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We extend our sincere appreciation to all authors, reviewers, and editorial board members for their valuable contributions. We look forward to engaging with you in future editions of **IJSSMER** and continuing to advance knowledge in Social Science, Management, and Economics.

With warm regards,

Dr. Dhivya Devi Sekar

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International Journal of Social Science, Management and Economics Research (IJSSMER)

Official Email – editor@ijssmer.com

ORCID ID – <https://orcid.org/0000-0002-2837-9011>

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Email – aaydin@ahievran.edu.tr

ORCID ID – <https://orcid.org/0000-0002-8741-3451>

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Email – erwinrimban@csu.edu.ph

ORCID ID – <https://orcid.org/0000-0003-1120-4845>

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Dr. Dion Enari

Senior Lecturer at the School of Sport and Recreation at Auckland University of Technology, University in Auckland, **New Zealand**

Email – dion.enari@aut.ac.nz

ORCID ID – <https://orcid.org/0000-0002-3239-699X>

Dr. Osimen Goddy Uwa, Ph.D

Senior Lecturer, Department of Political Science and International Relations, College of Leadership and Development Studies, Covenant University, **Nigeria**

Email – osimengoddy@abuad.edu.ng

DR. ARSHAD BHAT

Assistant Professor, Amity Institute of Liberal Arts, Amity University Mumbai: Mumbai, **India**

Email – ahbhat@mum.amity.edu

ORCID ID – <https://orcid.org/0000-0002-9689-2351>

Zhilwan Tahir Hama Faraj

PhD in the Philosophy of History, International Institute of Islamic Thought and Civilization (ISTAC-IIUM), **Malaysia**

Email – zhelwantahr94@gmail.com

ORCID ID – <https://orcid.org/0009-0000-0511-3045>

Dr. AKRAM ALHAMAD MOHAMAD

Department of Business Administration, Faculty of Business Karabük Üniversitesi (KBÜ), Karabük- Turkey Kastamonu Yolu Demir Çelik Kampüsü, 78050 Kılavuzlar/Karabük Merkez/Karabük- **Turkey**

Email – akramalhamad@karabuk.edu.tr

ORCID ID – <https://orcid.org/0000-0002-3210-0642>

Dr. Sanpha Kallon

Senior Lecturer and Head of Animal Science Department Njala University Sierra Leone, **West Africa**

Email – skallon@njala.edu.sl

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EFFECT OF BOARD STRUCTURE ON VOLUNTARY DISCLOSURE QUALITY OF LISTED INDUSTRIAL GOODS FIRMS IN NIGERIA

Daniel Ochokoda Ebekwu ACA

Budget and Expenditure, Bursary Department,
Federal College of Education, Akwaibom State, **Nigeria**

Anthony Idoko Onoja PhD

Department of Accounting, Benue State University, Makurdi, **Nigeria**

Evelyn Ashiko PhD

Department of Accounting, Benue State University, Makurdi, **Nigeria**

Adams David Pida

Nigerian Air Force, Nigerian Defence Academy, Kaduna, **Nigeria**

Sandra Mngusonum Abuul

Internal Audit Department, Sundry Markets Limited, Abuja, **Nigeria**

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ABSTRACT

This study examines the effect of board structure on voluntary disclosure quality (VDQ) of listed industrial goods companies in Nigeria. Specifically, the study investigates the influence of board size, board independence, board financial expertise, board diligence and board gender diversity on voluntary disclosure quality. Anchored on resource dependency theory, signaling theory and stakeholder theory, the study adopts an ex-post facto research design and employs secondary data sourced from the audited annual reports and accounts of 14 listed industrial goods firms on the Nigerian Exchange Group (NGX) for the period 2020–2024, yielding 70 firm-year observations. A 60-item voluntary disclosure quality index (VDQI) encompassing ten thematic dimensions was constructed and applied to quantify VDQ. A 60-item voluntary disclosure quality index (VDQI) encompassing ten thematic dimensions was constructed and applied to quantify VDQ. Data were analyzed using descriptive statistics, Pearson correlation, ordinary least squares (OLS) regression and mixed model analysis (MMA). The results reveal that board independence ($\beta=0.053$, $p=0.004$), board financial expertise ($\beta=0.022$, $p=0.041$) and board gender diversity ($\beta=0.025$, $p=0.001$) exert statistically significant positive effects on voluntary disclosure quality while board size ($\beta=0.004$, $p=0.555$) and board diligence ($\beta=0.011$, $p=0.169$) show positive but statistically insignificant effects. The model accounts for approximately 69.1% of variation in VDQ ($R^2=0.691$). These findings underscore the critical roles of independent directors, financially literate board members and gender-diverse boards in enhancing corporate transparency. The study recommends regulatory strengthening of board independence requirements, mandatory financial expertise standards and gender diversity quotas for listed industrial firms in Nigeria.

Keywords: board structure, voluntary disclosure quality, board independence, board financial expertise, board gender diversity, industrial goods firms

1. INTRODUCTION

Corporate transparency and the quality of information disclosed in annual reports have gained renewed scholarly and regulatory attention following a series of high-profile governance failures globally from Enron and WorldCom to more recent collapses involving Signature Bank, Silicon Valley Bank, Wirecard and Adoni Group (Onoja, Oto & Onmikpa 2023). There is currently an ongoing investigation into \$1.6 billion accounting frauds at Nidec Corporation, described as one of the biggest scandals of the decade in Japan. These events underscore the consequences of weak corporate governance and inadequate disclosure practices, reinforcing the centrality of voluntary disclosure quality (VDQ) as a mechanism for enhancing investor confidence and reducing information asymmetry (Tian & Chen, 2009; Mwacha et al., 2023). Voluntary disclosure defined as the sharing of financial and non-financial information beyond statutory requirements has emerged as a critical index of good corporate governance and a strategic tool through which firms signal their quality, manage stakeholder expectations and attract resources (Spence, 1973; Freeman, 1984).

The board of directors occupies a pivotal governance role in shaping firms' disclosure policies. Board attributes including size, independence, financial expertise, meeting diligence and gender diversity influence managerial behaviour and the extent to which firms go beyond regulatory minima to provide transparent and reliable information (Fama & Jensen, 1983; Shehata, 2014). While a growing body of literature has examined the relationship between board characteristics and disclosure practices in developed economies (Alyousef & Alsughayer, 2021; Hanen et al., 2020; Boateng et al., 2021), empirical evidence from emerging markets and from the Nigerian industrial goods sector in particular remains limited and inconclusive (Bitrus et al., 2024; Suleiman et al., 2022; Ugoh, 2024).

Nigeria's industrial goods sector is strategically important and makes significant contribution to economic growth, employment and infrastructure development. However, concerns persist regarding the adequacy and quality of information voluntarily disclosed by firms in this sector. Weak disclosure practices have been associated with poor investor protection, reduced market confidence and inefficient capital allocation (Adelopo, 2021; Shuaibu & Isah, 2019). Although regulatory reforms and the Nigerian Code of Corporate Governance (NCCG, 2018) have been introduced to improve transparency, inter-firm variations in disclosure quality suggest that governance mechanisms, particularly board structure, may not be functioning optimally. Existing Nigerian studies have largely focused on financial performance or mandatory disclosure compliance within the financial sector (Yahaya et al., 2025; Olugbenga et al., 2020), leaving the quality dimension of voluntary disclosure and the industrial goods sector under-explored.

Against this backdrop, this study examines the effect of board structure on voluntary disclosure quality of listed industrial goods firms in Nigeria. Specifically, it investigates the influence of board size, board independence, board financial expertise, board diligence and board gender diversity on a 60-item voluntary disclosure quality index (VDQI) constructed and applied to 14 firms over the 2020-2024 periods. The study makes three key contributions. First, it extends voluntary disclosure quality research to the Nigerian industrial goods sector. Second, it operationalizes a comprehensive, multi-dimensional VDQI. Finally, it applies mixed model analysis alongside OLS regression to generate robust panel estimates.

The rest of the paper is organized as follows: section 2 reviews related literature, section 3 outlines the methodology, section 4 presents and discusses findings, and section 5 provides conclusions and recommendations.

2. LITERATURE REVIEW

2.1 Theoretical Framework

This study is anchored on three complementary theories. Resource Dependency Theory (RDT) developed by Pfeffer and Salancik (1978) posits that organizations depend on external resources and must strategically manage relationships with stakeholders who control such resources. Voluntary disclosure serves as a key mechanism through which firms build trust, reduce uncertainty and facilitate access to capital and other critical resources. In the context of board structure, RDT predicts that boards with greater diversity of expertise, independence and gender representation are better positioned to manage external dependencies and incentivize higher-quality disclosure (Pfeffer & Salancik, 1978; Kor & Sundaramurthy, 2009).

Signaling Theory propounded by Spence (1973) holds that firms possessing superior performance or governance quality voluntarily disclose more information to signal their quality to the market thereby distinguishing themselves from lower-quality competitors. Applied to board structure, the theory predicts that boards composed of independent, financially expert and gender-diverse members will signal stronger governance quality through higher disclosure as such signals reduce information asymmetry and attract investment (Varrecchia, 1983; Ross, 1977).

Stakeholder Theory credited to Freeman (1984) argues that firms have obligations to a broad range of constituencies beyond shareholders whose interests must be integrated into corporate strategy and reporting. The theory motivates voluntary disclosure as a means of fulfilling accountability obligations to employees, customers, suppliers, government and communities (Weiss, 2014; Archie & Ann, 2014).

2.2 Board Structure and Voluntary Disclosure Quality

Board size refers to the total number of directors serving on a company's board (El-Deeb et al., 2021). Larger boards bring greater diversity of expertise and networks, potentially enhancing disclosure quality through improved oversight and resource acquisition (Laksmana, 2008; Cheng & Courtenay, 2006). However, agency theory cautions that excessively large boards may suffer from coordination problems and free-rider effects potentially reducing monitoring effectiveness (Jensen, 1993). Empirically, Adebayo et al. (2023) and Alyousef and Alsughayer (2021) document significant positive relationships between board size and voluntary disclosure, while Abdelhaq et al. (2022) report similar findings in Palestine.

Board independence defined as the proportion of non-executive directors on the board is widely theorized to enhance disclosure quality by strengthening the board's oversight function and reducing managerial discretion over disclosure decisions (Fama & Jensen, 1983; Lee & Luu, 2017). Independent directors have closer relationships with stakeholders and are more likely to advocate for transparent and accurate disclosure (Masum & Khan, 2019; Alnabsha et al., 2018). Mwacha et al. (2023), Adebayo et al. (2023), and Hanen et al. (2020) all report positive relationships between board independence and disclosure levels. However, some studies find insignificant relationships (Yahaya et al., 2025; Abdelhaq et al., 2022) suggesting contextual moderation.

Board financial expertise as the proportion of board members with professional knowledge in accounting, finance or financial management is expected to enhance disclosure quality by improving the board's capacity to evaluate and communicate financial and non-financial information (Juhmani, 2017; Kibiya et al., 2016). The NCCG 2018 explicitly requires at least one board member to possess financial management and accounting knowledge. Naheed (2022) observes that financially expert directors enhance investment decisions and resource acquisition,

while Olugbenga et al. (2020) report a significant positive relationship between board financial expertise and anti-corruption disclosure quality in Nigerian deposit money banks. Suleiman et al. (2022) similarly find significant positive effects of board financial expertise on financial disclosures of Nigerian industrial goods firms.

Board diligence, operationalized as the frequency of board meetings reflects the intensity of board oversight activity. Jensen (1993) argues that meeting frequency is a critical tool for enhancing monitoring. Ntim and Osei (2011) document a positive relationship between board meeting frequency and firm performance in South Africa, while Hanen et al. (2020) report positive effects on governance and environmental disclosure in France. However, Sanyaolu et al. (2020) find a significant negative effect on financial performance of Nigerian banks, and Ladini et al. (2024) report a negative significant effect of board meeting frequency on environmental disclosure of Nigerian manufacturing firms, suggesting that excessive meetings may not translate into disclosure quality improvements.

Board gender diversity refers to the proportion of female members on the board and it is expected to enhance disclosure quality by introducing diverse perspectives, improving decision-making quality and strengthening stakeholder engagement (Kumar et al., 2013; Hillman et al., 2007). Ulan et al. (2023) find that female board membership significantly explains variation in corporate voluntary disclosure in Nigeria. Hanen et al. (2020) report positive and significant influence of board gender diversity on governance, environmental and ethics disclosure in France. Bitrus et al. (2024) report significant positive effects of board gender diversity on voluntary disclosure of Nigerian industrial goods firms. However, Adams and Ferreira (2009) and Abdelhaq et al. (2022) report negative relationships, indicating mixed evidence.

2.3 Gaps in the Literature

Despite the growing body of evidence, several gaps remain. First, most Nigerian studies on voluntary disclosure focus on the financial sector (Yahaya et al., 2025; Olugbenga et al., 2020; Sanyaolu et al., 2020) or aggregate manufacturing sector (Ugoh, 2024; Adebayo et al., 2023), with limited attention to the industrial goods sector specifically. Second, prior studies predominantly measure the quantity of voluntary disclosure rather than its quality, leaving the qualitative dimension under-examined. Third, the mixed evidence across settings calls for updated, sector-specific analysis using more recent data. This study addresses these gaps by examining VDAQ not merely extent using a comprehensive 60-item index across 14 Nigerian industrial goods firms for the period 2020-2024.

3. METHODOLOGY

3.1 Research Design and Data

This study adopts an ex-post facto research design, appropriate for studies based on historical secondary data that cannot be manipulated by the researcher (Ugoh, 2024; Bitrus et al., 2024). Secondary data were extracted from the audited annual reports and accounts of listed industrial goods firms on the Nigerian Exchange Group (NGX) for the five-year period 2020-2024. The choice of this period reflects the availability of recent post-COVID-era disclosure data and the implementation of the NCCG 2018, ensuring relevance to current governance practice in Nigeria.

The population of the study comprises all industrial goods firms listed on the NGX. Following the application of filters for data completeness, consistent listing status and availability of annual reports across the study period, a sample of 14 firms was selected. These firms generated 70 firm-year observations (14 firms $\times$ 5 years), constituting a balanced panel dataset. The sampled firms

include: Austin Laz & Company Plc, Berger Paints Plc, Beta Glass Co. Plc, Chemical and Allied Products Plc, Cutix Plc, Dangote Cement Plc, Lafarge Africa Plc, McNichols Plc, Dn Meyer Plc, Thomas Wyatt Nigeria Plc, BUA Cement Plc, Chellerams Plc, UAC of Nigeria Plc, and SCOA Nigeria Plc.

3.2 Measurement of Variables

Voluntary Disclosure Quality Index (VDQI): The dependent variable was operationalized using a content analysis-based disclosure index comprising 60 items across ten thematic categories: General Corporate Information (6 items), Corporate Strategies (5 items), Corporate Governance (9 items), Corporate Social Responsibility (4 items), Environmental Disclosure (4 items), General Risk Management (4 items), Marketing Disclosure (6 items), Employees Disclosure (10 items), Financial Highlights (6 items), and Forward-looking Information (6 items). This index draws on established disclosure frameworks from Kahl and Belkaoui (1981), Haniffa and Cooke (2002), Alsaeed (2008), and Uyar et al. (2013), among others. Each annual report was scored 1 if an item was disclosed and 0 otherwise, with the total score divided by 60 to produce the VDQI (ranging from 0 to 1). This unweighted dichotomous scoring approach is consistent with Meek et al. (1995), Adelopo (2021), and Ghazalat (2025).

Board Size (BSIZ) was measured as the natural logarithm of the total number of directors on the board in a given year, consistent with El-Deeb et al. (2021) and Adebayo et al. (2023). **Board Independence (BIND)** was measured as the proportion of independent non-executive directors to total board members, following Cheng and Courtenay (2006) and Mwacha et al. (2023). **Board Financial Expertise (BEXP)** was measured as the proportion of board members with financial, accounting or banking qualifications to total board members, consistent with Juhmani (2017) and Suleiman et al. (2022). **Board Diligence (BDIL)** was measured as the natural logarithm of the number of board meetings held in the financial year, following Sanyaolu et al. (2020) and Ladini et al. (2024). **Board Gender Diversity (BGD)** was measured as the proportion of female directors to total board members, in line with Kumar et al. (2013) and Ulan et al. (2023).

3.3 Model Specification

The following linear regression model was specified to investigate the effect of board structure on VDQ:

$$VDQ_{it} = \beta_0 + \beta_1 BSIZ_{it} + \beta_2 BIND_{it} + \beta_3 BEXP_{it} + \beta_4 BDIL_{it} + \beta_5 BGD_{it} + \varepsilon_{it}$$

Where VDQI is the voluntary disclosure quality index for firm *i* in year *t*; BSIZ is board size; BIND is board independence; BEXP is board financial expertise; BDIL is board diligence; BGD is board gender diversity; β_0 is the constant; β_1 – β_5 are coefficients; and ε is the error term. Data analysis was carried out using SPSS version 25, employing descriptive statistics, Pearson correlation analysis, ordinary least squares (OLS) multiple regression, and mixed model analysis (MMA) to account for firm-level random effects.

4. RESULTS AND DISCUSSION

4.1 Descriptive Statistics

Table 1: Descriptive Statistics (N=45)

Variable	N	Min	Max	Mean	Std. Dev	Skewness	Kurtosis
BSIZ	70	4.00	17.00	8.2571	3.26459	1.133	1.189
BIND	70	0.00	5.00	1.9571	1.36664	0.465	-0.265
BEXP	70	1.00	8.00	2.8571	1.87497	1.014	0.552
BDIL	70	1.00	9.00	4.9714	1.43427	-0.525	0.980
BGD	70	0.00	7.00	2.3143	1.57464	0.950	0.238
VDQI	70	0.43	0.87	0.6724	0.11510	-0.242	-0.667

Source: Authors' computation (2026)

Table 1 presents the descriptive statistics for all study variables across the 70 firm-year observations. The mean board size (BSIZ) is 8.26 directors (SD=3.26), ranging from 4 to 17. This is consistent with the 6–18 range recommended by the NCCG 2018, suggesting that sampled firms broadly comply with regulatory guidance on board size. The mean board independence ratio (BIND) is 1.96 non-executive directors (SD=1.37), reflecting a relatively low proportion of independent directors across the sample, which may signal governance concerns given that NCCG 2018 recommends a majority of non-executive directors on the board.

Board financial expertise (BEXP) has a mean of 2.86 members (SD=1.87), indicating moderate levels of financial literacy on boards. Board diligence (BDIL) averages 4.97 meetings per year (SD=1.43), ranging from 1 to 9, consistent with the requirement of at least four board meetings annually. Board gender diversity (BGD) averages 2.31 female members (SD=1.57), with considerable variation (0 to 7), reflecting the uneven adoption of gender diversity across firms. The mean VDQI of 0.67 (SD=0.12) indicates that sampled firms, on average, disclose approximately 67% of the 60-item index, consistent with prior findings of moderate voluntary disclosure levels in Nigerian listed firms (Adelopo, 2021; Ugoh, 2024).

4.2 Correlation Analysis

Table 2: Pearson Correlation Matrix

Variable	BSIZ	BIND	BEXP	BDIL	BGD	VDQI
BSIZ	1.000					
BIND	0.837**	1.000				
BEXP	0.837**	0.812**	1.000			
BDIL	0.522**	0.517**	0.462**	1.000		
BGD	0.452**	0.538**	0.447**	0.280*	1.000	
VDQI	0.582**	0.604**	0.585**	0.434**	0.567**	1.000

Note: ** $p < 0.01$; * $p < 0.05$ (two-tailed).

Source: Authors' computation (2026)

Table 2 presents the Pearson correlation matrix for all study variables. All independent variables show significant positive correlations with VDQI. Board independence ($r=0.604$, $p<0.01$) and

board financial expertise ($r=0.585$, $p<0.01$) exhibit the strongest bivariate associations with voluntary disclosure quality, followed by board gender diversity ($r=0.567$, $p<0.01$), board size ($r=0.582$, $p<0.01$), and board diligence ($r=0.434$, $p<0.01$). High inter-correlations among some independent variables particularly between BSIZ and BIND ($r=0.837$) and between BSIZ and BEXP ($r=0.837$) suggest potential multicollinearity, which is addressed in the regression analysis through Variance Inflation Factor (VIF) diagnostics and the mixed model specification.

4.3 OLS Regression Results

Table 3: OLS Regression – Model Summary and ANOVA

Model Summary						
R	R Square	Adj. R ²	Std. Error	F	df	Sig.
0.701	0.691	0.651	0.085	12.340	5, 64	0.000

ANOVA					
Source	Sum of Squares	df	Mean Square	F	Sig.
Regression	0.449	5	0.090	12.340	0.000
Residual	0.465	64	0.007		
Total	0.914	69			

Dependent Variable: VDQI. Predictors: BSIZ, BIND, BEXP, BDIL, BGD.

Source: Authors' computation (2026)

Table 3 presents the OLS regression results. The model is statistically significant overall ($F=12.340$, $p<0.001$) and explains approximately 69.1% of the variation in VDQI ($R^2=0.691$; Adjusted $R^2=0.651$), indicating strong explanatory power. The standard error of estimate is 0.085, reflecting acceptable model fit.

Board size ($\beta=0.004$, $t=0.593$, $p=0.555$) has a positive but statistically insignificant effect on VDQ. This suggests that larger boards alone do not guarantee higher disclosure quality in the Nigerian industrial goods sector—a finding consistent with Jensen (1993), who cautions against the coordination problems of large boards, and with Bitrus et al. (2024), who find mixed results for board size in the same sector.

Board independence ($\beta=0.053$, $t=3.550$, $p=0.004$) has a positive and statistically significant effect on VDQ, supporting the second hypothesis. This is consistent with the agency theory prediction that independent directors strengthen oversight, advocate for transparency, and reduce information asymmetry (Fama & Jensen, 1983; Cheng & Courtenay, 2006). The finding aligns with Adebayo et al. (2023), Alyousef and Alsughayer (2021), and Mwacha et al. (2023), all of whom report significant positive effects of board independence on disclosure.

Board financial expertise ($\beta=0.022$, $t=2.181$, $p=0.041$) has a positive and statistically significant effect on VDQ. This supports the third hypothesis and is consistent with Juhmani (2017), Naheed (2022), and Suleiman et al. (2022), who document that financially expert board member, enhance the capacity for comprehensive and accurate reporting. The result affirms the NCCG 2018's emphasis on financial literacy as a governance requirement.

Board diligence ($\beta=0.011$, $t=1.389$, $p=0.169$) is positive but statistically insignificant, suggesting that meeting frequency per se does not translate into improved disclosure quality in the Nigerian industrial goods context. This aligns with Sanyaolu et al. (2020) and Ladini et al. (2024), who find that diligence metrics may not capture the quality of board engagement - a notable limitation of frequency-based measures.

Board gender diversity ($\beta=0.025$, $t=3.336$, $p=0.001$) has the most statistically robust positive effect on VDQ, supporting the fifth hypothesis. This is consistent with Ulan et al. (2023), Hanen et al. (2020), and Kumar et al. (2013), who argue that female directors bring diverse perspectives, facilitate stakeholder engagement, and strengthen accountability. The finding is particularly significant in the Nigerian context, where gender diversity on boards remains below comparative emerging market peers.

4.4 Mixed Model Analysis

Table 4: Mixed Model Analysis – Estimates of Fixed Effects

Parameter	Estimate (β)	Std. Error	t	Sig.	95% CI Lower	95% CI Upper
Intercept	0.477	0.041	11.528	0.000	0.394	0.559
BSIZ (Board Size)	0.004	0.006	0.593	0.555	-0.009	0.017
BIND (Board Independence)	0.053	0.015	3.550	0.004	-0.022	0.038
BEXP (Financial Expertise)	0.022	0.010	2.181	0.041	-0.008	0.033
BDIL (Board Diligence)	0.011	0.008	1.389	0.169	-0.005	0.028
BGD (Gender Diversity)	0.025	0.007	3.336	0.001	0.010	0.039

Dependent Variable: VDQI. -2LL=152.283; AIC=128.283; BIC=101.301.

Source: Authors' computation (2026)

To validate the OLS findings and account for firm-level random effects inherent in panel data, a mixed model analysis (MMA) was conducted. The MMA results are presented in Table 4. The Type III tests of fixed effects confirm the statistical significance of board independence ($F=2.302$, $p=0.004$), board financial expertise ($F=1.996$, $p=0.041$), and board gender diversity ($F=11.128$, $p=0.001$). Board size ($F=0.352$, $p=0.555$) and board diligence ($F=1.930$, $p=0.169$) remain statistically insignificant, consistent with the OLS results. The information criteria ($AIC=128.283$; $BIC=101.301$; $-2LL=152.283$) indicate adequate model fit.

4.5 Summary of Hypotheses

Table 5: Summary of Hypotheses Testing Results

Hypothesis	Variable	β	p-value	Decision
H ₀₁ : Board size has no significant effect on VDQI	BSIZ	0.004	0.555	Not Rejected
H ₀₂ : Board independence has no significant effect on VDQI	BIND	0.053	0.004	Rejected
H ₀₃ : Board financial expertise has no significant effect on VDQI	BEXP	0.022	0.041	Rejected
H ₀₄ : Board diligence has no significant effect on VDQI	BDIL	0.011	0.169	Not Rejected
H ₀₅ : Board gender diversity has no significant effect on VDQI	BGD	0.025	0.001	Rejected

Source: Authors' computation (2026)

4.6 Discussion

The overall findings reveal that board structure collectively and significantly influences voluntary disclosure quality of listed industrial goods firms in Nigeria, with the model explaining approximately 69.1% of variation in VDQ. These results are broadly consistent with agency theory predictions (Fama & Jensen, 1983), signaling theory (Spence, 1973), and resource dependency theory (Pfeffer & Salancik, 1978), all of which theorize mechanisms through which board composition influences disclosure behaviour.

The insignificance of board size aligns with Jensen's (1993) caution about coordination inefficiencies in large boards, and with the empirical findings of Suleiman et al. (2022) and Bitrus et al. (2024) in comparable Nigerian contexts. The finding suggests that merely increasing board membership does not translate into disclosure quality improvements; what matters is the qualitative composition of the board rather than its numerical strength alone.

The significant positive effect of board independence corroborates the extensive theoretical and empirical literature positing that independent directors act as effective monitors who advocate for transparency (Cheng & Courtenay, 2006; Mwacha et al., 2023). In the Nigerian industrial goods context, where information asymmetry between management and stakeholders is a persistent concern, the presence of independent directors appears to substantially elevate disclosure standards. This finding has direct implications for the NCCG 2018's provisions on board independence and reinforces calls by Yahaya et al. (2025) for stronger enforcement of independence requirements.

The significant positive effect of board financial expertise affirms that directors with accounting, finance or banking knowledge are better equipped to evaluate disclosure quality and advocate for comprehensive, accurate reporting, consistent with Juhmani (2017), Kibiya et al. (2016), and Suleiman et al. (2022). This finding underscores the NCCG 2018's requirement for at least one financially expert board member as a minimum that may need strengthening.

The positive but insignificant effect of board diligence is consistent with Sanyaolu et al. (2020) and Ladini et al. (2024) indicating that meeting frequency is an imperfect proxy for board effectiveness. Boards may meet frequently without substantively improving disclosure quality if meetings lack strategic focus or if attendance and engagement quality are poor. Future research should explore qualitative dimensions of board engagement rather than relying solely on meeting frequency as a diligence metric.

The significant positive effect of board gender diversity which is the strongest effect in the MMA ($F=11.128$, $p=0.001$) is particularly noteworthy and consistent with Ulan et al. (2023) and Hanen et al. (2020). Female directors appear to enhance accountability through greater stakeholder sensitivity and advocacy for broader, more inclusive information disclosure. This finding provides strong empirical support for initiatives to increase female representation on boards of listed Nigerian industrial goods firms.

5. CONCLUSION AND RECOMMENDATIONS

5.1 Conclusion

This study has examined the effect of board structure on voluntary disclosure quality of listed industrial goods firms in Nigeria using panel data from 14 firms over the period 2020-2024 ($N=70$). Using a 60-item voluntary disclosure quality index and analyzing data through descriptive statistics, Pearson correlation, OLS regression and mixed model analysis, the study finds that board independence, board financial expertise and board gender diversity have statistically significant positive effects on VDQ, while board size and board diligence do not. The model accounts for approximately 69.1% of variation in VDQI, demonstrating substantial explanatory power.

These findings contribute to the extant literature by providing sector-specific empirical evidence on voluntary disclosure quality in Nigeria's industrial goods sector, a context previously underrepresented in the governance and disclosure literature. The results affirm that the qualitative composition of boards particularly their independence, financial expertise and gender diversity matters more for disclosure quality than their size or meeting frequency. They further validate the relevance of resource dependency theory, signaling theory and stakeholder theory in explaining voluntary disclosure behaviour in the Nigerian corporate governance framework.

5.2 Recommendations

On the basis of these findings, the following recommendations are made. First, the Securities and Exchange Commission (SEC) and the Financial Reporting Council of Nigeria (FRCN) should strengthen enforcement of board independence requirements under the NCCG 2018. The current average of approximately 2 independent directors out of 8 board members is insufficient for robust monitoring. Regulators should consider mandating a minimum of 50% independent non-executive directors on boards of listed industrial goods firms, with periodic disclosure of compliance status.

Second, the NCCG 2018's existing requirement of at least one financially expert board member should be elevated to a mandatory minimum of two members with professional qualifications in accounting, finance or banking. The FRC should develop a standardized definition of financial expertise and require explicit board-level disclosure of the financial qualifications of each director in annual reports, enabling investors and regulators to assess compliance objectively.

Third, the NGX, SEC and relevant regulatory bodies should establish binding gender diversity targets for listed industrial goods companies. The evidence of a significant positive effect of gender diversity on VDQ which represents the strongest effect in the MMA model provides a compelling

empirical basis for gender quota policies. A minimum of 30% female board membership, consistent with comparable emerging market targets in South Africa and Kenya, is recommended as an initial benchmark.

Fourth, given the insignificance of board diligence as measured by meeting frequency, regulators and boards should move beyond quantitative meeting targets toward qualitative assessments of board engagement. Board evaluation frameworks should incorporate metrics for the quality of discussions at meetings, the diversity of agenda items and the rigor of follow-up on strategic and governance matters.

Fifth, the disclosure quality index developed in this study comprising 60 items across ten thematic dimensions could be adopted by the FRC as a voluntary disclosure performance benchmark for Nigerian listed companies, providing a standardized, comparable measure of disclosure quality across sectors and firms.

Finally, future research should extend this analysis to other Nigerian sectors particularly financial services, consumer goods and oil and gas to assess whether the governance-disclosure relationships identified here are sector-specific or generalizable. Longitudinal studies incorporating additional governance mechanisms such as audit committee characteristics, external audit mechanisms and ownership structure would further enrich understanding of the determinants of voluntary disclosure quality in Nigeria

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ADAPTING TO CHANGE: THAILAND'S TOURISM RESPONSE TO THE DECLINE OF CHINESE TOURISTS

Jirasak Rakkarn

Department of Southeast Asian Studies,
Wenzao Ursuline University of Languages,
No. 900, Minzu 1st Rd., Sanmin District,
Kaohsiung City 80793, Taiwan (ROC), **Taiwan**

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ABSTRACT

Thailand's tourism industry, historically anchored by Chinese visitors, has experienced a decline since 2024, with arrivals decreasing from 6.73 million in 2024 to approximately 4.47 million in 2025, a 34% decline. This downturn is attributed to concerns regarding safety, China's slowing economic growth, currency appreciation, regional competition, and geopolitical challenges. This research examines Thailand's response to this demand shock through a qualitative case study utilizing sources from government agencies, industry stakeholders, and media outlets. It identifies the factors contributing to the decline and evaluates strategies such as visa facilitation, addressing safety issues, market diversification, transitioning from volume-centric to value-oriented destination marketing, and promoting domestic tourism. Diversification initiatives targeting India, Russia, and Europe have partially mitigated revenue losses, with Malaysia overtaking China as the primary source market in 2025, a position it has maintained for over a decade. Nonetheless, the recovery of the Chinese market has been slow, indicating that trust-based tourism markets recover more gradually than those driven mainly by price or accessibility. The study proposes an adaptive resilience framework that links demand shocks to capacity and outcomes (volume, value, image), along with policy recommendations for economies overly dependent on a single market.

Keywords: Tourism resilience, Market diversification, Chinese outbound tourism, Destination image, Thailand, Tourism policy

1. INTRODUCTION

Tourism is among the most significant sectors of the Thai economy; it plays a vital role in economic and social development (Chulaphan & Barahona, 2018). According to Thailand's Ministry of Tourism and Sports, in 2017 the tourism sector contributed at least 18.24% to the nation's economy and supported over 4.3 million jobs, accounting for 11.64% of total employment. For nearly two decades, China has been the primary source market underpinning this sector. In 2019, prior to the onset of the pandemic, Chinese nationals constituted nearly 11.2 million arrivals, representing approximately 28% of Thailand's total inbound tourists, thereby rendering Thailand excessively reliant on a single, geographically concentrated, and demand-elastic source market (Mehera, B., 2025).

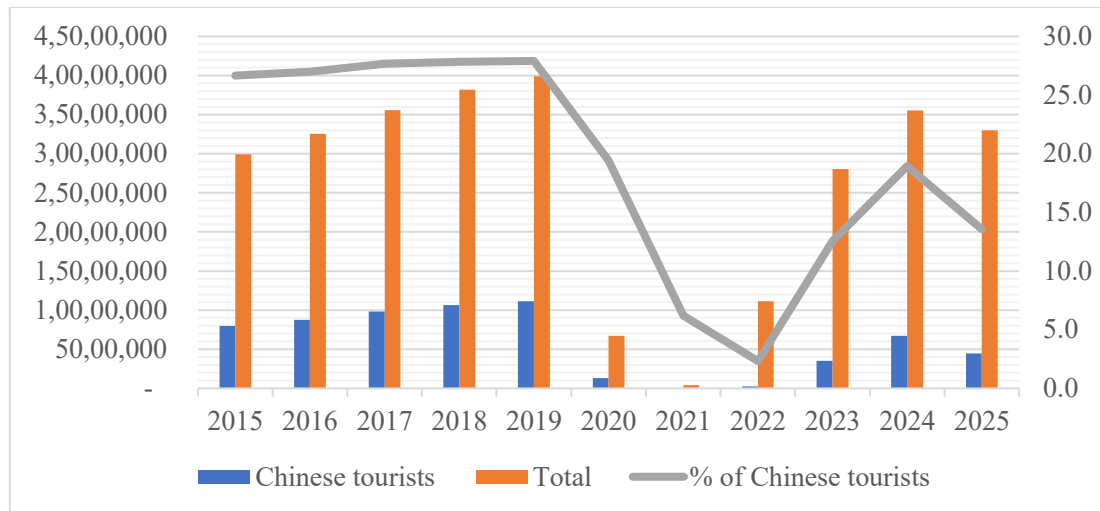


Figure 1-1: Number of international tourists to Thailand

Source: Tourism and Sports Economics Division, Ministry of Tourism and Sports of Thailand

This linkage was completely severed during the COVID-19 pandemic, and its aftermath proved more complicated than just returning to previous trends. Following the issuance of a temporary visa waiver in September 2023 and the signing of a visa-exemption agreement between Thailand and China in January 2024, which took effect in March 2024, the number of Chinese tourists increased and continued to constitute the largest group visiting Thailand until 2024 (Giulia, 2024; Bhutia, P. D., 2024). However, the growth was modest. Beginning in January 2025, several high-profile security threats, including the kidnapping and trafficking of Chinese actor Wang Xing to a cyberfraud camp near Myanmar, significantly diminished Chinese tourists' trust in Thailand. This decline was compounded by ongoing issues, including China's economic downturn, the appreciation of the Thai currency, and rising regional competition (Konishi & Akama, 2026). Consequently, by the end of 2025, the number of Chinese tourists in Thailand decreased to approximately 4.47 million, a 34% decline from the previous year. Thailand also experienced its first year-over-year decline in foreign tourists since the pandemic, with total arrivals falling to 32.97 million, a 7.23% decline.

This decline signifies more than a transient fluctuation. It serves as a pivotal stress test for a tourism sector that, for over ten years, has concentrated its marketing initiatives, accommodations, tourism offerings, retail, and airport capacities on a singular primary market. The inquiry into how a tourism-dependent economy will respond to the downturn of its most significant market, considering policy, marketing, product, and diversification strategies, is of immediate and scholarly relevance, not only for Thailand but also for numerous other Southeast Asian economies. This paper directly addresses this issue. It poses the primary research question: How has Thailand's tourism industry adjusted to the reduction in Chinese visitors, and what has been the efficacy of these adaptation strategies to date?

2. THEORETICAL FRAMEWORKS

2.1 Tourism Dependency and Economic Vulnerability

Economies that depend heavily on tourism for a significant part of their GDP, employment, and foreign exchange earnings face a well-known trade-off: the sector's high growth potential is counterbalanced by increased vulnerability to external shocks (Fan & Ha, 2025). Specifically, within the Association of Southeast Asian Nations (ASEAN) region, research has shown that

excessive reliance on tourism, particularly on a small number of source markets, leads to economic fragility, financial leaks, and susceptibility to demand shocks largely beyond the destination's control (HAU et al., 2026). The COVID-19 pandemic clearly exposed this weakness across the region, demonstrating how quickly tourism-dependent livelihoods can be destabilized when international travel stops. Thailand, along with countries such as Singapore and Cambodia, and parts of the Asia-Pacific, is often cited as an example of an economy dependent on a single market, given China's significant role in Thailand's inbound tourism since the mid-2010s.

Importantly, dependency risk goes beyond just the total number of tourists; it is also influenced by the characteristics of the dependent market. Chinese outbound tourism is highly sensitive to domestic economic conditions, government travel advisories, social media sentiment, and perceptions of safety abroad, all of which are largely beyond the control of the destination country (Tai, 2025). This distinguishes reliance on China as a single market from dependence on more mature, stable long-haul markets such as the United Kingdom or Germany.

2.2 Destination Resilience and Crisis Adaptation

The concept of resilience, originating in ecological systems theory (Holling, 1973) and later expanded to socio-ecological systems (Folke, 2016), has become a key perspective for understanding how tourism destinations handle shocks (Mongua et al., 2026). Destination resilience is generally defined as a tourism system's ability to resist, absorb, adapt to, and reorganize around disruptions while maintaining its core functions and identity (Wang et al., 2022). Recent research increasingly views destinations not as fixed entities but as complex adaptive systems in which disturbances spread across interconnected subsystems, such as accommodation, transportation, retail, security, and destination image, and in which resilience develops through sensing, coordination, reconfiguration, and organizational learning (Najafi & Costa, 2026).

A further refinement in the literature distinguishes supply-side resilience, the capacity of destinations, firms, and infrastructure to recover, from demand-side resilience, which involves how travelers themselves adapt their behavior, risk perceptions, and destination choices under conditions of uncertainty (Ketter, 2026). This demand-side perspective is particularly relevant to the Thailand–China case, where the primary challenge is not a disruption of supply (hotels and attractions in Thailand remain fully operational) but a collapse in demand driven by traveler risk perception and trust. Empirical research on tourism resilience also emphasizes institutional and structural factors, including economic diversification, market composition, and adaptive governance, as critical determinants of how well tourism-dependent economies resist and recover from global shocks (Mongua et al., 2026). Additionally, collaborative, multi-stakeholder crisis planning, clear leadership, and structured communication are identified as vital enablers of destination-level resilience (Wang et al., 2022).

2.3 Market Diversification as a Strategic Response to Demand Shocks

Market diversification in tourism reduces a destination's vulnerability to demand shocks by spreading risks across multiple source markets with different economic profiles and travel purposes. Dependence on a limited number of markets heightens risks associated with economic downturns, exchange rate fluctuations, geopolitical issues, travel restrictions, and image crises (Prideaux, 2009; Ritchie, 2009). Such diversification stabilizes demand by lessening the impact of shocks in any single market on overall visitor numbers. However, diversification extends beyond just replacing declining markets with new destinations. Various source markets contribute in distinctive ways, influenced by factors such as length of stay, expenditure patterns, travel behaviors, and individual preferences. (Dwyer et al., 2004). For instance, long-haul tourists tend to spend more

and stay longer but may be concentrated in specific zones and high-end segments, whereas regional markets often produce higher volumes but with differing spending patterns (Cooper et al., 2008). Consequently, diversification influences not only the volume of arrivals but also the composition, distribution, and economic quality of tourism revenue.

This is vital for destinations experiencing shifts in traditional markets. A varied portfolio can boost resilience by combining mature markets with stable demand and emerging markets with growth potential. Success depends on attracting segments while maintaining competitiveness through accessibility, service quality, infrastructure, and destination image (Pike & Page, 2014). Diversification is more than expanding source markets; it's a strategic reorganization of demand to achieve stability and sustainability.

Southeast Asia exemplifies how diversification enhances resilience. Historically dependent on East Asian markets, especially China, which was a major source pre-pandemic (UNWTO, 2019), countries now see growth in Europe, North America, the Middle East, and intra-ASEAN travel, creating a more balanced demand (UNWTO, 2023). While China remains key, over-reliance poses risks during crises. Therefore, market diversification is vital for regional tourism resilience.

2.4 Chinese Outbound Tourism: Post-Pandemic Behavioral Shifts

Chinese outbound tourism has not simply recovered after COVID-19; it has also experienced a process of restructuring. Regionally, China has re-emerged as one of the top two inbound markets for most Southeast Asian destinations, supported by visa facilitation and the restoration of flight capacity (Antom Knowledge, 2026). However, within this broader recovery, outcomes at the destination level vary significantly, influenced by travelers' risk perceptions, price competitiveness, and the prominence of safety narratives circulating on Chinese social media platforms such as Weibo and Xiaohongshu. Recent commentary on the Thailand case specifically has noted that safety-related social media narratives can cause rapid and measurable shifts in Chinese travel intent, including spikes in flight cancellations following a single high-profile incident (AOL, 2025), a dynamic that is considerably more sudden and volatile than the slower-moving economic and demographic factors typically emphasized in traditional tourism-demand models. This indicates that, particularly for the Chinese outbound segment, destination image and perceived safety are distinct, highly elastic demand drivers, which warrant consideration alongside conventional economic factors (price, income, exchange rates) within resilience frameworks.

2.5 Research Gap and Positioning of the Study

While the overall theoretical connection between market dependency, resilience, and diversification is well known, the literature provides relatively little empirical, case-based analysis of how a major tourism destination adapts in real time to a reputation-driven, rather than solely economic or pandemic-driven, collapse in its main source market. Most existing resilience research is either abstract or conceptual, such as bibliometric reviews and theoretical frameworks, or focuses on the COVID-19 pandemic as the primary example of shock. The Thailand-China case presents a different and currently under-studied shock type: a safety and trust crisis developing within an otherwise open, accessible, and competitively priced destination. This study fills that gap by offering a systematic, evidence-based account of Thailand's adaptive response from 2024 through mid-2026.

3. RESEARCH METHODOLOGY

3.1 Research design

This study employs a qualitative, exploratory, document-based case study design. Since the phenomenon being examined, Thailand's policy and industry response to the decline in Chinese tourists, is an ongoing, rapidly changing process (2024-2026) rather than a completed historical event, a secondary data and document analysis approach was considered the most appropriate and justified method for providing a timely, evidence-based account. This approach aligns with case study methods used in tourism crisis research elsewhere that combine official statistics, policy documents, and media/industry reports to reconstruct destination-level response processes.

3.2 Analytical approach

The data were analyzed through thematic content analysis. Documents were examined to identify (a) quantitative indicators such as arrivals, revenue, and market share by source country and year; (b) causal factors cited for the decline in Chinese arrivals; and (c) specific policy and industry actions taken in response. These actions were then inductively categorized into themes: visa facilitation, safety and confidence restoration, market diversification, value repositioning, and domestic stimulation.

3.3 Data source and collection

Data were collected from three categories of publicly available secondary sources, covering the period from January 2024 to mid-2026.

1. Official statistics and policy communications, such as releases from the Tourism Authority of Thailand (TAT) newsroom, data summaries from Thailand's Ministry of Tourism and Sports, and government policy announcements like visa-exemption agreements and launches of the national tourism strategy.
2. Specialist and mainstream news outlets, including Bangkok Post, Nation Thailand, Nikkei Asia, AOL, and trade publications like Travel and Tour World and Jing Daily, were chosen for their direct coverage of arrival stats, policy updates, and industry insights.
3. Academic papers and institutional analyses, such as peer-reviewed tourism-resilience studies and policy commentary from research organizations like ISEAS–Yusof Ishak Institute's Fulcrum and from an international research journal, are used to provide context and develop theories based on empirical data.

4. FINDINGS AND DISCUSSION

4.1 The Magnitude and Trajectory of the Decline

Table 4.1: Thailand's inbound tourist arrivals and the Chinese market's position

Year	Total tourist arrivals	Chinese arrivals	Chinese share of total
2019 (<i>pre-pandemic peak</i>)	39.9 million	11.1 million	28%
2020 (<i>during pandemic</i>)	6.7 million	1.3 million	19.4%
2021 (<i>Entry restrictions during the pandemic, Thailand Pass requirement</i>)	0.4 million	0.02 million	6.2%
2022 (<i>eases the entry requirement, Lost in Thailand movie.</i>)	11.1 million	0.2 million	2.3%

2023	28 million	3.5 million (<i>recovering period, pilot visa waiver program from Sept.</i>)	12.6%
2024	35.5 million	6.7 (<i>Visa waiver program continued</i>)	18.9%
2025	32.9 million	4.4 million (<i>The Wang Xing Incident: safety concerns, Thailand-Cambodia geopolitical conflicts</i>)	13.6%
2026 (Q1)	9.3 million	1.4 million (<i>top source market</i>)	16%

Source: Compiled from Tourism Authority of Thailand newsroom data (2026); Thailand Ministry of Tourism and Sports (2026).

Two key features define the decline. First, the downturn in 2025 was sharp and occurred mainly in a single year, primarily impacting China. Although total arrivals fell by 7.23%, Chinese arrivals fell by around 34%. This shows that China's decline accounts for most of Thailand's total shortfall in 2025. Second, Malaysia surpassed China to become Thailand's largest source market in 2025 for the first time in years, with approximately 4.50-4.52 million arrivals, compared with China's 4.47 million arrivals (Thaiger, 2026). This shift signifies a symbolically important change, given China's nearly two-decade dominance in Thailand's inbound rankings.

Compared to the pre-pandemic benchmark, the decline is substantial: Chinese arrivals in 2025 were approximately 34% lower than in 2019, in absolute numbers. Additionally, China's share of Thailand's total arrivals nearly halved, decreasing from about 28% in 2019 to approximately 13.6% in 2025. Data from early 2026 indicate a partial and uneven recovery: China reestablished itself as the leading source market in the first quarter of 2026 with 1.49 million arrivals. Nevertheless, reports as recent as mid-2026 still indicate that Chinese arrivals are roughly 30% below the previous year and characterize the market as not yet fully recovered (Thaiger, 2026).

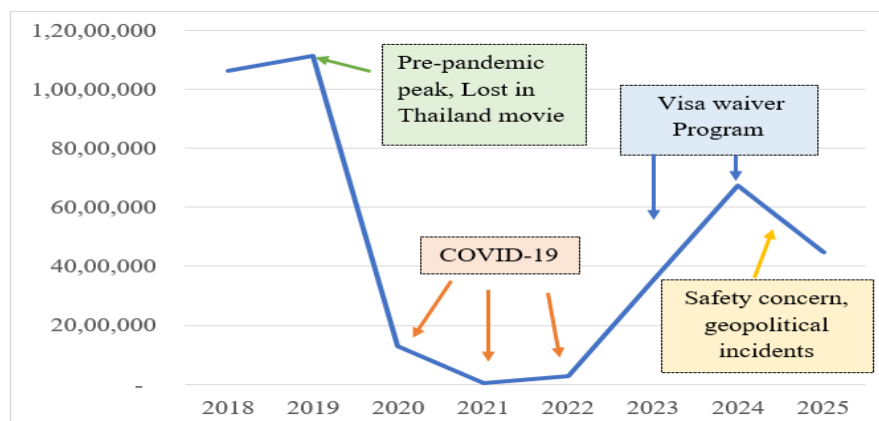


Figure 4-1: Number of Chinese tourists to Thailand, 2018-2025

Source: Tourism and Sports Economics Division, Ministry of Tourism and Sports of Thailand

4.2 Drivers of the Decline: A Multi-Causal Analysis

The drivers of the Decline in Chinese tourists to Thailand are described in Table 4.2 below.

Table 4.2: Major Drivers of the Decline in Chinese Tourist Arrivals to Thailand

Driver	Key Events / Evidence	Mechanism Affecting Chinese Demand	Relative Impact
1. Safety and Security Concerns (<i>Trust Collapse</i>)	Abduction of Chinese actor Wang Xing in January 2025, followed by trafficking to the KK Park scam compound in Myawaddy, Myanmar. The incident received extensive media coverage and sparked viral discussions on Chinese social media. There was also a surge in flight cancellations and growing concerns over transnational scam syndicates operating along the Thailand-Myanmar border (<i>Gan et al., 2025; AOL, 2025; Ehrlich, R., Crispin, S., 2025; Hong Kong Free Press, 2025; Hunt, 2025</i>).	The incidents significantly reduced perceived destination safety, undermined traveler confidence, generated negative word of mouth on Chinese social media, and increased risk aversion among potential visitors.	Very High
2. China's Domestic Economic Slowdown	Slower economic growth, weak consumer confidence, and declining household spending decreased discretionary spending on overseas travel. (<i>Mehera, B., 2025</i>).	Lower disposable income reduced outbound travel demand and heightened price sensitivity among Chinese tourists.	High
3. Reduced Price Competitiveness	Appreciation of the Thai baht (THB) increased travel costs, leading to ongoing complaints about dual-pricing practices at tourist attractions and services. (<i>Visit Thailand Today, 2026</i>)	The increase in travel expenses diminished Thailand's price competitiveness relative to other destinations and negatively impacted visitor satisfaction.	Moderate–High
4. Intensified Regional Competition	Competing destinations like Japan, Vietnam, South Korea, and Malaysia enhanced visa ease, airline links, and tourism campaigns aimed at Chinese travelers. (<i>Mehera, B., 2025</i>)	Chinese tourists replaced Thailand with destinations seen as safer, more affordable, or offering better value.	Moderate
5. Regional and Environmental Disruptions	Northern Myanmar earthquake, Thailand–Cambodia border conflict, and severe flooding in southern Thailand during 2025. (<i>Konishi & Akama, 2026</i>).	Reinforced perceptions of regional instability and uncertainty, which further discourage international travel to Thailand, even though it doesn't directly involve Chinese visitors.	Moderate

Source: Compiled by the author.

These incidents collectively support the point made in Section 2.4: for the Chinese outbound market, trust and safety perceptions act as a highly responsive, socially influenced demand driver

that can change more quickly and sharply than the slower-moving economic factors (currency, income) that typically drive tourism demand.

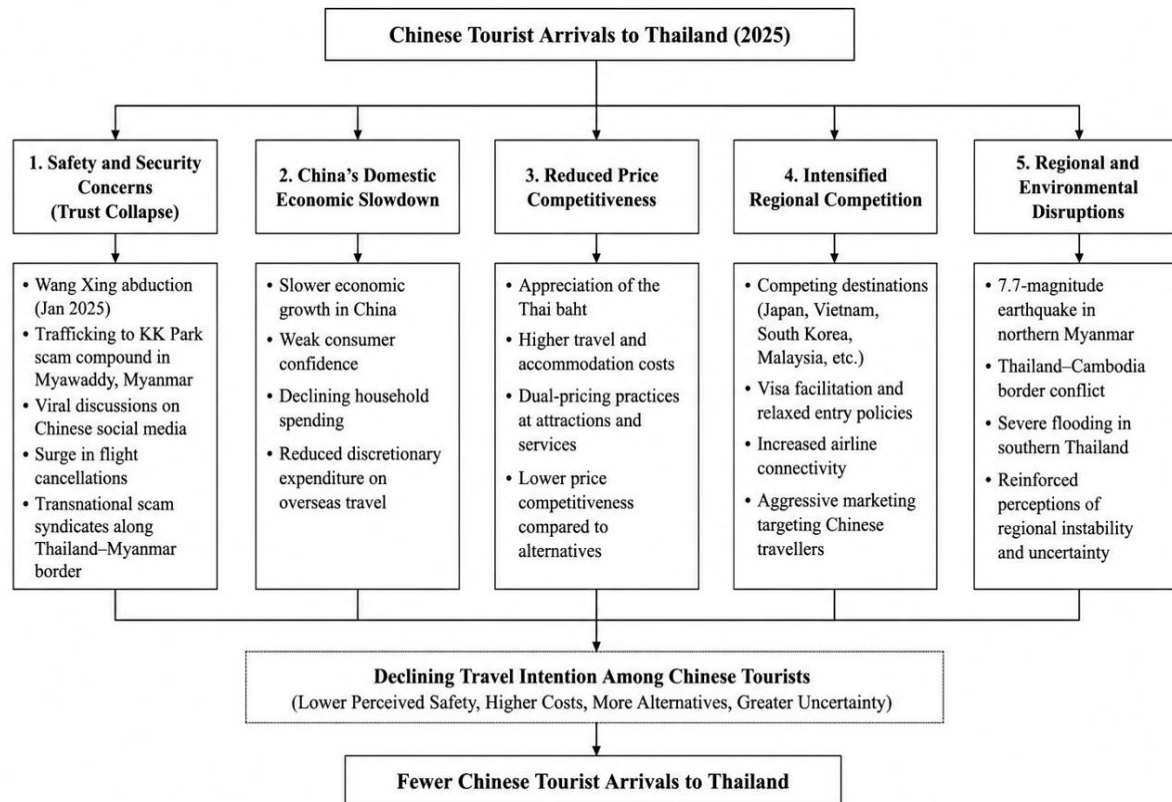


Figure 4-2: Causal framework: Decline in Chinese tourism

Source: Compiled by the author

4.3 Thailand's Adaptive Strategies

Aligning with the adaptive response stage of the destination resilience framework, Thailand enacted a series of policy measures to stabilize tourism demand, rebuild visitor trust, and reduce dependence on the Chinese market. Rather than implementing these strategies sequentially, they were launched simultaneously, showcasing a comprehensive approach to an unfolding crisis. These primary policy responses can be categorized into five key areas (Table 4.3).

Table 4.3: Thailand's Adaptive Strategies in Response to the Decline of Chinese Tourists

Strategic Response	Key Measures	Primary Objective	Expected Impact
1. Visa Facilitation	Permanent reciprocal visa exemption for Chinese citizens starting March 2024; visa-free stay extended from 30 to 60 days in July 2024.	Reduce travel barriers and maintain accessibility to the Chinese market.	Maintain tourism demand by confirming that the market decline wasn't driven by visa restrictions.
2. Safety and Confidence Restoration	Enhanced tourist security, arrests connected to the Wang Xing incident, launch of safety certification for	Rebuild trust in destinations and enhance safety perceptions among international	Restore confidence and alleviate travel-related safety concerns.

	tourism businesses, and the <i>"Trusted Thailand"</i> initiative.	visitors, especially Chinese tourists.	
3. Source Market Diversification	Expansion into India, Japan, Europe, North America, the Middle East, and Australia through targeted marketing campaigns, visa exemption, and increased international flight connectivity, while maintaining charter flights from China.	Diversify Thailand's international visitor base and decrease reliance on the Chinese market.	Increase tourism resilience by diversifying the portfolio of source markets.
4. Transition from "Volume" to "Value" Tourism	Adopting the <i>"Value is the New Volume"</i> strategy and the <i>"Amazing 5Fs¹ Soft power"</i> framework, focusing on wellness, medical tourism, sports tourism, film production, cruise tourism, and the night economy.	Boost tourism income by attracting higher-value visitors rather than focusing on total arrivals.	Enhance tourism revenue and minimize the risks associated with mass tourism.
5. Domestic Tourism Promotion	Amazing Thailand Grand Tourism and Sports Year 2025, UNESCO Creative Cities initiatives, and local destination campaigns.	Address weaker international arrivals by boosting domestic tourism demand.	Stabilize tourism revenues and support local tourism businesses as international markets recover, especially the Chinese market.

Source: China Briefing, Travel and Tour World, TAT Newsroom, Nation Thailand.

Thailand's initial strategy was to keep markets open by liberalizing visa requirements. The reciprocal visa exemption between Thailand and China, initiated in March 2024 and expanded in July 2024, remained in place during the 2025 downturn (Giulia, 2024; Tungkeunkunt, 2024). Since most visa barriers had been lifted before the decline, the ongoing decrease in Chinese visitors indicates that the crisis was primarily demand-driven, stemming from deteriorating perceptions of safety and trust rather than travel restrictions.

The second policy focus was to restore confidence in the destination. After Wang Xing's kidnapping, the Thai government strengthened security, arrested suspects from the trafficking network, and launched new tourist safety initiatives (Saha, H. 2025). The TAT then introduced a safety certification program for hotels, restaurants, and shopping centers, which later expanded into the broader Trusted Thailand initiative as part of the 2026 tourism strategy (TAT Newsroom, 2026). These actions were aimed directly at repairing the reputational damage from the safety crisis and rebuilding trust among Chinese travelers.

Thailand took proactive steps to diversify its source markets, aware of the risks of overdependence on a single market. The TAT boosted promotional campaigns targeting India, Japan, Europe, North America, the Middle East, and Australia. It also improved international air links by establishing new and resuming long-haul routes. Additionally, charter flight programs from secondary Chinese

¹ Thailand's "5Fs" soft power strategy is a national campaign aimed at boosting the creative economy and increasing global cultural influence. The framework emphasizes five main pillars: Food (Thai cuisine), Film (cinema and media), Fashion (Thai textiles and crafts), Fighting (Muay Thai), and Festival (traditional events like Songkran).

cities continued, indicating that diversification was intended to complement rather than replace the Chinese market (Vinaiastien T., 2026). This strategy aligns with the widely recommended portfolio diversification approach in tourism resilience research.

Thailand has transitioned its approach to tourism from emphasizing visitor numbers to emphasizing economic value through the 2025 initiative titled "Value is the New Volume." This policy shift seeks to enhance visitor expenditure and prolong stays, moving away from solely augmenting arrival figures (TAT Newsroom, 2026). The strategy, implemented via the Amazing 5Fs soft power model, aims to attract high-end segments including wellness and medical tourism, sports, film production, cruises, yachts, and the nighttime economy (Krisanaraj, J., 2026). Success is now evaluated based on economic impact and sustainability metrics rather than entirely on visitor volume.

Finally, recognizing that international tourism recovery would be slow, Thailand stepped up its efforts to promote domestic travel. National campaigns, including the Amazing Thailand Grand Tourism and Sports Year 2025 and UNESCO Creative Cities initiatives, motivated local travel and supported regional tourism economies. These programs led to noticeable growth in domestic trips and revenue throughout 2025, helping partially offset weaker international demand (Krisanaraj, J., 2026).

Thailand's diversification did not signify abandoning China. In the early months of 2026, the TAT initiated the "Amazing Thailand Chinese New Year 2026" campaign to commemorate the 51st anniversary of Thailand-China diplomatic relations and to enhance Chinese tourism (TAT, 2026). This exemplifies Thailand's dual strategy: decreasing dependence on China while implementing targeted measures to restore Chinese visitors' confidence. From a destination resilience perspective, these strategies are complementary, balancing market diversification with focused recovery efforts to rebuild a vital segment of Thailand's tourism industry.

4.4 Assessing Effectiveness: Early Outcomes

The effectiveness of Thailand's adaptive strategies can be assessed using the three outcome dimensions of the destination resilience framework: tourism volume, tourism value, and destination image/trust. The evidence suggests a mixed pattern of recovery, indicating that policy interventions have produced uneven outcomes across these dimensions.

Tourism Volume. Regarding visitor arrivals, the recovery has stayed limited. Despite efforts to diversify source markets, Thailand did not reach its tourism goals. Official forecasts for international arrivals were repeatedly lowered, from an initial goal of 40 million visitors in 2025 to about 33.4 million, yet the final total was only 32.97 million. Likewise, the 2026 forecast was reduced from 36.7 million to 30–34 million by mid-2026 (Mehera, B., 2025; Krisanaraj, J., 2026). These results show that growth from other markets has not yet been enough to offset the drop in Chinese visitors.

Tourism Value. Performance was notably stronger when evaluating tourism revenue rather than visitor numbers. Despite a 7.23% drop in international arrivals in 2025, total tourism revenue (including international and domestic) only fell by 1.26%, totaling 2.70 trillion baht (Krisanaraj, J., 2026). This modest decline highlights two main points: first, domestic tourism revenue increased by 3.69%, partially offsetting weaker international demand; second, long-haul markets with higher spending grew significantly, with arrivals reaching a record 10.8 million (+10.64%), led by the United Kingdom and the United States. India and Russia also saw strong growth of 16.8% and 8.8%, respectively, highlighting their emerging roles as growth markets (Vinaiastien, T., 2026). Nevertheless, international tourism revenue still decreased by 4.71% (Vinaiastien, T., 2026),

indicating that market diversification helped mitigate the economic impact of declining Chinese visitor arrivals.

Destination image and trust. Recovery has been the slowest regarding destination image and traveler confidence. Despite China regaining its status as Thailand's largest source market in the first half of 2026 (TAT Newsroom, 2026), industry reports still indicate that Chinese arrivals are approximately 30% below pre-crisis levels (Konishi & Akama, 2026; Thaiger, 2026). This apparent contradiction underscores that, although China remains Thailand's leading individual source market, its actual visitor numbers are considerably lower than previous figures, with no other market approaching that scale. The ongoing recovery gap suggests that reputational damage related to safety concerns is more resilient to policy measures than barriers associated with market access or destination marketing. This observation aligns with the theory presented in Section 2.3, which posits that demand shocks driven by trust recover more slowly than those stemming from economic or policy modifications.

Overall, Thailand's adaptive strategies have fostered resilience. By diversifying markets, the country has reduced economic risks through expanding high-value source markets and boosting domestic tourism. However, this has not fully offset the lack of Chinese visitors. The main challenge remains restoring traveler confidence, as the destination's reputation recovers more slowly than visitor numbers or tourism revenue.

4.5 Theoretical Discussion

Examined through the Adaptive Market Resilience Framework, Thailand's case provides three significant theoretical insights.

First, the case shows that tourism value can recover faster than tourism volume. Although visitor arrivals remained below target, Thailand's strong institutional capacity, which includes effective tourism governance, market flexibility, and domestic demand stimulation, helped limit revenue losses by attracting higher-spending visitors and strengthening domestic tourism. This supports the view that institutional adaptive capacity can generate meaningful value-dimension resilience even when volume-dimension recovery lags.

Second, the findings indicate that market diversification and recovery complement each other rather than compete. Thailand, for example, expanded into new source markets such as India, Russia, and Europe, while continuing to invest in the Chinese market through targeted campaigns and charter flights. This implies that resilient destinations should focus on diversifying while simultaneously strengthening their core markets.

Third, the case highlights the significance of destination trust as an independent facet of resilience. Even though China regained its status as Thailand's top source market in 2026, visitor numbers remained well below pre-crisis levels, indicating that traveler confidence lagged behind the recovery in visitor numbers and tourism income. This underscores the need for resilience models to assess not just tourism metrics and economic outcomes but also the restoration of destination reputation and trust, particularly after reputation-related crises.

5. CONCLUSION AND POLICY IMPLICATIONS

5.1 Summary of Key Findings

This study examined how Thailand's tourism industry has adapted to the sharp decline in Chinese tourists since 2024-2025. It finds that the decline, a roughly 34% year-on-year fall in Chinese arrivals in 2025, reducing China's share of Thailand's total arrivals from about 28% in 2019 to

approximately 13.6% in 2025, was driven mainly by a safety and trust crisis triggered by high-profile trafficking and scam incidents, worsened by China's economic slowdown, currency effects, and regional competition. In response, Thailand implemented a multi-faceted strategy that included continued visa facilitation, safety certification, confidence-building measures, deliberate diversification toward India, Russia, and long-haul European markets, a formal shift from "volume" to "value," and efforts to boost domestic tourism. Early evidence indicates this approach has significantly mitigated revenue losses and reshaped Thailand's source market profile, most notably through Malaysia's rise to the top source market in 2025. However, it has not yet restored the Chinese market to its previous scale or fully regained Chinese travelers' trust, which seems to be recovering more slowly and unevenly than arrival numbers alone suggest.

5.2 Policy implications

The key findings have several practical implications for Thai tourism authorities and industry stakeholders.

First, the shift from a volume-focused to a value-oriented tourism approach should be formalized with clear, publicly available performance metrics like tourism revenue per visitor, average stay duration, and repeat visit rates. Assessing policy effectiveness based on these indicators, rather than just total international arrivals, will offer a more precise measure of the industry's success, especially since visitor numbers might stay below pre-2019 levels for some time.

Second, policymakers should continue pursuing a dual-market strategy by increasing tourism demand from emerging and diverse source markets, including India, Russia, Europe, and the Middle East, while also rebuilding confidence among Chinese travelers. These goals should be viewed as complementary rather than competing priorities for tourism investment and marketing.

Third, building traveler confidence demands continuous support for independently verified safety and quality assurance systems. Programs such as Trusted Thailand and hotel and restaurant safety certifications should be enhanced with regular, transparent, and publicly accessible reports. Evidence indicates that Chinese travelers are more influenced by credible, consistently demonstrated safety improvements than by short-term promotional efforts.

Fourth, enhance strategic destination communication in China by utilizing trusted digital platforms, social media, and key public figures. Safety should be consistently highlighted alongside positive destination stories, as visa facilitation and marketing campaigns don't fully restore traveler confidence. Communication efforts need to proactively address safety concerns, dispel misinformation, and deliver timely, credible updates through channels popular among Chinese travelers. Partnering with reputable media outlets, online travel services, and influential personalities can strengthen Thailand's image as a safe, welcoming, and high-quality destination, helping build long-term trust and boost tourism demand.

Finally, cross-border scam operations should be treated as a strategic tourism policy issue, not just a law-enforcement concern. Given the strong link between cross-border crime and heightened safety concerns among Chinese visitors, enhancing border security and public safety is crucial to rebuilding confidence in the destination and supporting long-term tourism recovery.

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DO BETTER RECORDS MEAN BETTER RETURNS: EXAMINING THE IMPACT OF RECORD-KEEPING PRACTICES ON SME PERFORMANCE

Lenin Kumar Nooney

Faculty, Accounting & Finance, College of Economic and Business Administration,
University of Technology and Applied Sciences - Nizwa, Sultanate of Oman.

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ABSTRACT

This study examines the influence of record-keeping practices on the financial performance of SMEs in Nizwa, Oman, focusing on Accuracy, Completeness, Timeliness, Security and Data Protection, Compliance with Regulatory Standards, Use of Technology, and Auditability. A quantitative descriptive survey was conducted among 173 SMEs using a researcher-developed questionnaire validated through expert review and pilot testing. Data were analyzed using descriptive statistics, reliability analysis, correlation, and multiple regression. The findings indicate that SMEs exhibit strong traditional record-keeping practices, although technology adoption remains limited. Overall, record-keeping practices significantly influence financial performance. Among the dimensions examined, Auditability showed a significant positive effect on Return on Assets (ROA). The study was limited to SMEs in Nizwa and relied on cross-sectional, self-reported data. The findings suggest that strengthening auditability and promoting digital record-keeping can enhance SME performance. This study provides context-specific evidence on record-keeping practices and SME performance in Oman.

Keywords: Record-Keeping Practices, SMEs, Financial Performance, Auditability, Return on Assets, Oman

1. INTRODUCTION

Small and Medium-sized Enterprises (SMEs) constitute the backbone of many global economies, playing a vital role in promoting economic growth, generating employment opportunities, and fostering innovation. In the Sultanate of Oman, SMEs have emerged as dynamic contributors to the national economy, encompassing a diverse range of enterprises—from traditional family-owned businesses to innovative start-ups operating in emerging industries. Owing to their significant economic contribution, SMEs are widely recognized as essential components of both developed and developing economies.

In Oman, SMEs currently contribute approximately 17 percent to the national Gross Domestic Product (GDP), with the government aiming to increase this share to 30 percent by the end of the Tenth Five-Year Development Plan. According to statistics published by the National Centre for Statistics and Information (NCSI), the number of registered SMEs has increased by 46.8 percent in recent years. To further strengthen this sector in alignment with Oman Vision 2040, the Authority for Small and Medium Enterprises Development (ASMED) is actively developing strategic initiatives tailored to the specific needs of SMEs. This strategic direction reflects a clear recognition of the role SMEs play in ensuring long-term economic sustainability and national prosperity.

Despite the rapid expansion of SMEs, the need for effective record-keeping practices remains a critical concern. Business records serve as a fundamental tool for assessing enterprise performance,

financial stability, and growth potential. Moreover, accurate and systematic record keeping enables SMEs to access essential financial resources such as bank loans, government grants, and external funding, thereby supporting business continuity and growth. As the SME sector in Oman continues to expand, fostering a culture of sound record keeping becomes increasingly important. Such practices not only enhance organizational sustainability but also enable SMEs to capitalize on emerging opportunities and strengthen their contribution to the country's economic development.

Against this backdrop, the present study examines the influence of record-keeping practices on the performance of SMEs in Nizwa. Specifically, the study aims to assess the impact of record-keeping practices on SME financial performance, as measured by Return on Assets (ROA).

This study provides empirical evidence on record-keeping practices (RKP) and their impact on the financial performance of small and medium enterprises (SMEs), as measured by Return on Assets (ROA). By establishing these relationships, the study enhances understanding of how behavioral and operational factors jointly influence SME performance. Furthermore, by examining the role of record-keeping practices, the study clarifies the mechanism through which effective record keeping contributes to improved SME financial performance. This insight is valuable for SME owners and managers in designing efficient record-keeping systems that support informed decision-making and enhance profitability.

In addition, the study contributes to academic literature by extending existing research on SME performance through a multidimensional analysis of record-keeping practices (RKP), including Accuracy of Records (AR), Completeness of Records (CR), Timeliness of Record-keeping (TR), Security and Data Protection (SDP), Compliance with Regulatory Standards (CRS), Use of Technology (UT), Auditability (AU). The findings provide a structured framework for future researchers examining the role of behavioral accounting practices in influencing SME financial outcomes.

2. REVIEW OF LITERATURE

2.1 Record-Keeping Practices in Small and Medium Enterprises

Small and Medium Enterprises (SMEs) often commence operations with limited managerial and accounting knowledge, which exposes them to numerous operational challenges. Previous studies have identified poor managerial skills, inadequate administrative capacity, insufficient capital, overreliance on external borrowing, and weak record-keeping practices as major constraints hindering SME growth and sustainability (Brooks, Collings & Gonzales, 1990). Among these challenges, ineffective record keeping has been consistently highlighted as a critical weakness affecting SME operations.

Ademola et al. (2012) emphasized that financial record keeping forms the foundation upon which modern businesses achieve growth and long-term sustainability. Similarly, Dawuda and Azeko (2015) noted that SMEs rely heavily on financial records documenting transactions such as sales, purchases, income, and payments to support decision-making and operational control. However, many SME owners undervalue the importance of maintaining proper financial records, often perceiving record keeping as time-consuming and costly (Amoako, 2013).

Dawuda and Azeko (2015) further observed that limited education and the high cost of employing qualified accounting personnel discourage SMEs from maintaining proper books of accounts. In some cases, businesses deliberately avoid accurate record keeping to evade tax obligations. Mwangi (2011) reported that many SMEs rely on single-entry bookkeeping systems, which result

in incomplete and informal records, often maintained through memory rather than systematic documentation. Such practices limit the ability of SMEs to track financial performance effectively.

Studies on double-entry bookkeeping systems have emphasized their importance in enhancing financial transparency and accountability. Mutisya (2015) found that inadequate bookkeeping knowledge prevents SMEs from accurately determining profits or losses, advocating for training programs and educational initiatives to improve accounting skills. Ademola (2012) and Sangster (2011) highlighted the role of day books, journals, and ledgers in ensuring accurate and chronological recording of financial transactions, which strengthens internal controls and auditability.

Empirical evidence also suggests that SMEs face multiple barriers to effective record keeping, including lack of accounting skills, time constraints, financial limitations, and inadequate technological adoption (Idewe, 2019; Malauri et al., 2021). Recent studies have further indicated that limited technological competence restricts SMEs from adopting modern accounting systems, including cloud-based accounting solutions (Amosah et al., 2023; Tawfik et al., 2022). These findings underscore the importance of education, training, and technological readiness in improving record-keeping practices among SMEs.

2.2 Financial Performance of Small and Medium Enterprises

The financial performance of SMEs is widely recognized as a key determinant of economic development, employment generation, and poverty reduction. Several studies have demonstrated that effective financial management practices, including sound record keeping, significantly influence SME performance and survival (Musah & Muazu, 2014; Collis & Jarvis, 2002; Nooney et al., 2024).

Madurapperuma et al. (2016) found a positive relationship between the preparation of financial statements and SME financial performance, noting that as enterprises grow, the demand for comprehensive financial reporting increases, particularly to meet the information needs of external stakeholders such as lenders and investors. Similarly, Olatunji (2013) and Abdul-Rahamon and Adejare (2014) reported a strong positive correlation between the adoption of proper accounting systems and improved SME performance.

Empirical studies in developing economies have consistently shown that maintaining accurate and consistent accounting records enhances profitability and overall business performance (Akesinro & Adetoso, 2016). Proper record keeping enables SMEs to assess financial health, monitor resource utilization, and support effective business planning (Al-Zakwani & Mondal, 2019; Mwebesa et al., 2018).

However, some studies have reported mixed findings. Mairura (2011), while identifying education and business characteristics as drivers of record-keeping practices, failed to establish a direct correlation between record keeping and SME performance. Despite this, subsequent research has provided substantial evidence linking poor record keeping to unfavorable financial outcomes, including liquidity problems, tax non-compliance, and increased risk of business failure (Evans et al., 2005; Pillay, 2009).

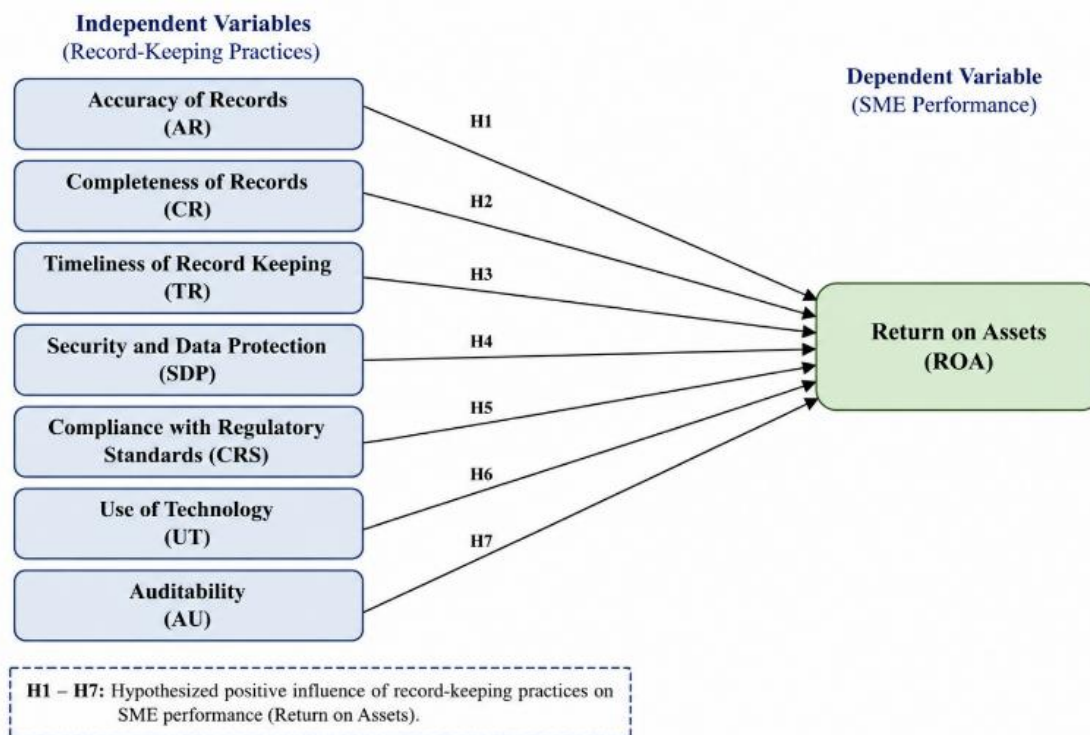
Recent literature also emphasizes the growing role of technology-enabled accounting systems in enhancing financial performance. The adoption of cloud accounting and integrated management accounting systems has been shown to improve information accessibility, decision-making efficiency, and overall organizational performance (Tawfik et al., 2022; Hassan & Maelah, 2023). Moreover, studies recommend that SMEs strengthen their financial performance by adopting sound

record-keeping practices and engaging qualified accounting professionals (Eke et al., 2023). Recent studies have also highlighted the growing importance of digital accounting systems and technology adoption in improving SME financial management and organizational performance. Digital accounting systems enhance the accuracy, timeliness, and transparency of financial information while supporting better managerial decision-making and operational efficiency (Al-Hattami et al., 2025). Likewise, the digitalization of accounting processes has been shown to improve SME performance by strengthening organizational capabilities and facilitating more effective resource utilization. Furthermore, cloud accounting systems and accounting analytics technologies have emerged as important drivers of financial management, enabling SMEs to automate accounting processes, improve financial reporting quality, and support strategic decision-making (Hossain, 2025). More broadly, recent evidence indicates that technology adoption is a key determinant of SME competitiveness and performance, with digital transformation contributing to greater innovation, operational efficiency, and sustainable business growth (Kallmuenzer et al., 2024; Zainodin et al., 2024).

2.3 Research Gap:

Despite the studies from other countries, showing the impact of accounting records keeping practices on SME performance, there are no similar studies in the Sultanate of Oman. There were no studies that have determined the influence of record keeping practices on SME performance. The study was motivated by the fact that this area has not received any attention to literature.

Conceptual Model



Source: Author's Creation

2.4 Hypotheses of the Study

H1: Accuracy of Records (AR) has a positive influence on Return on Assets (ROA).

H2: Completeness of Records (CR) has a positive influence on Return on Assets (ROA).

H3: Timeliness of Record Keeping (TR) has a positive influence on Return on Assets (ROA).

H4: Security and Data Protection (SDP) have a positive influence on Return on Assets (ROA).

H5: Compliance with Regulatory Standards (CRS) has a positive influence on Return on Assets (ROA).

H6: Use of Technology (UT) has a positive influence on Return on Assets (ROA).

H7: Auditability (AU) has a positive influence on Return on Assets (ROA).

3. METHODOLOGY

3.1 Research Design: This study adopted a survey method, which is a fact-finding approach that facilitates systematic data collection and accurate interpretation of findings (Cooper & Schindler, 2003). A descriptive research design was employed to provide an accurate description of the characteristics of individuals, events, and situations relevant to the study (Saunders, Lewis, & Thornhill, 2007). The study followed a quantitative research approach, as quantitative analysis enables the development and testing of statistical models to examine relationships among variables (Anderson et al., 2018). The research focused on examining the influence of record-keeping practices on the financial performance of small and medium enterprises (SMEs) in Nizwa, Sultanate of Oman.

3.2 Sampling Strategy and Data Collection: The target population comprised SMEs operating in Nizwa, Sultanate of Oman. A simple random sampling technique was adopted because the population units were readily accessible to the researcher, ensuring that each SME had an equal chance of being selected. A total of 200 SMEs were selected for participation in the study.

Data were collected using a structured questionnaire administered through Google Forms. The survey link was distributed electronically to the selected respondents. Out of the 200 questionnaires distributed, 173 completed questionnaires were found valid and suitable for analysis, representing an effective response rate of 86.5%. The remaining 27 questionnaires were excluded due to incomplete responses or missing data. Prior to analysis, the data collected were screened to identify and correct errors and missing values.

3.3 Instrument Development and Questionnaire Structure: The questionnaire was developed by the researcher following an extensive review of the literature on record-keeping practices. Independent measurement items were adapted and modified to suit the study context, covering seven dimensions: Accuracy of Records (4 items), Completeness of Records (4 items), Timeliness of Record Keeping (5 items), Security and Data Protection (4 items), Compliance with Regulatory Standards (4 items), Use of Technology (4 items), and Auditability (4 items). The instrument was subjected to expert review to establish content validity and was pilot tested before the main survey. The pilot study confirmed the clarity and reliability of the instrument (Cronbach's alpha values exceeding the recommended threshold of 0.70), and minor revisions were made based on respondents' feedback prior to actual data collection. Responses were measured using a five-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). The five-point Likert scale was selected because it is one of the most widely used psychometric measurement tools in social science research (Taherdoost, 2019). The dependent variable, SME financial performance, was measured using Return on Assets (ROA) over a five-year period. Before the main data collection process, the questionnaire was pre-tested to ensure its clarity, reliability, and validity.

3.4 Data Analysis Techniques: The collected data were analyzed using the Statistical Package for Social Sciences (SPSS), Version 21. Prior to analysis, the data were screened for completeness and

accuracy. Descriptive statistics were used to summarize the demographic characteristics of respondents and the key study variables. Correlation analysis was conducted to examine the relationship between record-keeping practices and SME performance. Furthermore, multiple regression analysis was employed to assess the effect of the independent variables - accuracy, completeness, timeliness, security and data protection, compliance with regulatory standards, use of technology, and auditability on the dependent variable, Return on Assets (ROA). These statistical techniques enabled the study to test the proposed relationships and draw meaningful conclusions regarding the impact of record-keeping practices on SME performance.

4. DATA ANALYSIS

Table 1: Demographic profile

		Frequency	Percent	Valid Percent	Cumulative Percent
Gender	Male	108	62.4	62.4	62.4
	Female	65	37.6	37.6	100.0
	Total	173	100.0	100.0	
Age	20 – 29 Years	125	72.3	72.3	72.3
	30 – 39 Years	39	22.5	22.5	94.8
	40 – 49 Years	9	5.2	5.2	100.0
	Total	173	100.0	100.0	
Education	Diploma	99	57.2	57.2	57.2
	Bachelors	68	39.3	39.3	96.5
	Masters	6	3.5	3.5	100.0
	Total	173	100.0	100.0	
Business Type	Trade	141	81.5	81.5	81.5
	Services	27	15.6	15.6	97.1
	Manufacturing	5	2.9	2.9	100.0
	Total	173	100.0	100.0	
Knowledge of Record Keeping	Yes	108	62.4	62.4	62.4
	No	65	37.6	37.6	100.0
	Total	173	100.0	100.0	
Accounting Software	Quick books	71	41.0	41.0	41.0
	Tally	68	39.3	39.3	80.3
	Pastel	34	19.7	19.7	100.0
	Total	173	100.0	100.0	

A total of 173 respondents participated in the survey, of whom 108 were male (62.4%) and 65 were female (37.6%). With respect to age distribution, 125 respondents (72.3%) were aged between 20 and 29 years, 39 respondents (22.5%) fell within the 30–39 age group, and 9 respondents (5.2%) were between 40 and 49 years of age.

Regarding educational qualifications, most respondents held diploma-level qualifications (57.2%), followed by those with bachelor's degrees (39.3%), while only a small proportion (3.5%) possessed master's degrees. Analysis of business type revealed that 81.5% of the respondents were engaged in trading activities, 15.6% operated in the service sector, and 2.9% were involved in manufacturing.

In terms of record-keeping knowledge, 62.4% of the respondents reported having knowledge of record keeping, whereas 37.6% indicated limited or no proficiency in this area. Furthermore, the

findings show that 41% of the respondents used QuickBooks for record keeping, 39.3% relied on Tally, and 19.7% used Pastel accounting software.

Table 2: Study Variables

Variables	N	Minimum	Maximum	Mean	Std. Deviation
AR	173	1.75	5.00	3.9249	.69267
CR	173	1.00	5.00	3.9350	.84420
TR	173	1.00	5.00	4.0786	.81459
SDP	173	1.00	5.00	3.9393	.88466
CRS	173	1.00	5.00	4.0954	.85607
UT	173	1.00	5.00	2.6040	.87355
AU	173	1.00	5.00	3.5708	1.04010
ROA	173	.03	5.00	.6839	.72716
Valid N (listwise)	173				

Table 2 presents the descriptive statistics of the study variables based on responses from 173 SMEs. The results indicate that all record-keeping practice dimensions Accuracy of Records (AR), Completeness of Records (CR), Timeliness of Record Keeping (TR), Security and Data Protection (SDP), Compliance with Regulatory Standards (CRS), Use of Technology (UT), and Auditability (AU) were measured using a five-point Likert scale.

Among the record-keeping dimensions, Compliance with Regulatory Standards (CRS) recorded the highest mean value (Mean = 4.0954, SD = 0.85607), followed closely by Timeliness of Record Keeping (TR) (Mean = 4.0786, SD = 0.81459). This indicates that most SMEs demonstrate strong adherence to regulatory requirements and maintain timely records. Accuracy of Records (AR) and Completeness of Records (CR) also exhibited relatively high mean values of 3.9249 and 3.9350, respectively, suggesting satisfactory record accuracy and completeness among the sampled SMEs.

Similarly, Security and Data Protection (SDP) showed a high mean score (Mean = 3.9393, SD = 0.88466), indicating that SMEs place considerable importance on safeguarding business records. Auditability (AU) recorded a moderate mean value (Mean = 3.5708, SD = 1.04010), reflecting some variability in the extent to which SMEs maintain records that facilitate auditing and verification.

In contrast, Use of Technology (UT) reported the lowest mean score (Mean = 2.6040, SD = 0.87355), suggesting limited adoption of technological tools for record keeping among SMEs. This finding highlights a potential area for improvement, particularly in the context of digital transformation and automation of accounting processes.

With respect to financial performance, Return on Assets (ROA) recorded a mean value of 0.6839 (SD = 0.72716), indicating moderate performance levels across the sampled SMEs. The variability observed in ROA suggests differences in how effectively SMEs utilize their assets to generate profits.

Overall, the descriptive statistics reveal that while SMEs in the study demonstrate relatively strong traditional record-keeping practices, the adoption of technology in record keeping remains comparatively low. These findings provide a foundation for further inferential analysis to examine the impact of record-keeping practices on SME financial performance.

Table 3: Output Interpretation- Reliability

Variables	Number of Items	Cronbach Alpha
AR	4	0.612
CR	4	0.854
TR	5	0.873
SDP	4	0.899
CRS	4	0.890
UT	4	0.603
AU	4	0.791
ROA	5	0.993

Table 3 presents the results of the reliability analysis for the study constructs using Cronbach's alpha coefficients. Reliability analysis assesses the internal consistency of the measurement items used to represent each construct.

The findings indicate that most constructs exhibit acceptable to excellent internal consistency, with Cronbach's alpha values exceeding the commonly accepted threshold of 0.70. Specifically, Completeness of Records (CR) ($\alpha = 0.854$), Timeliness of Record Keeping (TR) ($\alpha = 0.873$), Security and Data Protection (SDP) ($\alpha = 0.899$), Compliance with Regulatory Standards (CRS) ($\alpha = 0.890$), and Auditability (AU) ($\alpha = 0.791$) demonstrate strong reliability, indicating that the items within each construct are consistent in measuring the intended concept.

Return on Assets (ROA) recorded an exceptionally high Cronbach's alpha value ($\alpha = 0.993$), suggesting excellent internal consistency among the performance measurement items. This indicates a high degree of reliability in capturing SME financial performance.

The constructs Accuracy of Records (AR) ($\alpha = 0.612$) and Use of Technology (UT) ($\alpha = 0.603$) exhibit slightly lower reliability values. However, these values remain acceptable for exploratory research, particularly in social science studies where Cronbach's alpha values above 0.60 are considered permissible. A Cronbach's alpha score exceeding 0.6 is indicative of the item's reliability (Hajjar, S. T. 2018, Cronbach, L. J. 1951, George and Mallery 2003).

Overall, the reliability results confirm that the measurement scales used in the study are sufficiently reliable for subsequent statistical analyses, including correlation and regression analysis.

Table 4: Pearson Correlation Matrix of Record-Keeping Practices and SME Performance

		AR	CR	TR	SDP	CRS	UT	AU	ROA
AR	Pearson Correlation	1	.612**	.747**	.746**	.621**	.100	.242**	.032
	Sig. (2-tailed)		.000	.000	.000	.000	.190	.001	.673
	N	173	173	173	173	173	173	173	173
CR	Pearson Correlation	.612**	1	.756**	.802**	.818**	.201**	.322**	.064
	Sig. (2-tailed)	.000		.000	.000	.000	.008	.000	.400
	N	173	173	173	173	173	173	173	173
TR	Pearson Correlation	.747**	.756**	1	.876**	.773**	.104	.408**	.017
	Sig. (2-tailed)	.000	.000		.000	.000	.171	.000	.823
	N	173	173	173	173	173	173	173	173
SDP	Pearson Correlation	.746**	.802**	.876**	1	.784**	.091	.365**	.075
	Sig. (2-tailed)	.000	.000	.000		.000	.234	.000	.329

	N	173	173	173	173	173	173	173	173
CRS	Pearson Correlation	.621**	.818**	.773**	.784**	1	.040	.350**	-.033
	Sig. (2-tailed)	.000	.000	.000	.000		.605	.000	.670
	N	173	173	173	173	173	173	173	173
UT	Pearson Correlation	.100	.201**	.104	.091	.040	1	.202**	-.045
	Sig. (2-tailed)	.190	.008	.171	.234	.605		.008	.560
	N	173	173	173	173	173	173	173	173
AU	Pearson Correlation	.242**	.322**	.408**	.365**	.350**	.202**	1	.161*
	Sig. (2-tailed)	.001	.000	.000	.000	.000	.008		.035
	N	173	173	173	173	173	173	173	173
ROA	Pearson Correlation	.032	.064	.017	.075	-.033	-.045	.161*	1
	Sig. (2-tailed)	.673	.400	.823	.329	.670	.560	.035	
	N	173	173	173	173	173	173	173	173
**. Correlation is significant at the 0.01 level (2-tailed).									
*. Correlation is significant at the 0.05 level (2-tailed).									

Table 4 presents the Pearson correlation coefficients among the dimensions of record-keeping practices. The results reveal strong and statistically significant positive correlations among most dimensions of record-keeping practices. Accuracy of Records (AR) is significantly and positively correlated with Completeness of Records (CR) ($r = 0.612$, $p < 0.01$), Timeliness of Record Keeping (TR) ($r = 0.747$, $p < 0.01$), Security and Data Protection (SDP) ($r = 0.746$, $p < 0.01$), and Compliance with Regulatory Standards (CRS) ($r = 0.621$, $p < 0.01$). These findings indicate a high degree of interrelation among core record-keeping practices.

Similarly, Completeness of Records (CR) demonstrates strong positive correlations with Timeliness (TR) ($r = 0.756$, $p < 0.01$), Security and Data Protection (SDP) ($r = 0.802$, $p < 0.01$), and Compliance with Regulatory Standards (CRS) ($r = 0.818$, $p < 0.01$). Timeliness of Record Keeping (TR) is also strongly associated with Security and Data Protection (SDP) ($r = 0.876$, $p < 0.01$), suggesting that timely record maintenance is closely linked to secure record-keeping systems.

In contrast, Use of Technology (UT) exhibits weak and largely insignificant correlations with most record-keeping dimensions, except for a small but significant association with Completeness of Records (CR) ($r = 0.201$, $p < 0.01$) and Auditability (AU) ($r = 0.202$, $p < 0.01$). This indicates limited integration of technological tools within existing record-keeping practices among the sampled SMEs.

With respect to SME performance, Return on Assets (ROA) shows a weak but statistically significant positive correlation only with Auditability (AU) ($r = 0.161$, $p < 0.05$). All other record-keeping dimensions display positive but statistically insignificant relationships with ROA. This suggests that while several record-keeping practices are interrelated, auditability appears to have a more direct association with financial performance at the bivariate level.

Overall, the correlation results indicate strong interconnections among record-keeping practice dimensions, while their direct associations with SME financial performance are generally weak at the correlation level. These findings justify the use of multivariate analysis, such as regression analysis, to further examine the influence of record-keeping practices on SME performance.

Table 5: Model Summary of Multiple Regression Analysis for SME Performance

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin - Watson
					R Square Change	F Change	df 1	df 2	Sig. F Change	
1	.295 _a	.087	.048	.70946	.087	2.241	7	165	.033	1.591
a. Predictors: (Constant), AU, UT, AR, CR, CRS, TR, SDP										
b. Dependent Variable: ROA										

Table 5 presents the model summary of the multiple regression analysis conducted to examine the influence of record-keeping practice dimensions on SME financial performance. The results show a multiple correlation coefficient (R) of 0.295, indicating a modest positive relationship between independent variables and SME performance. The coefficient of determination (R^2) is 0.087, suggesting that the combined record-keeping practice variables explain approximately 8.7% of the variation in return on assets (ROA). After adjusting for the number of predictors included in the model, the Adjusted R^2 decreases to 0.048, indicating that only 4.8% of the variance in SME financial performance is explained by the model.

The relatively low Adjusted R^2 indicates that, although the model is statistically significant, its explanatory power is limited. This suggests that record-keeping practices alone account for only a small proportion of the variation in SME financial performance. Financial performance is a multifaceted outcome that is influenced by numerous internal and external factors beyond record-keeping practices. Such factors may include managerial competence, firm size, access to finance, market competition, innovation capability, business age, macroeconomic conditions, government policies, and industry-specific characteristics. Consequently, a substantial proportion of the variation in ROA remains unexplained by the variables included in this study.

Despite the relatively low explanatory power, the model's overall significance is supported by the F-change statistic ($F = 2.241$, $p = 0.033$), which is statistically significant at the 5% level. This indicates that the set of record-keeping practice variables, when considered collectively, contributes significantly to explaining variations in SME financial performance, even though the magnitude of their contribution is modest.

The standard error of the estimate is 0.70946, reflecting the average deviation of the observed ROA values from the predicted values. Furthermore, the Durbin–Watson statistic of 1.591 suggests that there are no serious autocorrelation issues in the residuals, as the value falls within the generally accepted range of 1.5 to 2.5.

Overall, the findings suggest that record-keeping practices have a statistically significant but limited influence on SME financial performance. The low Adjusted R^2 highlights that SME financial performance is determined by a broad range of factors beyond record-keeping practices. Therefore, future research should incorporate additional organizational, financial, managerial, and environmental variables to develop models with greater explanatory power and provide a more comprehensive understanding of the determinants of SME financial performance.

Table 6: ANOVA Results of Multiple Regression Analysis for SME Performance

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	7.897	7	1.128	2.241	.033 ^b
	Residual	83.049	165	.503		
	Total	90.947	172			
a. Dependent Variable: ROA						
b. Predictors: (Constant), AU, UT, AR, CR, CRS, TR, SDP						

Table 6 presents the results of the Analysis of Variance (ANOVA) for the multiple regression model examining the effect of record-keeping practice dimensions. The ANOVA results indicate that the regression model is statistically significant. The regression sum of squares is 7.897 with 7 degrees of freedom, while the residual sum of squares is 83.049 with 165 degrees of freedom. The computed F-statistic is 2.241, with a corresponding significance value ($p = 0.033$), which is below the 0.05 significance level.

This result suggests that the independent variables, when considered collectively, significantly explain variations in SME financial performance. In other words, the overall regression model provides a better fit to the data than a model with no predictors.

Overall, the ANOVA findings confirm the adequacy of the regression model and support further interpretation of the individual regression coefficients to assess the specific impact of each record-keeping practice dimension on SME performance.

Table 7: Regression Coefficients for the Effect of Record-Keeping Practices on SME Performance

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.641	.364		1.764	.080		
	AR	.042	.124	.040	.340	.734	.399	2.508
	CR	.233	.131	.271	1.786	.076	.241	4.153
	TR	-.196	.153	-.219	-1.278	.203	.188	5.311
	SDP	.199	.149	.242	1.339	.182	.169	5.919
	CRS	-.316	.125	-.372	-2.535	.012	.257	3.898
	UT	-.110	.066	-.132	-1.658	.099	.870	1.149
	AU	.155	.059	.222	2.648	.009	.787	1.270
a. Dependent Variable: ROA								

Table 7 presents the results of the multiple regression analysis examining the effect of record-keeping practice dimensions on SME financial performance. The results indicate that Auditability (AU) has a positive and statistically significant effect on SME performance ($\beta = 0.222$, $t = 2.648$, $p = 0.009$). This finding suggests that SMEs with stronger auditability practices are more likely to achieve improved financial performance, possibly because well-documented and verifiable financial records enhance transparency, strengthen internal controls, facilitate access to finance, and support informed managerial decision-making.

Compliance with Regulatory Standards (CRS) exhibits a negative and statistically significant relationship with return on assets (ROA) ($\beta = -0.372$, $t = -2.535$, $p = 0.012$). This finding suggests that, within the sampled SMEs, higher levels of compliance with regulatory requirements are associated with lower financial performance. A plausible explanation is that regulatory compliance

often requires SMEs to incur substantial direct and indirect costs, including expenditures on accounting systems, professional services, staff training, documentation, reporting, audits, and regulatory monitoring. Since SMEs generally operate with limited financial and human resources, these compliance-related obligations may divert resources away from productive investments and core business operations, thereby reducing profitability in the short term. It is also possible that firms facing greater regulatory obligations allocate more time and financial resources to meet compliance requirements than to business expansion and innovation.

This finding is consistent with previous studies that have reported that regulatory compliance can impose financial and administrative burdens on SMEs, particularly where compliance costs are disproportionately high relative to firm size (Lewis, 2015; Sommers & Cole, 1981). These studies argue that although compliance promotes transparency, accountability, and long-term business sustainability, the immediate costs associated with meeting regulatory requirements may negatively affect short-term financial performance. However, the result contrasts with studies such as (Lewis, 2015), which found that compliance with regulatory standards enhances organizational credibility, improves stakeholder confidence, and contributes positively to financial performance by strengthening governance and reducing operational risk. The difference in findings may be attributed to variations in regulatory environments, institutional support, firm characteristics, industry sectors, and the level of resources available to SMEs across different countries and contexts.

The remaining variables, Accuracy of Records (AR), Completeness of Records (CR), Timeliness of Record Keeping (TR), Security and Data Protection (SDP), and Use of Technology (UT) do not exhibit statistically significant effects on SME performance at the 5% significance level. Although several variables display positive or negative regression coefficients, their corresponding p-values exceed the 0.05 threshold, indicating that their individual contributions to explaining variations in ROA are not statistically significant in this model.

With respect to multicollinearity diagnostics, the tolerance values range from 0.169 to 0.870, while the Variance Inflation Factor (VIF) values range from 1.149 to 5.919. Although the VIF values for Timeliness of Record Keeping (TR = 5.311) and Security and Data Protection (SDP = 5.919) are relatively high, they remain below the commonly accepted critical threshold of 10 (Hair et al., 2010), indicating that severe multicollinearity is unlikely to be present. Nevertheless, VIF values exceeding 5 may indicate moderate multicollinearity (James et al., 2021), suggesting that some of the record-keeping practice dimensions are moderately correlated. This is not unexpected, as effective record-keeping practices often coexist and reinforce one another within SMEs. Moderate multicollinearity can inflate the standard errors of the affected regression coefficients, making it more difficult to detect statistically significant individual effects, even when the variables collectively contribute to explaining the dependent variable. Despite this, the regression coefficients remain interpretable, and the absence of VIF values exceeding 10 and tolerance values below 0.10 indicates that multicollinearity is not sufficiently severe to compromise the validity of the regression model. Therefore, while the results should be interpreted with some caution, multicollinearity does not appear to materially affect the study's conclusions.

Overall, the findings suggest that while record-keeping practices collectively influence SME financial performance, auditability is the only significant positive predictor, whereas compliance with regulatory standards demonstrates a significant negative association with ROA. These results imply that although regulatory compliance is essential for legal accountability and good governance, SMEs should be supported through simplified regulatory procedures, digital

compliance tools, and capacity-building initiatives that reduce compliance costs while enabling them to maintain strong financial performance.

Table 8: Hypothesis Result of H1

S. No	Hypothesis	p-value	Result
H1	Accuracy of Records (AR) has a positive influence on Return on Assets (ROA).	.734	Insignificant
H2	Completeness of Records (CR) has a positive influence on Return on Assets (ROA).	.076	Insignificant
H3	Timeliness of Record Keeping (TR) has a positive influence on Return on Assets (ROA).	.203	Insignificant
H4	Security and Data Protection (SDP) have a positive influence on Return on Assets (ROA).	.182	Insignificant
H5	Compliance with Regulatory Standards (CRS) has a positive influence on Return on Assets (ROA).	.012*	Significant
H6	Use of Technology (UT) has a positive influence on Return on Assets (ROA).	.099	Insignificant
H7	Auditability (AU) has a positive influence on Return on Assets (ROA).	.009**	Significant

*P < 0.05, **P < 0.01

5. CONCLUSION

The present study examined the influence of record-keeping practices on the financial performance of small and medium enterprises (SMEs) in Nizwa, Sultanate of Oman, with financial performance measured using Return on Assets (ROA). The findings reveal that SMEs in the study generally demonstrate strong traditional record-keeping practices, particularly in terms of compliance with regulatory standards, timeliness of record keeping, accuracy, completeness, and security of records. However, the adoption of technology in record keeping remains relatively low, indicating a gap in digital integration among SMEs.

Reliability analysis confirmed that the measurement instruments used in the study were internally consistent and suitable for further statistical analysis. Correlation analysis showed strong interrelationships among most record-keeping dimensions, suggesting that record-keeping practices tend to operate as a cohesive system rather than as isolated activities. However, at the bivariate level, only auditability exhibited a significant positive relationship with SME financial performance.

The regression results indicate that record-keeping practices collectively have a statistically significant effect on SME performance, although their overall explanatory power is modest. Among the individual dimensions, auditability emerged as a significant positive predictor of ROA, highlighting the importance of maintaining records that support verification, transparency, and accountability. Conversely, compliance with regulatory standards was found to have a significant negative effect on financial performance, suggesting that regulatory compliance may impose financial or administrative burdens on SMEs. Other dimensions, including accuracy, completeness, timeliness, security, and use of technology, did not show a statistically significant direct effect on ROA.

Overall, the study concludes that while sound record-keeping practices are essential for SME operations, only specific aspects, particularly auditability, translate directly into improved financial

performance. The findings emphasize the need for SMEs to balance compliance requirements with efficient and performance-oriented record-keeping systems.

6. RECOMMENDATIONS

Based on the findings of the study, it is recommended that SMEs place greater emphasis on improving auditability by maintaining systematic, well-documented, and verifiable records, as this can enhance financial transparency, support informed decision-making, and improve access to external financing. Policymakers and regulatory authorities should consider simplifying compliance procedures and reducing administrative burdens to minimize the negative impact of regulatory requirements on SME financial performance. Although the use of technology did not show a significant impact in the current model, the limited adoption of accounting software among SMEs highlights the need for targeted training and awareness programs to promote digital record-keeping practices. Furthermore, government agencies and SME development institutions should implement regular capacity-building initiatives focused on record-keeping practices, financial management, and audit readiness, particularly for younger and less-educated SME owners. Additionally, SMEs should be encouraged to seek advisory support from accounting professionals or consultants to enhance the quality of their record-keeping systems and ensure alignment with regulatory standards and organizational performance objectives.

7. LIMITATIONS OF THE STUDY

Despite its contributions, the study is subject to certain limitations that should be acknowledged. First, the research was confined to small and medium enterprises operating in Nizwa, which may limit the generalizability of the findings to other regions of the Sultanate of Oman or to different national contexts. Second, the study adopted a cross-sectional research design, with data collected at a single point in time, thereby restricting the ability to establish causal relationships between record-keeping practices and financial performance. Third, the use of self-administered questionnaires may introduce response bias or inaccuracies, as the data relies on the respondents' perceptions and self-reporting. Finally, the regression model explains a relatively modest proportion of the variance in SME financial performance, suggesting that additional factors not examined in the study may also play a significant role in influencing Return on Assets (ROA).

8. SCOPE FOR FUTURE RESEARCH

Future research can extend the findings of this study in several meaningful ways. Expanding the geographical scope to include SMEs from multiple regions or across the entire Sultanate of Oman would enhance the generalizability of the results. Longitudinal research designs could be employed to examine changes in record-keeping practices over time and to better assess their long-term impact on SME financial performance. Additionally, future studies may incorporate other key determinants of SME performance, such as access to finance, managerial competence, innovation, market conditions, and entrepreneurial orientation, to improve the explanatory power of the model. Given the relatively low adoption of technology identified in this study, further research could specifically focus on the role of digital accounting systems and cloud-based solutions in improving SME performance. Moreover, adopting a mixed-methods approach by integrating qualitative techniques, such as interviews or case studies, with quantitative analysis could provide deeper insights into the challenges and contextual factors influencing effective record-keeping practices among SMEs.

Declaration regarding AI Usage: AI was used for checking the logical flow and for grammar and language errors.

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FACULTY COGNIZANCE, CAPACITY, AND MOTIVATION FOR INTERNATIONALIZATION ACROSS HIGHER EDUCATION INSTITUTIONS (HEIS): IMPLICATIONS FOR POLICY RECOMMENDATION

Lilyn G. Estrada

University of Negros Occidental-Recoletos, Blk 58 Lot 11 Manville Royale,
Tangub, Bacolod City, **Philippines**

Ma Quincy D. Dones*

La Carlota City College, **Philippines**

Diana B. Rodrigo*

University of Negros Occidental-Recoletos, **Philippines**

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ABSTRACT

Advancing faculty preparedness has become a fundamental factor in achieving internationalization in higher education institutions. Thus, this quantitative study, using a descriptive-comparative-correlational research design, involved 269 faculty members across Higher Education Institutions (HEIs) in local colleges, state universities, and private universities on Negros Island and determined the extent of faculty cognizance, capacity, and motivation for internationalization during the academic year 2025-2026. The faculty's cognizance, capacity, and motivation were measured using a research-made instrument. Results revealed that the extent of faculty cognizance, capacity, and motivation for internalization is high. Results also revealed that there was no significant difference in the extent of faculty cognizance, capacity, and motivation for internationalization, a strong positive relationship between faculty cognizance and capacity in internalization, and a moderate positive relationship between faculty cognizance and motivation for internalization across local colleges, state universities, and private universities in Higher Education Institutions (HEIs) in Negros Island. Thus, the result of the study served as the basis for formulating college policy and providing targeted support to advance faculty-driven internationalization initiatives.

Keywords: faculty preparedness, cognizance, capacity, motivation, internationalization, Schema Theory, CCM (Cognizance, Capacity, and Motivation) research instrument, internationalization initiative

INTRODUCTION

Internationalization empowers faculty members to engage in global teaching, research, and professional collaborations, improving their competencies and the institution's pursuit of academic distinction. However, the central determinant of success in these efforts is faculty readiness. Advancing faculty preparedness is fundamental—it directly fosters worldwide cooperation for sustainable development, adding to the United Nations SDG 17 (Knight, 2020; Liu et al., 2025). Higher Education Institutions achieve internationalization through faculty exchanges, research, and partnerships, all of which rely on effective faculty training and commitment (Smith & Doe, 2020; United Nations, 2020).

The Commission on Higher Education (CHED) has established policies to support internationalization in the Philippines, as outlined in CMO No. 55, Series of 2016 – Policy Framework and Strategies on the Internationalization of Philippine Higher Education (<https://legacy.ched.gov.ph/2016-ched-memorandum-orders>). Implementation is often hampered by inadequate faculty training, language barriers, and limited support (Cruz, 2020). Faculty meet challenges juggling academic duties and global initiatives, pointing out the need to assess and strengthen faculty preparedness for CHED’s goals (Cruz & Sarmiento, 2021).

In the Negros Island Region, Higher Education Institutions have started to internationalize curricula and form partnerships with foreign institutions. While some universities offer joint research and exchange programs, progress varies (State University of Northern Negros, 2025). Villanueva and Gonzales (2021) identify resource gaps, differences in support, and limited faculty exposure as barriers. This points to the need to examine the specific faculty skills and motivations that shape further internationalization in this region.

At the institutional level, faculty members are central to achieving internationalization, especially in leading curriculum development, supporting collaboration, and mentoring students. The decisive factor is faculty readiness—awareness, skills, and motivation—which underpins the institution’s ability to prepare globally competent graduates (Leal, 2021). Despite this, many HEIs prioritize administration-led initiatives and overlook fostering faculty capacity and motivation (Ilieva et al., 2020). This gap raises critical questions about the adequacy of support for local faculty. While research examines internationalization policies and student programs, understanding of faculty preparedness in provincial HEIs, such as those on Negros Island Region, remains limited (Mananay et al., 2024, pp. 401-431). The predominant literature focuses on institutional strategies in national or urban settings, neglecting the challenges faculty face locally, such as limited funding, training, and support (Cruz, 2020; Villanueva & Gonzales, 2021). Thus, examining faculty readiness is urgent to address these issues.

STATEMENT OF THE PROBLEM

This study determined the extent of faculty cognizance, capacity, and motivation for internationalization across Higher Education Institutions (HEIs) local colleges, state universities, and private universities in Negros Island Region when respondents were taken as a whole and when grouped according to age, sex, civil status, school type, academic rank, years of experience, educational attainment, and average monthly income.

Specifically, the study sought to answer the following questions:

1. Is there a significant difference in the extent of faculty cognizance for internationalization when respondents are grouped according to demographics?
2. Is there a significant difference in the extent of faculty capacity for internationalization across local colleges, state universities, and private universities in Higher Education Institutions when respondents are grouped according to demographics?
3. Is there a significant difference in the extent of faculty motivation for internationalization when respondents are grouped according to demographics?
4. Is there a significant relationship between the extents of faculty cognizance, capacity, and motivation for internalization?

FRAMEWORK OF THE STUDY

This study focused on three main aspects of faculty preparedness. The first is cognizance, which means having knowledge and awareness. According to Rogers’ Diffusion of Innovation Theory

(2003), being aware is the first step in adopting internationalization practices. Faculty need to understand global trends, policies, and practices before they can take part in them. This theory matters for the study because internationalization is a new approach that needs faculty involvement. Faculty members need sufficient knowledge and awareness to participate in activities such as international research, curriculum changes, exchanges, and global partnerships. By assessing what faculty know, we can better understand how ready they are to join internationalization efforts.

Also, learning what faculty know can help shape suggestions for improving awareness through training, orientation, policy sharing, and ongoing learning. When faculty are more aware, they are more likely to take part in internationalization activities at universities.

The second aspect, capacity, builds on cognizance and encompasses skills, competence, and institutional support. Human Capital Theory (Becker, 1964) posits that training and skill investment make people more productive and effective. Support from the institution and professional development also help faculty become more prepared (Becker, 1964). Human Capital Theory is important to this study because it shows that faculty are better able to support internationalization when their institutions invest in their knowledge, skills, and professional growth. For faculty to succeed in international teaching, research, and collaboration, they need training, international experience, language skills, research opportunities, and strong institutional support.

This study looks at how well faculty members are prepared for internationalization in higher education. Using Human Capital Theory, the findings highlight where faculty are strong and where they need more support. These results can help shape policies that encourage ongoing professional development, international training, faculty exchanges, research support, language programs, and better resources. With these policies, institutions can build stronger faculty teams and reach their internationalization goals more successfully.

Indeed, Human Capital Theory supports the idea that institutions should invest in faculty development to help faculty succeed in internationalization.

The third aspect is motivation, which comes from both internal and external sources, as explained by Self-Determination Theory (Deci & Ryan, 1985; Deci et al., 1989). Internal factors, including personal values and career growth, and external factors, such as recognition, incentives, and policies, all affect how faculty engage in internationalization.

Self-Determination Theory is important to this study because it helps explain what drives faculty to participate in internationalization efforts at universities. The theory shows that motivation comes from both internal factors, such as personal interest, career development, and a commitment to global engagement, and extrinsic factors, such as recognition from the institution, incentives, leadership support, and internationalization policies. When these factors are in place, faculty are more likely to engage in international teaching, research, collaborations, and outreach. On the other hand, if there is not enough support or few incentives, faculty may be less engaged in internationalization. This theory offers a useful way to examine faculty motivation and to suggest policies that back both internal and external motivation. These policies might include better professional development, recognition and rewards, funding, workload adjustments, and strategies that build a culture of internationalization in higher education.

Together, these three ideas—cognizance, capacity, and motivation—shape faculty preparedness to support internationalization in higher education.

FACULTY COGNIZANCE FOR INTERNALIZATION

At the policy level, CHED's iEducation portal consolidates guidance on CMO No. 55, TNE implementation, and related programs. These resources shape faculty awareness of mobility, quality assurance, ethics/data governance, and international partner engagement. In parallel, IAU's global survey emphasizes that awareness alone is insufficient. Institutions must embed internationalization in their strategy and academic core to realize its benefits. These conclusions justify items in Sections A5–A16 (policy literacy, QA, mobility, and ethical aspects) (Commission on Higher Education, 2016).

Philippine empirical work since 2019 notes generally positive dispositions toward internationalization among faculty but uneven knowledge of policies, processes, and funding sources. This is especially true outside large metropolitan HEIs (Ferrer, 2022). The findings signal the need for focused orientations, SOPs, and IRO mediation (Mananay et al., 2024).

FACULTY CAPACITY FOR INTERNALIZATION

IRO capacity is frequently cited as a hinge factor for operationalizing partnerships, mobility, and joint curricula. (International Relations Office – Romblon State University, 2025). The ANTENA IRO Management Guide details processes for partnership development, outward/inward mobility, and quality management. These are practical competencies mirrored in this instrument's items on project logistics, MOAs, and grant writing (B21, B25) (Mananay et al., 2024).

English-Medium Instruction (EMI). Across Asia (and the Philippines), EMI—defined as the employment of English as the language of instruction in academic subjects—has expanded to support internationalization goals, yet it continues to face recurring challenges. Typical problems include faculty language proficiency, pedagogical adaptation for multilingual classrooms, and assessment alignment. Recent systematic reviews (2019–2025) reiterate mixed outcomes. They call for structured faculty development (language + pedagogy) and intercultural classroom management, which are core elements captured in the capacity scale (B17, B18, B24) (Sameephet et al., 2025).

FACULTY MOTIVATION FOR INTERNALIZATION

Global studies show that intrinsic interests, such as improving teaching and research and intercultural learning, coexist with extrinsic drivers like recognition, promotion points, and rankings. Within SDT, institutional climates that support autonomy and competence amplify internalization of internationalization behaviors. The results clarify how incentives and mentoring (C34–C35) interact with personal values (C29–C33) (Bureau et., 2021).

Local studies report that Filipino faculty value global exposure for pedagogical innovation and research impact. However, they are also sensitive to tangible supports such as grants, workload credits, and visible peer exemplars. (Suleiman et al., 2025) These data validate your separation of intrinsic and extrinsic indicators (Mananay et al., 2024).

DEMOGRAPHICS AND FACULTY COGNIZANCE FOR INTERNALIZATION

Regarding age, younger and early-career faculty frequently report greater familiarity with recent internationalization concepts, such as digital mobility and Internationalization at Home, due to recent training and exposure (Sandström & Weimer, 2022). In contrast, older or senior faculty may possess more extensive long-term international (de Wit, 2020). This relationship is typically non-linear and context-dependent (OECD, 2021). Seniority is associated with established research networks, which enhance research capacity (Leal, 2021).

Sex and gender shape faculty involvement in internationalization. Male academics typically join more international collaborations and global projects, while female faculty may encounter barriers like caregiving and limited mobility, reducing participation (Liu et al., 2020; OECD, 2025). These disparities underscore the need for policies promoting gender equity.

Civil status alone does not typically predict awareness or ability. Instead, it often serves as a proxy for other factors, such as mobility or caregiving responsibilities (Ilieva et al., 2020). For example, this is evident in the fact that married faculty members with dependents are less likely to undertake extended travel (OECD, 2021). In light of these links, scholars recommend collecting more detailed data regarding dependents and caregiving obligations, rather than focusing exclusively on marital status (Altbach & de Wit, 2020).

The type of school, whether public or private, research-intensive or teaching-oriented, shapes internationalization. Institutional resources, priorities, and goals impact faculty's international opportunities. For example, a well-funded private university may offer more support for international collaborations, travel grants, and global partnerships. In contrast, a regional public college may have fewer resources for such activities and fewer international partnerships. These differences show how school type influences the extent of internationalization efforts (Zhang & Li, 2024).

Higher academic rank is associated with broader international networks and greater access to grants, which increases capacity. Junior faculty may be more likely to adopt innovative pedagogies. Seniority shapes the type of international engagement, distinguishing between strategic and operational roles (Ilieva et al., 2020). Promotion and reward criteria are key drivers of motivation, as faculty seeking advancement respond to incentives that value international outputs and achievements (Knight, 2020).

Total years of experience correlate with accumulated networks and confidence; however, recent activity, such as engagement within the last five years, is a better indicator of current pedagogical capacity and active involvement (OECD, 2021). Years of experience sometimes exhibit an inverted-U relationship with active internationalization (Sandström & Weimer, 2022).

Faculty educational attainment is another key factor. Advanced education, such as a doctoral degree, equips faculty with the knowledge, skills, and credentials necessary for effective international collaboration and participation in global academic networks. This training enriches the faculty's global potential and contributes to academic brain circulation. Institutions that invest in doctoral programs can attract and retain top academic talent. Including global doctoral mobility statistics can further support this rationale. Faculty with advanced degrees significantly build their institution's internationalization capacity (Zhang & Li, 2024).

Socioeconomic status, often measured by average monthly income, affects access to international opportunities. Faculty in well-resourced institutions, or those with higher incomes, can more easily join international conferences, exchange programs, and research collaborations. Limited financial resources can restrict participation and impact institutional internationalization (Li et al., 2023). To address income gaps, institutions may provide travel bursaries or additional stipends for international collaborations. These policies can support faculty across income levels and encourage more equitable internationalization.

DEMOGRAPHICS AND FACULTY CAPACITY FOR INTERNALIZATION

Age frequently influences differences in faculty capacity, particularly in adapting to internationalization initiatives and new academic procedures. While younger faculty members are

generally more proficient with digital technologies, digital cooperative platforms, and inventive teaching techniques—skills that are progressively vital in internationalized higher education—older faculty members contribute extensive professional experience, institutional knowledge, and established academic networks that can strengthen international engagement (Culp-Roche et al., 2020).

Sex plays an important role in shaping faculty capacity in higher education. Although professional development is now more equitable, men and women still do not have the same access to international collaborations, leadership roles, or research opportunities (Kwiek & Roszka, 2021, pp. 1344-1380). Castulo et al. (2026) emphasize that institutions need gender-responsive practices to ensure equal chances for faculty development. Research on internationalization also shows that gender-related experiences affect who takes part in international activities, which then influences how faculty contribute to global engagement (Ma, 2025).

Meanwhile, According to Li et al. (2021), personal factors like family duties can shape faculty involvement in internationalization efforts. At the same time, support from family can encourage career development and career progress (Fox & Gaughan, 2021). As a result, marital status can have either a positive or negative impact on faculty capacity, depending on each person's situation and the support provided by their institution (Gribling Marinova, 2018).

The type of school, whether public or private, directly affects how well faculty can engage in internationalization by shaping resources, funding, and priorities (Krishanachinda, 2020). Private schools usually have more flexibility in how they use resources, while public schools may benefit from government-funded programs and larger networks (Lucero et al., 2020)

According to Eckhaus and Davidovitch (2020), academic rank has a significant impact on research output among university faculty. Those with higher ranks generally show higher academic productivity and professional competence. The authors believe that moving up in rank shows a faculty member's growing expertise, achievements, and ongoing involvement in academic work. In a similar study, Salahuddin et al. (2026) found that research and technical skills among faculty varied based on demographic and professional factors. This means that senior faculty and those in higher positions often have more advanced skills that support their academic success.

Studies show that ongoing teaching, research, outreach, and career development all help faculty improve their skills. Those with more experience tend to be more confident in designing courses, mentoring students, leading research, and taking on leadership roles (Sood et al., 2019). Bendol (2026) found that career growth improves when faculty regularly participate in seminars, mentoring, and research projects, and receive support from their institutions throughout their careers. Gaining experience also helps faculty develop research skills and become more productive scholars. Faculty who have served longer often have more chances to work on research teams, publish their work, and take part in international projects, which further builds their capacity (Tripodi et al., 2024).

Faculty with advanced degrees usually have stronger research skills, broader professional networks, and more experience with international academic standards (Helden et al., 2021, pp. 1741-1761). Overall, higher educational attainment can strengthen faculty capacity by increasing knowledge, skills, and participation in internationalization (De Witte & Soncin, 2021).

Income plays an important role in building faculty capacity because it allows access to professional development, research resources, and international opportunities. Faculty with higher incomes are more likely to attend conferences, earn higher qualifications, and join global academic networks (Faria et al., 2023).

DEMOGRAPHICS AND FACULTY MOTIVATION FOR INTERNALIZATION

Motivation depends on personal, professional, and organizational factors that change throughout a career (Stratford et al., 2023). Younger faculty often focus on advancing their careers, gaining recognition, getting promoted, and building skills, which encourages them to do research, publish, and network. In contrast, older faculty are usually motivated by fulfillment, sharing knowledge, mentoring, and helping their institutions (Martin et al., 2023, pp. 569-582).

Female faculty usually report more intrinsic motivation, especially when they have supportive colleagues and a healthy work environment. Male faculty, on the other hand, may be more driven by research output and career growth (Wilkesmann & Vorberg, 2021).

Studies show that married faculty members usually have higher intrinsic motivation and are more engaged in academic activities, likely because they receive emotional and social support from their families (Denson & Szelenyi, 2020). On the other hand, unmarried faculty might have more flexibility to pursue their professional goals, but they may not have the same support systems to help sustain motivation (Denson & Szelenyi, 2020, pp. 261-278).

Salajegheh et al. (2024) also found that teachers in private schools were more motivated than those in public schools, mainly because of better recognition, personalized support, responsive leadership, and more flexible organizations. On the other hand, public school teachers struggled with bureaucracy and limited resources, which lowered their motivation.

Recent research shows that faculty at different ranks are motivated by different factors (Niloofer et al., 2020, pp. 77-100). Those in higher ranks often report more autonomy, professional recognition, and involvement in decision-making, which can boost motivation (Daumiller et al., 2020).

Meanwhile, instructors with more experience often feel more confident, skilled, and familiar with their institution, which can boost their motivation and devotion to teaching (Snook et al., 2021). As they gain more teaching experience, faculty members improve their teaching skills and develop a stronger professional identity, which helps keep them motivated (Ma, 2022).

Faculty with higher academic qualifications, like master's or doctoral degrees, are often more motivated to teach, conduct research, serve the community, and pursue career development (Daumiller et al., 2022). Advanced education builds knowledge, skills, confidence, and competence, which support both internal and external motivation (Vu et al., 2021).

Lastly, recent research highlights the crucial role of salary, incentives, and benefits in motivating teachers and keeping them engaged. A study in the Philippines found these factors were key in teachers' decisions to stay in the profession (Busico et al., 2023.) Calizar (2026) found that financial benefits boost teachers' motivation and performance. Teachers with higher pay were more motivated and performed better (Calizar, 2026).

METHODOLOGY

This quantitative study utilized a descriptive-comparative-correlational research design. Specifically, the design was used to describe the distribution of one or more variables, disregarding any causal hypothesis (Aggarwal & Ranganathan, 2019), and then compare groups utilizing finding similarities and/or differences, and establish relationships between variables in an attempt to draw conclusions about them (Creswell & Creswell, 2022).

As applied in this study, the descriptive design determined the extent of faculty cognizance, capacity, and motivation for internationalization among Higher Education Institutions (HEIs) local

colleges, state universities, and private universities in Negros Occidental when respondents are taken as a whole and when grouped according to their demographics. On the other hand, the comparative design drew comparisons each for the extents of faculty cognizance, capacity, and motivation according to the respondents' demographics. Finally, correlational design enabled the researchers to establish relationships between the extents of the variables aforementioned.

The subject and respondents of the study were the full-time permanent faculty members of higher education institutions in Negros Island Region, both in public and private, who are involved in teaching, research, and extension functions. They served as the primary source of data regarding their cognizance, capacity, and motivation in advancing internationalization within their respective institutions. The inclusion criteria involved faculty who have been in service for at least one academic year and are engaged in educational activities that may contribute to the internationalization of education. The distribution of the respondents is shown in table 1.

Table 1. Distribution of the Respondents

School	Population	Sample
A	27	9
B	30	10
C	39	13
D	145	48
E	175	57
F	206	68
G	100	33
H	59	19
I	38	12
Total	819	269

RESULTS AND DISCUSSION

Extent of Faculty Cognizance for Internalization as a Whole and according to Demographics

The table 2 below shows the extent of faculty cognizance for internalization when respondents are taken as a whole and when grouped according to their demographics.

Results show that as a whole, the extent of faculty cognizance for internalization is high. The elevated level of faculty awareness indicates a deep understanding of the objectives and significance of internationalization in higher education (Calikoglu et al., 2022). This observation aligns with the findings of Amakiri et al. (2025), who emphasized that awareness and understanding of internationalization among members of the academic community are critical to promoting global engagement and enhancing institutional competitiveness in an increasingly interconnected educational context.

When grouped according to age, the extent of faculty cognizance is high for 20-29 years old ($M=3.78$, $SD=0.80$), 30-39 years old ($M=3.95$, $SD=0.68$), 40-49 years old ($M=4.04$, $SD=0.63$), 50-59 years old ($M=4.01$, $SD=0.66$) and 60 years old or above ($M=4.14$, $SD=0.49$). When grouped according to sex, the extent of faculty cognizance is also high for both males ($M=3.94$, $SD=0.73$) and females ($M=4.01$, $SD=0.62$). When grouped according to civil status, the same extent is the faculty cognizance for respondents that are single ($M=3.94$, $SD=0.83$), married ($M=3.99$, $SD=0.59$), and widowed ($M=4.00$, $SD=0.48$). When taken according to school type, both public ($M=3.96$, $SD=0.67$) and private ($M=4.12$, $SD=0.66$) HEIs' faculty also obtained high extent of cognizance. Amakiri et al. (2025) reported that members of the academic community demonstrated a strong understanding of internationalization concepts and objectives, reflecting the growing

embrace of these principles in institutional policies, programs, and strategic directions. This widespread awareness across demographic groups is due to the increasing emphasis on internationalization initiatives within higher education institutions (Van Mol & Perez-Encinas, 2022, pp. 1-16).

When grouped according to academic rank, high extent of cognizance for instructors ($M=4.01$, $SD=0.62$), assistant professors ($M=3.84$, $SD=0.73$), associate professors ($M=4.15$, $SD=0.58$), and professors ($M=3.92$, $SD=0.86$). When grouped according to years of teaching, there is a high extent of cognizance among faculty teaching for 0-5 years ($M=4.06$, $SD=0.73$), 6-10 years ($M=3.86$, $SD=0.73$), 11-15 years ($M=3.94$, $SD=0.62$), 16-20 years ($M=4.09$, $SD=0.50$), and 21 years or above ($M=4.06$, $SD=0.68$). When grouped according to educational attainment, the same high extent is obtained by faculty with bachelor's degree ($M=3.51$, $SD=1.02$), master's degree ($M=3.95$, $SD=0.67$), doctorate degree ($M=4.04$, $SD=0.63$), and those who still take post graduate degree ($M=4.17$, $SD=0.43$). Finally, when grouped according to average monthly income, high extent also characterizes the cognizance of faculty with 30 000 or below MI ($M=3.85$, $SD=0.70$), 30 001-40 000 MI ($M=4.02$, $SD=0.59$) and 40 001 or above MI ($M=3.99$, $SD=0.71$).

The results show that most faculty members have a strong understanding of internationalization ($M = 3.98$, $SD = 0.67$). They are familiar with its concepts, goals, and importance in higher education. This means internationalization is now a well-known part of how institutions and faculty approach academic work. Further supporting this result, the provisions of CHED Memorandum Order (CMO) No. 55, s. 2016 are being effectively articulated and implemented by higher education institutions. As a result, HEIs are better able to align their academic programs, policies, and governance with international standards and practices. Complementing CMO No. 55, Republic Act No. 11448 further strengthens the country's internationalization efforts by providing a legal framework for transnational higher education (TNE) providers and the cross-border delivery of higher education programs.

Looking at age groups, all faculty showed high awareness, with those aged 60 and above having the highest average ($M = 4.14$, $SD = 0.49$). This could be because older faculty have more experience and have seen more changes and international projects. Still, the high scores across all ages show that knowledge of internationalization is strong no matter the generation.

Both male and female faculty members showed high awareness, with females ($M = 4.01$, $SD = 0.62$) having a slightly higher average than males ($M = 3.94$, $SD = 0.73$). This small difference indicates that both genders have similar chances of learning about and participating in internationalization efforts.

Similarly, faculty members among different civil-status categories demonstrated high levels of cognizance. Faculty members, whether single, married, or widowed, all showed high awareness. The similar scores mean that marital status does not have much effect on how well faculty understand internationalization. Instead, their jobs and experiences at their institutions may matter more. Faculty from private institutions ($M = 4.12$, $SD = 0.66$) obtained a slightly higher mean than those from public institutions ($M = 3.96$, $SD = 0.67$). This may reflect the stronger emphasis that private institutions often place on international partnerships, accreditation standards, and global competitiveness.

Across academic ranks, all groups showed high awareness, with associate professors having the highest average ($M = 4.15$, $SD = 0.58$). This may mean that those in higher positions are more involved in research, international projects, and policy-making, giving them more exposure to internationalization. All groups likewise exhibited high cognizance. Faculty with 16–20 years of

experience ($M = 4.09$, $SD = 0.50$) and those with 21 years or more of experience ($M = 4.06$, $SD = 0.68$) reported slightly higher levels, suggesting that prolonged engagement in academia may enhance awareness of global trends and international learning practices.

All education levels showed high awareness, but faculty currently working on postgraduate studies had the highest average ($M = 4.17$, $SD = 0.43$). This could be because they are more involved in advanced research and exposed to international ideas. Faculty with doctorates also showed high awareness, indicating that advanced education deepens understanding of internationalization.

Faculty members at all income levels showed high awareness. The similar scores indicate that economic status has little effect on knowledge of internationalization. Instead, factors such as institutional policies, professional development, and academic involvement may play a larger role.

In line with the findings, faculty demographics and professional characteristics such as age, academic rank, and international experience are increasingly playing a decisive role in advancing institutional internationalization. Parallel to this finding, recent empirical and review studies consistently demonstrate that demographic variables such as age, sex, civil status, school type, academic rank, years of experience, educational attainment, and income influence faculty cognizance, capacity, and motivation for internationalization (de Wit et al., 2020; Ilieva et al., 2020; Sandström & Weimer, 2022). These effects are frequently mediated or moderated by institutional supports, academic discipline, and local or national contexts (Altbach & Knight, 2007; Leal, 2021).

Table 2. Extent of Faculty Cognizance for Internalization as a Whole according to Demographics

Variables	Mean	Standard Deviation	Interpretation
Age			
20-29 years old	3.78	0.8	High
30-39 years old	3.95	0.68	High
40-49 years old	4.04	0.63	High
50-59 years old	4.01	0.66	High
60 years old or Above	4.14	0.49	High
Sex			
Male	3.93	0.73	High
Female	4.01	0.62	High
Civil Status			
Single	3.94	0.83	High
Married	3.99	0.59	High
Widowed	4	0.48	High
School Type			
Public	3.96	0.67	High
Private	4.12	0.66	High
Academic Rank			
Instructor	4.01	0.62	High
Assistant Professor	3.84	0.73	High
Associate Professor	4.15	0.58	High
Professor	3.92	0.86	High
Years of Teaching			
0-5 Years	4.06	0.73	High
6-10 Years	3.86	0.73	High
11-15 Years	3.94	0.62	High
16-20 Years	4.09	0.5	High
21 Years or Above	4.06	0.68	High

Educational Attainment			
Bachelor's degree	3.51	1.02	High
Master's degree	3.95	0.67	High
Doctorate degree	4.04	0.63	High
Post	4.17	0.43	High
Average Monthly Income			
30 000 and below	3.85	0.7	High
30 001-40 000	4.02	0.59	High
40,001 and above	3.99	0.71	High
As a Whole	3.98	0.67	High

Extent of Faculty Capacity for Internalization as a Whole and according to Demographics

Table 3 shows the extent of faculty capacity for internalization when respondents are taken as a whole and when grouped according to their demographics

Results show that as a whole, the extent of faculty capacity for internalization is high [$M=3.79$, $SD=0.71$]. When grouped according to age, the extent of faculty capacity is high for 20-29 years old ($M=3.68$, $SD=0.67$), 30-39 years old ($M=3.86$, $SD=0.78$), 40-49 years old ($M=3.80$, $SD=0.70$), 50-59 years old ($M=3.73$, $SD=0.66$) and 60 years old or above ($M=3.69$, $SD=0.67$). When grouped according to sex, the extent of faculty capacity is also high for both males ($M=3.83$, $SD=0.78$) and females ($M=3.75$, $SD=0.66$). When grouped according to civil status, the same extent is the faculty capacity for respondents that are single ($M=3.77$, $SD=0.85$), married ($M=3.79$, $SD=0.65$), and widowed ($M=3.72$, $SD=0.50$). When taken according to school type, both public ($M=3.76$, $SD=0.72$) and private ($M=4.00$, $SD=0.61$) HEIs' faculty also obtained high extent of capacity.

When grouped according to academic rank, high extent of capacity for instructors ($M=3.83$, $SD=0.73$), assistant professors ($M=3.66$, $SD=0.73$), associate professors ($M=3.94$, $SD=0.63$), and professors ($M=3.61$, $SD=0.74$). When grouped according to years of teaching, there is a high extent of capacity among faculty teaching for 0-5 years ($M=3.78$, $SD=0.78$), 6-10 years ($M=3.79$, $SD=0.79$), 11-15 years ($M=3.68$, $SD=0.63$), 16-20 years ($M=3.98$, $SD=0.56$), and 21 years or above ($M=3.78$, $SD=0.72$). Higher academic rank is associated with broader international networks and greater access to grants, which increases capacity (Altbach & Knight, 2007). Junior faculty may be more likely to adopt innovative pedagogies (Beelen & Jones, 2015). Seniority shapes the type of international engagement, distinguishing between strategic and operational roles (Ilieva et al., 2020).

When grouped according to educational attainment, faculty with bachelor's degree ($M=3.21$, $SD=0.96$) obtained moderate extent, high extent master's degree ($M=3.79$, $SD=0.72$) and doctorate degree ($M=3.79$, $SD=0.67$), while very high extent of faculty capacity for those who still take post graduate degree ($M=4.27$, $SD=0.38$). Finally, when grouped according to average monthly income, high extent also characterizes the capacity of faculty with 30 000 or below MI ($M=3.83$, $SD=0.82$), 30 001-40 000 MI ($M=3.74$, $SD=0.60$) and 40 001 or above MI ($M=3.80$, $SD=0.76$).

The results show that faculty in higher education institutions generally have the skills, knowledge, and resources needed to support internationalization efforts, as seen in the high overall faculty capacity ($M = 3.79$, $SD = 0.71$). This means faculty are well prepared to participate in international teaching, research, collaboration, and academic activities. As a result, HEIs can build on this strength by growing international partnerships, research collaborations, virtual exchanges, and internationalized curricula.

High ratings across all age groups show that internationalization capacity is not limited to any one generation of faculty. Both younger and older educators are able to take part in internationalization efforts, which suggests that professional development and institutional programs have reached faculty at different career stages. This means age is likely not a major barrier to faculty involvement in internationalization.

Likewise, high ratings for both male and female faculty suggest that opportunities, resources, and experiences related to internationalization are accessible to everyone. This points to institutions creating welcoming environments where all faculty can build the skills needed for global engagement. As reported, sex and gender shape faculty involvement in internationalization. Male academics typically join more international collaborations and global projects, while female faculty may encounter barriers like caregiving and limited mobility, reducing participation.

Similar levels of capacity across civil-status groups suggest that personal or family circumstances do not significantly affect faculty readiness for internationalization. Faculty, whether married or not, seem able to take part in international academic activities. As reported by Ilieva et al. (2020), civil status alone does not typically predict awareness or ability. Instead, it often serves as a proxy for other factors, such as mobility or caregiving responsibilities. Internationalization efforts are becoming institutional focuses among different types of higher education institutions. However, the relatively higher mean among private HEIs may indicate greater access to resources, international networks, funding opportunities, or institutional support mechanisms that facilitate capacity development.

High ratings across academic ranks show that internationalization skills are being developed at all levels. Associate professors scored a bit higher, which may be due to their experience, wider research networks, and more involvement in collaborations. Mentoring programs could use the knowledge of senior faculty to help colleagues in lower ranks build their capacity.

The results show that faculty capacity remains high regardless of how many years someone has been teaching. Faculty with 16–20 years of experience had the highest average score, suggesting that a mix of extensive teaching experience and ongoing growth helps prepare them for internationalization.

Education level seems to play a key role in faculty capacity. Faculty with only a bachelor's degree showed moderate capacity, while those with graduate degrees had high or very high levels. Faculty are currently working on postgraduate studies. In particular, the average score suggests that ongoing advanced education improves exposure to suggested ideas, research skills, networking, and best practices. This demonstrates the value of supporting graduate studies and lifelong learning in strengthening internationalization.

Finally, high ratings across all income groups indicate that faculty capacity for internationalization depends little on income. This means opportunities to build internationalization skills are likely available to faculty through different salary levels, though ongoing institutional support remains important.

In brief, this evidence shows that HEIs already have a strong base of faculty capacity for internationalization. Still, institutions should continue investing in career development, international programs, research collaborations, and postgraduate education to further build faculty readiness and sustain internationalization efforts.

Table 3. Extent of Faculty Capacity for Internalization as a Whole according to Demographics

Variables	Mean	Standard Deviation	Interpretation
Age			
20-29 years old	3.68	0.67	High
30-39 years old	3.86	0.78	High
40-49 years old	3.8	0.7	High
50-59 years old	3.73	0.66	High
60 YO or Above	3.69	0.67	High
Sex			
Male	3.83	0.78	High
Female	3.75	0.66	High
Civil Status			
Single	3.77	0.85	High
Married	3.79	0.65	High
Widowed	3.72	0.5	High
School Type			
Public	3.76	0.72	High
Private	4	0.61	High
Academic Rank			
Instructor	3.83	0.73	High
Assistant Professor	3.66	0.73	High
Associate Professor	3.94	0.63	High
Professor	3.61	0.74	High
Years of Teaching			
0-5 Years	3.78	0.78	High
6-10 Years	3.75	0.71	High
11-15 Years	3.68	0.63	High
16-20 Years	3.98	0.56	High
21 Years or Above	3.79	0.72	High
Educational Attainment			
Bachelor's degree	3.21	0.96	Moderate
Master's degree	3.79	0.72	High
Doctorate degree	3.79	0.67	High
Post	4.27	0.38	Very High
Average Monthly Income			
30 000 or below	3.83	0.82	High
30 001-40 000	3.74	0.6	High
40 001 or above	3.8	0.76	High
As a Whole	3.79	0.71	High

Extent of Faculty Motivation for Internalization as a Whole and according to Demographics

Table 4 in the next page shows the extent of overall faculty motivation and in terms of internal and external motivation when respondents are taken as a whole and when grouped according to demographics.

Results show that the overall extent of motivation for internalization is high ($M=3.95$, $SD=0.75$). The same extent is shown in terms of internal ($M=4.07$, $SD=0.83$) and external ($M=3.83$, $SD=0.87$) motivation. Results show that as a whole, the extent of faculty capacity for internalization is high [$M=3.79$, $SD=0.71$].

In terms of internal motivation according to age, the extent of faculty motivation is high for 20-29 years old ($M=3.98$, $SD=0.80$), 30-39 years old ($M=4.15$, $SD=1.00$), 40-49 years old ($M=4.06$, $SD=0.73$), 50-59 years old ($M=3.99$, $SD=0.75$) and 60 years old or above ($M=4.08$, $SD=0.66$). Studies show that age can affect what motivates faculty, but research results are mixed. Motivation depends on personal, professional, and organizational factors that change throughout a career (Stratford et al., 2023).

According to sex, the extent of faculty internal motivation is also high for both males ($M=4.07$, $SD=1.02$) and females ($M=4.06$, $SD=0.67$). In general, while sex is one factor in faculty motivation, support from the organization and workplace conditions matter more (Wilkesmann & Vorberg, 2021; Alharthi, 2026). Studies show that sex or gender can affect faculty motivation, but the results are often mixed (Snook et al., 2021). Female faculty usually report more intrinsic motivation, especially when they have supportive colleagues and a healthy work environment. Male faculty, on the other hand, may be more driven by research output and career growth (Wilkesmann & Vorberg, 2021). However, these differences are small and depend more on organizational and cultural factors than on gender itself. Likewise, Spanish University Context (2021) and Martínez-Ramón & Morales-Rodríguez (2022) found that female university faculty had higher intrinsic motivation to teach, which was associated with greater engagement with students and colleagues.

When grouped according to civil status, the same extent is the internal motivation for respondents that are single ($M=4.06$, $SD=0.81$), married ($M=4.06$, $SD=0.85$), while very high for widowed ($M=4.28$, $SD=0.45$). When taken according to school type, both public ($M=4.05$, $SD=0.84$) and private ($M=4.15$, $SD=0.78$) HEIs' faculty obtained high extent of internal motivation for internalization. Studies show that married faculty members usually have higher intrinsic motivation and are more engaged in academic activities, likely because they receive emotional and social support from their families (Denson & Szelényi, 2020). On the other hand, unmarried faculty might have more flexibility to pursue their professional goals, but they may not have the same support systems to help sustain motivation (Denson & Szelényi, 2020, pp. 261-278). Supporting this evidence, Baumbach (2025) found that married faculty reported higher intrinsic motivation for research than unmarried faculty, suggesting that family support promotes persistence and engagement in scholarly work. Still, the link between marital status and motivation is complicated and can change depending on work demands and the institution (Baumbach, 2025; Shaffer et al., 2026). When grouped according to academic rank, high extent of internal motivation for instructors ($M=4.14$, $SD=0.94$), assistant professors ($M=3.93$, $SD=0.76$), associate professors ($M=4.15$, $SD=0.76$), and professors ($M=4.11$, $SD=0.81$). This result is supported by Calvin et al. (2024) which states that academic rank is linked to differences in faculty responsibilities, recognition, pay, authority, and opportunities for advancement. According to years of teaching, there is a high extent of internal motivation among faculty teaching for 0-5 years ($M=4.14$, $SD=0.65$), 6-10 years ($M=4.01$, $SD=1.07$), 11-15 years ($M=3.96$, $SD=0.70$), and 21 years or above ($M=4.09$, $SD=0.81$), but is very high for those teaching 16-20 years ($M=4.25$, $SD=0.60$). When grouped according to educational attainment, there is a high extent in internal motivation for faculty with bachelor's degree ($M=3.92$, $SD=0.88$), master's degree ($M=4.04$, $SD=0.90$), doctorate degree ($M=4.10$, $SD=0.74$), but very high for those who still take post graduate degree ($M=4.28$, $SD=0.64$). Finally, when grouped according to average monthly income, high extent also characterizes the internal motivation of faculty with 30 000 or below MI ($M=4.20$, $SD=1.22$), 30 001-40 000 MI ($M=4.05$, $SD=0.67$) and 40 001 or above MI ($M=4.03$, $SD=0.78$).

On the other hand, in terms of external motivation according to age, the extent of faculty motivation is high for 20-29 years old ($M=3.58$, $SD=0.91$), 30-39 years old ($M=3.84$, $SD=0.91$), 40-49 years old ($M=3.90$, $SD=0.76$), 50-59 years old ($M=3.87$, $SD=1.04$) and 60 years old or above ($M=3.67$,

SD=0.68). According to sex, the extent of faculty external motivation is also high for both males (M=3.79, SD=0.92) and females (M=3.86, SD=0.82). When grouped according to civil status, the same extent is the external motivation for respondents that are single (M=3.76, SD=0.99), married (M=3.86, SD=0.81), and widowed (M=3.69, SD=0.30). When taken according to school type, both public (M=3.82, SD=0.87) and private (M=3.94, SD=0.86) HEIs' faculty obtained high extent of external motivation for internalization. When grouped according to academic rank, high extent of external motivation for instructors (M=3.89, SD=0.74), assistant professors (M=3.69, SD=1.00), associate professors (M=3.97, SD=0.80), and professors (M=3.81, SD=0.87). According to years of teaching, there is a high extent of external motivation among faculty teaching for 0-5 years (M=3.88, SD=0.76), 6-10 years (M=3.75, SD=0.88), 11-15 years (M=3.74, SD=0.77), 16-20 years (M=3.91, SD=0.73), and 21 years or above (M=3.96, SD=1.07). When grouped according to educational attainment, there is a high extent in external motivation for faculty with bachelor's degree (M=3.54, SD=0.87), master's degree (M=3.79, SD=0.79), doctorate degree (M=3.88, SD=0.98), but very high for those who still take post graduate degree (M=4.28, SD=0.70). Finally, when grouped according to average monthly income, high extent also characterizes the external motivation of faculty with 30 000 or below MI (M=3.84, SD=0.73), 30 001-40 000 MI (M=3.82, SD=0.76) and 40 001 or above MI (M=3.84, SD=0.98).

Table 4. Extent of Faculty Motivation for Internalization as a Whole according to Demographics

Variable	Internal Motivation			External Motivation		
	M	SD	Int	M	SD	Int
Age						
20-29 years old	3.95	0.82	High	3.59	0.9	High
30-39 years old	4.09	0.69	High	3.84	0.81	High
40-49 years old	4.07	0.73	High	3.91	0.77	High
50-59 years old	3.99	0.75	High	3.79	0.82	High
60 years old or Above	4.08	0.66	High	3.67	0.68	High
Sex						
Male	4.02	0.8	High	3.8	0.91	High
Female	4.06	0.67	High	3.83	0.74	High
Civil Status						
Single	4.06	0.81	High	3.77	0.99	High
Married	4.03	0.69	High	3.84	0.72	High
Widowed	4.28	0.45	Very High	3.69	0.3	High
School Type						
Public	4.03	0.72	High	3.8	0.8	High
Private	4.15	0.78	High	3.94	0.86	High
Academic Rank						
Instructor	4.08	0.66	High	3.89	0.74	High
Assistant Professor	3.93	0.76	High	3.65	0.85	High
Associate Professor	4.17	0.74	High	3.97	0.81	High
Professor	3.91	0.9	High	3.8	0.78	High
Years of Teaching						
0-5 years	4.14	0.65	High	3.88	0.76	High
6-10 years	3.94	0.75	High	3.76	0.88	High
11-15 years	3.96	0.7	High	3.74	0.77	High
16-20 years	4.26	0.6	Very High	3.93	0.75	High
21 years or above	4.09	0.81	High	3.88	0.83	High
Educational Attainment						
Bachelor's degree	3.92	0.88	High	3.54	0.87	High

Master's degree	4	0.71	High	3.81	0.79	High
Doctorate degree	4.1	0.74	High	3.82	0.83	High
Post	4.28	0.64	Very High	4.28	0.7	Very High
Average Monthly Income						
30 000 or below	4.01	0.92	High	3.68	1.06	High
30 001-40 000	4.12	0.67	High	3.95	0.71	High
40 001 or above	3.99	0.69	High	3.77	0.77	High
As a Whole	4.07	0.83	High	3.83	0.87	High

Difference in the Extent of Faculty Cognizance for Internalization according to Sex and School Type

Mann Whitney test was used in table 5 to show the difference in the extent of faculty cognizance for internalization when grouped according to sex and school type. Results show that there is no significant difference in the extent of cognizance for internalization according to sex [$U=8380.500$, $p=0.513$] and school type [$U=3085.000$, $p=0.138$].

With this, Gender does not seem to influence their awareness in this case. Instead, things like exposure, institutional practices, and professional development likely affect both groups in the same way (Hanley & Chankseliani, 2025). Because of this, programs to improve faculty awareness of internationalization do not need to be different for men and women. Using general strategies that help all faculty members build their skills is more effective (Hur et al., 2025).

Also, results suggests that the type of institution does not have a big impact on faculty awareness of internationalization. Faculty members from all school types seem to have similar exposure to related ideas, policies, and practices. This could mean that things like institutional initiatives, professional development, and access to information are offered in much the same way among different schools. As a result, strategies to improve faculty awareness can be created and used

Table 5. Difference in the Extent of Faculty Cognizance for Internalization according to Sex and School type

Variables	U	z	p
Sex	8380.500	-0.6548	0.513
School Type	3085.000	-1.4837	0.138

Note: difference is significant when $p \leq 0.05$

Kruskal Wallis test was used in table 6 to show the difference in the extent of faculty cognizance for internalization when grouped according to age, civil status, academic rank, educational attainment, and average monthly income. Results show that there is no significant difference in the extent of faculty cognizance according to age [$H=3.118075$, $p=0.538$], civil status [$H=0.078943$, $p=0.961$], academic rank [$H=7.373895$, $p=0.061$], years of teaching [$H=4.755288$, $p=0.313$], educational attainment [$H=3.703$, $p=0.295$], and average monthly income [$H=1.392$, $p=0.499$].

Firstly, younger and older faculty members show similar levels of understanding. This suggests that factors like institutional exposure, professional development, or corporate regulations have a greater impact on awareness than age (Sandra, 2024).

The institution does not need age-specific programs to improve awareness. Instead, a unified approach like campus-wide training, seminars, or information campaigns is likely to be more effective in helping faculty understand internationalization efforts.

Secondly, Civil status does not affect how faculty understand internationalization (Jin & Schneider, 2019). Therefore, information, institutional efforts, and professional development about internationalization reach all civil status groups in similar ways. As a result, programs to improve

understanding do not need to vary by group. Instead, institutions should focus on access to training, academic roles, or support, which may have a greater impact.

Also, below finding reveals that information, policies, and activities about internationalization likely reach faculty at all ranks equally. It also shows that academic rank does not affect faculty awareness. As a result, efforts to improve awareness can include all ranks instead of focusing on certain groups.

Furthermore, results suggest that knowledge of internationalization is independent of teaching experience. Institutional policies, professional development, access to information, and organizational support may contribute to consistent awareness among faculty. Therefore, programs to enhance faculty awareness of internationalization should be offered to all, as teaching experience is not a differentiating factor.

Moreover, faculty with bachelor's, master's, or doctoral degrees demonstrate similar understanding of internationalization initiatives. These findings indicate that institutional policies, professional experience, training, and organizational culture have a greater impact on awareness than academic qualifications. Therefore, strategies to enhance faculty awareness can be implemented uniformly across all educational groups.

Lastly, faculty members seem to have similar levels of understanding about internationalization no matter their salary. This suggests that awareness is more likely linked to institutional policies, leadership, communication, and professional development opportunities than to financial compensation (Calikoglu et al., 2020, pp. 61-79). For this reason, higher education institutions should keep offering equal access to internationalization programs, training, and information for all faculty members, regardless of income (Moshtari & Safarpour, 2024).

Table 6. Difference in the Extent of Faculty Cognizance for Internalization according to Age, Civil Status, Academic Rank, Educational Attainment, and Average Monthly Income

Variable	H	df	p
Age	3.118075	4	0.538
Civil Status	0.078943	2	0.961
Academic Rank	7.373895	3	0.061
Years of Teaching	4.755288	4	0.313
Educational Attainment	3.703	3	0.295
Average Monthly Income	1.392	2	0.499

Note: difference is significant when $p \leq 0.05$

Difference in the Extent of Faculty Capacity for Internalization according to Demographics

Mann Whitney test was used in table 7 to show the difference in the extent of faculty capacity for internalization when respondents are grouped according to sex and school type. Results show that there is no significant difference in the extent of capacity according to sex [$U=7880.000$, $p=0.147$] however, the difference is significant according to school type [$U=2890.500$, $p=0.050$] with the capacity of private HEIs faculty being significantly higher than the public HEIs faculty.

The results show that male and female faculty members have similar ability to support internationalization efforts. Gender does not play a major role in faculty members' participation in internationalization (Watanabe, 2024). Meanwhile, Faculty at private HEIs had higher capacity than those at public HEIs (Marinoni & Pina-Cardona, 2024). This may indicate that private institutions provide better support, more adaptable policies, easier access to training, or more targeted internationalization efforts (Tamtik, 2022).

Table 7. Difference in the Extent of Faculty Capacity for Internalization according to Sex and School Type

Variable	U	z	p
Sex	7880.000	-1.4513	0.147
School Type	2890.500*	-1.9617	0.050

*Note: *difference is significant when $p \leq 0.05$*

Kruskal Wallis test was used in table 8.A to show the difference in the extent of faculty capacity for internalization when respondents are grouped according to age, civil status, academic rank, years of experience, educational attainment, and average monthly income. Results show that there is no significant difference in the extent of capacity for internalization according to age [$H=2.52867$, $p=0.640$], civil status [$H=0.15562$, $p=0.925$], academic rank [$H=7.19281$, $p=0.066$], years of teaching [$H=4.41065$, $p=0.353$], and average monthly income [$H=1.683$, $p=0.431$].

However, the difference in the extent of capacity is significant according to educational attainment [$H=9.064$, $p=0.028$]. Post hoc test in table 8.B shows the post hoc test which revealed that the extent of capacity of those who are still pursuing post graduate school is significantly higher than the bachelor's degree holder faculty.

Ma (2025) reports that faculty participation in internationalization activities is determined by professional experience and experience with global academic environments. Similarly, Calikoglu et al. (2024) observe that faculty engagement in internationalization varies across career stages, suggesting that age-related factors may also affect faculty members' ability to participate in international programs and collaborations. Development programs should support all age groups equally.

Meanwhile, capacity levels stay consistent across all groups, indicating that factors such as training, resources, and institutional support exert greater influence (Ji et al., 2026). Therefore, strategies to enhance capacity may be uniformly implemented regardless of civil status, making civil status an unlikely basis for targeting interventions.

Moreover, when making policies or planning programs, there is no need to focus on faculty rank. Offering professional development to everyone may work better (Kohan, 2023). To build capacity, it is more helpful to improve access to training, boost motivation, and raise awareness instead of focusing on rank.

Furthermore, teaching experience does not affect capacity for internationalization. Training opportunities related to internationalization may be just as available to faculty at all experience levels (NAFSA, 2026). Likewise, faculty, regardless of income, may have similar chances to develop internationalization capacity. Institutional support and professional development seem to be offered uniformly, regardless of personal finances. Efforts to strengthen faculty capacity should not depend on income group. Instead, continue focusing on institutional strategies that may benefit all faculty equally.

However, faculty members' ability to work internationally is closely related to their level of education. Faculty with only a bachelor's degree have less capacity than those with doctorates or those in postgraduate programs. Faculty still in postgraduate programs show even greater capacity than those with master's or doctoral degrees (Kayingo et al., 2022). This suggests that continuing education may help more than simply completing a higher degree.

This means that advanced or ongoing graduate education helps faculty become better prepared, more skilled, and more engaged in international work. (Verbyla et al., 2023) The data highlight the

value of continuous academic development, as ongoing postgraduate study appears to strengthen faculty in this area.

Table 8A. Difference in the Extent of Faculty Capacity for Internalization according to Age, Civil Status, Academic Rank, Years of Experience, Educational Attainment, and Average Monthly Income

Variable	H	df	p
Age	2.52867	4	0.640
Civil Status	0.15562	2	0.925
Academic Rank	7.19281	3	0.066
Years of Teaching	4.41065	4	0.353
Educational Attainment	9.064*	3	0.028
Average Monthly Income	1.683	2	0.431

Note: *difference is significant when $p \leq 0.05$

Table 8B. Post hoc Test for Educational Attainment

Educational Attainment	Test Statistic	Adj. p-value
Bachelor-Master	-51.28	0.327
Bachelor-Doctorate	-54.074	0.274
Bachelor-Post	-113.194*	0.016
Master-Doctorate	-2.794	1.000
Master-Post	-61.914	0.168
Doctorate-Post	-59.12	0.231

Difference in the Extent of Faculty Motivation for Internalization according to Demographics

Mann Whitney test was used in table 9 to show the difference in the extent of faculty motivation for internalization when respondents are grouped according to sex and school type. Results show that there is no significant difference in the extent of faculty motivation according to sex [$U=8706.500$, $p=0.892$] and school type [$H=3086.000$, $p=0.138$].

Male and female faculty show similar motivation for internationalization activities (Li et al., 2021). Therefore, efforts to increase motivation do not need to be based on sex. Likewise, the type of institution does not significantly affect faculty motivation to participate in internationalization activities (Salahi & Smith, 2022). Policy and administrative support for faculty motivation to internationalize should apply equally across all school types.

Table 9. Difference in the Extent of Faculty Motivation for Internalization according to Sex and School Type

Variable	U	z	p
Sex	8706.500	-0.1361	0.892
School Type	3086.000	-1.4819	0.138

Note: difference is significant when $p \leq 0.05$

Kruskal Wallis test was used in table 10 to show the difference in the extent of faculty motivation for internalization when respondents are grouped according to age, civil status, academic rank, years of experience, educational attainment, and average monthly income. Results show that there is no significant difference in the extent of faculty motivation according to age [$H=1.75583$, $p=0.781$], civil status [$H=0.00341$, $p=0.998$], academic rank [$H=6.92836$, $p=0.074$], years of teaching [$H=4.7976$, $p=0.309$], educational attainment [$H=3.674$, $p=0.299$], and average monthly income [$H=0.882$, $p=0.643$].

Younger and older faculty show similar motivation. Internationalization engagement is consistent across age groups (Calikoglu et al., 2022). Thus, institutions need not create age-specific motivation strategies. Also, members' motivation for internationalization appears unchanged across single, married, and other civil statuses (Li et al., 2021). Therefore, schools do not need to adjust their plans or programs based on civil status. Instead, focus on other factors that may influence motivation, such as professional development, institutional support, or workload.

Internationalization efforts can be applied equally to all academic ranks, without needing special motivational strategies for different ranks. However, it is still important to watch for any small differences that future research might find, for as faculty move from instructor or lecturer roles to assistant, associate, and full professor positions, their motivations can shift. Studies suggest that academic rank affects both intrinsic motivations, like professional fulfillment and scholarly achievement, and extrinsic motivation, such as promotion, prestige, and rewards (Niloofer et al., 2020).

Efforts to boost faculty motivation for internationalization need not to depend on teaching experience. Institutions can use a unified approach for programs, incentives, and training. Other factors, such as institutional support, access to international opportunities, or professional development, may have a greater impact on motivation than years of teaching (Li et al., 2021).

Similarly, Stupnisky and Salahuddin (2025) noted that encouraging interventions, recognition, and a positive institutional environment enhance faculty motivation more than academic credentials.

Finally, Li et al. (2021) found that faculty involvement in internationalization is primarily shaped by institutional policies, organizational support, professional goals, and personal beliefs, rather than financial rewards. Likewise, personal and professional aspirations are more reliable predictors of faculty engagement in internationalization than external or monetary factors.

Table 10. Difference in the Extent of Faculty Motivation for Internalization according to Age, Civil Status, Academic Rank, Years of Experience, Educational Attainment, and Average Monthly Income

Variable	H	df	p
Age	1.75583	4	0.781
Civil Status	0.00341	2	0.998
Academic Rank	6.92836	3	0.074
Years of Teaching	4.7976	4	0.309
Educational Attainment	3.674	3	0.299
Average Monthly Income	0.882	2	0.643

Note: difference is significant when $p \leq 0.05$

Relationship between the Extents of Faculty Cognizance, Capacity, and Motivation for Internalization

Spearman rank correlation was used in table 11 to show the relationships between the extents of faculty cognizance, capacity, and motivation for internalization. There are strong positive correlations between faculty cognizance and capacity [$r=0.720$, $p=0.000$], cognizance and motivation [$r=0.671$, $p=0.000$], and capacity and motivation [$r=0.719$, $p=0.000$].

When faculty are more aware of and engaged in internationalization, they tend to possess stronger skills and competencies needed to implement internationalization initiatives (Li et al., 2021). This evidence suggests that policymakers and administrators can strengthen faculty capacity by investing in targeted awareness-building activities. Those initiatives provide the foundation for

developing the knowledge, confidence, and competencies required for effective internationalization (Mittelmeier et al., 2024). This finding supports the study of Hsu (2025), who reported that faculty members with a better understanding of internationalization are more likely to actively engage in initiatives and develop the competencies needed to implement them effectively.

Results also suggest that greater faculty awareness of internationalization is associated with greater motivation to engage in or support related activities (Li et al., 2021). However, the relationship is not strong enough for cognizance to fully account for motivation. This indicates that awareness is an important prerequisite for faculty engagement, while motivation is also influenced by other institutional and circumstantial factors. Enhancing faculty awareness through training, seminars, international exposure, and continuous dissemination of internationalization policies and opportunities may help strengthen motivation to participate in internationalization initiatives (Yongxin & Mustapha, 2025). Nevertheless, because the relationship is only moderate, higher education institutions should also provide institutional support, leadership, incentives, workload adjustments, and professional development opportunities to sustain faculty engagement.

Finally, faculty members with greater skills, competencies, and training are more motivated to pursue internationalization, suggesting that capacity and motivation increase concurrently rather than independently (Ji et al., 2026).

Improvements in faculty capacity may increase motivation for internationalization (Ji et al., 2026). Investment in professional development and training can therefore enhance motivation and engagement in internationalization initiatives (Li et al., 2021). These results suggest that enhancing faculty capacity increases both ability and motivation (Ji et al., 2026). This stresses the importance of robust institutional support systems for internationalization (Jiewei et al., 2026).

Table 11. Relationships between Extents of Faculty Cognizance, Capacity, and Motivation for Internalization

Variable	r	df	p
Faculty Cognizance x Faculty Capacity	0.720*	267	0.000
Faculty Cognizance x Faculty Motivation	0.671*	267	0.000
Faculty Capacity x Faculty Motivation	0.719*	267	0.000

*Note: *correlation is significant when $p \leq 0.05$*

CONCLUSION

From the above findings, it can be concluded that faculty members consistently have high cognizance for internalization across all demographic and professional groups, indicating that age, sex, civil status, school type, academic rank, years of teaching, educational attainment, and average monthly income do not substantially affect faculty members' awareness and understanding of internationalization. In addition, faculty members tend to show strong ability to support internationalization, regardless of age, sex, civil status, school type, academic rank, teaching experience, or monthly income. The main difference is in educational attainment: those working toward postgraduate degrees have a very high capacity, while faculty with only a bachelor's degree have a moderate capacity. This suggests that advanced education helps strengthen faculty capacity for internationalization. Lastly, faculty members show strong motivation for internationalization, with high ratings for both internal and external factors. They are driven by personal reasons such as professional growth, satisfaction, and dedication to teaching, as well as by institutional support, recognition, and career opportunities. This indicates a strong overall readiness to participate in internationalization efforts.

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BOOK REVIEW: THE CANONS OF JIHAD: TERRORISTS' STRATEGY FOR DEFEATING AMERICA

John C. Zimmerman

University of Nevada Las Vegas, **United States**

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This is a selection of ten translated writings on key aspects of jihad. Nine of the writings advocate jihad while one (General S.K. Malik) defends the jihad concept from the historical perspective. The material has been skillfully condensed, in some cases from larger works, so that the major points being advocated by the authors are immediately apparent. Nine of the ten writings are not readily available, the exception being al Qaeda's well-known call of February 23, 1998 for a jihad against "Jews and Crusaders." Hence, the volume would be a very useful text in a graduate course as well as for anyone interested in the ideological underpinnings of the current jihad phenomenon.

In accordance with classic Islamic theory, some of the essays see jihad as being a necessary world – wide phenomenon in order to create Islamic rule over the earth.

This is the view of Hasan al – Banna, who is widely credited as being the father of modern Islamism with his founding of the Muslim Brotherhood in 1928. He writes that "[j]ihad is an obligation on every Muslim and cannot be ignored or evaded." (5) The Quran and Sunnah (life example of the Prophet Muhammad) "are overflowing with noble ideals and they summon the people to jihad, to warfare, to the armed forces, and to all means of land and sea fighting." (6) Thus, "jihad is used to safeguard the mission of spreading Islam. For Islam, even as it ordains jihad, extols peace." (9)

Similar sentiments are echoed by Sayyid Qutb, the 20th century's most influential advocate of jihad. Qutb categorically rejects the idea that jihad is only defensive. Offensive jihad is needed to cleanse the world of jahiliyyah (ignorance). Jewish and Christian societies are characterized by this ignorance because their forms of worship derive from "false and distorted beliefs". (25) Like Banna, the jihad to bring truth to mankind is seen as a way to universal peace. "The peace that Islam desires is that the religion [Islam] has the obedience of all the world's people." (23)

The peace that will be brought about by jihad is defended by General S.K. Malik in his well-known The Qu'ranic Concept of War. "Jihad is a continuous and never - ending struggle waged on all fronts...It aims at attaining the overall mission assigned to the Islamic state [by Allah], and military strategy is one of the means available to it to do so." (112) Thus, "a Muslim should be proud of the fact that, when used, his sword is meant to subdue the forces of tyranny and repression, and to bring peace and justice to mankind." (109) It should be noted that tyranny and repression in the jihadist context is the absence of Islamic rule.

Even where one might expect the jihad concept to be more localized against domestic rulers, it can still be seen as a world – wide necessity. Muhammad al – Salam Faraj, author of The Neglected Obligation, the work that was a major influence on the assassins of Egyptian president Anwar Sadat, saw the need for jihad in a wider context. "Islam fights to make supreme the Word of God in this world, whether it be by attacking or by defending." (41)

Abdullah Azzam, Bin Laden's mentor, was the principal force behind recruiting Arab and Muslim youth to fight the Soviets in Afghanistan. His essay entitled Join the Caravan was

instrumental in reviving an interest in jihad. He argued that as long as a Muslim country was under attack, jihad was an individual obligation on all Muslims.

He wrote: “Jihad has a deep -rooted role that cannot be separated from the constitution of this religion. A religion that does not have jihad cannot become established in any land...” (126)

Abu Musab al Suri was the pseudonym for al Qaeda’s chief theoretician until his capture. He is best known for his massive 1600 page *The Call to Global Islamic Resistance*. He sees massive conspiracies aimed at Muslims. Hence, the U.S. led Crusader – Jewish alliance “has clearly announced its goals: total elimination of the civilizational, religious, political, economic, social and cultural existence of Muslims.” (164) In this quest the U.S. is aided by domestic regional rulers who seek to destroy the community of Muslims (the ummah) “defeat her religion [Islam], kill her sons, and wipe out all elements of civilization.” (166) Suri approves of Bin Laden’s approach to this conspiracy that consists of launching a jihad against the U.S. Bin Laden’s ideas “are the key to solving the problems in the Arab Peninsula and the whole region.” (177)

Al – Suri’s successor was Muhammad Khalil Al – Hakaymah. He adopts ideas from al Suri’s *The Call* that individuals acting alone can be effective in bringing about the enemy’s collapse. He argues that weaker forces can wage successful jihad in asymmetrical warfare and cites as examples the ousting of the Soviets from Afghanistan, and the jihads in Bosnia and Chechnya. He overlooks the fact that (1) the Afghan mujahadeen received billions in outside aid, (2) the Muslim success in Bosnia was due totally to NATO intervention and (3) the Chechens were crushed by the Russians.

The internet has become a popular forum for jihadists to exchange ideas. Two jihadists that have become prominent as a result of their writings on the net are featured. Abu Bakr Naji, a pseudonym, argues that the corruption and “effeminacy” of western societies render them incapable of sustaining long term anti – jihadist military commitments. Thus, committed jihadists can eventually wear down their enemies. He argues that “we need to massacre others”, but once power is seized “control and justice spreads...” (65) His overall goal is universal; it will be achieved by “[u]niting the hearts of the world’s people by means of money and uniting the world through sharia [Islamic law] governance.” (53)

Abu – Ubayd Al – Qurashi, also a pseudonym, has become a well – known internet poster on jihadist websites. He attempts to give a “psychological” profile of President George W. Bush, who is found to be clownish, passive and sadistic. He “is a sick man needing treatment.” Bush compares very unfavorably with Bin Laden, who is “pious, brave, honest, decent, and ready to give whatever is most precious in order to aid his religion and nation...” (145)

My only complaint about this very skillfully edited and informative volume is that it did not contain any writings by Shiites.

COMMUNITY SERVICE SENTENCING IN FACILITATING THE REINTEGRATION OF OFFENDERS INTO THE COMMUNITY IN TEMEKE MUNICIPALITY

Matilda John*

St. Augustine University of Tanzania.

Ludovick Myumbo

St. Augustine University of Tanzania.

Johnson Mavole

St. Augustine University of Tanzania.

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ABSTRACT

Community Service Sentencing (CSS) is a non-custodial sentencing option adopted in Tanzania to promote offender rehabilitation, reduce recidivism, alleviate prison overcrowding, and enhance community participation in the justice process. Despite its legal establishment under the Community Service Act No. 6 of 2002 and its nationwide implementation, questions persist regarding its effectiveness in urban municipalities characterized by high population density and socio-economic vulnerability, such as Temeke Municipality in Dar es Salaam. The purpose of this study was to investigate the role of Community Service Sentencing in facilitating the reintegration of offenders into the community in Temeke Municipality. The study adopted a qualitative exploratory research design grounded in Reintegrative Shaming Theory. Data were collected through purposive sampling using in-depth interviews and focus group discussions involving ex-offenders, probation officers, magistrates, community leaders, and family members. The data were analysed thematically to generate an in-depth understanding of stakeholders' experiences and perceptions regarding the implementation and outcomes of Community Service Sentencing. The findings revealed that Community Service Sentencing provides meaningful opportunities for offender rehabilitation and community engagement by allowing offenders to maintain social ties and contribute positively to community development. The study concludes that while Community Service Sentencing is important in the reintegration of offenders into the community in Temeke Municipality its effectiveness in Temeke Municipality remains constrained by institutional and community-level challenges. The study recommends strengthened inter-agency coordination, increased resource allocation, enhanced supervision and monitoring systems, and sustained community sensitization programmes to improve the effectiveness of Community Service Sentencing as a viable alternative to imprisonment.

Keywords: Community Service Sentence, Community Reintegration, Offenders Criminal Justice Reform

1. INTRODUCTION

Criminal justice systems have increasingly recognized the limitations of incarceration in addressing crime sustainably (UNODC, 2015). Scholars argue that prisons often perpetuate cycles of violence, stigmatization, and exclusion, especially for petty offenders (Garland, 2018). Community Service Sentences (CSS) have emerged as a restorative alternative emphasizing rehabilitation,

accountability, and reintegration rather than retribution (Karimullah, 2023). They are increasingly recognized as a restorative alternative to traditional punitive measures, emphasizing rehabilitation, accountability, and reintegration rather than retribution. Unlike conventional punishment, which often prioritizes deterrence or retribution, CSS focus on repairing harm, fostering offender responsibility, and promoting community well-being (Karimullah, 2023; Pavlacic, 2021).

By engaging offenders in structured community work, CSS provides opportunities to acquire practical skills, build social connections, and develop a sense of purpose, all of which are crucial for reducing recidivism and supporting long-term reintegration (Lacey, 2015; Fulham et al., 2023). Restorative practices embedded in CSS encourage offenders to confront the consequences of their actions, often through reparative activities or direct dialogue with victims, thereby enhancing accountability and offering victims emotional closure (Shem-Tov et al., 2024; Wood, 2024). Moreover, CSS address limitations of traditional punitive approaches, which can exacerbate social alienation and fail to tackle underlying social, economic, or psychological drivers of criminal behavior (Karimullah, 2023; Taylor, 2025).

Empirical evidence consistently demonstrates that restorative interventions, including CSS, are effective in lowering recidivism and facilitating successful reintegration (Fulham et al., 2023). Legal precedents further underscore the judiciary's recognition of restorative alternatives as constructive mechanisms for justice, highlighting the social and moral benefits of reintegration over purely punitive responses (Pavlacic, 2021). Collectively, these findings position CSS as a transformative approach in criminal justice, balancing the needs of offenders, victims, and communities while fostering rehabilitation, accountability, and social reintegration (Shem-Tov et al., 2024; Wood, 2024).

In Africa, CSS and other non-custodial sentences are grounded in communal traditions of reconciliation and collective responsibility (Oware, 2020). Countries such as Kenya, Uganda, and Ghana have integrated community service into their penal systems to reduce prison congestion and promote restorative justice (Kariuki, 2019; Sarpong, 2016). In Tanzania, CSS were institutionalized under the Community Service Act No. 6 of 2002. The law empowers magistrates to impose community work on eligible offenders in lieu of imprisonment. According to the Ministry of Home Affairs (2023), CSS aims to alleviate prison overcrowding, reduce state expenditure, and facilitate offender rehabilitation. By 2013, more than 5,000 offenders had served community service sentences, mostly in public institutions such as schools, health centers, and municipal cleaning projects. However, despite policy successes, questions remain regarding the actual impact of CSS on recidivism, rehabilitation, and community perceptions – particularly in urban municipalities characterized by social fragmentation and unemployment (Tanzania Correctional Service, 2021). This study situates CSS within Tanzania's broader penal reform agenda and explores its effectiveness in Temeke, one of Dar es Salaam's most populous and diverse municipalities.

1.2 Statement of the Problem

Although Community Service Sentencing has been legally established and implemented across Tanzania for over two decades, evidence regarding its actual effectiveness in reintegrating offenders to the community remains limited, especially at the municipal level. In Temeke Municipality, official reports indicate persistently high and, in some cases, rising rates of recidivism, particularly among young male offenders (Tanzania Correctional Service, 2021; MOHA, 2020). This trend persists despite the availability of non-custodial sentencing options designed to rehabilitate offenders and reduce repeat offending.

Existing studies on Community Service Sentencing in Tanzania and comparable developing contexts have largely focused on policy frameworks, institutional arrangements, or general perceptions of non-custodial sentences (Gilliéron, 2010; Queenturnble, 2007). Many adopt quantitative or mixed-method approaches and emphasise outcomes such as prison decongestion, while paying limited attention to offenders lived experiences, community attitudes, and the practical realities of CSS implementation at the local level. Moreover, there is a noticeable lack of qualitative research examining how CSS operates in highly urbanised municipalities characterised by social and economic vulnerabilities.

In Temeke Municipality, administrative records and anecdotal evidence suggest that some offenders who complete community service sentences subsequently reoffend, raising concerns about the adequacy of supervision, community support, and reintegration mechanisms (URT, 2022). However, there is insufficient empirical evidence explaining why this occurs, how CSS is implemented in practice, and whether it effectively addresses the underlying factors contributing to reoffending.

The absence of in-depth, localized qualitative evidence on the role of Community Service Sentencing in facilitating the reintegration of offenders into the community in Temeke Municipality represents a significant knowledge gap. Without such evidence, policymakers, judicial officers, and correctional administrators lack the contextual insights necessary to strengthen CSS implementation and enhance its rehabilitative outcomes. This study therefore seeks to address this gap by examining the role of Community Service Sentencing in facilitating the reintegration of offenders into the community in Temeke Municipality.

1.3 Study Objective

The objective of this study was to investigate the role of Community Service Sentencing in facilitating the reintegration of offenders into the community in Temeke Municipality, Dar Es Salaam Region, Tanzania

2. LITERATURE REVIEW

In this section, theoretical and empirical literature reviews are presented.

2.1 Theoretical framework

This study is anchored on Braithwaite's (1989) reintegrative shaming theory, which differentiates between stigmatizing and reintegrative forms of shaming. Stigmatizing shaming labels offenders as deviant, isolating them from society and often exacerbating criminal behaviour, whereas reintegrative shaming condemns the offense while treating the offender as a valued member of the community capable of reform (Braithwaite, 1989). Community Service Sentences (CSS) operationalize this theory by providing a structured mechanism through which offenders can make amends for their wrongdoing through unpaid labour, while simultaneously maintaining and rebuilding social ties within the community. By emphasizing responsibility, skill development, and meaningful contribution, CSS embodies the rehabilitative and reintegrative principles highlighted in the preceding discussion, offering a concrete pathway for offenders to restore their social identity and reduce recidivism (Fulham et al., 2023; Karimullah, 2023; Shem-Tov et al., 2024).

In African contexts, reintegrative shaming resonates with indigenous justice traditions that emphasize reconciliation, apology, and compensation, reflecting a communal understanding of justice as restorative rather than purely punitive (Mutangi, 2021). CSS thus represent a convergence of Western restorative justice practices and African communal ethics, particularly the Ubuntu

philosophy, where justice is conceptualized as a process of repairing harm and restoring social harmony rather than enacting retribution (Karimullah, 2023; Taylor, 2025). By linking offenders' accountability to meaningful community engagement, CSS operationalizes reintegrative shaming in a manner that is both culturally resonant and empirically effective, reinforcing its role as a restorative alternative that balances the interests of offenders, victims, and communities (Pavlastic, 2021; Wood, 2024).

2.2 Empirical Review

Rehabilitation and Reintegration of Offenders into the Community Rehabilitation and reintegration remain central goals of Community Service Sentencing (CSS), grounded in the idea that offenders are more likely to reform when they remain embedded within their social environment rather than being isolated through imprisonment. However, recent empirical literature increasingly shows that reintegration is not guaranteed by the sentence itself, but is shaped by supervision quality, institutional capacity, stigma, and socio-economic realities.

Recent global studies continue to emphasise the rehabilitative potential of community-based sanctions, while also revealing important limitations. A 2023 meta-analysis on restorative justice interventions examined multiple international programs and found that such approaches, including community-based sanctions, produce small but statistically significant reductions in general recidivism, while also improving offender accountability and social reintegration outcomes. However, the study highlighted that results vary depending on programme design, offender characteristics, and implementation context. Methodologically, the study relied on aggregated quantitative data, which provides strong generalisable evidence but offers limited insight into how offenders experience reintegration in everyday life. This creates a gap in understanding the social processes of reintegration, which this study addresses by focusing on lived experiences in Temeke.

More recently, Zhang, Shi, and Ward (2026), in *The Dynamic and Endogenous Behavior of Re-Offense Risk*, used an agent-based simulation model based on U.S. probation data to examine how diversion and community-based programs influence reintegration trajectories. The study found that rehabilitation outcomes are not static but evolve through interactions between individuals and their social environment, including supervision intensity and community feedback. While this study is methodologically innovative, it is based on simulation and data from developed systems, limiting its applicability to real-world African contexts. The present study addresses this by providing empirical, grounded evidence from an urban African municipality.

Recent African studies increasingly highlight that reintegration is deeply influenced by structural and social realities. A 2024 study by Alila titled *Assessment of Rehabilitation Programs in Kenyan Prisons* used a mixed-methods design combining surveys and interviews at Kamiti Maximum Security Prison. The findings showed that rehabilitation programs improve reintegration when they are tailored to offenders' needs and include skills development, but their effectiveness is constrained by resource limitations, overcrowding, and weak post-release support systems. The limitation of this study is that it focuses on prison-based rehabilitation rather than community service, leaving unanswered whether non-custodial sanctions provide better reintegration outcomes. This study addresses that gap by examining reintegration within a community-based sentencing framework.

In Kenya, the 2025 National Crime Research Centre study, *The Delivery of Community-Based Sentences*, analysed probation and community service orders using institutional data and stakeholder perspectives. The study found that community-based sentences support rehabilitation by keeping offenders within society and reducing the disruptive effects of imprisonment. However,

it also revealed that public perceptions, weak compliance monitoring, and limited institutional capacity undermine reintegration outcomes. While this study provides strong policy-level insights, it does not deeply explore offenders' lived reintegration experiences. The current study fills this gap by incorporating perspectives from ex-offenders, families, and community members.

Another important regional contribution is the Kenyan Probation and Aftercare Service report (2016–2023), which documents reforms in supervision and reintegration systems. The report shows that structured supervision, social inquiry, and follow-up mechanisms are critical in supporting offender reintegration, but also highlights challenges such as high caseloads and uneven service delivery. However, institutional reports tend to present aggregated outcomes rather than detailed qualitative insights. This study complements such evidence by exploring how reintegration is experienced at the community level.

Recent Tanzanian studies provide more direct insight into the challenges of rehabilitation under community service systems. Leonard, Buhori, and Naftal (2025), in *Examining the Challenges Hindering the Implementation of Community Service Sentencing for Offender Rehabilitation: Insights from Butimba Central Prison*, used a qualitative case study design involving interviews and document analysis. The study found that rehabilitation and reintegration are constrained by inadequate resources, weak legal enforcement, poor coordination among stakeholders, and strong social stigma against offenders. These factors limit the effectiveness of CSS despite its intended rehabilitative role. The strength of this study lies in its recent, context-specific evidence. However, it is centred around institutional perspectives and does not fully capture the broader community dynamics influencing reintegration.

Similarly, Ndibalema (2025), in *Community Service Orders and Prison Congestion in Tanzania*, used a phenomenological qualitative approach with interviews and document review in Dar es Salaam. The study found that community service orders are underutilised and often depend on judicial discretion rather than systematic implementation. This limits their potential to support reintegration and reduce reliance on imprisonment. While this study highlights structural barriers, it focuses more on sentencing practices than on the actual reintegration experiences of offenders after completing community service.

Across global, regional, and Tanzanian literature, a consistent pattern emerges: Community Service Sentencing has clear potential to support rehabilitation and reintegration by preserving offenders' social ties and shielding them from the negative effects of imprisonment. However, its effectiveness is not automatic; rather, it is shaped by several interconnected factors, including the quality of supervision and monitoring, the availability of rehabilitation support such as skills training, counselling, and aftercare services, prevailing community attitudes and stigma toward offenders, as well as the overall institutional capacity and level of coordination among key actors. Despite the growing body of recent studies, a critical gap remains in the literature. Many existing studies tend to focus primarily on quantitative outcomes, often overlooking the lived experiences of offenders, while others emphasise institutional or policy perspectives at the expense of community-level realities. Additionally, a significant proportion of research concentrates on prison-based rehabilitation, leaving community-based sentencing, particularly Community Service Sentencing, insufficiently explored in terms of its actual reintegrative impact in everyday social contexts.

There is limited in-depth, qualitative, and context-specific research examining how Community Service Sentencing supports or fails to support reintegration in urban, socio-economically vulnerable settings such as Temeke Municipality. This study addresses these gaps by adopting a qualitative exploratory approach to examine rehabilitation and reintegration under Community Service Sentencing in Temeke Municipality. It brings together perspectives from ex-offenders,

probation officers, magistrates, community leaders, and family members to provide a holistic and humanised understanding of reintegration.

3. RESEARCH METHODOLOGY

This study adopted a qualitative exploratory design to investigate the effectiveness of CSS in Temeke Municipality, capturing the nuanced experiences of offenders, practitioners, and community members. The qualitative approach was particularly suitable for this study, as it facilitates an in-depth exploration of social processes, interpersonal interactions, and community-based restorative justice practices, aligning with the study's focus on reintegration, accountability (reduce recidivism), and rehabilitation as emphasized in Braithwaite's (1989) reintegrative shaming theory (Creswell & Poth, 2018; Denzin & Lincoln, 2018; Patton, 2015).

A total of eighteen participants were purposively selected based on their direct experience with CSS, complemented by snowball sampling to identify additional participants embedded in relevant social networks. The sample included eight ex-offenders who had completed CSS, three probation officers, two magistrates, two community leaders, and three family members, ensuring a diversity of perspectives across institutional, familial, and community levels. This sampling strategy allowed for a comprehensive understanding of the social and relational dimensions of reintegrative justice in practice.

Data collection employed multiple qualitative methods to capture rich information. In-depth semi-structured interviews elicited personal narratives and professional reflections, focus group discussions facilitated interactive insights into community perceptions, and participant observation documented behaviours and practices during ongoing CSS activities. Interviews were conducted in Swahili, audio-recorded with participants' informed consent, transcribed verbatim, and translated into English for accurate and reliable analysis. Triangulation across these data sources enhanced the credibility and richness of the findings (Denzin & Lincoln, 2018).

Data were analysed thematically using Braun and Clarke's (2006) six-step framework, providing a systematic and rigorous approach to identifying patterns and insights across the qualitative dataset. The analysis began with familiarization, during which the researcher repeatedly read the interview transcripts, focus group notes, and observation records to gain a holistic understanding of participants' experiences with CSS. This step was particularly important for capturing the social and relational nuances emphasized in Braithwaite's (1989) reintegrative shaming theory, including offenders' accountability (reduce recidivism), social reintegration, and community responses to restorative interventions.

Trustworthiness was ensured through methodological triangulation across interviews, focus groups, and participant observation, as well as peer debriefing and member checking to validate interpretations (Lincoln & Guba, 1985). Reflexivity was maintained throughout, with the researcher critically reflecting on positionality, biases, and the influence of their dual role as academic and community observer, thereby enhancing the credibility and contextual relevance of the findings (Creswell & Poth, 2018; Denzin & Lincoln, 2018; Patton, 2015).

3.1 Study Findings

Reintegration is a multidimensional process that involves not only the offender but also the family, community members, and broader social support structures. The analysis revealed three interconnected sub-themes: (i) community acceptance and stigma, (ii) family and community support systems, and (iii) interventions needed for better reintegration.

Family Support and Reintegration

Community leaders highlighted that communities have become more accepting of offenders after CSS, although stigmas persist. One leader noted:

“As community members, we try to avoid stigmatising, despising, or judging them as unworthy. Instead, we learn from their mistakes and the consequences of wrongdoing... we dedeliberately involve them in community activities such as environmental cleaning, tree planting, maintaining gardens, and keeping public spaces tidy.” (Interview/Community Leader/2025).

Family members reported mixed experiences:

“Among close family members, the reception was warm and filled with love... However, some neighbours were still doubtful at first. But when they consistently showed good behaviour after completing the sentence, those same neighbours began to trust and accept them again.” (Interview/Family Member/2025).

Offenders themselves acknowledged stigma

“Within my family, some felt I had not changed and would continue stealing because I was not sent to prison, while others gave me a second chance to rebuild trust.” (FGD/Offender/2025).

The findings indicate that while CSS promotes community acceptance and offers offenders a second chance, lingering stigma both within families and the wider community can hinder full reintegration. This suggests that for CSS to be more effective, efforts should extend beyond the sentence itself to include community sensitization and support programs that foster trust and reduce negative perceptions. Strengthening these social acceptance mechanisms can enhance the rehabilitative and re-integrative potential of CSS, ensuring offenders are fully reintegrated and less likely to reoffend. These results align with Maruna (2001), who argued that desistance depends heavily on community acceptance and recognition of an offender's changed identity. However, they contrast with LeBel, Burnett, Maruna, and Bushway (2008), who observed that stigma often persists regardless of demonstrated reform, making reintegration highly challenging. The RST emphasizes reintegration rather than permanent stigmatisation (Braithwaite, 1989). In Temeke, CSS provides opportunities for integrative shaming, but stigma by some community members reflects disintegrative shaming, which undermines reintegration.

Community Acceptance and Social Interaction

Community leaders highlighted the importance of local support structures:

“We have local groups and family networks that guide these individuals. Some elders and leaders help them find jobs or small business opportunities, which makes reintegration smoother.” (FGD/Community Leader/2025)

Family members confirmed providing support:

“As a family, we supported them by providing capital to start small businesses, while others were assisted to go back to school or vocational training colleges.” (Interview/Family Member/2025)

Offenders also valued support from officers

“From my probation officer, I received guidance and advice, and was even referred to a drug rehabilitation unit. Now I no longer use drugs.” (FGD/Offender/2025)

The findings indicate that coordinated support from family, community networks, and probation officers plays a critical role in facilitating successful reintegration of offenders. Access to vocational training, small business opportunities, and counseling not only equips offenders with practical skills but also reduces the likelihood of recidivism.

Support systems whether from families, community leaders, or probation officers were crucial in preventing relapse into crime and fostering stable reintegration. This corresponds with Visser and Travis (2003), who argued that family support is one of the strongest predictors of successful reintegration. However, it contrasts with Petersilia (2003), who argued that systemic barriers such as limited employment opportunities often outweigh family or community support in determining reintegration outcomes. According to RST, reintegrative support restores social bonds and fosters pro-social behaviour. The family and community support described in Temeke reflects integrative practices that reduce shame and encourage offenders to reform.

Experiences of Stigma and Labelling

Participants suggested further interventions as shared below

“They need continuous counselling and guidance... In addition, vocational training should be provided, especially for those who are unemployed. Skills such as masonry, tailoring, or small business training would be helpful.” (Interview/Community Leader/2025).
“Providing counseling, guidance, and life skills training is crucial for offenders sentenced to community service.” (Interview/Magistrate/2025).

Offenders requested more economic opportunities

“Provide more entrepreneurship training and linkages to credit facilities; develop offenders’ talents and skills.” (FGD/Offender/2025)

The findings highlight that counseling, vocational training, and access to employment are key for sustainable reintegration. Without these interventions, stigma and economic hardship may drive some back into crime. These insights are consistent with Uggen (2000), who demonstrated that employment opportunities are vital for sustaining desistance. However, they diverge from Cullen and Gilbert (2012), who argue that effective correction lies more in supervision and deterrence than in socio-economic support. CSS embodies reintegrative shaming by providing offenders with second chances. However, RST also highlights that reintegration requires both symbolic acceptance (community forgiveness) and practical opportunities.

4. CONCLUSION

The study concludes that offender reintegration following Community Service Sentencing is highly dependent on social relationships and community attitudes. Family support emerged as a critical facilitator of reintegration, while experiences of stigma and labelling undermined reintegration efforts. In densely populated urban settings such as Temeke Municipality, weak community cohesion and limited public awareness of Community Service Sentencing intensified these challenges. The findings suggest that reintegration outcomes are shaped not only by sentencing decisions but also by broader social dynamics within the community.

5. RECOMMENDATIONS

Based on the findings, this study recommends several measures to strengthen Community Service Sentencing for the reintegration of offenders into the community in Temeke Municipality. They include but not limited to the following: -

(i) increased government funding for probation services; (ii) capacity-building for magistrates and officers; (iii) nationwide sensitization campaigns to destigmatize CSS; (iv) integration of vocational training; and (v) continuous evaluation of CSS outcomes. More broadly, the adoption of CSS contributes to decolonizing Tanzania's criminal justice system by emphasizing restoration over retribution.

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PAYMENT SYSTEMS AND MOBILE MONEY AS DRIVERS OF FINANCIAL INCLUSION: BALANCING INNOVATION WITH FINANCIAL INTEGRITY IN SIERRA LEONE

Joseph Momoh Conteh

Peking University China Beijing

Musa Abdullah Kargbo

Fourah Bay College University of Sierra Leone

Dr. Dante Allie Bendu

Fourah Bay College University of Sierra Leone

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ABSTRACT

Sierra Leone has built a modern retail payment architecture in under a decade, culminating in the Salone Payment Switch and a central bank directive requiring all banks and mobile money operators to route domestic transactions through it from 1 April 2025. Account ownership nonetheless stands at roughly 39% of adults, against a sub-Saharan African average of 58 per cent, and the country's digital finance market is characterised by mass registration alongside minimal use. This article examines whether payment system modernisation and mobile money growth are in fact driving financial inclusion in Sierra Leone, and how the resulting integrity risks are being governed. The study synthesises administrative and survey evidence from the Bank of Sierra Leone and the United Nations Capital Development Fund Annual Provider Survey, Global Findex 2021 and 2025, GSMA industry data, GIABA mutual evaluation and follow-up findings, and International Monetary Fund Article IV documentation, and interprets that evidence through an institutional and payments-economics framework. Three findings emerge. First, Sierra Leone's inclusion deficit is a usage deficit rather than an access deficit: approximately 2.9 million wallets carry a zero balance and around 57 per cent of registered mobile money accounts are dormant, so infrastructure investment addresses a constraint that is no longer binding. Second, the tiered know-your-customer regime immobilises roughly 70% users in the lowest tier, capping transaction limits precisely for the population that interoperability is intended to serve. Third, integrity supervision is not competing with inclusion but underwriting it: the Financial Intelligence Unit investigated 14 online financial fraud cases across 2020 and 2021, against survey evidence that 41% of consumers had been targeted by phishing. The article argues that detection capacity, not payment rails, is the binding constraint, and proposes a sequenced framework in which integrity investment is treated as the enabling condition for usage rather than as a compliance cost imposed upon it.

Keywords: financial inclusion; mobile money; payment systems; financial integrity; anti-money laundering; interoperability; digital financial services; Sierra Leone

1. INTRODUCTION

The global stock of mobile money accounts passed 2.1 billion in 2024, and Africa held 1.1 billion of them, representing 53 per cent of the world total and 74 per cent of global transaction volume (GSMA, as reported in Bank of Sierra Leone & UNCDF, 2025). Those proportions describe a structural fact rather than a passing enthusiasm. In much of the continent the mobile wallet is the

retail payment system, and the bank account is the exception. Account ownership across sub-Saharan Africa rose from 34 per cent of adults in 2014 to 58 per cent in 2024, and 20 per cent of adults in the region now hold a mobile money account and nothing else (World Bank, 2025).

Sierra Leone sits at the wrong end of that distribution. Roughly 39 per cent of adults hold an account of any kind, derived from World Bank estimates that 3.19 million of a 5.20 million adult population remain unbanked (World Bank, 2025). Kenya records 90 per cent, Ghana 81 per cent. The gap is not explained by the absence of infrastructure. Sierra Leone licensed mobile money in 2015, published agency guidelines in 2020, enacted a National Payment Systems Act in 2022, commissioned a national switch in 2023, and launched instant interoperable payments in February 2025. On the standard checklist of payment system reform, the country has done most of what the literature recommends, and it has done it quickly.

This produces the puzzle the article addresses. If the enabling infrastructure is largely in place and adoption remains shallow, then the diagnosis that has driven a decade of donor-supported reform, that inclusion is constrained by the absence of interoperable rails, is either wrong or incomplete for Sierra Leone. The article argues that it is incomplete in a specific and consequential way. Sierra Leone's problem is not that people cannot open accounts. It is that around 57 per cent of registered mobile money accounts are inactive, approximately 2.9 million wallets carry a zero balance, and the dominant transaction pair remains cash-in followed by cash-out (Bank of Sierra Leone & UNCDF, 2025). Value passes through the digital system; it does not rest there. A payment switch improves the efficiency of value that is already circulating digitally. It does little for a household that treats the wallet as a transit corridor between two piles of banknotes.

The second element of the argument concerns integrity. Conventional policy framing treats anti-money laundering and counter-terrorist financing requirements as a constraint on inclusion, a tax that must be minimised through proportionality and simplified due diligence (FATF, 2013; Isern & de Koker, 2009). That framing has produced real gains and it remains correct in jurisdictions where compliance burdens are the operative barrier. It is misleading for Sierra Leone. Here the integrity regime is not suppressing usage through excessive rigour; it is failing to generate the trust on which usage depends. Survey work commissioned in support of the country's consumer protection policy found that 41 per cent of consumers had been targeted by phishing calls or messages, 37 per cent had shared their personal identification number, and 10 per cent reported that agents charged unauthorised fees on every transaction (UNCDF, 2020). Against that, the Financial Intelligence Unit reported investigating eight cases of online financial fraud in 2020 and six in 2021 (Mano Reporters, 2022). The distance between the incidence of harm and the volume of enforcement is the finding, and it has direct implications for how the next phase of reform should be sequenced.

Three research questions organise the analysis. First, what has payment system modernisation actually delivered against measurable inclusion outcomes in Sierra Leone, as distinct from infrastructure milestones? Second, which constraints now bind on the usage margin, and how do identity, tiering, agent economics and connectivity interact to produce the observed pattern of registration without activity? Third, is the country's integrity architecture capable of supervising a digital retail payment system operating at the scale the switch is designed to enable, and if not, what is the practical consequence for the pace at which the system should be expanded?

The contribution is threefold. Empirically, the article assembles the first consolidated account of Sierra Leone's digital finance market drawing together the sixth Annual Provider Survey, Global Findex 2025, GIABA follow-up assessments and IMF programme documentation, and it treats the discrepancies among these sources as analytically informative rather than as noise to be smoothed. Conceptually, it proposes a framework in which financial integrity is positioned as a condition on

the inclusion-development chain rather than as a downstream consequence of it. For policy, it offers a sequenced programme that assigns priority to detection and redress capacity ahead of further rail construction, and it argues that this ordering is more likely to raise usage than the reverse.

2. LITERATURE REVIEW

2.1 Financial inclusion: from access to usage and quality

Early inclusion scholarship measured access. Sarma (2008) constructed a multidimensional index combining penetration, availability and usage, and the World Bank's Findex programme from 2011 onward standardised account ownership as the headline indicator. The theoretical warrant came from the finance-and-growth literature: financial development relaxes credit constraints, improves the allocation of capital, and disproportionately benefits the poor (Levine, 2005; Beck et al., 2007). Allen et al. (2016) established that account ownership responds to cost, proximity and documentation requirements, which gave policymakers three tractable levers.

The field has since moved decisively towards usage and quality. Account ownership turned out to be a weak proxy for welfare because dormant accounts are common and because the binding constraint frequently lies in the product rather than the aperture. Karlan et al. (2014) documented that savings uptake among poor households responds less to access than to trust, transaction costs and self-control problems. Dupas and Robinson (2013) showed that even free accounts generate substantial returns only for subgroups with a clear use case. This distinction is the analytical foundation of the present article: a jurisdiction can register the entire adult population and still be financially excluded in every sense that matters for welfare.

2.2 Financial intermediation and the payments channel

Classical intermediation theory explains financial institutions as solutions to information and monitoring problems (Gurley & Shaw, 1960; Diamond, 1984). Payments occupy an awkward position in that theory because a payment system performs no delegated monitoring. Its function is to reduce the transaction cost of exchange and to provide settlement finality, which the Committee on Payments and Market Infrastructures and the World Bank (2016) formalised in the payment aspects of financial inclusion framework: transaction accounts are the entry point to the financial system, and the payment system is the infrastructure that makes them worth holding.

That framework carries an implication generally under-examined in the African literature. If transaction accounts are valuable primarily as gateways to savings, credit and insurance, then a payment system that only moves money is delivering a fraction of its potential contribution. The GSMA data confirm the point at continental scale: in 2024, 44 per cent of African mobile money providers offered credit, up from 24 per cent in 2023, and savings offerings grew from 23 to 34 per cent (Bank of Sierra Leone & UNCDF, 2025). Sierra Leone lags this transition badly, with only 27 per cent of banks offering digital loans and no institution offering agency advance facilities.

2.3 Adoption theory and its limits in low-income settings

Diffusion of innovations (Rogers, 2003) and the technology acceptance model (Davis, 1989; Venkatesh et al., 2003) remain the standard lenses for mobile money adoption, and a substantial applied literature has confirmed that perceived usefulness, perceived ease of use, social influence and facilitating conditions predict intention to adopt. Senyo and Osabutey (2020) applied this apparatus to Ghanaian fintech and found trust and perceived risk to be the strongest antecedents.

The limitation is that these models explain individual adoption decisions conditional on a functioning supply side, and in Sierra Leone the supply side is itself the variable. Lashitew et al.

(2019) demonstrated that cross-country variation in mobile money diffusion is driven far more by regulatory accommodation and provider strategy than by consumer characteristics. Mothobi and Grzybowski (2017) showed that infrastructure deficiencies, particularly electricity access, condition adoption independently of any perceptual variable. In a country where 39.2 per cent of the population has electricity access (World Bank, 2025), a model that treats facilitating conditions as a perception rather than a physical fact will systematically misattribute causation.

2.4 Institutional theory and the regulation of digital finance

Institutional theory supplies the missing element. North (1990) distinguished institutions as the rules of the game from organisations as the players, and the distinction matters here because Sierra Leone has been notably more successful at producing rules than at building the organisations that enforce them. DiMaggio and Powell's (1983) account of coercive, mimetic and normative isomorphism describes with some precision how a small West African central bank comes to adopt an instant payment system architecture closely modelled on Ghanaian and Nigerian precedents, under donor encouragement, within a compressed timetable.

Isomorphism is not a criticism in itself. Borrowing proven design reduces risk. The analytical question is whether the borrowed institution is accompanied by the supervisory organisation that made it work in the source jurisdiction. Scott (2014) frames this as the gap between regulative structures and the normative and cultural-cognitive pillars that sustain compliance. Sierra Leone's mutual evaluation findings, discussed in section 7, indicate that the gap is wide.

2.5 Financial integrity and the inclusion-integrity relationship

The dominant framing of the relationship between integrity and inclusion is one of tension to be managed. de Koker (2011) argued that rigid customer due diligence requirements exclude undocumented populations and push activity into channels that are harder to monitor, so that excessive stringency is self-defeating. The Financial Action Task Force (2013, 2017) accepted this logic, endorsing a risk-based approach and simplified due diligence for low-risk products. Chatain et al. (2011) provided the specific application to mobile money, identifying anonymity, elusiveness, rapidity and poor oversight as the four risk vectors.

There is, though, a second relationship in the literature that receives far less attention and that the Sierra Leonean evidence makes central. Integrity failure suppresses inclusion directly, through the destruction of trust. If a substantial share of users has experienced or witnessed fraud and has no realistic prospect of redress, rational behaviour is to minimise stored value and to convert to cash at the earliest opportunity. That is precisely the behaviour the Sierra Leonean data record. The inclusion-integrity relationship in this setting is complementary rather than competitive, and the policy implication reverses: strengthening detection and redress is an inclusion intervention, not a brake on one.

2.6 Interoperability: contested evidence

Interoperability is the most confidently asserted and least well-evidenced element of contemporary payments policy. The theoretical case rests on network externalities: a closed-loop system's value to a user rises with the number of counterparties reachable, so mandated interconnection should raise adoption and reduce prices. Ghana is the exemplar, where the Bank of Ghana's 2015 e-money guidelines and the 2018 mobile money interoperability framework operated by GhIPSS preceded a rise in instant payment volumes from 0.1 million in 2018 to 37.7 million in 2021 (GSMA, 2024).

The counter-evidence is substantial. The GSMA's five-market assessment covering Ghana, Kenya, Malawi, Rwanda and Tanzania concluded that in four of the five, mobile money adoption was already high before interoperability was implemented, and that financial inclusion therefore preceded interoperability rather than resulting from it (GSMA, 2024). Providers opt into interconnection once they have achieved scale and their incentives shift from customer acquisition to transaction revenue. AfricaNenda (2026) reaches an apparently opposing conclusion, reporting that African economies launching cross-domain instant payment systems saw account access grow by an average of 37 per cent over the following two years against 14 per cent in economies without one. The two findings are reconcilable, and the reconciliation matters for Sierra Leone: selection into instant payment system adoption is not random, and the economies that build switches are those where market development, regulatory capability and political commitment already exist. The switch may be a marker of those conditions rather than a substitute for them.

2.7 Research gaps

Three gaps follow. First, the empirical literature on Sierra Leone's digital financial sector is thin and predominantly descriptive, consisting largely of provider surveys and consultancy assessments rather than analytical treatments; the peer-reviewed work that exists tends to address fraud perception at the level of the individual user rather than system-level governance. Second, the interoperability literature has concentrated on markets that reached scale before interconnection, leaving the case of a switch installed at low penetration substantially untheorised. Third, and most consequentially, the integrity literature and the inclusion literature remain largely separate bodies of work, with the former treating inclusion as a constraint on effective supervision and the latter treating supervision as a cost. This article addresses all three.

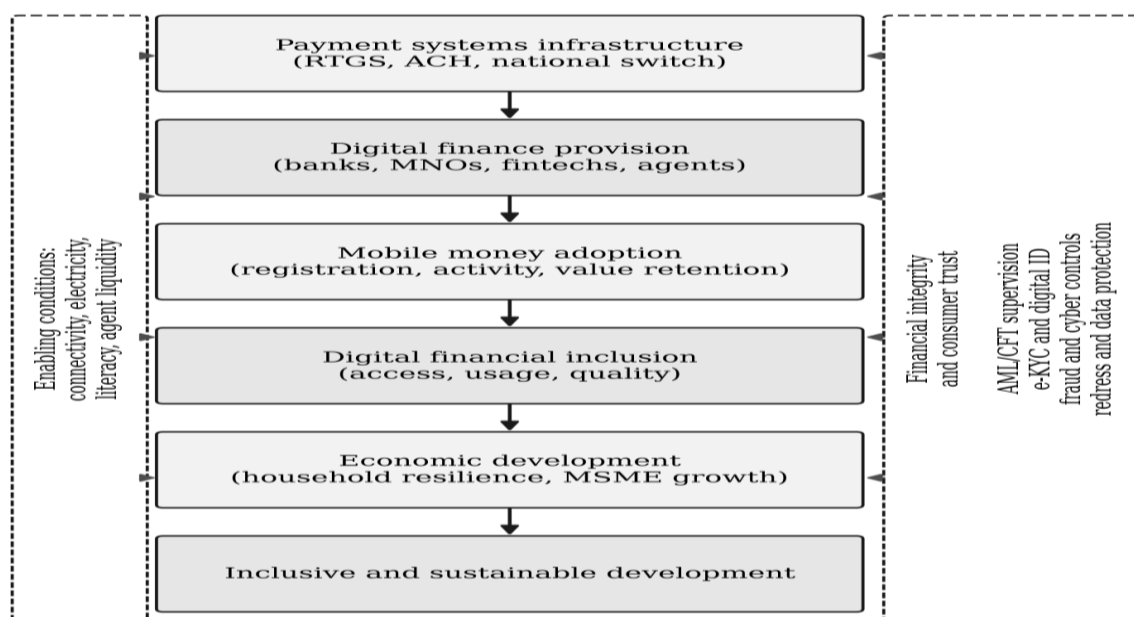


Figure 1. Conceptual framework: payment systems, inclusion and the integrity condition

Note. The chain from infrastructure to inclusive development is conditioned throughout by enabling conditions on the input side and by financial integrity and consumer trust on the governance side, rather than integrity entering as a downstream stage. Author's construction.

3. THE PAYMENT SYSTEM IN SIERRA LEONE: STRUCTURE AND TRAJECTORY

3.1 From cheque clearing to instant payments

Sierra Leone's retail payment system was, until the middle of the last decade, a cheque-and-cash system with a thin card overlay confined to Freetown. Wholesale modernisation preceded retail modernisation, as it did across the region: the Bank of Sierra Leone established real-time gross settlement and automated clearing house capability to serve interbank settlement and government payments, but neither infrastructure touched the household economy.

The retail transformation began with the Guidelines for Mobile Money Services in 2015, which established the trust account requirement, defined agent responsibilities, imposed know-your-customer obligations and gave customers recourse to the central bank where provider complaint handling failed (Bank of Sierra Leone, 2015). The sequence that followed is set out in Table 1.

Table 1 Evolution of the payment system in Sierra Leone, 2015 to 2025

Year	Development	Institutional significance
2015	Guidelines for Mobile Money Services issued	Established e-money as a regulated category; trust account and KYC obligations imposed
2017	National Strategy for Financial Inclusion 2017–2020 (NSFI-1); BSL regulatory sandbox established in June	First sandbox in the sub-region; inclusion elevated to formal policy objective
2018	Second Annual Provider Survey conducted with UNCDF	Supervisory data collection institutionalised
2020	Agency banking guidelines published in January	Legal basis for third-party agent networks beyond MNO channels
2022	National Payment Systems Act (Act No. 8 of 2022), assented 23 June; NSFI-2 launched 14 April	Licensing, capital adequacy, e-money redemption at par, National Payment System Committee
2023	National Payment Switch announced 19 April; launched May; National Switch Directives issued	Phase 1 card and point-of-sale interoperability across six commercial banks
2024	BSL directive of 17 December mandating full integration by 1 April 2025	Compliance shifted from voluntary to mandatory with financial sanctions
2025	Salone Payment Switch Instant Payment Service launched 13 February	Real-time bank-to-bank and wallet-to-bank transfers; seven banks and two MNOs connected at launch

Note. Compiled from Bank of Sierra Leone (2015, 2022, 2024), World Bank (2023), UNCDF (2022) and contemporaneous reporting of the February 2025 launch.

Two features of this chronology deserve comment. The first is compression. Ghana's equivalent journey ran from the creation of GhIPSS in 2007 to mobile money interoperability in 2018, eleven

years during which the market reached scale and the Bank of Ghana accumulated supervisory experience. Sierra Leone traversed comparable ground in under a decade, and from a much lower base of both market development and institutional capacity.

The second is the character of the 2024 directive. Requiring all banks, mobile money operators and payment service providers to route domestic transactions through the Salone Payment Switch by 1 April 2025, on pain of financial sanction, is a strong instrument. It solves the coordination problem that has stalled interoperability elsewhere, where incumbent providers with dominant market positions have little incentive to interconnect. It also creates a specific risk: compliance can be satisfied by technical connection without any corresponding change in transaction routing or consumer behaviour. Connection counts are a poor proxy for usage, and the announcement that seven banks and two mobile network operators were connected at launch tells us about integration status, not about whether anyone is transacting.

3.2 Market structure

Three mobile network operators provide mobile money: Orange, trading as Orange Money; Africell, trading as AfriMoney; and QCell, trading as QMoney (Bank of Sierra Leone & UNCDF, 2025). The bank-led side of the market comprises commercial banks offering mobile applications, web channels, cards and, in a minority of cases, agency banking. Fintech participation is emerging but modest, channelled largely through the regulatory sandbox that the Bank of Sierra Leone has operated with UNCDF support since June 2017.

The asymmetry between the two channels is the defining structural fact. Telecom-led services operate through approximately 39,400 agents nationally. Bank-led digital financial services operate through 716 agents. Banks report a monthly average of about 7,800 agent transactions worth some SLE 25 million, against roughly 903,000 monthly digital self-service transactions worth about SLE 2.5 billion and 246,000 card transactions worth about SLE 3.3 billion (Bank of Sierra Leone & UNCDF, 2025). Bank digital channels serve an existing, urban, higher-value customer base efficiently. They do not reach the excluded population, and the data give no indication that they are being configured to do so: agency banking is offered by 55% of banks, digital lending by 27%, and agency advance facilities by none.

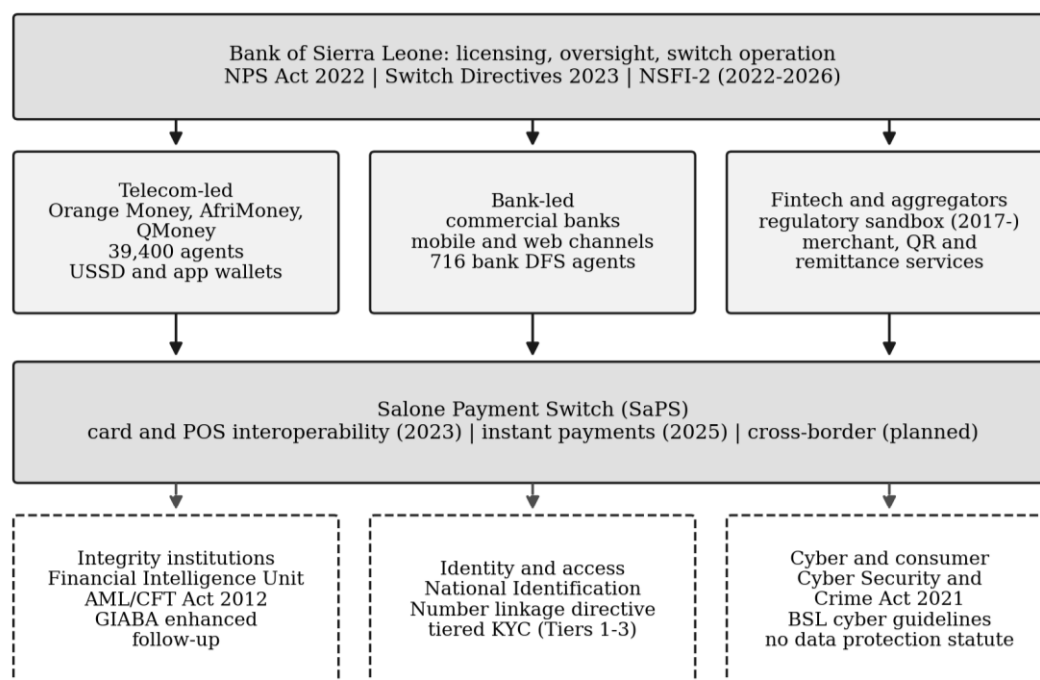


Figure 2. The digital financial ecosystem and integrity governance architecture in Sierra Leone

Note. Solid boxes denote market and infrastructure institutions; broken boxes denote integrity, identity and consumer governance functions. Constructed from Bank of Sierra Leone and UNCDF (2025), Parliament of Sierra Leone (2021, 2022) and Bank of Sierra Leone (2015, 2024).

3.3 Channels, instruments and gaps

Mobile applications are universal among banks, with web, automated teller machine and card channels each at 91 per cent, and chat banking at 18 per cent. Bill payments and airtime top-up are the most widely available services at 91 per cent, with merchant payments, inward and outward remittances at 75 per cent (Bank of Sierra Leone & UNCDF, 2025). Merchant acceptance infrastructure remains the weakest link in the chain. Quick response code acceptance is not yet at a scale that permits systematic measurement, and the transaction data confirm the consequence: bill payments in the Western Area, the country's commercial centre, amount to approximately SLE 4.1 million against deposits of approximately SLE 1.02 billion in the same region and period.

That ratio is the single most diagnostic figure in the dataset. Where merchants do not accept digital payment, a wallet holder who receives funds digitally must convert to cash to spend. Cash-out is then not a failure of financial literacy but a rational response to an acceptance network that does not exist. Every subsequent policy question about dormancy, zero balances and low value retention resolves back to this point.

4. THE GROWTH OF MOBILE MONEY

4.1 The trajectory

The measured expansion of digital financial services in Sierra Leone has been rapid in registration terms and considerably less so in activity terms. Table 2 assembles the series from the Annual Provider Survey.

Table 2. Digital financial services and mobile money indicators, Sierra Leone, 2016 to 2024

Indicator	2016	2017	2019	2020	2024
Adults actively using DFS (%)	6	n.a.	n.a.	n.a.	n.a.
Active customer accounts (90-day)	n.a.	385,000	1.4 million	2.2 million	n.a.
Registered DFS accounts	n.a.	n.a.	6.2 million	n.a.	n.a.
Monthly transactions (December)	n.a.	6.1 million	n.a.	n.a.	n.a.
Transaction value (December)	n.a.	SLL 310 billion (US\$39m)	n.a.	n.a.	n.a.
Active mobile money agents	n.a.	n.a.	n.a.	11,307	c. 39,400
Reporting providers	10	10	10	10	12 (2021 survey)
Mobile money operators	2	2	2	2	3

Note. n.a. denotes not available in the published source. Compiled from UNCDF (2018, 2020, 2021, 2022) and Bank of Sierra Leone and UNCDF (2025). The 2024 agent figure is the sum of regional totals reported in the sixth Annual Provider Survey and includes dormant agents. Transaction values are reported in old Leones (SLL) for 2017 and new Leones (SLE) thereafter following the 2022 redenomination at 1,000:1.

The series is incomplete because the underlying surveys changed instrumentation between rounds, and the sixth survey reports distributions and regional breakdowns rather than the headline national aggregates published in earlier editions. This is itself a supervisory finding. A central bank that has mandated system-wide interoperability requires a consistent national time series on registered accounts, active accounts, transaction volumes and values. Its absence limits both academic analysis and the Bank's own capacity to evaluate the switch against its objectives.

What the series does establish is a sharp discontinuity in 2020. Active accounts rose from 1.4 million in December 2019 to 2.2 million in December 2020, an increase of 57 per cent, following growth of 123 per cent in the preceding year (UNCDF, 2021). The COVID-19 pandemic and the associated fee waivers and distancing measures were the proximate cause. The agent network expanded from 11,307 in 2020 to approximately 39,400 by 2024, a more than threefold increase.

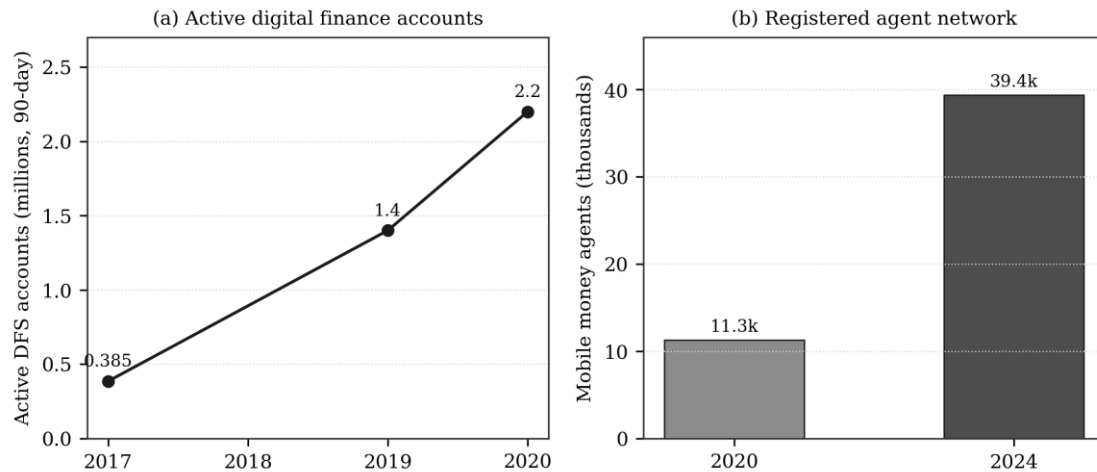


Figure 3. Active digital finance accounts and the mobile money agent network, Sierra Leone, 2017 to 2024

Note. Panel (a) plots active 90-day accounts for the years in which the figure was published; 2018 is omitted because the published source reports growth rates rather than a level. Panel (b) compares active agents in 2020 with the sum of regional agent totals in 2024, which includes dormant agents and is therefore not strictly comparable. From UNCDF (2018, 2021) and Bank of Sierra Leone and UNCDF (2025).

4.2 The activity problem

Registration growth has not converted into use. Approximately 56.5 per cent of female and 56.6 per cent of male mobile money accounts were inactive in 2024, and around 2.9 million wallets carried a zero balance, of which 65.5 per cent belonged to men (Bank of Sierra Leone & UNCDF, 2025). Applying the reported zero-balance proportions to the total implies a registered wallet base of approximately 5.3 million, of which fewer than half are meaningfully in use.

The transaction mix explains why. Across all regions, deposits totalled approximately 4.9 million transactions and cash-outs approximately 3.2 million, together accounting for the overwhelming majority of transaction volume. Bill payments and rebalancing transactions were the smallest categories. Airtime top-up leads on volume and contributes little to value; peer-to-peer transfers lead on value. This is a cash-in, cash-out system with a person-to-person transfer layer on top of it, and it has not evolved into a store of value or a platform for financial services.

4.3 Distributional patterns

The gender gap is severe and is widening in the dimensions that matter. Men constitute 66.8 per cent of the mobile money user base and women 33.2 per cent. Women hold 251,000 Tier 3 accounts against 545,000 held by men, and 146,000 Tier 2 accounts against 264,000. Women's share of transaction value falls below their share of transaction volume in nearly every category, and their participation in bulk disbursements, loans and outward remittances is close to absent. Female agents constitute approximately 4 per cent of the agent base (Bank of Sierra Leone & UNCDF, 2025). Bank-led channels show a materially narrower gap at 57 per cent male and 43 per cent female users, which is consistent with bank digital services serving a formally employed and urban population where gender differentials in access are smaller.

The age distribution is unexpected and warrants scrutiny. The survey reports that the 36 to 45 age group constitutes 52.6 per cent of the user base, with the 26 to 35 group at 27.8 per cent. In a

country with a median age under 20, a user base concentrated in the fourth decade of life is difficult to reconcile with the youth-led adoption pattern documented elsewhere in West Africa. Two explanations are plausible: registration under the identity documents of older household members, or classification artefacts in provider records. Either would matter for policy, and the question deserves direct investigation.

Regional concentration is extreme. Table 3 sets out the distribution.

Table 3. Regional distribution of mobile money agents, agent density and transaction volumes, 2024

Region	Total agents	Agents per 100,000 people	Deposit transactions	Cash-out transactions	Bank DFS agents
Western	15,400	1,213	2,459,900	1,708,400	340
Southern	8,400	459	756,700	480,700	220
Eastern	6,500	337	1,084,400	460,300	61
Northern	6,000	456	381,200	336,200	71
North West	3,100	259	218,100	209,000	24
West					
National	c. 39,400	n.a.	4,900,300	3,200,600	716

Note. Figures are approximations as reported in the sixth Annual Provider Survey. From Bank of Sierra Leone and UNCDF (2025). Regional totals for agents include dormant agents, which range from approximately 34 per cent of the Western network to approximately 57 per cent of the Southern network.

The Western Area holds 1,213 agents per 100,000 people; North West holds 259. A resident of the North West faces roughly one fifth the service density of a resident of Freetown. The Eastern region presents an instructive anomaly: it has fewer agents than the Southern region but processes considerably more deposit transactions, which suggests either higher per-agent productivity or a more genuine dependence on the mobile channel in the absence of banking alternatives.

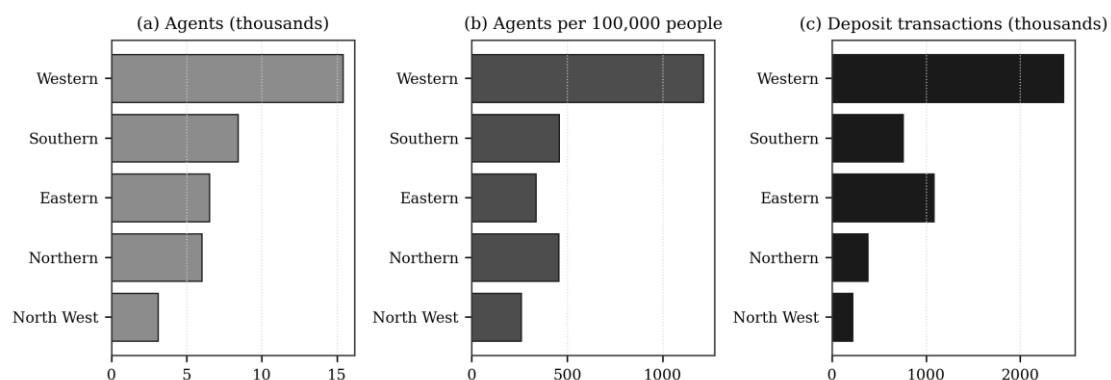


Figure 4. Regional agent numbers, agent density and deposit transaction volumes, 2024

Note. From Bank of Sierra Leone and UNCDF (2025). Agent density is agents per 100,000 population.

4.4 Drivers and constraints

The drivers of what growth has occurred are straightforward: mobile connections stood at 8.28 million in early 2024, equivalent to 93.2 per cent of the population; agent networks tripled between 2020 and 2024; the pandemic supplied a demand shock; and the state has pursued digital payment adoption as declared policy since 2017 (DataReportal, 2024; Bank of Sierra Leone, 2022).

The constraints are more revealing. Internet penetration stood at 30.4 per cent at the start of 2024, so roughly seven in ten Sierra Leoneans transact, if at all, over unstructured supplementary service data on a feature phone (DataReportal, 2024). Electricity access covers 39.2 per cent of the population (World Bank, 2025), which constrains both device charging and agent operations. The GSMA Mobile Connectivity Index score of 45 places the country well below the threshold at which app-based financial services become viable at scale. Agent dormancy of between one third and well over half of the network by region indicates that agent economics are marginal outside the commercial centre. These are not perceptual barriers amenable to awareness campaigns. They are physical and commercial constraints, and they will not be resolved by a payment switch.

5. CONTRIBUTION TO FINANCIAL INCLUSION

5.1 What the aggregate indicators show

Table 4 assembles the inclusion picture.

Table 4. Financial inclusion and digital connectivity indicators, Sierra Leone and comparators

Indicator	Sierra Leone	Sub-Saharan Africa	Source year
Account ownership (% adults 15+)	c. 39	58	2024
Adults without an account (millions)	3.19 of 5.20	n.a.	2024
Made or received a digital payment (% adults)	16 (2017); 27 (2021)	n.a.	2017, 2021
Mobile money account ownership (% adults)	14 male; 9 female	40 (2024)	2017; 2024
Internet penetration (% population)	30.4	n.a.	Jan 2024
Mobile connections (% population)	93.2	n.a.	Jan 2024
Electricity access (% population)	39.2	n.a.	2024
GSMA Mobile Connectivity Index (1–100)	45	n.a.	2024
Personal remittances received (% GDP)	7.85 (2022); 6.1 (2023); 4.6 (2024)	n.a.	2022–2024
Firms using mobile money (% of surveyed firms)	32 (48 of 150)	n.a.	2017

Note. Compiled from World Bank (2025), *Making Finance Work for Africa* (n.d.), *DataReportal* (2024), and *World Bank Enterprise Surveys* (2017). Comparator figures for sub-Saharan Africa are from *Global Findex* 2025.

Sierra Leone's account ownership of roughly 39% against a regional average of 58%, and against Kenya's 90% and Ghana's 81%, places the country in the lower quintile of African performance. Figure 3 sets this in comparative perspective. Digital payment usage rose from 16% of adults in 2017 to 27% in 2021, a meaningful gain, though from a base so low that the absolute increase remains modest.

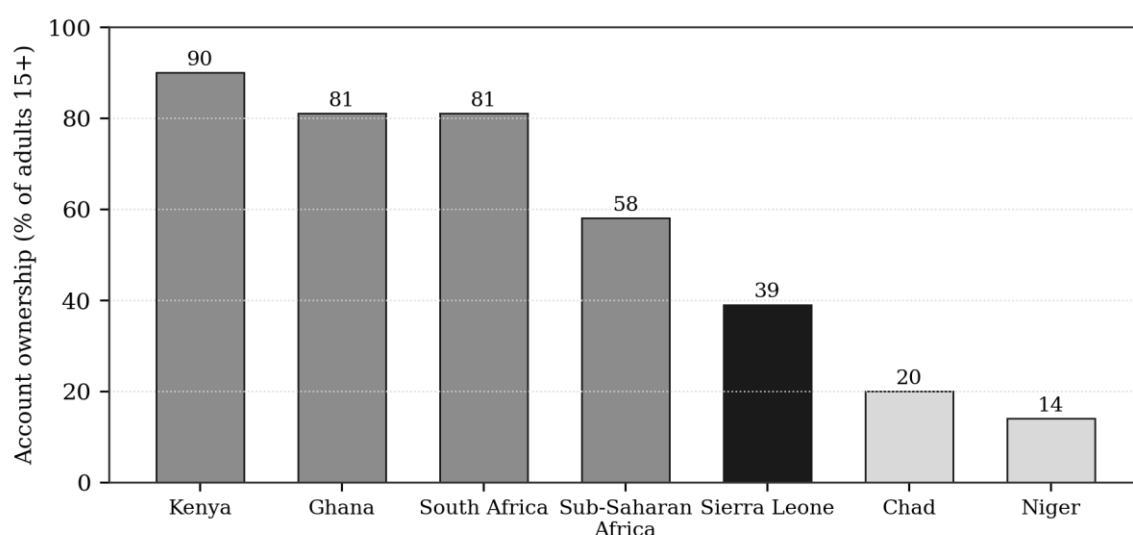


Figure 5. Account ownership in comparative perspective, 2024

Note. Percentage of adults aged 15 and above holding an account at a financial institution or with a mobile money provider. The Sierra Leone figure is derived from World Bank estimates of 3.19 million unbanked adults in an adult population of 5.20 million. From World Bank (2025).

5.2 Households, women and youth

The evidence that mobile money improves household risk-sharing is among the strongest in development economics. Jack and Suri (2014) demonstrated that Kenyan households with M-PESA access smoothed consumption in the face of negative income shocks while non-users did not, and Suri and Jack (2016) subsequently estimated that access lifted approximately 194,000 Kenyan households out of poverty, with disproportionate effects for female-headed households. Riley (2018) confirmed the risk-sharing channel in Tanzania.

Whether these results transfer to Sierra Leone is doubtful on the current configuration. The risk-sharing mechanism operates through the ability to receive remittances from a dispersed network at low cost and at short notice. That requires a counterparty network large enough to include the people who would send. At roughly 39 per cent account ownership and with 57 per cent of accounts dormant, the effective network is a fraction of the adult population, and the sending side is concentrated in the Western Area. The mechanism is present in principle and attenuated in practice. Remittance inflows, which fell from 7.85 per cent of GDP in 2022 to 4.6 per cent in 2024, are substantial enough to matter but the share flowing through formal digital channels remains undocumented.

For women, the Sierra Leonean data suggest that mobile money is currently reproducing rather than reducing exclusion. A one-third share of the user base, a two-to-one disadvantage in higher-tier account holding, near-absence from credit and bulk payment flows, and a 4 per cent share of agency roles together describe a channel that women use for receiving small amounts and topping up airtime. The comparison with bank-led services, where the gender split is 57 to 43, indicates that the gap is not a general characteristic of digital finance in Sierra Leone but a specific characteristic of the mobile money channel, which points towards agent-level and identity-related causes rather than technology aversion.

5.3 MSMEs, agriculture and the credit gap

Enterprise use is where the inclusion argument is weakest. World Bank Enterprise Survey data recorded 48 of 150 surveyed firms, or 32 per cent, using mobile money, and predominantly to receive payments from customers rather than to manage working capital (AERC, 2023). Digital credit, the mechanism through which transaction histories become collateral, is offered by 27 per cent of banks and remains marginal on the mobile money side. The wider African market has moved decisively in this direction, with the number of users accessing mobile-money-enabled loans rising by 50 per cent in under a year and 44 per cent of providers offering credit by 2024 (Bank of Sierra Leone & UNCDF, 2025). Sierra Leone has not participated in that shift.

The reason is not purely technological. Credit to the private sector grew at 25.0, 21.0 and 20.4 per cent in recent years in nominal terms, which in an environment of high inflation represents limited real expansion, and the banking system remains highly concentrated, with the fifty largest borrowers accounting for around 60 per cent of total exposure in 2022 (IMF, 2024; Making Finance Work for Africa, n.d.). Banks holding capital adequacy of 35 per cent against a 15 per cent statutory minimum and liquid assets equal to 78.3 per cent of total assets are not capital-constrained. They are choosing not to lend to the segment that digital credit would serve, and no payment infrastructure changes that calculation.

5.4 Government payments

Government-to-person and person-to-government payments are the most reliable lever available for converting registration into use, because they generate recurrent, predictable digital inflows and give the state a direct interest in acceptance. Sierra Leone has committed to this route through membership of the Better Than Cash Alliance and through the expectation, stated at the switch's inception, that the National Revenue Authority would benefit from automated revenue collection (World Bank, 2023). Published evidence of the volumes actually migrated is not available, which is a gap that both the Ministry of Finance and the Bank of Sierra Leone are positioned to close and should.

5.5 Savings, insurance, human capital payments and resilience

The welfare case for digital finance rests substantially on what sits above the payment layer. Formal savings raise investment in microenterprises and in human capital; insurance transfers covariate risk; and digital payment of school fees and health charges reduces the leakage and travel cost that deter households from using services at all. Sierra Leone has almost none of this.

Savings products offered through the mobile money channel are minimal, and the zero-balance data indicate that even informal wallet-based saving is not occurring at scale. This is a design outcome as much as a behavioural one. A Tier 1 account with a low balance cap is not a savings instrument, and a system in which the dominant transaction sequence is deposit followed by immediate withdrawal offers the user no reason to leave value in place. Insurance offerings reached 28 per

cent of African mobile money providers by 2024 (Bank of Sierra Leone & UNCDF, 2025); the Sierra Leonean market shows no comparable movement, and the country's exposure to climate shocks and to health emergencies makes the absence consequential rather than merely disappointing.

Education and health payments represent the most tractable near-term opportunity, and one that policy has not pursued. School fee payment through wallets creates a recurrent, predictable digital outflow that gives households a reason to hold value; it also generates a payment record that can support credit assessment. The same applies to health facility charges. Both require institutional acceptance rather than consumer behaviour change, which places them within reach of government direction in a way that merchant acceptance in the informal retail sector is not.

Economic resilience is where the cost of these gaps is ultimately paid. The Findex resilience indicators measure how long a household could cover expenses after losing its main income source, and the mechanism through which digital finance improves that duration runs through stored savings and through the ability to call on a dispersed network at short notice. Sierra Leone's configuration supports the second weakly and the first not at all. A country facing recurrent climate and price shocks has built a payment system optimised for moving small sums quickly and has not built the savings and insurance layer that would convert that capability into protection.

6. FINANCIAL INTEGRITY RISKS

6.1 The risk profile of a low-value, high-volume, cash-intensive system

The standard mobile money risk vectors, anonymity, elusiveness, rapidity and weak oversight, apply in Sierra Leone with a particular emphasis (Chatain et al., 2011). Individual transaction values are low, which reduces the money laundering attractiveness of any single transfer and increases the attractiveness of structuring across many. The predominance of cash-in and cash-out means that the digital record captures a fragment of the transaction chain: cash enters at an agent, moves once, and leaves at another agent. Neither end is documented beyond the agent's own record-keeping. A system in which approximately 4.9 million deposits and 3.2 million cash-outs occur against comparatively negligible merchant and bill payment activity is, from a supervisory standpoint, a cash system with a digital transmission segment in the middle.

The predicate crime environment compounds this. Sierra Leone's mutual evaluation identified proceeds-generating crimes of a transnational character, including offences connected to extractive sectors, alongside a domestic corruption problem, and found international cooperation hampered by the absence of specific guidelines and of any structured case management system for handling requests (GIABA, 2021).

6.2 The detection gap

The central integrity finding of this article is quantitative. Consumer research conducted in support of Sierra Leone's consumer protection policy found that 41 per cent of surveyed consumers had been targeted by phishing calls or messages, 37 per cent had shared their personal identification number, and 10 per cent of mobile money users reported that agents charged them unauthorised fees on every transaction (UNCDF, 2020). The Financial Intelligence Unit reported that it investigated eight cases of online financial fraud in 2020 and six in 2021 (Mano Reporters, 2022).

Fourteen investigations across two years, in a market with several million registered wallets and where two in five consumers report being targeted, is not a measure of the incidence of fraud. It is a measure of the capacity to detect it. The mutual evaluation reinforces the point from the

supervisory side: suspicious transaction reporting is concentrated almost entirely in the banking sector, with negligible reporting from bureaux de change and designated non-financial businesses and professions, and supervisors are significantly under-resourced relative to the breadth of their responsibilities (GIABA, 2021).

This has a direct behavioural consequence that the inclusion literature has largely missed. Where fraud is common and redress is unavailable, minimising stored value is rational. The 2.9 million zero-balance wallets and the cash-out-dominated transaction mix are, in part, a rational risk management response by users to a system in which they bear the entire loss from fraud. Dormancy is not simply a marketing failure. It is a trust equilibrium.

6.3 The identity and tiering constraint

Identity sits at the centre of both the integrity problem and the inclusion problem. Approximately 6.4 million people hold a National Identification Number, but fewer than 500,000 physical identity cards had been issued as at 2024 owing to cost constraints in the first year of issuance (Borgen Project, 2026). The Bank of Sierra Leone has issued a directive requiring the linkage of National Identification Numbers to bank accounts and mobile wallets, which is the correct instrument.

The consequence of the present position is visible in the tiering data. Roughly 70 per cent of both female and male users hold only Tier 1 accounts, with 8.1 per cent of women and 7.4 per cent of men at Tier 2, and 14 per cent and 15.3 per cent respectively at Tier 3 (Bank of Sierra Leone & UNCDF, 2025). Tier 1 exists to admit users who cannot satisfy full due diligence, and it does so by capping balances and transaction values. Seven in ten users are therefore held at limits designed for provisional, low-risk access, and they remain there indefinitely. The tier that was intended as an on-ramp has become a terminus.

This produces a compounding failure. Users capped at Tier 1 cannot hold meaningful balances, which suppresses value retention and reinforces the cash-out pattern. They cannot access credit, savings or insurance products that require higher limits. And from the supervisory perspective, a population transacting under simplified due diligence is precisely the population about which the least is known, so the integrity benefit of the arrangement is also limited. Table 5 sets out the risk architecture in full.

Table 5. Financial integrity risks, transmission channels and mitigation measures

	Transmission channel			
Risk	in Sierra Leone		Current mitigation	Assessed adequacy
Money laundering through structuring	Multiple low-value cash-in and cash-out transactions below reporting thresholds across agents		Tiered KYC; AML/CFT Act 2012; provider transaction monitoring	Weak: no evidence of cross-provider aggregation; switch not yet used for monitoring
Terrorist financing	Regional exposure through porous land borders with Guinea and		FIU analysis; GIABA regional cooperation	Weak: no structured case management for international requests (GIABA, 2021)

Risk	Transmission channel in Sierra Leone	Current mitigation	Assessed adequacy
Agent fraud and unauthorised fees	Liberia; informal value transfer Agent charges unauthorised fees or executes unauthorised transactions on customer wallets	Agency guidelines 2020; provider codes	Weak: 10 per cent of users report systematic overcharging (UNCDF, 2020)
Social engineering, phishing and smishing	SMS and voice impersonation of providers and prize scams; PIN disclosure	Provider awareness campaigns	Weak: 41 per cent targeted; 37 per cent have shared PIN (UNCDF, 2020)
SIM swap and account takeover	Compromise of subscriber identity module to seize wallet control	MNO internal controls; NIN linkage directive	Untested: no published incident data
Identity fraud and synthetic identity	Registration on incomplete or borrowed identity documentation; low card issuance	NIN linkage directive; tiered KYC	Partial: 6.4m NINs but under 500,000 cards issued
Cybercrime against institutions	Intrusion into provider and bank systems; data exfiltration	Cyber Security and Crime Act 2021; BSL cybersecurity and IT risk guidelines for banks	Partial: no published sectoral incident reporting regime
Data misuse and privacy breach	Provider and agent handling of customer data without statutory constraint	NPS Act 2022 consumer provisions	Weak: no dedicated data protection statute in force
Consumer detriment without redress	Loss borne by consumer; complaint escalation to BSL rarely exercised	Mobile Money Guidelines 2015 complaint route	Weak: FIU investigated 14 online fraud cases across 2020–2021

Risk	Transmission channel		Current mitigation	Assessed adequacy
	in Sierra Leone			
Regulatory arbitrage	Differential treatment of bank-led and telecom-led providers; fintechs outside sandbox	NPS Act 2022	licensing regime	Partial: licensing framework in place, supervisory capacity constrained
Cryptocurrency and stablecoin spillover	Unregulated peer-to-peer trading; remittance substitution	None specific		Absent: no published regulatory position

Note. Assessment of adequacy is the author's, based on the evidence cited in each row.

6.4 Cross-border and emerging exposures

Phase 3 of the Salone Payment Switch is intended to connect to international payment gateways. Cross-border interoperability multiplies both the inclusion benefit and the integrity exposure, and it does so asymmetrically: the benefit accrues gradually as corridors are established, whereas the exposure is immediate on the day the corridor opens. Sierra Leone's correspondent banking relationships are already sensitive to its enhanced follow-up status under GIABA, and the risk of de-risking by international correspondents is real. Sequencing therefore matters. Opening international connectivity before domestic transaction monitoring is functioning would expose the country's institutions to precisely the scrutiny that the 2024 technical compliance upgrades were intended to relieve.

Cryptocurrency and stablecoin activity represents an unmeasured exposure. The Bank of Sierra Leone has not published a regulatory position, and the absence of one is not neutrality but a gap. Where remittance costs are high and formal channels are slow, peer-to-peer stablecoin transfer is an obvious substitute, and it is invisible to the entire supervisory apparatus described in this article.

6.5 Identity theft, synthetic identity and agent-level exposure

Identity-related fraud in Sierra Leone takes a form distinct from that in higher-documentation jurisdictions. Synthetic identity fraud, the construction of a fictitious person from a combination of real and fabricated attributes, requires a documentation system rich enough to be gamed. Sierra Leone's exposure runs the other way: with 6.4 million National Identification Numbers issued against fewer than 500,000 physical cards, the verification burden falls on agents who frequently cannot verify anything. Registration under a relative's documentation, or under documentation that the presenting person does not in fact hold, is the more likely failure mode, and it is consistent with the anomalous concentration of the reported user base in the 36 to 45 age bracket noted in section 4.3.

The agent is the point at which every integrity control in the system either holds or fails. Agents perform customer registration, execute transactions, and in practice mediate the customer's understanding of the product. They are also the population that survey evidence identifies as a source of unauthorised charging, and the point at which personal identification numbers are disclosed. An agent network of approximately 39,400, of which between a third and well over half is dormant by region, cannot be supervised by direct examination. It can only be supervised through the transaction record, which returns the analysis to the monitoring capability discussed in section 7.3.

Subscriber identity module swap fraud deserves particular attention as the identity linkage programme proceeds. Binding wallets to a national identifier raises the value of compromising the associated telephone number, and no published incident data exist against which to assess whether operator controls are adequate. Establishing a baseline before the linkage is complete would be prudent; establishing one afterwards will be considerably harder.

7. REGULATORY AND GOVERNANCE FRAMEWORK

7.1 The legal architecture

Sierra Leone's payments and integrity law is more complete on paper than the country's institutional performance would suggest. Table 6 sets out the framework.

Table 6 Regulatory framework governing payment systems and digital financial services

Instrument	Year	Scope	Principal gap
Guidelines for Mobile Money Services	2015	E-money issuance, trust accounts, agent conduct, KYC, customer complaints	Predates the NPS Act; not fully harmonised with tiered KYC practice
Anti-Money Laundering and Combating of Financing of Terrorism Act	2012	Predicate offences, reporting obligations, FIU mandate	Effectiveness rather than technical compliance is the constraint
Agency banking guidelines	2020	Third-party agent networks for banks and MFIs	Slow bank uptake; 716 bank agents nationally
Cyber Security and Crime Act	2021	Cyber offences, electronic evidence, critical information infrastructure	No mandatory sectoral incident reporting; enforcement capacity limited
National Payment Systems Act (No. 8)	2022	Licensing, capital adequacy, e-money redemption at par, float management, NPS Committee, BSL examination powers	Secondary regulations and supervisory staffing lag the statute
National Strategy for Financial Inclusion 2022–2026 (NSFI-2)	2022	DFS expansion, client-centric products, financial education and consumer protection	Measurement framework inherited the gender-disaggregation weakness of NSFI-1

Instrument	Year	Scope	Principal gap
National Directives	Switch 2023	Participation obligations for payment system participants	Compliance defined by connection rather than by routed volume
BSL directive on full switch integration	2024	Mandatory routing of domestic transactions from 1 April 2025	No published usage reporting against the mandate
Directive on linking NIN to accounts and wallets	2024–2025	Identity linkage for bank accounts and mobile wallets	Physical card issuance under 500,000 against 6.4m NINs
Data protection legislation	Pending	Personal data processing	No statute in force; drafting under the Ministry of Information and Civic Education

Note. Compiled from Bank of Sierra Leone (2015, 2022, 2024), Parliament of Sierra Leone (2021, 2022), UNCDF (2022) and Council of Europe (n.d.).

The National Payment Systems Act 2022 is a competent piece of drafting. It requires that electronic money be issued in exchange for Leones or highly liquid assets acceptable to the central bank, that issuers redeem e-money at par on request, that float management and redemption obligations be clearly defined, and that issuers submit periodic statistics on loaded and redeemed value so that the Bank can monitor the quantity and velocity of electronic money in circulation (Parliament of Sierra Leone, 2022). It confers examination powers exercisable without prior notice and establishes a National Payment System Committee. The statutory foundations for prudential oversight of e-money are, in short, sound.

7.2 The compliance and effectiveness distinction

The mutual evaluation record makes the operative distinction clear. Following the on-site visit of 15 to 26 July 2019 and adoption of the mutual evaluation report in December 2020, Sierra Leone entered enhanced follow-up. By November 2024 it had secured re-rating of eight Recommendations, numbers 10, 14, 15, 17, 18, 22, 32 and 38, from partially compliant to largely compliant, bringing the total rated compliant or largely compliant to 27, and it submitted a fifth enhanced follow-up report in 2025 (FATF, 2024; GIABA, 2025). This is genuine progress and it reflects sustained work.

Technical compliance re-ratings, though, measure the quality of laws and regulations. They do not measure whether the system detects, investigates and prosecutes. The mutual evaluation's effectiveness findings identified under-resourced supervisors, suspicious transaction reporting concentrated in banking with negligible contribution from higher-risk sectors including foreign exchange bureaux, real estate agents and dealers in precious metals and stones, and international cooperation constrained by the absence of guidelines and case management systems (GIABA, 2021). The IMF's 2024 Article IV assessment reached the same conclusion in programme language, noting that further progress is needed on AML/CFT reforms and that effective implementation should prioritise convicting launderers and confiscating proceeds (IMF, 2024).

Sierra Leone is therefore a jurisdiction with an improving rulebook and an underpowered enforcement apparatus. That combination has a particular pathology in the payments context: rules that are formally binding but rarely enforced impose compliance costs on the institutions that follow them while conferring advantage on those that do not, which selects against exactly the well-governed providers the system needs.

7.3 Supervision of a switched system

The Salone Payment Switch changes what supervision can be. A central switch through which all domestic transactions pass is, in principle, the single most valuable supervisory technology a low-capacity jurisdiction can acquire. It creates one point at which cross-provider transaction patterns become visible, which is the only place where structuring across multiple mobile money operators can be detected. No individual provider can see a customer's aggregate activity across the market; the switch can.

Sierra Leone has built this capability and there is no published evidence that it is being used for supervisory purposes. Bank of Sierra Leone ownership and management of the switch makes the arrangement available without any further legal instrument. Deploying analytics at the switch, with appropriate legal safeguards and a data protection statute in place, would convert an infrastructure investment into a supervisory one, and it would do so at a small fraction of the cost of recruiting and training the number of examiners that conventional risk-based supervision of dozens of institutions would require. This is the single highest-return regulatory technology intervention available to the country, and it is the central recommendation of this article.

7.4 Consumer protection, redress and data governance

The Mobile Money Guidelines 2015 give customers the right to escalate complaints to the Bank of Sierra Leone where a provider has handled them unsatisfactorily. The evidence that this route functions at scale is absent, and the pattern of consumer detriment documented in section 6.2 suggests it does not. A redress mechanism that requires an individual who has lost the equivalent of a few days' income to escalate to the central bank is not a redress mechanism in any operational sense.

The absence of a data protection statute is the sharper gap. The National Payment Systems Act contains consumer provisions covering data protection and privacy in payment transactions, but sectoral provisions in a payments statute are not a substitute for a general data protection regime with an independent supervisory authority. This matters increasingly as the National Identification Number becomes the linking key across banks, wallets and government services. Concentrating identity in a single national identifier without a statutory framework governing its processing creates a surveillance and misuse exposure that grows with every additional linkage. The correct sequence is to enact the data protection statute before completing the identity linkage, and Sierra Leone is proceeding in the opposite order.

7.5 RegTech, SupTech and interagency coordination

The argument for supervisory technology in Sierra Leone does not rest on its being fashionable. It rests on arithmetic. Conventional risk-based supervision of commercial banks, three mobile money operators, microfinance institutions, foreign exchange bureaux and an emerging fintech sector requires a number of trained examiners that the Bank of Sierra Leone does not have and that the current fiscal envelope will not fund. Automated analysis applied to data the system already generates is the only route to coverage.

Two conditions must be met for this to work, and neither is technical. The first is legal authority to analyse switch-level data for supervisory purposes, with defined purpose limitation and retention rules, which is why the data protection statute is a precondition rather than a parallel workstream. The second is interagency coordination. The Bank of Sierra Leone supervises payment institutions, the Financial Intelligence Unit receives and analyses suspicious transaction reports, the National Communications Authority regulates the mobile network operators whose subsidiaries issue most of the country's electronic money, the National Civil Registration Authority controls the identity layer, and the Sierra Leone Police hold the cybercrime investigative function. No one of these can act on a cross-provider structuring pattern alone.

The mutual evaluation identified the absence of a structured case management system for handling cooperation requests as a specific deficiency (GIABA, 2021). The same deficiency applies domestically. A memorandum of understanding among these five institutions covering data sharing, referral thresholds and case tracking would cost nothing beyond drafting and negotiation time, and it is the sort of low-cost institutional measure that tends to be neglected precisely because it produces no visible infrastructure. Regulatory technology on the compliance side, principally automated reporting by providers under a standardised schema, would reduce the reporting burden that currently produces the partial and inconsistent submissions the Annual Provider Survey compilers acknowledge.

8. COMPARATIVE LESSONS

8.1 What the comparators actually demonstrate

The instinct in Sierra Leonean policy discussion is to reason from Kenya. This is the wrong comparator and reasoning from it produces systematic error. Kenya's M-PESA achieved dominant scale under a permissive regulatory posture, with a single operator holding a commanding market share and with interoperability arriving in 2018, a full eleven years after launch and long after inclusion had been achieved. Kenyan account ownership of 90 per cent is the outcome of a market-led process that Sierra Leone cannot replicate, in part because no Sierra Leonean operator holds anything approaching Safaricom's position and in part because the Kenyan sequence ran in the reverse order to the one Sierra Leone has adopted.

Ghana is the closer analogue and the more instructive one. GhIPSS was created in 2007 as a wholly owned subsidiary of the Bank of Ghana, and the 2015 Guidelines on Electronic Money Issuers permitted non-bank licensing and mandated interoperability, after which investment and growth followed. The mobile money interoperability framework of May 2018 connected dedicated electronic money issuers to each other and to bank accounts, and instant payment volumes rose from 0.1 million in 2018 to 37.7 million in 2021 (GSMA, 2024; Findev Gateway, 2025). Ghana also supplies the clearest cautionary evidence available: the electronic transaction levy introduced in May 2022 reduced both mobile money transaction values and provider revenue (GSMA, 2024). Any Sierra Leonean proposal to tax digital transactions as a revenue measure should be assessed against that result.

Rwanda and Tanzania offer the interoperability model closest to Sierra Leone's, with regulator-mandated interconnection through a national switch, eKash and the Tanzania Instant Payment System respectively. The GSMA's assessment of both is candid: the impact of national switch-led interoperability on financial inclusion remains unclear, and more time is needed to establish whether adoption and usage responded (GSMA, 2024). Nigeria's NIBSS-based instant payment infrastructure demonstrates what is achievable at scale, though against a market and regulatory

capacity incomparable to Sierra Leone's. Uganda's experience with bilateral interconnection preceding central switching illustrates the alternative path.

Table 7 summarises the comparative evidence.

Table 7 Comparative evidence on interoperability models and financial inclusion outcomes

Country	Interoperability model	Timing relative to scale	Account to ownership (2024)	Lesson for Sierra Leone
Kenya	Market-led, 2018	Long after scale achieved	90%	Inclusion preceded interoperability; sequence not replicable
Ghana	Central switch (GhIPSS), MMI 2018	After substantial scale	81%	Non-bank licensing and e-money guidelines drove growth; e-levy reversed gains
Rwanda	Regulator-mandated (eKash)	Concurrent with growth	n.a.	Effect on inclusion not yet established
Tanzania	Bilateral then national (TIPS)	After scale	n.a.	Provider-led bilateral links preceded the switch
Nigeria	Central (NIBSS)	Concurrent	n.a.	Scale of market and supervisory capacity not comparable
Sierra Leone	Regulator-mandated (SaPS), 2023–2025	Well before scale	c. 39%	Switch installed at low penetration; no comparator precedent

Note. Account ownership from World Bank (2025) where reported. Interoperability characterisations from GSMA (2024) and Findev Gateway (2025). n.a. indicates the figure was not available in the sources consulted.

8.2 Adjudicating the contested evidence

Two credible bodies of evidence point in opposite directions on whether instant payment systems drive inclusion. AfricaNenda (2026), using Global Findex 2025, reports that African economies with a cross-domain instant payment system saw account access grow by an average of 37 per cent in the two years after launch against 14 per cent in economies without one. The GSMA (2024) reports that in four of five markets studied, adoption was already high before interoperability and inclusion therefore preceded it.

These findings are compatible and the reconciliation is important. Countries do not launch instant payment systems at random. They do so when the central bank has the technical capability to procure and operate one, when providers have reached sufficient scale for interconnection to be

commercially rational, and when political commitment is durable enough to survive a multi-year implementation. Those same conditions independently predict inclusion growth. The AfricaNenda correlation is therefore substantially confounded by selection, and the GSMA's market-level histories describe the mechanism through which the selection operates.

The implication for Sierra Leone is uncomfortable but should be stated plainly. The country has installed a switch at approximately 39 per cent account ownership, well below the penetration at which every comparator interconnected. It has done so because a donor-financed programme and a determined central bank made it possible, not because market conditions generated the demand. That is not an argument against having built it. It is an argument that the switch will not produce inclusion on its own, and that expecting it to will lead to the wrong follow-on investments.

9. DISCUSSION

9.1 Reconciling theory and evidence

The conceptual framework presented in Figure 1 places financial integrity as a condition running alongside the entire payments-to-development chain rather than as a stage within it. The Sierra Leonean evidence supports that specification over the linear alternative. Each link in the chain is present: infrastructure exists, provision exists, registration has occurred, and yet inclusion measured by usage has not followed. The chain does not break at a stage; it is attenuated throughout by two conditions, the enabling conditions on the input side and the integrity and trust condition on the governance side.

Institutional theory explains the pattern better than adoption theory does. Sierra Leone has acquired the regulative pillar of a modern payment system with considerable speed, largely through coercive and mimetic pressures operating through donor programmes and regional peer comparison (DiMaggio & Powell, 1983). What it has not acquired at the same pace is the organisational capacity that converts rules into enforced practice, which is the distinction North (1990) drew between institutions and organisations. The gap between 27 Recommendations rated compliant or largely compliant and 14 fraud investigations across two years is the empirical expression of that distinction.

9.2 The central trade-off is not the one usually stated

Policy discourse frames the trade-off as innovation against integrity: every additional control cost suppresses inclusion, so proportionality is the answer. In Sierra Leone the operative trade-off is different. It is between speed of infrastructure deployment and depth of supervisory capability, and the two have diverged.

The tiered know-your-customer regime illustrates this precisely. Tier 1 was designed as a proportionality measure, admitting the undocumented at capped limits. It has instead trapped roughly 70 per cent of users at limits that prevent meaningful value retention, credit access or product diversification, while delivering limited integrity benefit because the population under simplified due diligence is the population about which the least is known. A measure intended to reconcile inclusion and integrity is currently serving neither well. The resolution is not to relax Tier 1 further, which would worsen the integrity position, nor to tighten it, which would exclude. It is to complete the identity infrastructure so that tier migration becomes possible at scale, which is an identity policy question rather than a financial regulation question.

9.3 Financial stability implications

Mobile money in Sierra Leone does not presently pose systemic risk. Float balances are held in trust accounts at licensed banks under the 2015 guidelines and the 2022 Act, e-money is redeemable at par, and the aggregate value stored is small relative to bank deposits. The banking system itself carries capital adequacy of about 35 per cent against a 15 per cent minimum and high liquidity ratios (Making Finance Work for Africa, n.d.).

Two forward-looking risks warrant monitoring. The first is operational concentration: routing all domestic retail transactions through a single switch creates a single point of failure whose availability now determines whether the retail economy functions. Business continuity, disaster recovery and cyber resilience arrangements for the switch are of macro-critical importance and there is no published assessment of them. The second is the interaction between digital credit and a banking system already exhibiting extreme borrower concentration. If digital lending expands rapidly on the mobile money rails, as it has elsewhere in Africa, it will do so in a jurisdiction whose credit reference bureau holds limited borrower data and where consumer redress is weak. The Kenyan and Ghanaian experience with digital lending over-indebtedness should inform the regulatory posture before the products launch, not after.

9.4 Political economy

Three sets of incentives shape what is feasible. Mobile network operators derive revenue from cash-out fees and float, and interoperability that increases wallet-to-wallet and wallet-to-bank transfer reduces cash-out volume. Their compliance with the April 2025 mandate is legally required; their enthusiasm for driving volume through it is not, and this is the most likely source of quiet under-performance against the directive. Commercial banks face a comparable calculation on agency banking, where the low bank agent count of 716 nationally reflects an assessment that the segment is not worth serving rather than any regulatory obstacle. The state has a strong revenue interest in digitising tax and fee collection through the switch, which is the one place where public and private incentives align and where progress is therefore most likely.

The fiscal context constrains everything. Sierra Leone's debt is assessed as sustainable but at high risk of distress, with total debt service to revenue above 100 per cent until 2028, under a 38-month Extended Credit Facility arrangement of SDR 186.663 million approved in October 2024 (IMF, 2024). Recommendations requiring substantial recurrent expenditure will not be implemented. This is why the switch-based supervisory analytics proposal in section 7.3 is the right recommendation: it substitutes a technology investment for a permanent increase in examiner headcount that the fiscal position cannot support.

9.5 Limitations

Three limitations qualify the analysis. The Annual Provider Survey data are self-reported by providers and were not independently verified, with partial submissions and limited gender and rural-urban disaggregation acknowledged by the compilers (Bank of Sierra Leone & UNCDF, 2025). Reporting periods for several transaction aggregates are not specified in the source, so the transaction values reported here should be treated as indicative of relative magnitude rather than as precise annual or monthly totals. Second, the change in survey instrumentation between rounds prevents construction of a consistent time series, which rules out formal trend estimation. Third, no primary data were collected for this study; the analysis is a synthesis of secondary sources, and the causal claims made here are inferences from pattern and comparison rather than identified estimates.

10. POLICY RECOMMENDATIONS

The recommendations below are sequenced by the constraint they address and constrained by what the fiscal position permits. Table 8 sets them out.

Table 8. Policy recommendations matrix

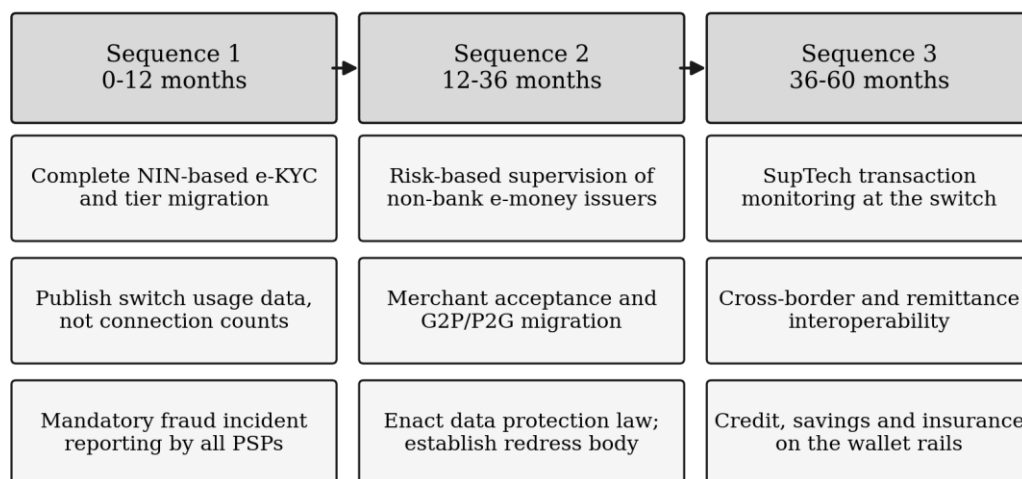
Actor	Recommendation	Sequence	Feasibility constraint
Bank of Sierra Leone	Deploy transaction monitoring analytics at the Salone Payment Switch to detect cross-provider structuring	0–12 months	Requires data protection statute and legal authority; technology cost modest
Bank of Sierra Leone	Publish quarterly switch statistics on routed volume and value by participant, not connection status	0–12 months	None material; data already held
Bank of Sierra Leone	Restore and standardise the national DFS time series: registered accounts, active accounts, volumes, values	0–12 months	Requires reporting template revision under NPS Act powers
Bank of Sierra Leone	Mandate incident reporting for fraud and cyber events by all payment service providers	0–12 months	Supervisory analysis capacity must be built alongside
Government and NCRA	Complete physical identity card issuance and NIN-based electronic KYC to enable tier migration	0–24 months	Cost of card production was the binding constraint in year one
Parliament and Ministry of Information	Enact data protection legislation with an independent supervisory authority before completing identity linkage	0–24 months	Drafting advanced; parliamentary time is the constraint
Ministry of Finance and NRA	Migrate government-to-person and person-to-government payments to the switch with published volume targets	12–36 months	Requires beneficiary identity coverage; strong revenue incentive aligns
Bank of Sierra Leone	Apply risk-based supervision to non-bank e-money issuers with staffing proportionate to market share	12–36 months	Recurrent staffing cost; partially substitutable by SupTech

Actor	Recommendation	Sequence	Feasibility constraint
Financial Intelligence Unit	Establish a case management system for domestic and international cooperation requests	12–36 months	Identified as a deficiency in the mutual evaluation
Bank of Sierra Leone and providers	Establish an independent financial services ombudsman with binding determinations below a value threshold	12–36 months	Funding model should be provider-levied, not budget-financed
Mobile network operators	Publish agent commission structures and enforce against unauthorised fee charging	12–36 months	Runs against short-run agent recruitment incentives
Commercial banks	Expand agency banking beyond 716 agents, prioritising North West and Eastern regions	12–36 months	Commercial case is weak without merchant acceptance growth
Fintech firms and providers	Build merchant acceptance and QR infrastructure as the precondition for value retention	12–36 months	Requires interchange economics that make acceptance viable for micro-merchants
Bank of Sierra Leone	Issue a regulatory position on cryptocurrency and stablecoin activity	12–36 months	Requires technical capacity currently absent
Development partners	Fund supervisory technology and identity completion rather than further rail construction	Continuous	Requires reorientation of programme design away from infrastructure milestones
Bank of Sierra Leone	Sequence Phase 3 cross-border connectivity after domestic monitoring is operational	36–60 months	Political pressure for early regional integration
Providers and BSL	Extend credit, savings and insurance onto wallet rails with consumer protection rules issued in advance	36–60 months	Credit bureau data coverage is the binding constraint

Actor	Recommendation	Sequence	Feasibility constraint
Academia and Statistics Sierra Leone	Conduct a demand-side financial capability and fraud incidence survey on a recurring basis	12–36 months	Modest cost; no institutional home currently assigned

Note. Sequence indicates the period within which implementation should commence. NCRA denotes the National Civil Registration Authority; NRA denotes the National Revenue Authority.

Four of these deserve emphasis because they carry the argument. Supervisory analytics at the switch is the highest-return intervention available, because it converts infrastructure already paid for into detection capability the country cannot otherwise afford. Publishing routed volume rather than connection status is the only way to know whether the April 2025 mandate achieved anything. Enacting data protection before completing identity linkage is a sequencing correction, and reversing the current order costs nothing but political attention. And funding merchant acceptance rather than further rails addresses the constraint that actually binds on value retention, which every dataset in this article points towards.



Binding constraint at each stage: supervisory and detection capacity, not payment rails

Figure 6. Integrated policy framework: sequencing against the binding constraint

Note. Author's construction, drawing on the recommendations set out in Table 8.

11. CONCLUSION

Sierra Leone has built a payment system that works and a market that does not yet use it. Account ownership of roughly 39 per cent, approximately 57 per cent account dormancy, some 2.9 million zero-balance wallets, and a transaction mix dominated by cash-in and cash-out describe a country that has solved the access problem it set out to solve and has arrived at a usage problem it did not anticipate.

The article has argued three things. Infrastructure is no longer the binding constraint, and continued investment in rails will yield diminishing returns while merchant acceptance, identity completion

and agent economics remain unaddressed. The tiered know-your-customer regime, designed as a proportionality measure, has become a ceiling that holds seven in ten users at limits incompatible with meaningful financial participation, and resolving this is an identity policy task rather than a financial regulation one. And the relationship between financial integrity and financial inclusion in Sierra Leone is complementary, not competitive: fourteen fraud investigations across two years against 41 per cent of consumers reporting phishing attempts describes a detection deficit that suppresses trust, and suppressed trust is a direct cause of the dormancy and cash-out behaviour that defines the market.

The contribution is to reposition financial integrity as an enabling condition for inclusion rather than a cost imposed upon it, and to identify a specific, affordable instrument through which a fiscally constrained state can act on that repositioning. The Salone Payment Switch is the only point in the system where cross-provider transaction patterns are visible. Using it for supervision would give the Bank of Sierra Leone a detection capability that no plausible increase in examiner headcount could match, at a cost the Extended Credit Facility programme envelope can absorb.

Three research priorities follow. Sierra Leone requires a demand-side survey establishing fraud incidence, redress experience and the reasons users give for not retaining value in wallets, because every explanation offered in this article for the dormancy pattern is an inference. The age distribution anomaly in the provider data, with 52.6 per cent of users reported in the 36 to 45 bracket in a country with a median age under 20, requires direct investigation because registration under borrowed identity would have significant integrity implications. And the effect of the April 2025 interoperability mandate on routed transaction volume should be evaluated once eighteen months of data exist, which would make Sierra Leone the first documented case of a national switch installed well below the penetration threshold at which every comparator interconnected. That case is of interest well beyond this country.

Conflict of Interest Statement

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About the Authors

Joseph Momoh Conteh is a PhD candidate in Theoretical Economics at the Institute of South-South Cooperation and Development (ISSCAD), Peking University, Beijing, China (<https://www.isscad.pku.edu.cn/>). He is the ICT/Administrative Director at the Justice Sector Coordination Office (<https://jsco.gov.sl>), where he has served for 16 years. His research addresses national development, spanning aid and development, international cooperation, trade, information and communication technology for development, administration, policy development, and finance. His doctoral work is directed at advancing economic theory while generating practical insights capable of informing sustainable development policy throughout the Global South. His academic profiles: <https://ufl.academia.edu/JosephConteh>, <https://orcid.org/0009-0004-1690-508X> and https://www.researchgate.net/profile/Joseph-Conteh-6?ev=hdr_xprf.

Musa Abdullah Kargbo, BSc, MFA, FCCA, FCA(SL), is a Chartered Accountant with more than fifteen years in banking and government service. As Head of Finance at the Ministry of Information and Civic Education, he oversees budgets, financial reporting, treasury and compliance. A Fellow of ACCA and of the Institute of Chartered Accountants of Sierra Leone, he is reading for an MPhil

in Accounting on foreign direct investment in Sierra Leone and writes on public finance, governance and development.

Dr. Dante Allie Bendu holds a singular place in Sierra Leone's professional history. Often described as the father of accounting in the country, he was the first chartered and certified accountant there to earn a doctorate. His credentials include a BSc Honours in Accounting and Finance, membership of ACCA and CIMA, the FeICM fellowship, an MSc, an MA in Marketing and Management, and a PhD in Accounting and Strategic Management. Lecturing since 1986, he is now a senior lecturer at Fourah Bay College, University of Sierra Leone, teaching from first degree to doctoral level and supervising many theses. A secondment to KPMG from 1988 to 1990 gave him first-hand experience of practice at its most demanding. He directs national corporate governance work under the African Peer Review Mechanism, has written textbooks and journal articles, and leads the Sarante Experts Group Consultancy.

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BEST PRACTICES OF TEACHERS AND TECHNOLOGY-AIDED INSTRUCTION IN RELATION TO PUPILS' ACADEMIC PERFORMANCE

Emilyn C. Laureño

DepEd Negros Island Region, **Philippines**

Ma. Quincy D. Dones

La Carlota City College, Negros Occidental, **Philippines**

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ABSTRACT

This study determined the levels of teachers' best practices, technology-aided instruction, and pupils' academic performance among public elementary school teachers in Districts 3A and 3B of the Division in the Negros Island Region during School Year 2024–2025. A quantitative descriptive-correlational research design was employed, involving 123 public elementary school teachers selected through total enumeration. Data were collected using a standardized 30-item questionnaire. The respondents were predominantly teachers with 5–10 years of teaching experience, bachelor's degree holders, and those who had attended 0–5 relevant ICT training programs. The findings revealed that teachers demonstrated a moderate level of best practices and technology-aided instruction, while pupils' academic performance was at a very satisfactory level. However, the results showed no significant relationship between teachers' best practices and pupils' academic performance. Likewise, no significant relationship was found between technology-aided instruction and pupils' academic performance. These findings indicate that although teachers demonstrated moderate levels of best practices and technology-aided instruction and pupils achieved very satisfactory academic performance, the variables examined did not demonstrate a significant association within the context of the study.

Keywords: teachers' best practices, technology-aided instruction, pupils' academic performance, elementary education, public school teachers

INTRODUCTION

The quality of education largely depends on teachers' ability to implement effective instructional practices that promote meaningful learning and improve pupils' academic performance. In 21st-century education, teachers are expected to employ learner-centered and evidence-based approaches that support learner engagement, critical thinking, collaboration, assessment, and meaningful learning experiences. Teachers' best practices, including lesson planning, differentiated instruction, formative assessment, collaborative learning, classroom management, and continuous feedback, contribute to an effective learning environment that responds to pupils' diverse learning needs.

The integration of technology has further transformed the teaching-learning process. Technology-aided instruction through digital tools, multimedia presentations, educational applications, interactive learning platforms, and online resources can enhance the delivery of lessons and provide opportunities for greater learner engagement and collaboration. Technology can also support the development of pupils' critical thinking, creativity, communication, and other competencies needed in contemporary education. However, the effective use of educational technology depends on

teachers' competence and confidence, as well as their ability to integrate digital tools meaningfully into instruction (UNESCO, 2023).

In the Philippine educational system, the Department of Education (DepEd) has promoted the integration of Information and Communication Technology (ICT) through various educational initiatives and programs. These efforts seek to strengthen teachers' pedagogical and technological competencies and maximize digital resources in support of learning. Nevertheless, challenges involving technological resources, teachers' digital competencies, internet connectivity, and access to appropriate digital learning materials may affect the implementation of technology-aided instruction, particularly in public elementary schools (DepEd, 2023).

Despite the emphasis on effective teaching practices and technology integration, the relationship of these factors with pupils' academic performance may vary across educational contexts. Thus, this study determined the levels of teachers' best practices, technology-aided instruction, and pupils' academic performance among public elementary school teachers in Districts 3A and 3B of the Division in the Negros Island Region during School Year 2024–2025. Specifically, it examined the level of teachers' best practices and technology-aided instruction, determined pupils' academic performance, and investigated whether teachers' best practices and technology-aided instruction were significantly related to pupils' academic performance. The findings may provide evidence for understanding the role of instructional practices and technology integration in the context of public elementary education and may inform efforts to strengthen teaching practices and support pupils' learning outcome

LITERATURE REVIEW

Teachers' Professional Characteristics

Teachers' professional characteristics, including length of service, educational attainment, and participation in relevant ICT training, provide important context for understanding instructional practices and technology use. Teaching experience allows teachers to encounter diverse classroom situations, develop instructional routines, manage learner behavior, and refine strategies according to learners' needs. However, years of service alone do not necessarily guarantee higher teaching effectiveness, as experience is more likely to contribute to professional competence when accompanied by reflection and continuing professional development.

Bacus et al. (2024), in a study involving 2,680 beginning teachers in the Philippine Department of Education, examined professional characteristics as predictors of teaching performance and found that length of service, together with other characteristics, was relevant to teaching performance. In contrast, Antiquina and Caliba (2024), who examined 161 teachers in Naawan District, found no significant relationship between demographic characteristics and teaching performance. These findings indicate that teaching experience is relevant for describing teachers' professional backgrounds, although its association with teaching performance may vary across contexts.

Educational attainment is another characteristic that may contribute to teachers' professional knowledge and competence. Graduate education may provide opportunities to deepen pedagogical knowledge, subject-matter expertise, research skills, and understanding of contemporary educational practices. Balanquit et al. (2023) found that the proportion of faculty members with doctoral degrees was significantly associated with higher institutional performance in the Licensure Examination for Teachers. Abenir and Abenir (2023) likewise examined educational attainment and instructional competencies among Grade 6 teachers in Capiz, demonstrating the relevance of academic qualifications in understanding teachers' professional characteristics. Nevertheless,

educational attainment should be considered alongside experience, professional development, school support, and other factors rather than as an independent guarantee of teaching effectiveness.

Relevant ICT training is particularly important as technology becomes increasingly integrated into classroom instruction. UNESCO (2023) emphasized that teachers require appropriate preparation and continuing professional development to use educational technology meaningfully. ICT training can strengthen teachers' technical skills while helping them understand how digital tools can be aligned with instructional objectives and learners' needs. Sasota et al. (2021), examining ICT integration among science and mathematics teachers in the Philippines, found that teachers' attitudes toward ICT, ICT skills, and technological resources were important factors in technology integration. Similarly, Magtolol and Oropa (2025) reported that ICT-related training was associated with teachers' digital literacy, while inadequate training, limited equipment, unstable connectivity, and insufficient technical support remained barriers to technology integration.

These findings support the inclusion of length of service, educational attainment, and relevant ICT training as profile variables in the present study. They provide contextual information for understanding the professional backgrounds of the teacher-respondents and their possible differences in instructional practices and technology-aided instruction.

Teachers' Best Practices

Teachers' best practices encompass purposeful and learner-centered instructional practices such as lesson planning, classroom management, learner engagement, assessment, feedback, differentiated instruction, classroom interaction, and professional reflection. Effective teaching involves more than content delivery; it requires teachers to organize meaningful learning experiences, monitor learner progress, and respond to diverse learning needs.

Alp Christ et al. (2022), in a systematic review of teaching quality, identified dimensions such as cognitive activation, formative assessment, classroom management, socio-emotional support, active engagement, differentiation, and adaptation as important aspects of teaching quality. Their findings demonstrated that the relationship between teaching quality and student achievement is complex and may operate through learning processes. Similarly, Tao and Chen (2024), in a meta-analysis of K–12 classrooms, found that dialogic teacher talk was positively associated with student achievement and that student engagement mediated this relationship. These findings highlight the importance of instructional practices that actively involve learners in classroom interaction.

Pedagogical content knowledge is likewise an important component of effective teaching. Fukaya et al. (2025) found associations between pedagogical content knowledge, teaching quality, and student achievement in mathematics and science education. López-Martín et al. (2023), through a meta-analysis of teacher characteristics and competencies, further reported that professional competencies such as instructional planning, learning-environment creation, evaluation, feedback, professional development, and reflective attitudes were associated with student achievement.

Philippine studies also demonstrate the relevance of instructional practices in examining teacher performance. Antiquina and Caliba (2024) reported consistent use of various teaching strategies among teachers in Naawan District, while Escanda (2024) examined research-based instructional strategies, professional competence, and pedagogical approaches among elementary teachers in Iloilo. Collectively, these studies establish that teachers' best practices are multidimensional and involve the integration of instructional planning, classroom management, learner engagement, assessment, feedback, and pedagogical knowledge.

Technology-Aided Instruction

Technology-aided instruction involves the purposeful integration of digital tools, multimedia resources, educational applications, online platforms, and other ICT resources into teaching and learning. Technology can support the presentation of content, classroom interaction, assessment, access to learning resources, and differentiated learning. However, technology does not automatically improve learning; its value depends on appropriate pedagogical integration and alignment with instructional objectives.

UNESCO (2023) emphasized that technology can provide opportunities for interaction, collaboration, practice, personalized learning, and access to educational resources, but also stressed that technology should complement sound pedagogy and meaningful teacher–learner interaction. Akram et al. (2022) similarly reported generally positive teacher perceptions of technology integration while emphasizing the importance of teachers’ technological knowledge, skills, and attitudes.

In the Philippine context, Sasota et al. (2021) found that teachers’ ICT skills, attitudes, and availability of technological resources were important conditions for technology integration. Gardoque and Israel (2025) further found positive relationships between professional development and teacher technology integration among public elementary school teachers, highlighting the role of continuing professional development and school leadership. Magtoltol and Oropa (2025) likewise identified ICT training as an important factor associated with teachers’ digital literacy and noted that inadequate training, limited equipment, connectivity problems, and insufficient technical support can constrain technology integration.

These findings indicate that technology-aided instruction is a multidimensional practice influenced by teacher competence, professional development, technological resources, and the instructional context. Thus, the extent to which teachers use technology should be examined together with the conditions that support its meaningful integration into classroom instruction.

Pupils’ Academic Performance

Pupils’ academic performance represents the extent to which learners demonstrate expected knowledge, skills, competencies, and learning outcomes. It is commonly reflected in grades, assessment results, examinations, and other school-based measures. Academic performance is influenced by multiple learner, instructional, family, and contextual factors and therefore should not be attributed to a single educational variable.

Research indicates that learner outcomes may be associated with the quality of classroom instruction and learner engagement. Tao and Chen (2024) found that dialogic teacher talk was positively associated with student achievement, with student engagement serving as an important mechanism. Similarly, Fukaya et al. (2025) reported associations between pedagogical content knowledge, teaching quality, and student achievement. These findings suggest that the quality of instructional experiences may contribute to academic outcomes, although the relationship may be influenced by other factors.

Parental and contextual factors may also affect academic performance. Wang and Wei (2024), through a meta-analysis, found a positive relationship between parental involvement and students’ mathematics performance, although the strength of the relationship varied according to the type and context of parental involvement. In the Philippine setting, Pantao-o and Baldonado (2025) found generally high levels of parental involvement but no significant overall relationship between parental involvement and learners’ academic performance, illustrating that learner outcomes are shaped by complex and context-dependent factors.

Technology may likewise contribute to learning when appropriately integrated. UNESCO (2023) noted that digital technologies can support access to learning resources, interaction, practice, and personalized learning, but emphasized that technology alone does not guarantee improved learning outcomes. The OECD (2023) also reported continuing challenges in Philippine student performance in mathematics, reading, and science, highlighting the broader importance of examining factors associated with learning outcomes.

Teachers' Best Practices and Pupils' Academic Performance

The literature generally recognizes teachers' instructional practices as an important component of the learning environment. Effective classroom interaction, pedagogical content knowledge, assessment, feedback, learner engagement, and appropriate instructional planning can provide pupils with meaningful opportunities to develop knowledge and skills. Tao and Chen (2024) found a positive association between dialogic teacher talk and student achievement, while Fukaya et al. (2025) identified relationships between pedagogical content knowledge, teaching quality, and student achievement.

Professional development may also strengthen teaching practices and indirectly support learner outcomes. Visscher et al. (2025), in a meta-analysis of in-service teacher professional development interventions, reported a positive average effect on student achievement. These findings provide a basis for examining whether teachers' best practices are associated with pupils' academic performance.

However, the literature also suggests that the relationship between teaching practices and academic achievement is not necessarily direct or uniform. Alp Christ et al. (2022) found that learning processes may mediate the relationship between teaching quality and achievement, while other learner and contextual factors may influence academic outcomes. Therefore, although teachers' best practices are important components of effective instruction, their association with pupils' academic performance requires empirical examination within specific educational contexts.

Technology-Aided Instruction and Pupils' Academic Performance

Technology has the potential to support pupils' learning by providing interactive content, multimedia representations, digital resources, opportunities for practice, and alternative forms of classroom participation. However, its contribution to academic performance depends on the quality and purpose of its integration.

UNESCO (2023) emphasized that digital technology can support teaching and learning but should be aligned with educational objectives and implemented through sound pedagogical practices. Sasota et al. (2021) similarly demonstrated that effective technology integration depends on teacher ICT skills, attitudes, and access to technological resources. These findings suggest that technology use should be examined not merely in terms of its presence but in relation to how teachers employ it in actual instruction.

Philippine studies further emphasize the role of teacher competence and professional development in technology integration. Gardoque and Israel (2025) found positive relationships between professional development and technology integration among public elementary school teachers, while Magtoltol and Oropa (2025) identified ICT training as an important factor associated with digital literacy. Such findings indicate that the educational contribution of technology may depend on teachers' preparedness and the conditions under which digital tools are used.

Although technology-aided instruction may provide meaningful opportunities for learning, its relationship with academic performance cannot be assumed to be automatic. Learner characteristics, teacher competence, instructional design, access to resources, parental support, and school conditions may also influence academic outcomes. Thus, empirical investigation is necessary to determine whether the level of technology-aided instruction is significantly associated with pupils' academic performance in the context of the present study.

Synthesis of the Literature

The reviewed literature establishes that teachers' professional characteristics, instructional practices, technology use, and pupils' academic performance are interconnected components of the educational process. Length of service and educational attainment provide information about teachers' professional backgrounds, while ICT training may contribute to their readiness to integrate technology into instruction. Teachers' best practices encompass multiple dimensions of effective teaching, including classroom management, learner engagement, assessment, feedback, instructional planning, and pedagogical knowledge. Technology-aided instruction provides additional opportunities for teaching and learning but requires appropriate teacher competence, professional development, resources, and pedagogical alignment.

Although previous studies have generally identified positive associations between teaching quality, professional development, technology integration, and learner outcomes, the relationships are not always consistent across contexts. Much of the literature emphasizes that academic performance is influenced by multiple factors and that instructional practices or technology use alone may not explain differences in learner achievement. This variation provides a basis for examining these relationships in specific school contexts.

Accordingly, the present study addresses this contextual gap by examining teachers' best practices, technology-aided instruction, and pupils' academic performance among public elementary school teachers in Districts III-A and III-B of the Schools Division in the Negros Island Region during School Year 2024–2025. It specifically determines the levels of the variables and empirically examines whether teachers' best practices and technology-aided instruction are significantly related to pupils' academic performance.

METHODOLOGY

The study employed a quantitative descriptive-correlational research design. The descriptive component was used to determine the levels of teachers' best practices, technology-aided instruction, and pupils' academic performance as they naturally occurred in the study setting. The correlational component was used to examine the relationships between teachers' best practices and pupils' academic performance and between technology-aided instruction and pupils' academic performance. The design was appropriate because it allowed the researcher to collect quantitative data and examine relationships among the variables without manipulating the study conditions.

The participants were 123 public elementary school teachers from eight schools in Districts III-A and III-B of the Schools Division in the Negros Island Region during School Year 2024–2025. Total enumeration was employed, whereby all qualified teachers in the identified schools were invited to participate. Inclusion criteria required participants to be currently employed as elementary school teachers during the conduct of the study and willing to provide informed consent. The respondents' profile was described in terms of length of service, educational attainment, and number of relevant ICT training programs attended.

Data were collected using a standardized questionnaire adapted from established educational frameworks, including Danielson's Framework for Teaching for teachers' instructional best practices and the Technological Pedagogical Content Knowledge (TPACK) framework of Mishra and Koehler for technology-aided instruction. The questionnaire consisted of sections covering the respondents' profile, teachers' best practices, and technology-aided instruction. Items measuring teachers' best practices and technology-aided instruction were rated using a five-point Likert scale ranging from 5 (Strongly Agree) to 1 (Strongly Disagree).

Pupils' academic performance was determined using documentary data on class performance obtained through the research instrument and the corresponding school records, as applicable.

Permission to conduct the study was secured from the Schools Division Superintendent and the school heads of the eight participating elementary schools. After approval was obtained, the researcher coordinated with the school administrators regarding the administration of the questionnaire. The purpose of the study was explained to the participants, and informed consent was secured before data collection. Participation was voluntary, and confidentiality of the information provided was maintained throughout the research process.

The questionnaires were distributed to the teacher-participants and retrieved after completion. The collected data were checked, organized, encoded, tabulated, and prepared for statistical analysis.

Descriptive and inferential statistical procedures were used to analyze the data. Frequency counts and percentages were used to summarize the respondents' profile. Means and standard deviations were used to determine the levels of teachers' best practices and technology-aided instruction and to summarize pupils' academic performance, as appropriate to the measurement of each variable.

For teachers' best practices and technology-aided instruction, mean scores were interpreted using a five-point scale: 4.21–5.00, Very High; 3.41–4.20, High; 2.61–3.40, Moderate; 1.81–2.60, Low; and 1.00–1.80, Very Low.

Pupils' academic performance was interpreted according to the applicable grading scale, wherein 90–100 was classified as Outstanding, 85–89 as Very Satisfactory, 80–84 as Satisfactory, 75–79 as Fairly Satisfactory, and below 75 as Did Not Meet Expectations.

Spearman's rank-order correlation coefficient was used to determine the relationships between teachers' best practices and pupils' academic performance and between technology-aided instruction and pupils' academic performance.

RESULTS AND DISCUSSIONS

Demographic Profile of Respondents

Table 1. Frequency and Percentage Distribution of the Demographic Profile of Respondents.

Profile	Category	f	%
Length in Service	0-5 years	35	28.46
	5-10 years	50	40.65
	11 years and above	38	30.89
	Total	123	100.00
Educational Attainment	Bachelor's Degree	72	58.54
	Master's Degree	42	34.15

Relevant Attended	ICT Trainings	Doctorate Degree	9	7.32
		Total	123	100.00
		0-5	71	57.72
		6-10	40	32.52
		11 and above	12	9.76
		Total	123	100.00

The 123 teacher-respondents were described according to length of service, educational attainment, and number of relevant ICT training programs attended. In terms of length of service, the largest group consisted of teachers with 5–10 years of experience (50, 40.65%), followed by those with 11 years and above (38, 30.89%) and those with 0–5 years of service (35, 28.46%). This distribution indicates that a substantial proportion of the respondents had several years of teaching experience.

Regarding educational attainment, most respondents held a bachelor's degree (72, 58.54%), followed by those with a master's degree (42, 34.15%) and a doctorate degree (9, 7.32%). The distribution indicates that while the majority had attained a bachelor's degree, a considerable proportion had pursued graduate-level education.

In terms of relevant ICT training, 71 respondents (57.72%) had attended 0–5 training programs, 40 (32.52%) had attended 6–10 training programs, and 12 (9.76%) had attended 11 or more training programs. The findings show that most respondents had participated in a relatively limited number of ICT-related training programs.

Level of Teachers' Best Practices

Table 2. Level of Teachers' Best Practices.

Statements	Mean	SD	Interpretation
1. I align my daily lesson objectives with national curriculum standards	3.36	.79	Moderate
2. I design activities that explicitly cater to diverse student learning styles (visual, auditory, kinesthetic).	3.32	.75	Moderate
3. I prepare all my instructional materials and lesson components well before class begins	3.38	.79	Moderate
4. I establish clear classroom rules, routines, and behavioral expectations at the start of the term	3.32	.91	Moderate
5. I maximize actual instructional time by minimizing transition periods and classroom disruptions.	3.33	.78	Moderate
6. I cultivate a safe, positive, and inclusive learning environment that encourages participation.	3.59	2.80	High
7. I implement differentiated instruction to support both struggling learners and advanced students	3.35	.79	Moderate
8. I incorporate collaborative learning structures and group activities into my weekly lessons	3.37	.84	Moderate
9. I use data from regular formative assessments to adjust the pace and direction of my teaching.	3.46	.80	High
10. I provide constructive, timely, and specific feedback on student work to guide their improvement.	3.39	.82	Moderate

11. I integrate real-world examples and practical applications into abstract lesson concepts.	3.39	.77	Moderate
12. I utilize higher-order thinking skills (HOTS) questions during classroom discussions.	3.16	.71	Moderate
13. I reflect regularly on my teaching methods to identify personal areas for professional growth.	3.26	.65	Moderate
14. I maintain consistent communication with parents regarding student progress and behavior.	3.40	.74	Moderate
15. I collaborate actively with grade-level peers to share effective lesson plans and teaching tips.	3.32	.77	Moderate
Teachers' Best Practices as a Whole	3.36	.50	Moderate

Legend: (4.21-5.0)-Very High; (3.41 – 4.20)-High; (2.61-3.40) Moderate (1.81 – 2.60)-Low; (1.00 – 1.80)-Very Low

Level of Technology-Aided Instruction

Table 3. Level of Technology-Aided Instruction.

Statements	Mean	SD	Interpretation
1. I integrate multimedia presentations (videos, slides) to explain complex topics	3.39	.79	Moderate
2. I use educational software, applications, and online games to reinforce lessons.	3.37	.80	Moderate
3. I utilize digital platforms (LMS, Google Classroom) to distribute and collect assignments.	3.28	.77	Moderate
4. I encourage pupils to use technology for research and independent learning.	3.24	.78	Moderate
5. I attend professional development sessions to improve my digital teaching skills.	3.33	.75	Moderate
6. I use digital interactive whiteboards or projection systems during live delivery.	3.49	.73	High
2. I employ online assessment tools (e.g., Kahoot, Google Forms) for real-time quizzes.	3.41	.72	High
3. I select technological tools that directly align with my specific lesson objectives.	3.32	.75	Moderate
4. I use digital simulation tools to visualize abstract theories or experiments.	3.37	.73	Moderate
5. I offer digital learning materials (e-books, PDFs) that pupils can access at home.	3.33	.73	Moderate
6. I teach pupils proper digital citizenship and safe internet practices.	3.28	.62	Moderate
7. I utilize technology to communicate instructional updates to pupils and parents.	3.24	.74	Moderate
8. I use automated data tools or electronic spreadsheets to track student grades.	3.46	.81	High

9. I adapt my technology use to resolve sudden technical glitches in the classroom.	3.27	.75	Moderate
10. I design projects that require the creation of digital artifacts (e.g., slides, videos).	3.24	.73	Moderate
Technology-Aided Instruction as a Whole	3.33	.43	Moderate

Legend: (4.21-5.0)-Very High; (3.41 – 4.20)-High; (2.61-3.40) Moderate (1.81 – 2.60)-Low; (1.00 – 1.80)-Very Low

practices in areas such as HOTS questioning, differentiated instruction, and professional reflection.

Table 3 shows that the highest mean was obtained for statement 6, “I use digital interactive whiteboards or projection systems during live delivery,” with a mean of 3.49 ($M = 3.49$, $SD = 0.73$), interpreted as high. This indicates that the use of digital interactive whiteboards or projection systems was the most commonly practiced form of technology-aided instruction among the teachers. The mean suggests that teachers generally integrate visual and presentation technologies into their classroom instruction to support lesson delivery. The SD of 0.73 indicates a relatively low variation in the responses, suggesting that the teachers had generally similar perceptions regarding their use of these technologies.

This finding is consistent with Lingatong et al. (2025), who noted that teachers' instructional practices are influenced by the availability and use of resources within the context of curriculum reform. The use of technology for classroom instruction can provide teachers with additional means of presenting information and facilitating learning. Similarly, technology-supported instruction has been recognized as an important component of contemporary teaching, particularly when digital tools are appropriately integrated into classroom activities.

The lowest means were both 3.24, obtained by statement 4, “I encourage pupils to use technology for research and independent learning,” and statement 7, “I utilize technology to communicate instructional updates to pupils and parents,” as well as statement 10, “I design projects that require the creation of digital artifacts (e.g., slides, videos),”. These were all interpreted as moderate. Their standard deviations were 0.78, 0.74, and 0.73, respectively, indicating relatively limited variation in the teachers' responses.

The results suggest that although teachers use technology for direct classroom presentation, they may be less likely to extend technology use toward pupil-centered, independent, communicative, and creative activities. In particular, encouraging pupils to conduct research independently, communicating instructional updates through technology, and requiring pupils to create digital outputs involve a more active role for learners in using digital technologies. The moderate ratings may therefore indicate that technology is used more frequently as a teacher-support tool than as a medium for pupils to independently create, communicate, and explore.

This finding contrasts with the emphasis of Liu and Dacanay (2025) on developing higher-order thinking through instructional strategies that encourage more active learner engagement. When pupils are asked to research, create digital products, or independently use technology, technology can move beyond presentation and become a tool for active learning and knowledge construction.

As a whole, technology-aided instruction obtained a mean of 3.33 and SD of 0.43, interpreted as moderate. This indicates that teachers moderately practice technology-aided instruction in their teaching. The overall result suggests that technology is incorporated into classroom instruction, but its application varies across different instructional purposes. Teachers demonstrate relatively

stronger use of technology for live lesson delivery, online assessment, and electronic grade monitoring, while practices involving independent pupil learning, digital communication, and creation of digital artifacts remain at a moderate level. The SD of 0.43 indicates low variability in the overall responses. This means that the teachers' ratings were relatively close to one another, suggesting a generally consistent perception of their level of technology-aided instruction.

The finding is generally consistent with Lingatong et al. (2025), whose study emphasized that teachers' practices vary according to instructional demands and the resources available to them. However, the present finding also highlights a distinction between simply using technology in teaching and using technology to promote active and independent pupil engagement. Thus, the moderate overall rating suggests that while technology has become part of teachers' instructional practices, its integration may still be more concentrated on teacher-led activities than on learner-centered digital learning experiences.

Overall, the results indicate that teachers demonstrate a moderate level of technology-aided instruction, with the strongest practice involving the use of digital interactive whiteboards or projection systems ($M = 3.49$, $SD = 0.73$), while the lowest-rated practices ($M = 3.24$) involve pupils' independent use of technology, technology-supported communication, and creation of digital artifacts. The overall mean of 3.33 ($SD = 0.43$) confirms that technology is utilized in instruction at a moderate level, with relatively consistent responses among the teachers.

Level of Pupil's Academic Performance

Table 4. Level of Pupils' Academic Performance.

Level of Academic Performance	N	Mean	SD	Interpretation
Outstanding	0	85.25	1.05	Very Satisfactory
Very Satisfactory	95			
Satisfactory	28			
Fairly Satisfactory	0			
Did Not Meet Expectations	0			

Legend: (90-100)-Outstanding; (85-89)-Very Satisfactory; (80-84)-Satisfactory; (75-79)-Fairly Satisfactory; (75 below)-Did Not Meet Expectations

The table shows that the pupils generally demonstrated a very satisfactory level of academic performance, with a mean of 85.25 ($M = 85.25$, $SD = 1.05$). The majority of the pupils, 95, were classified as very satisfactory, while 28 pupils were classified as satisfactory. No pupils were classified as outstanding, fairly satisfactory, or did not meet expectations. This indicates that the academic performance of the pupils was generally favorable, with most learners achieving grades within the very satisfactory category. The standard deviation of 1.05 indicates a relatively small variation in the pupils' academic performance. This suggests that the grades of the pupils were relatively close to the mean, indicating a fairly consistent level of academic achievement across the group. The absence of pupils in the outstanding and lower performance categories further suggests that the learners' academic results were concentrated within the very satisfactory and satisfactory levels.

The finding is consistent with Peradillo and Martin (2025), who reported that primary learners in a Philippine elementary school obtained a satisfactory academic performance, with a mean grade of 84.36%. Similarly, Lagrimas (2025) examined educational practices and academic performance among Grade 6 pupils in Northern Samar and specifically assessed pupils' academic performance alongside different educational practices. These findings support the observation that elementary pupils in Philippine public-school settings can demonstrate generally satisfactory to very satisfactory academic outcomes.

The present result is also comparable with Callao and Uy (2023), who reported that Grade 5 learners exposed to technology-based instruction achieved a very satisfactory level of performance, with 63% of learners obtaining a very satisfactory rating. This provides further support for the present finding that pupils' academic performance can be concentrated within the satisfactory and very satisfactory categories.

However, the present result contrasts with studies reporting greater variation or challenges in pupils' achievement. For example, Lumba and Dioso (2025) investigated technology integration among multigrade learners and examined changes in numeracy and literacy achievement, indicating that academic outcomes can vary depending on the learning context and instructional approach. Likewise, Molde and Ducot (2025) examined the relationship between teachers' classroom management practices and learners' academic achievement in Araling Panlipunan, highlighting the role of instructional and classroom factors in learner outcomes.

Overall, the findings indicate that the pupils in the present study were performing at a generally favorable academic level, with most achieving very satisfactory grades and relatively little variation in their performance. The result provides a positive baseline for examining whether teachers' best practices and technology-aided instruction are associated with pupils' academic performance.

Relationship Between Teachers' Best Practices and Pupil's Performance

Table 5. Relationship Between Teachers' Best Practices and Pupil's Performance.

Variable	Test Statistics (r_s)	p-value	Decision for H_0	Interpretation
Teachers Best Practices vs. Pupil's Performance	.002	.979	Failed to Reject H_0	Not Significant

The results showed no statistically significant relationship between teachers' best practices and pupils' academic performance ($r_s = .002$, $p = .979$). Since the p-value exceeded the 0.05 level of significance, the null hypothesis was not rejected. The correlation coefficient indicates an almost zero positive association, suggesting that variations in teachers' reported best practices were not meaningfully associated with variations in pupils' academic performance in the present study.

This finding may reflect the multifaceted nature of pupils' academic performance, which can be influenced by factors beyond teachers' reported instructional practices, including learners' prior knowledge, motivation, attendance, parental support, learning environment, socioeconomic circumstances, and access to educational resources. Thus, the moderate level of teachers' best practices observed in the study did not correspond to a statistically significant association with pupils' academic performance.

The finding differs from Lingatong et al. (2025), who highlighted the importance of instructional practices, including assessment, feedback, and collaboration, in teaching effectiveness. The

difference may be attributed to variations in educational contexts, measures of instructional practices, and factors affecting learner outcomes. Overall, the present finding indicates that teachers' best practices, while important components of classroom instruction, were not significantly associated with pupils' academic performance within the context of this study.

Relationship Between Technology-Aided Instruction and Pupil's Performance

Table 6. Relationship Between Technology-Aided Instruction and Academic Performance

Variable	Test Statistics (r_s)	p-value	Decision for H_0	Interpretation
Technology-Aided Instruction vs. Academic Performance.	.056	.540	Failed to Reject H_0	Not Significant

The results revealed no statistically significant relationship between technology-aided instruction and pupils' academic performance ($r_s = .056$, $p = .540$). Since the p-value was greater than the 0.05 level of significance, the null hypothesis was not rejected. The correlation coefficient indicates a very weak positive association, suggesting that differences in the level of technology-aided instruction were associated with only minimal differences in pupils' academic performance.

The finding suggests that the presence of technology in instruction alone may not necessarily be associated with higher academic performance. The contribution of technology to learning may depend on how appropriately it is integrated with instructional objectives, learning activities, assessment practices, and pupils' learning needs. Other learner- and context-related factors may likewise influence academic performance.

The finding differs from Callao and Uy (2023), who reported very satisfactory learner performance following technology-based instruction, and Gonzales and Gonzales (2024), who found technology-aided instruction through Microsoft Teams to be effective in teaching arts. These studies indicate that technology may support learning when deliberately integrated into the teaching-learning process. However, the present study did not find a statistically significant association between technology-aided instruction and pupils' academic performance.

Consistent with Lingatong et al. (2025), the finding further highlights the importance of considering the broader instructional context, including curriculum demands, available resources, and other factors affecting teaching and learning. Overall, technology-aided instruction demonstrated only a very weak association with pupils' academic performance in the present study.

CONCLUSIONS

Based on the findings of the study, the following conclusions were formulated:

The teacher-respondents were predominantly moderately experienced, bachelor's degree holders, and had limited participation in relevant ICT training programs.

Teachers demonstrated a moderate level of best practices, indicating that the identified instructional, classroom management, assessment, and professional practices were generally implemented but not consistently at a high level.

Technology-aided instruction was practiced at a moderate level, indicating that teachers utilized digital technologies in the teaching-learning process, although their integration was not consistently extensive.

Pupils demonstrated very satisfactory academic performance, indicating that they generally attained the expected level of academic achievement.

Teachers' best practices were not significantly associated with pupils' academic performance, indicating that variations in the reported level of best practices did not correspond to meaningful differences in pupils' academic outcomes.

Technology-aided instruction was not significantly associated with pupils' academic performance, indicating that differences in the extent of technology use did not correspond to meaningful differences in pupils' academic outcomes.

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