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Balancing organizational structure dimensions for enhanced financial performance in Ghana's banking sector

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ABSTRACT

This study investigates how the structural dimensions of centralization, formalization, and specialization, both individually and in combination, influence return on equity (ROE) in Ghanaian commercial banks. It clarifies whether a balanced mix outperforms across-the-board intensification. Survey data from 400 employees across ten diverse banks were analyzed using partial least squares structural equation modeling after confirmatory factor analysis confirmed construct reliability and validity. Direct and moderated paths were assessed with bias-corrected bootstrapping. Centralization ($\beta = 0.943$, $p < 0.01$), formalization ($\beta = 0.614$, $p < 0.05$), and specialization ($\beta = 1.391$, $p < 0.10$) each raise ROE. The centralization × formalization interaction is negative and significant ($\beta = -0.074$, $p < 0.05$), whereas the other two-way interactions and the three-way term are nonsignificant. Profitability improves when each dimension is optimized independently; simultaneously concentrating authority and codifying rules can dampen adaptability and erode returns. Structural *balance*, not wholesale layering, best supports performance in turbulent, regulated settings. Bank leaders should centralize compliance-critical decisions, formalize core risk controls, and deploy specialist teams for complex tasks, while avoiding heavy centralization *combined* with rigid procedures. Regulators could add a "structural-balance" lens to supervisory scorecards to encourage resilient yet agile governance.

Contribution/Originality: To the best of our knowledge, this is the first African banking study to test a three-way interaction among centralisation, formalisation, and specialisation with latent-moderated PLS-SEM. It shows that the otherwise positive centralisation–formalisation dyad turns negative at high levels, validates sector-specific structure scales, and demonstrates the value of non-linear modelling for ROE.

1. INTRODUCTION

The organizational structure of a corporation significantly influences task distribution, information flow, and decision-making processes (Albers, Wohlgezogen, & Zajac, 2016; Daft, 2021; Joseph, Klingebiel, & Wilson, 2016). In sectors of the economy that require high regulation, such as the banking sector, the importance of organizational structures cannot be underestimated. This is due to the necessity for adaptability, compliance, and effective resource management, as they significantly influence financial outcomes (Basile & Faraci, 2015; Wu, Straub, & Liang, 2015). The banking sector in Ghana has experienced regulatory reforms and market volatility in recent years, necessitating the establishment of institutions that are both resilient and adaptable (Benson, 2022; Halidu, 2021).

Research on organizational structures identifies three fundamental dimensions: centralization, formalization, and specialization (Burton, Obel, & DeSanctis, 2011; Mintzberg, 1979). Centralization refers to the degree to which decision-making authority is concentrated at the upper echelons of the hierarchy (Shen, Zhang, Lee, & Li, 2020; Siggelkow & Levinthal, 2003). Formalization refers to the systematic codification and enforcement of rules, policies, and processes (Creswell & Zhang, 2009; Inków, 2021). Specialization denotes the allocation of duties into distinct roles to enhance competence and efficiency (Bhattacharyya, 2024; Inkson, Dries, & Arnold, 2015).

Current evidence indicates that each factor positively influences performance due to enhancements in coordination, compliance, and knowledge. However, some studies have proven that when these dimensions overlap firmly, the resultant effect may hinder adaptability and reduce overall performance (Kiplimo, 2023; Mustafa, Solli-Sæther, Bodolica, Håvold, & Ilyas, 2022). The banking sector of Ghana is particularly suitable for examining how these structural variables interact to shape financial performance, especially given growing competition, technological adoption, and the increasing complexities of regulatory regimes (Asiedu, 2020; Karikari, Eshun, & Osei, 2021).

This study aims to (1) examine the independent effect of the three core dimensions of organizational structure centralization, formalization, and specialization on banks' return on equity (ROE), and (2) investigate how the interaction among these structural dimensions influences ROE. This research seeks to highlight the optimum balance of structural elements that foster profitable operations by using partial least squares structural equation modeling (PLS-SEM) on data collected from ten banks in Ghana. The findings can inform both managers in emerging economies and scholars seeking to refine organizational design theories.

2. LITERATURE REVIEW

2.1. Organizational Structure and Financial Performance

Organizational structure provides a mechanism for coordinating tasks, delegating authority, and serving as a framework for strategic implementation (Daft & Armstrong, 2015; Hage & Aiken, 1967). There has been a debate among scholars over the past decades as to whether the alignment between organizational strategy and structure plays a crucial role in achieving superior performance (Chandler, 1962; Galbraith, 2014). Recent research confirms that successful structures diminish ambiguity, optimize procedures, and improve accountability, thereby positively impacting financial performance (Hilman, 2021; Joseph et al., 2016).

The congruence between organizational design and regulatory context in the banking sector is crucial (Benson & Ofori, 2022). Owing to the highly regulated nature of the banking environment, banks must be responsive to compliance requirements as well as market volatility (Goddard, Molyneux, & Wilson, 2022). In order to ensure risk management, customer satisfaction, and profitability, there must be structural arrangements that combine oversight with flexibility (Ong & Teh, 2022; Pasiouras, 2023).

2.2. Centralization

Centralization, denoting the consolidation of decision-making authority at elevated levels, influences the velocity and uniformity of organizational decision-making (Ahmad & Khan, 2021; Aibar-Guzmán & Frías-Aceituno, 2021). Accurate calibration of concentration minimizes redundant efforts, optimizes resource allocation, and ensures consistent policy enforcement (Shen et al., 2020; Yıldız, 2024).

Nonetheless, excessive concentration may obstruct local autonomy, diminish responsiveness, and stifle innovation at subordinate levels (Siggelkow & Levinthal, 2003). Empirical research from emerging countries demonstrates that a moderate level of centralization fosters resource management and compliance while not obstructing strategic resource agility (Alhassan & Biekpe, 2015; Helmrich et al., 2021).

2.3. Formalization

Formalization relates to the written rules, regulations, and procedures that define and constrain roles and interactions (Inków, 2021; Zheng, Yang, & McLean, 2010). It is able to standardize processes, enhance clarity, and reduce operational risks, especially in areas such as banking, where compliance is of high importance (Ong & Teh, 2022). Elevated formalization results in uniform service quality, diminishes ambiguity, and enhances knowledge transfer both within and between departments (Pugh, Hickson, Hinings, & Turner, 1968; Romi, Soetjipto, Widaningsih, Manik, & Riswanto, 2021).

In contrast, excessive formalization fosters bureaucracy, resulting in inefficiency and disengaged staff (Panarina, 2023). Recent research indicates that formalization may adversely affect the correlation between knowledge-sharing behaviors and performance due to the application of excessive constraints (Huo, 2020; Mustafa et al., 2022). Consequently, an ideal degree of formalization can maintain standardization while fostering creativity.

2.4. Specialization

Specialization denotes the division of labor, entailing the allocation of specific duties to individuals or departments to attain skill and knowledge (Bhattacharyya, 2024; Jacobides & Winter, 2005). Most of the time, banks utilize specialized roles such as credit analysts, investment bankers, and risk managers to deliver tailored services and manage complex products efficiently (Bazyar, Abbasi, & Naghdi Khanachah, 2024; Blickle, Parlatore, & Saunders, 2023). By concentrating on specific tasks, employees can build deeper expertise, reduce mistakes, and increase productivity.

However, there is a debate about the fact that overspecialization may result in siloed thinking, hinder solving problems holistically, and impede cross-functional collaboration (Yang, Secchi, & Homberg, 2022). In addition, some level of autonomy and resources are required for specialized staff to implement their expertise fully. This may be impeded by highly centralized or over-formalized environments (Jiang, Clark, & Turban, 2023). Balancing specialized functions with flexible coordination mechanisms is therefore critical (Xinyu, 2023).

2.5. Interaction Effects of Structural Dimensions

Recent research indicates that the elements of organizational structure do not operate independently (Budur, 2024; Glinkowska-Krauze & Chebotarov, 2022). Even though each dimension can individually influence performance, the interaction among them can result in unintended consequences (Kiplimo, 2023). For instance, high levels of centralization in interaction with formalization may yield rigidity, impede rapid decision-making, and hinder innovation (Zhong & Um, 2025). In a similar way, specialization often requires autonomy, which clashes with highly centralized control (Mustafa et al., 2022; Siggelkow & Levinthal, 2003).

According to Joseph et al. (2016) and Khan (2021), although centralization structures have a positive impact on financial monitoring, they tend to discourage employees from leveraging specialized knowledge if the authority to make decisions is not delegated appropriately. Dominguez Gonzalez (2023) posited that formalization might enhance specialization through the establishment of standardized processes; yet, when taken to an extreme, it may restrict exploratory learning (Henseler, Hubona, & Ray, 2016).

2.6. Contextualization within Ghana's Banking Sector

Recently, Ghana's banking sector has experienced regulatory revisions related to recapitalization requirements, mergers, and acquisitions (Alhassan & Biekpe, 2015; Karikari et al., 2021).

These changes highlight the significance of efficient organizational structures that have the capacity to absorb regulatory shocks while maintaining competitiveness (Halidu, 2021). There should be a balance between hierarchical control and flexible special roles to ensure customer responsiveness and innovation within the banking sector (Benson, 2022).

With reference to the interplay between structure and performance, and the outcomes of empirical studies regarding how centralization, formalization, and specialization jointly shape financial outcomes in Ghana's banking industry, this study provides valuable insights. The conceptual framework leads to the following research questions:

1. How do centralization, formalization, and specialization individually affect ROE in Ghana's banking sector?
2. How do the interaction effects of these structural dimensions influence ROE?

3. METHODOLOGY

3.1. Research Design

In order to test theory-driven hypotheses on covariance among latent variables at a particular point in time while accounting for common-method variance, a positivist, explanatory cross-sectional survey was used (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003).

3.2. Sampling Frame and Procedure

Twenty-four licensed Class 1 commercial banks made up the sample. Ten were chosen using heterogeneity-oriented purposive sampling to account for differences in size, digital intensity, and ownership (domestic vs. international). Three strata board/executive (n = 60), middle management (n = 120), and operational staff (n = 220)—were created within each bank using proportionate stratified random sampling, which mirrored the internal headcount pyramid of each bank.

3.3. Pre-Testing and Instrument Development

Twenty-three items that were modified from validated measures (Joseph et al., 2016; Pugh et al., 1968) and reworded for banking terminology were used to operationalize latent components. Content adequacy was evaluated by two methodologists and three subject-matter experts (CVI = 0.91). A pilot with 40 respondents yielded $\alpha = 0.88$ and guided small lexical improvements.

3.4. Data Collection Protocol

To minimize digital-access bias, data was gathered utilizing a mixed-mode strategy between March 1 and April 15, 2025: supervised paper forms for in-branch personnel and secure Qualtrics links for executives. Four hundred usable cases were kept after two follow-ups (overall response rate = 80%).

3.5. Statistical Strategy and Data Screening

- Screening: Expectation-maximization was used to impute missing values (< 2%); eight multivariate outliers were identified by Mahalanobis D^2, and these were kept following robustness checks.
- Measurement Model: loadings 0.71–0.89, CR 0.83–0.92, and AVE 0.55–0.68 were obtained using CFA in SmartPLS 4. According to the HTMT < 0.85 rule, discriminant validity was met.
- Structural Model: PLSpredict generated $Q2 > 0$, indicating out-of-sample predictive quality, while bias-corrected bootstrapping (5,000 draws) examined direct and moderated routes. There was very little multicollinearity (VIF < 3).
- Robustness: The alternative CB-SEM (AMOS 29) produced a convergent fit ($\chi^2/df = 2.45$, CFI = 0.93, RMSEA = 0.052), while a two-stage latent-moderated SEM (LMS) procedure validated interaction indications.

4. RESULTS

4.1. Demographic Profile

Table 1 presents the demographic characteristics of respondents. Men constituted 59.3% of the sample, and the majority possessed a master's degree (62.7%). Most respondents (37.5%) were between 39 and 48 years old, and 44.3%

had between 11 and 15 years of service in their respective banks. There was a roughly equal distribution (10% each) of participants across the ten participating banks.

Table 1. Demographic profile of the respondents (n = 400).

Variable	Dimension	Frequency	Percent
Gender	Man	237	59.3
	Woman	163	40.8
	Total	400	100.0
Age range	18–28 years	119	29.8
	29–38 years	124	31.0
	29–38 yrs/18–28 yrs (Miscoded)*	1	0.3
	39–48 years	150	37.5
	49–59 years	6	1.5
	Total	400	100.0
Level of education	Master's degree	251	62.7
	Tertiary (1st degree, HND, diploma)	119	29.8
	Other	20	5.0
	PhD	10	2.5
	Total	400	100.0
Banks	ADB, Cal Bank, Ecobank, GCB, GT Bank, HFC Bank, Prudential Bank, Société Générale, Standard Chartered Bank, Zenith Bank	40 each	10 each
Years worked	11–15 years	177	44.3
	6–10 years	93	23.3
	15–20 years	69	17.3
	Below 5 years	51	12.8
	Above 20 years	10	2.5
	Total	400	100.0
Job category	Lower-level employee	234	58.5
	Manager	113	28.2
	Board member	53	13.3
	Total	400	100.0

4.2. Descriptive Statistics of Key Variables

4.2.1. Centralization (Hierarchy of Authority)

Seven items measured the extent of hierarchical authority in the banks. The composite mean was 4.11 (SD = 0.77), indicating that respondents generally perceived a well-defined hierarchy contributing positively to organizational effectiveness.

Table 2 presents the descriptive statistics for the centralization scale, revealing a high composite mean (M = 4.11; SD = 0.77) that indicates respondents' broad agreement that their banks' hierarchies are clearly articulated and strategically supportive.

Table 2. Centralization (Hierarchy of authority).

Item	Min	Max	M	SD
Bank's current hierarchy is aligned with strategy and positively impacts financial performance	1	5	3.97	0.817
Employees understand organizational design and its positive financial impact	1	5	4.10	0.734
Bank adjusts its structure for growth/Change	2	5	4.14	0.774
Clear reasoning behind reporting lines and organizational units	1	5	4.17	0.742
Bank supports a clear decision-making process	1	5	4.15	0.767
Functions are grouped according to skill set	1	5	4.12	0.759
Bank's structure enables value creation	1	5	4.14	0.791
Composite score	1	5	4.11	0.769

4.2.2. Formalization

4.2.2.1. Promotion Based on Achievement

Table 3 shows a composite mean of 4.08 (SD = 0.78), indicating a strong perception that promotions and career progression are merit-based.

Table 3. Promotion based on achievement.

Item	Min	Max	M	SD
Employees can track their career progression	1	5	4.11	0.777
Bank's structure incorporates suitable skills/Character to enhance performance	1	5	4.03	0.822
Structure positively impacts employee satisfaction and retention	1	5	4.11	0.776
Structure fosters leadership development and succession planning	1	5	4.05	0.799
Bank's structure is designed to control turnover rates	1	5	4.08	0.744
Composite score	1	5	4.08	0.784

4.2.2.2. Impersonality

Table 4 presents a composite mean of 4.02 (SD = 0.81), suggesting that transparency, inclusivity, and stakeholder considerations are generally upheld.

Table 4. Impersonality.

Item	Min.	Max.	M	SD
Structure impacts the ability to attract and retain top talent.	2	5	4.11	0.755
Structure promotes transparency and inclusivity.	1	5	4.16	0.777
Bank's structure fosters the desired leadership style.	1	5	3.95	0.845
Bank's culture is influenced positively by the current structure.	1	5	3.98	0.843
Bank's structure considers the interests of all stakeholders.	1	5	3.97	0.816
Structure allows interactions among different generations/demographics.	1	5	3.97	0.808
Composite score	1	5	4.02	0.807

4.2.2.3. Written Rules of Conduct

Table 5 indicates a composite mean score of 4.01 (SD = 0.81), reflecting well-defined processes and traditions.

Table 5. Written rules of conduct.

Item	Min.	Max.	M	SD
Rituals and ceremonies reflect organizational structure	1	5	4.08	0.803
Structured onboarding process for new hires	1	5	3.98	0.854
Bank's structure deals positively with conflict	1	5	3.98	0.783
Composite score	1	5	4.01	0.813

4.2.3. Specialization

4.2.3.1. Specialized Division of Labour

Table 6 shows a composite mean of 4.02 (SD = 0.85). Respondents believe there is a balance in decision-making and clarity in role allocations.

Table 6. Specialized division of labor.

Item	Min.	Max.	M	SD
Balance between centralized and decentralized decision-making	1	5	3.99	0.852
Responsibility for ensuring the structure serves its purpose is clearly assigned	2	5	4.03	0.822
Bank's structure empowers employees to take initiative	1	5	3.97	0.875
Structure allows for diversity and inclusion	1	5	4.07	0.867
Composite score	1	5	4.02	0.854

4.2.3.2. Efficacy

Table 7 exhibits a composite mean of 4.12 (SD = 0.78). Respondents perceive their banks to be efficient in risk management and supportive of innovation and performance metrics.

Table 7. Efficacy.

Item	Min	Max	M	SD
Clear performance metrics in organizational design	1	5	4.11	0.773
Bank's structure supports a healthy work–life balance	1	5	4.12	0.791
Bank's structure facilitates innovation	1	5	4.08	0.794
Bank's structure effectively manages risk	1	5	4.15	0.774
Composite score	1	5	4.12	0.783

4.3. Measurement Model Assessment

Confirmatory factor analysis (CFA) was used in SmartPLS to evaluate convergent and discriminant validity. Every factor loading was higher than 0.70, meeting the minimum requirement (Hair, Risher, Sarstedt, & Ringle, 2019). Cronbach's alpha (α) and Composite Reliability (CR), which assess internal consistency, are both above the acceptable cutoff of 0.70 (Nunnally, 1978). Convergent validity was confirmed by Average Variance Extracted (AVE) values exceeding 0.5 (Fornell & Larcker, 1981). The HTMT ratio and the Fornell-Larcker criterion were used to establish discriminant validity (Henseler, Ringle, & Sarstedt, 2015), both of which showed sufficient separation between constructs.

Figure 1 illustrates the validated measurement model: all indicator loadings exceed 0.70, and each construct displays acceptable convergent and discriminant validity.

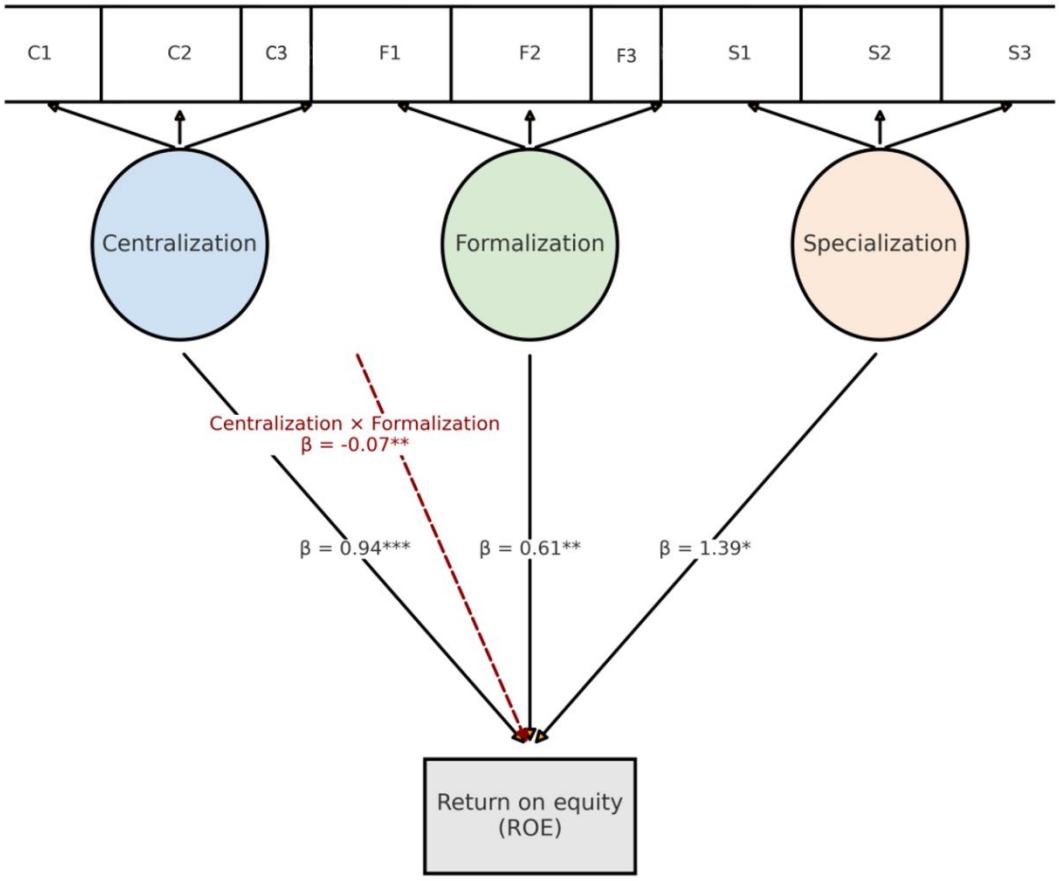

Figure 1. Measurement and structural model.

Note: *** p < 0.01, ** p < 0.05, * p < 0.1.

With regard to Figure 1, latent constructs are shown as colored circles, indicators as rectangles. Arrows denote reflective loadings and structural paths; path coefficients (β) and significance levels appear on each path. The dashed red line represents the significant centralization × formalization interaction.

4.4. Structural Model Evaluation

Having validated the measurement model, the structural model was assessed. Therefore, the inner model was evaluated. The collinearity diagnostics (Variance Inflation Factors) being below 5 indicated that there was no serious multicollinearity (Hair Jr, Matthews, Matthews, & Sarstedt, 2017). The R^2 for ROE was 0.518, indicating that 51.8% of the variance in ROE is explained by centralization, formalization, and specialization. The Q^2 value of 0.511 suggests medium predictive relevance (Geisser, 1974; Stone, 1974).

Figure 2 depicts the structural model results, confirming significant positive paths from the three structural dimensions to ROE and a small but negative interaction between centralization and formalization.

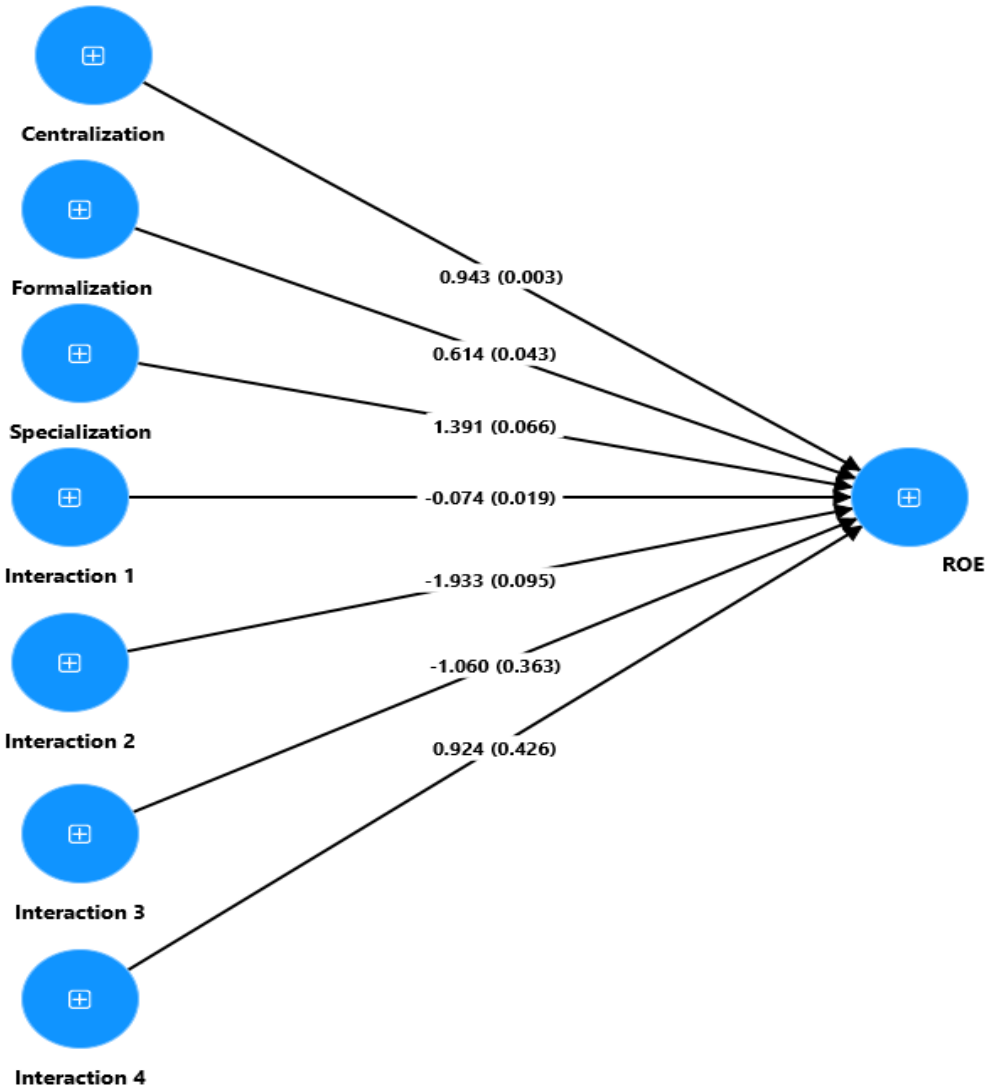

Figure 2. Structure model evaluation.

4.5. Hypotheses Testing and Interaction Effects

The hypothesis tests confirm that each structural dimension independently bolsters profitability, with centralization exerting the strongest direct effect. However, when high centralization co-occurs with strict formalization, the combined rigidity suppresses ROE, indicating diminishing returns from excessive control. Neither

centralization × specialization nor formalization × specialization significantly alters performance, and the three-way interaction is neutral. Overall, balanced (not cumulative) structuring yields superior financial outcomes.

Table 3. Structural model results.

Hypothesis	Path	β (Beta)	T-stat	p-value	Decision
H1: Centralization →\Rightarrow→ ROE	Centralization →\Rightarrow→ ROE	0.943	2.945	0.003	Supported (***p<0.01)
H2: Formalization →\Rightarrow→ ROE	Formalization →\Rightarrow→ ROE	0.614	2.024	0.043	Supported (**p<0.05)
H3: Specialization →\Rightarrow→ ROE	Specialization →\Rightarrow→ ROE	1.391	1.839	0.066	Supported (*p<0.10)
H4a: (Centralization *** Formalization) →\Rightarrow→ ROE	Interaction 1 →\Rightarrow→ ROE	-0.074	2.346	0.019	Supported (**p<0.05)
H4b: (Centralization *** Specialization) →\Rightarrow→ ROE	Interaction 2 →\Rightarrow→ ROE	-1.933	1.669	0.095	Not supported
H4c: (Formalization *** Specialization) →\Rightarrow→ ROE	Interaction 3 →\Rightarrow→ ROE	-1.060	0.910	0.363	Not supported
H4d: (Centralization *** Formalization *** Specialization) →\Rightarrow→ ROE	Interaction 4 →\Rightarrow→ ROE	0.924	0.797	0.426	Not supported

- Centralization →\rightarrow→ ROE: Significant positive effect (β=0.943\beta=0.943β=0.943, p<0.01), implying that centralizing decision-making authority improves financial performance.
- Formalization →\rightarrow→ ROE: Significant positive effect (β=0.614\beta=0.614β=0.614, p<0.05), indicating that well-defined rules and procedures enhance profitability.
- Specialization →\rightarrow→ ROE: Significant positive effect (β=1.391\beta=1.391β=1.391, p<0.10), suggesting that specialized division of labor fosters expertise and efficiency, thereby boosting ROE.
- **Interaction Effects**:
- Centralization *** Formalization negatively affected ROE (β=−0.074\beta=-0.074β=−0.074, p<0.05), suggesting that while each individually is beneficial, high levels of both may create excessive rigidity.
- Centralization *** Specialization was negative but not significant (β=−1.933\beta=-1.933β=−1.933, p>0.05).
- Formalization *** Specialization was non-significant (β=−1.060\beta=-1.060β=−1.060, p=0.363).
- The three-way interaction of centralization, formalization, and specialization also did not significantly affect ROE (β=0.924\beta=0.924β=0.924, p=0.426).

5. DISCUSSION

5.1. Individual Effects of Centralization, Formalization, and Specialization

The results confirm the idea that formalization, specialization, and centralization contribute significantly to improved financial performance independently in the banking sector of Ghana. Centralized structures ensure efficient allocation of resources through strengthened control over resources and also enhance consistent strategic implementation (Ahmad & Khan, 2021; Joseph et al., 2016). Comparable to this, formalization creates precise procedural rules that reduce mistakes and uncertainty, which is very necessary in highly regulated fields like banking (Daft, 2021; Romi et al., 2021). Also, the findings support classical management theory by showing that task specialization generates focused expertise and increases productivity (Bhattacharyya, 2024).

5.2. Interaction Effects

Remarkably, interaction effects show possible drawbacks when mixing certain dimensions. Combining centralization and formalization significantly and negatively impacted ROE, indicating that excessive rigidity and

top-down control can hinder adaptability (Budur, 2024). Although each structural variable is beneficial in isolation, excessive confluence, especially centralization with formalization, could be detrimental (Zhong & Um, 2025). Furthermore, the two-way interaction between formalization and specialization is nonsignificant, and the three-way interaction among formalization, specialization, and centralization shows that these combined techniques neither strongly impair nor enhance performance under the specific conditions of Ghana's banking sector.

5.3. Contextualizing in Ghana's Banking Environment

In Ghana's dynamic banking sector, especially in the wake of recent recapitalization efforts and heightened regulatory scrutiny (Benson, 2022; Halidu, 2021), there are two clear implications;

Firstly, banks can benefit from centralization, formalization, and specialization by optimizing each dimension individually rather than combining all three dimensions.

Secondly, excessive layering of these dimensions, especially centralization and formalization, may impede flexibility and innovation relevant to maintaining a competitive advantage in a volatile market (Mustafa et al., 2022; Yang et al., 2022).

6. CONCLUSION AND IMPLICATIONS

This research offers empirical evidence that centralization, formalization, and specialization independently enhance ROE in the banking sector of Ghana. Excessive overlap, especially in centralizing decision-making and formalizing procedures, can negatively impact innovation and adaptability. The interaction effect among centralization, formalization, and specialization is not significant, suggesting that optimizing all three dimensions concurrently may not enhance financial performance.

Theoretically, by examining both main and interaction effects, the research enriches organizational design theory, highlighting that structural dimensions can be both enablers and inhibitors depending on how they intersect. This underscores contingency perspectives, suggesting that contextual factors (e.g., sectoral regulations, market volatility) mediate the efficacy of different structural arrangements (Henseler, 2018; Shen et al., 2020).

Managerially, bank leaders should retain centralized authority in compliance-critical domains and in strategic resource allocation, while devolving day-to-day decision rights to specialized teams that are closer to the customer and the technology frontier. Formalization should protect core processes without suffocating creative problem-solving; flexible guidelines and "living" manuals can uphold prudential standards yet pivot quickly to evolving client needs. Specialization, finally, must be leveraged where complexity is highest—risk analytics, product innovation, and cybersecurity—while avoiding the trap of embedding these experts in hierarchies so rigid that their insights cannot reach the top fast enough.

The social dividend of such balanced structures is considerable. Banks that blend stability with agility foster public trust, extend financial inclusion, and contribute to job security and local economic growth (Allen, Demirguc-Kunt, Klapper, & Peria, 2016; Benson, 2022). In emerging markets where banking failures reverberate quickly through households and small firms, an architecture that guards solvency while enabling innovation constitutes a public good.

These insights translate into actionable policy. First, the Bank of Ghana could institute a "comply-or-explain" Structural Balance Scorecard that obliges banks to disclose and justify annual metrics on centralization, formalization, and specialization. Second, on-site examiners might integrate a design-risk module into the CAMELS framework, raising Pillar 2 capital charges when excessive overlap between centralization and formalization inflates operational risk (Zhong & Um, 2025). Third, regulators could authorize sandbox-enabled decentralization pilots in which frontline digital banking units experiment with lower decision thresholds before wider rollout. Fourth, capacity-building grants, jointly funded by the Chartered Institute of Bankers and Ghana Banking College, should certify middle managers in ambidextrous leadership so they can reconcile team autonomy with hierarchical discipline.

Finally, the Ghana Association of Bankers could convene an interbank learning consortium to benchmark Structural Balance Scorecards and diffuse best practices in structural agility.

By uniting these theoretical, managerial, social, and policy perspectives, the study not only clarifies when and why structural dimensions matter but also charts a pragmatic path for banking leaders and regulators seeking to elevate financial performance without sacrificing resilience or societal value.

This study's cross-sectional design and focus on ten Ghanaian banks limit generalizability. Future research could adopt longitudinal approaches or compare multiple emerging economies to explore how shifting macroeconomic conditions affect the interplay among centralization, formalization, and specialization (Meyer & Peng, 2016). Scholars may also integrate additional constructs, such as leadership style or organizational culture, to provide a more holistic view of how structure interacts with relational and contextual factors to shape performance (Liozu, 2021; Sidhu, 2024).

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