe: A case of Mwenezi district. Africanus, 43(2), 1-13.

Mavhunga, E., Chikwenje, M., & Moyo, T. (2023). Informal networks and rural entrepreneurship in Zimbabwe: Opportunities and challenges. African Journal of Business Management, 17(2), 45-58.

Mavunganidze, T., & Mpofu, M. (2022). Understanding the motivations of rural entrepreneurs in Zimbabwe. Journal of Small Business and Enterprise Development, 29(3), 345-360.

Mhizha, A. (2014). The effects of economic and political instability on entrepreneurship in Zimbabwe. International Journal of Entrepreneurship and Small Business, 22(4), 465-480.

Minniti, M. (2008). The role of government policy on entrepreneurial activity: Productive, unproductive, or destructive? Entrepreneurship Theory and Practice, 32(5), 779-790.

Moyo, S. (2011). Three decades of agrarian reform in Zimbabwe. The Journal of Peasant Studies, 38(3), 493-531.

Mungai, E. N., & Ogot, M. (2017). Gender, culture, and entrepreneurship in Kenya. International Journal of Gender and Entrepreneurship, 9(2), 188-207.

Naudé, W. (2010). Entrepreneurship, developing countries, and development economics: New approaches and insights. Small Business Economics, 34(1), 1-12.

Ncube, G., & Zengeni, K. T. (2014). Challenges faced by rural entrepreneurs in Zimbabwe: A case study of Binga District. International Journal of Humanities and Social Science, 4(4), 85-93.

Ndiweni, E., & Verhoeven, H. (2013). The rise of informal entrepreneurs in Zimbabwe: evidence of economic growth or failure of economic policies?. African Journal of Accounting, Auditing and Finance, 2(4), 260-276.

Nwankwo, F. O., & Okeke, C. S. (2017). Entrepreneurship development in rural areas of Nigeria: challenges and prospects. Journal of Entrepreneurship and Innovation in Emerging Economies, 3(2), 164-178.

Ratten, V. (2022). Entrepreneurship and economic growth: A review of the literature. International Journal of Entrepreneurship and Small Business, 45(1), 1-15.

Reardon, T., Berdegué, J. A., Barrett, C. B., & Stamoulis, K. (2007). Household income diversification into rural nonfarm activities. Transforming the rural nonfarm economy: Opportunities and threats in the developing world, 115-140.

Scoones, I., Mavedzenge, B., Murimbarimba, F., & Sukume, C. (2018). Labor after land: Livelihoods, differentiation and agrarian change in Zimbabwe following land reform. Journal of Agrarian Change, 18(2), 330-355.

Tambunan, T. T. (2019). Recent evidence of the development of micro, small and medium enterprises in Indonesia. Journal of Global Entrepreneurship Research, 9(1), 1-15.

Timungpi, K., & Kro, G. (2019). Rural infrastructure development and its impact on rural entrepreneurship in Northeast India. Journal of Rural Studies, 69, 96-104.

Welter, F., Baker, T., Audretsch, D. B., & Gartner, W. B. (2017). Everyday entrepreneurship—a call for entrepreneurship research to embrace entrepreneurial diversity. Entrepreneurship Theory and Practice, 41(3), 311-321