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Research Article

Internal Business Process Metrics, Organizational Performance, and the Moderating Role of Management Support in Ghana's Energy and Telecom Sectors

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About Article

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ABSTRACT

This study examines the impact of internal business process metrics on organizational performance in the oil and gas and telecommunications industries of Ghana under the lens of Resource-Based Theory and the Balanced Scorecard. With a mixed-method approach, data from 240 respondents were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM). The results demonstrated that the efficiency of internal processes have a significant impact on profitability ($\beta = 0.62$, $p < 0.01$) and market share ($\beta = 0.58$, $p < 0.01$). On the other hand, the analysis showed an insignificant effect of management support ($\beta = 0.09$, $p > 0.05$) as a moderator, thus indicating that internal efficiency can on its own lead to performance enhancement. These findings point to the necessity of operational excellence, lean management, and technological integration. The implementation of continuous improvement may therefore be negotiated by managers delegating authority to employees. Stakeholders must ensure that their strategic initiatives align with internal processes targeted at sustainable performance improvements among Ghana's core industrial sectors. This encourages organizations to monitor and assess their internal metrics for the purpose of guarding their competitive advantage.

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1. INTRODUCTION

1.1. Introduction

In any dynamic global economy, organizations are increasingly challenged to create operational efficiency and added value through optimizing internal business processes. Process-related measures such as cycle time, quality assurance, cost control, and flexibility are acknowledged to be important performance parameters (Kaplan & Norton, 1996). However, what is still critical to realize is that the actual transformation of these factors into sustainable outcomes has not been made, especially in the emerging economies. Ghana's oil and gas industry provides a suitable backdrop, as the public sector agencies face respective managerial challenges pertaining to performance tracking, resource limitation, and bureaucratic inertia. Owing to technological advancement and regulatory reform, both telecommunications and oil in Ghana have undergone changes, pointing to factors internal to organizations being insufficient in accounting for success against observed variability in performance outcomes. More recently, evidence has emerged indicating that management support in general and leadership commitment to data-driven decision-making and continuous improvement specifically moderate the actual impact of used internal metrics on performance gain. In this study, the relationship between internal process metrics and organizational performance will be investigated within the backdrop of oil and telecommunications in Ghana with special emphasis on the intervention effect of management support. The research thus seeks to fill an identified gap in performance management literature while simultaneously providing evidence-based recommendations for policymakers and practitioners that can eventually support the emergence of high-performing public-sector institutions in Ghana.

1.2. Statement of the problem

In the framework of a global economy that is becoming progressively more competitive and dynamic, organizations in Ghana's oil and gas and telecommunications sectors face significant pressure to enhance performance and achieve operational efficiency. Internal business processes encompassing quality management, innovation, service delivery, and operational efficiency are widely recognized as vital contributors to organizational performance Kaplan and Norton (2004). Despite the recognized significance of indicators concerning internal procedures, there is no empirical confirmation of their influence on the performance outcomes of companies in the Ghanaian setting. This void in knowledge is particularly evident in the oil & gas and telecommunications sectors where firms are striving to maintain their competitiveness against the backdrop of volatile market conditions and stringent regulations, as well as the ongoing technological transformation. Furthermore, the potential role of management support as a moderating factor that could either enhance or hinder the influence of internal business processes on performance has not been thoroughly investigated (Homburg *et al.*, 2012). Management support can affect resource allocation, employee motivation, and strategic alignment elements crucial for converting process improvements into tangible results. However, in the absence of empirical data, it is hard to say for sure whether strong management support

really boosts the positive effects of internal business metrics or plays a secondary role. Thus, the research study conducted below attempts to close this gap by evaluating the relationship between internal business process metrics and organizational performance measures and how management support moderates this relationship within the context of Ghana's oil and gas and telecommunications industries. Obtaining these insights will be important for all industry stakeholders by helping them to align their internal process improvements with the strategic management practices in order to guarantee sustainable performance in the market.

1.3. General objectives

The general objective is to determine the effect of internal business process perspective on organizational performance indicators and moderation effect of management support on the relationship between internal business process perspective and organizational performance indicators.

1.4. Theoretical framework

The study is based on the Resource-Based Theory (RBT), which is emanating from Penrose's (1959) theory of firm growth and Ricardo's (1817) rent theory, this study is based upon. It focused on the unique business resources affecting firm performance more on the meso aspect of organization's performance than macro. Based on Barney (1991), RBT argues resource combinations that are unique to firms are valuable, rare, inimitable, and non-substitutable, in the long run creating competitive advantages. Two basic postulation lies behind RBT that is resource heterogeneity and resource immobility Resource heterogeneity indicates that even though the different companies compete in the same sector, they own different combinations of tangible and intangible assets like technology, human capital, intellectual property and brand reputation which create different valuable competitive positions (Helfat & Peteraf, 2003). Resource heterogeneity implies that different assets owned by competitive firms create a different competition level; hence some companies become competitive because of their resource mix and quality (Kozlenkova *et al.*, 2014). This means that some resources are difficult to transfer or duplicate from one company to another into certain conditions. Intangible assets such as culture, reputation, and knowledge proprietary are indeed rooted in the history and relation of a firm, and therefore hard to imitate (Kozlenkova *et al.*, 2014). The dynamics of a firm's competitive edge are further reinforced with strong relationships of suppliers and customers, human capital, and organization-specific processes. A number of scholars have used RBT in numerous business situations. Aker *et al.* (2016) showed that when large data analytics are fitted within an RBT framework, firm performance improves due to technology aligned with management and human resources for business strategies. Nambisan *et al.* (2019) showed that some innovation capabilities-including equipment, expertise, and the applications of big data-were essential for maintaining the competitive edge. RBT supported marketing innovation, where companies established market-based resources for responding strategically to environmental changes (Kozlenkova *et al.* 2014). RBT is good but has its own share of criticisms. Scholars say that



it is tautological, static, and at times empirically very difficult to test (Priem & Butler, 2001; Barney, 2001). It cannot really explain how firms can maintain a competitive advantage in a quickly changing environment and often overlooks the external effect of market trends as well as regulatory changes (Lewis *et al.*, 2014). In addition, this stress on rare resources may well be unnecessary since, by definition, valuable and inimitable resources are rare and will, in any case, be valued as less than at least some level of inimitability (Priem & Butler, 2001). To address such criticisms, it has been suggested by scholars like (Palmatier *et al.*, 2013), by expanding its definition through terms such as dynamic capabilities and co-specialization. The essence of the dynamic capabilities approach implies that firms must be engaged in continuous adaptation of their resources, competencies, and learning to meet the pace at which evolving market demands unfold (Ambrosini & Bowman, 2009). This may include establishing training programs for employees, developing research and development (R&D) initiatives, upgrading of technologies, among others, while considering the external environmental factors with the help of frameworks such as PESTEL and Porter's Five Forces. Elementing the Resource-Based Theory is the most significant exploration for assessing both performance metrics, financial and non-financial, in Ghana's oil, gas, and telecommunication sectors. The balanced scorecard incorporates financial measures, customer perspectives, internal processes, and learning and growth, providing complementary values to the focus on internal resources in RBT. In such sectors like these, resources such as advanced drilling technologies, safety protocols, IT infrastructures, and customer service capabilities are crucial for achieving operational efficiency in running processes as well as satisfying customer needs. This research aims to examine how the collection of internal resources influences a firm's performance. It surveys management support to ascertain the effect it has on the relationship between internal business processes and performance measures. Management is considered a crucial resource in the utilization of resources and hence determines the effectiveness of aimed resources at achieving strategic goals. Thus, Examination of the moderating effects of management practice gives a closer look into the tactical choices that amplify or diminish the effects of financial and operational strategies. Generally, RBT provides a very good insight into how firms can use their internal strengths for sustainable growth and competitiveness. When aligning internal capacities with strategic goals, firms will be able to bear better the market pains and achieve results that surpass others in the long run. RBT also forms the basis for identifying and analyzing the key internal resources and capabilities that affect organizational performance in Ghana's oil, gas, and telecommunications industries.

2. LITERATURE REVIEW

The Balanced Scorecard (BSC) has cemented itself as one of the primary strategic performance management tools since it incorporates the balancing of financial and non-financial measures for the purpose of ensuring the alignment of the business activities to organizational objectives. There have been studies focusing more on the application of the BSC in

various sectors, including logistics (Nguyen & Robinson, 2024), marketing (Bhandari & Mehta, 2023), innovation (Scott & Smith, 2024), and public institutions (Martinez & Torres, 2024), which has consistently shown an improvement of strategic alignment, visibility, and operational agility through the BSC. However, there are still contextual limitations, methodological issues, and sectorial barriers, especially when considering human capital measurement, digitization, and cross-industry generalizations. This study by Nguyen and Robinson (2024) examined BSC adoption in logistics, emphasizing the difficulties of balancing financial efficiency over service quality with regional differences in data reporting. Their findings are intriguing, albeit not accounting for the integration of performance measures, which suggests a need to study further the potential role of technology and interdepartmental collaboration in improving BSC effectiveness within logistics. Sumant *et al.* (2024) assessed customer-oriented dimensions in the BSC models of Indian companies, reporting that customer-oriented measures tend to enhance satisfaction and loyalty significantly. However, the limited methodological transparency raises questions regarding its credibility and suggests the need for broader, more rigorously designed studies.

Meena and Thakkar (2014) investigate the interface between the Lean Management and the BSC in the manufacturing sector and the healthcare sector. They found that the leadership style and organizational culture are important for being able to integrate the two concepts successfully, but they did not discuss industry-specific issues such as the regulatory environment in healthcare or technological changes in manufacturing. Therefore, future studies should incorporate these elements along with assessing how digital tools can potentially help the BSC adoption across different industries. Mitchell (2024) studied the influence of employee engagement on the successful implementation of BSC through qualitative case studies in retail, hospitality, and educational sectors. The findings showed that engagement levels of employees increase the outcomes of BSC; nevertheless, the specific sector differentials and cultural issues affecting engagement were not completely dealt with in the study, warranting the need for further comparative studies in other industries and regions. Thakkar *et al.* (2006) assessed into the incorporation of marketing indicators into BSC models so as to build a profile of Indian marketing agencies. They conclude that inclusion of marketing metrics facilitates tactical alignment with business objectives. On the other hand, the limited geography of the study limits generalizability; hence, a much larger scope is required that includes cross-sectorial research to support these findings worldwide. Oyewo *et al.* (2022) reviewed how innovation metrics in the BSC framework contribute to strategic management and performance enhancement. The study gave some positive insights but failed to explore in-depth the difficulties of measuring innovation in different organizational contexts. Future studies may include comparative case studies of BSC implementations integrating innovation metrics that have been either successful or unsuccessful. Chan *et al.* (2019) examined the BSC that enhances organizational agility amidst Indian firms. Their study showed that BSC enables responsive strategies to changes in the market. The downside of this



research is that it does not explore whether BSC effectiveness is influenced by company size, culture, and industry context. Such factors would have led to further understanding of the BSC's impact. According to Assibi (2024) BSC is very important for strengthening business continuity planning in Canada-based organizations. They claimed that BSC arrangements would build resilience and risk management; however, they lacked attention in evaluating implementation difficulties facing varied industries. Only a well-rounded view could then be realized if this was coupled with relevant consideration of both the successful and miserable cases. Lee and Kim (2024) evaluated the performance of BSC in terms of optimization of supply chain operations in South Korea. Their findings confirm that BSC enhances operational efficiency and collaboration. Nevertheless, the study's applicability conclusions are only valid in the context of South Korea. Its relevance would be further meaningfully widened, if research could include investigation into other regions with the aim of better understanding the global relevance of BSC in supply chains. Northcott and Ma'amora Taulapapa (2012) assessed the effect of the BSC on accountability and transparency in Spanish governmental institutions. The authors discovered that BSC increases visibility of performance in government, yet implementation problems was not sufficiently discussed. Therefore, more study cases in practice are needed to better inform the public sector applications of the BSC. Treinta *et al* (2020) found that using a BSC in U.S. non-profit organizations would result in determining effectiveness through using customized performance measures to evaluate success. However, the study fails at fully pinning down the limitations of the tailor-made metrics. Future investigation should develop a holistic view regarding the pros and cons of the case in order to acquire a better understanding of customized BSC applications. Jardak and Ben Hamad (2022) studied how digital transformation affects BSC in U.S. companies. They concluded that the addition of digital measures helps in tracking performance and aligning strategies. Though quantitative validation was missed in the study, the authors reasoned that future studies should be looking toward combining qualitative inputs with quantitative approaches to validate digital integration benefits onto the BSC. Overall, the existing studies provide some validation for the BSC in facilitating organizational improvements across various industries and sectors. Amid these numerous empirical studies, many suffer from methodological drawbacks, sector-specific limitations, and the issue of generalizability. Such considerations underscore the need for future research that focuses on contextual depth, wider sample populations, consideration of technological integration, and a more balanced appraisal of BSC implementation's promised benefits versus challenges.

2.1. Conceptual literature review

According to RBV, organizational performance emanates from

the valuable, rare, inimitable, and non-substitutable resources and capabilities the organization possesses (Barney, 1991). In such a context, internal business processes become important organizational capabilities, leveraging them strategically towards enhanced performance. Previous studies (Kaplan & Norton, 1992; Ray *et al.*, 2004) have shown that strong internal business processes such as operational efficiency, innovation processes, and customer service processes are dominant in the performance of organizations. These hold more relevance in the emerging economies like Ghana because, in all cases, much market and infrastructural challenges engulf firms in energy and telecommunications (Adomako-Kwakye, 2021). The RBV sees such processes as strategic assets that firms use to build competitive advantage. Notwithstanding, evidence shows a mixed bag: several studies have shown a strongly positive relationship (Sirmon *et al.*, 2011), while others argue that these process metrics must be complemented and supported by organizational structures. Management support includes leadership commitment, resource allocation, and direction at a strategic level, which are believed to be critical to the enablement of capability deployment (Teece, 2019). From the perspective of RBV, management support enables the conversion of internal processes into sustained performance outcomes. Management significantly influences changes in internal processes in Ghana's dynamic energy and telecom sectors to combat adverse effects from these volatile environments (Osei *et al.* 2024). Even still, limited empirical analysis has considered management support as a moderating variable between internal processes and organizational performance: a gap this study aims to fill. The current study enters the ongoing scholarly discourse surrounding the contextual applicability of RBV in emerging economies (Zoogah *et al.*, 2015). Opponents argue that traditional RBV assumptions (of stable environments and resource scarcity) may not apply fully to such volatile sectors as the energy and telecoms in Sub-Saharan Africa. This research focuses on Ghana and adds to the empirical evidence in the debate on how internal capabilities interact with environmental dynamism through the moderating role of managerial actions. The study seeks to address two key gaps. Contextual Gap: Limited RBV-based research conducted in the regulated sectors of Sub-Saharan Africa, which are changing fast; Theoretical Gap: Rare attention on management support as a contingent (moderating) factor influencing capability-performance relationships. This RBV-based study will, therefore, investigate how internal business process measures affect performance in Ghana's energy and telecom sectors and the moderating role of management support therein. It adds to the ongoing discussions on the contextual applicability of RBV in emerging economies and highlights contingent roles of leadership in harnessing organizational capabilities for performance achievement. Conceptual model figure

2.2. Conceptual model figure



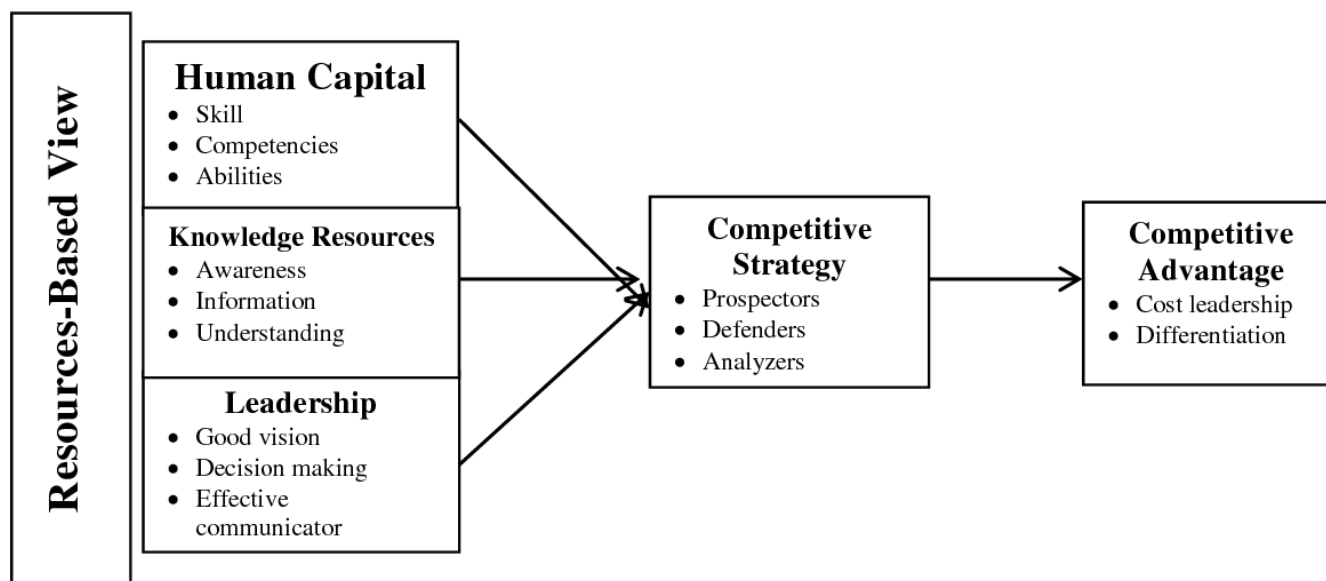


Figure 1. Research model

Source: *Researcher's Construct (2025)*

3. METHODOLOGY

3.1. Research design, method and approach

The research employed a case study design. An explanatory sequential research design has been chosen because it allowed the researcher to administer questionnaire to a quantitative larger sample size and also conduct random interviews with a smaller qualitative sample size. For the purpose of this study, this research the population of interest constituted 500 employees from major sectors in Ghana, particularly the oil and gas, and telecommunication industries, both of which are crucial to the nation's economy. The sample will encompass private companies such as MTN Ghana, Telecel, Airtel/Tigo, as well as public sectors entities such as Ghana Post Company, Bulk Oil Storage and Transportation Company Limited, National Petroleum Authority, Ghana National Petroleum Corporation, Petroleum Commission, Ghana Gas, and Ghana Oil Company. The sample size was derived from the formula;

Population size (N) = 500

Sample size (n): 240

Z-value for 95% confidence level (Z):1.96

Estimated proportion (P):0.5

Margin for error (E):4.56% or 0.0456

$n = N \times Z^2 \times P \times (1-p)$

$(N-1) \times E^2 + Z^2 \times P \times (1-p)$

$Z^2 = 1.962 = 3.8416$

$P \times (1-p) = 0.5 \times (1-0.5) = 0.5 \times 0.5 = 0.25$

$N \times Z^2 \times P \times (1-p) = 500 \times 3.8416 \times 0.25$

$500 \times 0.9604 = 480.2$

$(N-1) \times E^2$

$(N-1) \times E^2 = (500-1) \times 0.0456^2$

$(N-1) \times E^2 = 499 \times 0.00207936$

$(N-1) \times E^2 = 1.03889364$

$(N-1) \times E^2 + Z^2 \times p \times (1-p) = 1.03889364 + 0.9604 = 1.99929364$

$n = 480.2$

$= 240$

The approximate sample size of 240 is 5% of the target population of 500 which was representative enough of the entire population. For this research, purposive sampling was applied to intentionally target individuals which offer the most important perspectives related to the research objectives. Both closed and open-ended questions were used to allow easy compilation of responses collected in the questionnaires. This is to solicit for more information on answers to closed ended questions as to the reasons why that answer so that we can have an in-depth understanding of the topic at hand. The collected data was analyzed using Microsoft Excel as well as PLS-SEM where simple descriptive statistics were obtained and results were summarized as graphs and tables for discussion. Ethical considerations for this study included obtaining informed consent from participants, ensuring anonymity and confidentiality, and minimizing any potential harm to the participants

4. RESULTS AND DISCUSSION

The chapter outlines key research findings relating to measures customer perspective and their effect on performance indicators of the organization and the moderating role of management support. The study location, Ghana, pertains to the oil and gas as well as telecommunication sectors. The analysis reveals significant key differences relative to specific sectors. While these two industries are characterized by very good management support, such support is very different in nature and intensity. The telecommunication sector is faced with lots of disruptive technologies and fierce competition; thus, management engagement improves agility, customer responsiveness, and innovation capacity which should be key transient performance drivers. However, in the oil and gas sphere, operations typically are much capital-intensive as well as over-regulated and require a great deal of management support for compliance, large-scale operational efficiency,



and the ability to maintain stakeholder confidence over much longer projects.

The demographic analysis Overview studied participants by sex, age, level of education, sector of industry, and work experience. Almost, equal representation of males and females in the sample. The female participants slightly outweighed the

males as 122 out of 239 total participants were women (51.05%) while those that were men were 117 (48.95%). This balanced representation makes the research results more credible and generalizable. The higher numbers of female participants may denote the increasing participation of females in the sectors studied. Most subjects formed the 20-30 age category

Table 1. Descriptive statistical analysis result -demographic

		Frequency	Percent
Gender	Male	117	48.95
	Female	122	51.05
Age	20-30 Years	75	31.38
	31-40 Years	61	25.52
	41-50 Years	66	27.62
	51-60 Years	35	14.64
	61 Years And Above	2	0.84
Education level	Bachelor's Degree	86	36
	Doctorate/PhD Degree	19	7.9
	Master's Degree	71	29.7
	Professional Certificate	63	26.4
Roles	Financial And Account Professionals	27	11.3
	Head Of Department	34	14.2
	HR And Performance Professionals	28	11.7
	Middle/Line Manager	60	25.1
	Senior Manager	31	13
	Supervisor	59	24.7
Sectors	Oil And Gas	95	39.7
	Telecommunications	144	60.3
Experience level	More Than 10 Years	11	4.6
	1-3 Years	52	21.8
	4-6 Years	76	31.8
	7-10 Years	49	20.5
	Less Than 1 Year	51	21.3

Source: Field data (2025)

which made up 31.38% (or 75 respondents) showing a young workforce. Next came individuals of age 41-50, comprising 27.62% (66 respondents), while 31-40-year-olds constituted 25.52% (61 respondents). Older age groups, particularly those 51-60 (14.64%) and above 60 (0.84%), were less represented'. This alludes, however, to generational diversity, and it also appears that younger and mid-career professionals dominate the workforce, indicating a renewal. Bachelor's degree holders made up the majority at 36 percent (86 respondents), followed by master's degree holders at 29.7 percent (71 respondents). As much as 26.4 percent (63 participants) were professional certification holders, accounting for the high value put on

specialized skills acquired. Only 7.9 percent (19 participants) possessed a doctorate, thus indicating fewer highly specialized academicians in the workforce. In general, the data state that bachelor's and master's levels were the most obtained qualifications augmented by relevant professional training. Most of participants' results came from the telecommunication industry (60.3%, 144 respondents), with the oil and gas industries accounting for the remaining 39.7% (95 respondents). From this data, it is likely that the conclusions of this study would still lean towards those from the telecommunications sector, while also bringing in a valuable outside perspective from the oil and gas industry. The highest number of respondents showed between



4 to 6 years of experience (31.8%, 76 respondents), indicating a good percentage of mid-career professionals. In addition, 1 to 3 years (21.8%, 52 respondents) and below 1 year (21.3%, 51 respondents) formed a combined significant percentage representing many beginners in the professions. Meanwhile, 20.5% (49 respondents) had experience spanning between 7-10 years while only a small 4.6% (11 respondents) had above 10 years of experience indicating an under-representation of senior professionals. From demographic data, most people are young, mid-career, moderately experienced, fairly balanced in terms of gender with diverse educational backgrounds, and mainly drawn from the telecommunications sector.

4.1. Measurement assessment model

The first stage in the evaluation of a measurement model is called outer model assessment, which uses Partial Least Squares (PLS) for Confirmatory Factor Analysis (CFA). This step addresses the relationship between the indicators (i.e. questions or items) and the hidden concepts (termed as latent constructs) proposed in the model. It acts as a confirming check for whether the data reasonably fits with the theoretical proposition. For tests of reliability and consistency of the indicators, researchers resort to Cronbach's alpha and composite reliability. High reliability indicates that the indicators provide stable results. Validity is also established to ascertain that what is being measured is being measured. Convergent validity asserts that related indicators are strongly correlated, verified via Average Variance

Extracted (AVE) and factor loadings. Accordingly, AVE has good indicators exceeding 0.50 and that the factor loadings are greater than 0.70. Tests regarding discriminant validity assure that each concept is clearly distinct from each other. Tests like the Fornell-Larcker criterion were then conducted. In all, the model proved to be reliable and usable to proceed to the next analysis.

4.1.1. Factor loading

The numbers used to show how strongly an observed variable corresponds to a hidden or latent construct factor in factor analysis are factor loadings. A number that means between -1 and +1 belongs to this specific kind of value. A number closer to ± 1 means there is a stronger link between that variable and that factor; on the other hand, values in the vicinity of 0 show a far weaker connection between the two. Factor loading values may be used in theory help understand how well items reflect those latent constructs under study in methods like PCA (Principal Components Analysis) and CFA (Confirmatory Factor Analysis). According to researchers, loadings above 0.70 are strong and reflect that the item is a good fit. Loadings below 0.40 are said to be weak and that the item might not belong in the model (Hair *et al.*, 2019). These loadings test the validity and reliability of the model. The higher the loading, the better the indicator (item) represents the theory-the more accurate and trustworthy the measurement tool will be. In Table 4.2, those loading values can be observed.

Table 2. Factor loading

	CUSTP	FP	IBP	LGP	MANST	MARKS	OCB	RETA
CUSTP1	0.783							
CUSTP2	0.873							
CUSTP3	0.838							
CUSTP4	0.814							
CUSTP5	0.606							
FP1		0.676						
FP2		0.813						
FP3		0.689						
FP3		0.689						
FP4		0.853						
FP5		0.819						
IBP1			0.795					
IBP2			0.859					
IBP3			0.845					
IBP4			0.821					
IBP5			0.804					
LGP1				0.764				
LGP2				0.797				
LGP3				0.830				



LGP4	0.832	
LGP5	0.778	
MANST1	0.815	
MANST2	0.934	
MANST3	0.846	
MANST4	0.807	
MARKS1	0.802	
MARKS2	0.827	
MARKS3	0.800	
MARKS4	0.792	
MARKS5	0.784	
OCB1	0.753	
OCB2	0.762	
OCB3	0.790	
OCB4	0.800	
OCB5	0.808	
RETA1	0.753	
RETA2	0.751	
RETA3	0.800	
RETA4	0.738	
RETA5	0.753	
RETA6	0.725	

Source: Field data (2025)

4.1.2 Indicator multicollinearity

The Variance Inflation Factor (VIF) is an important diagnostic tool used to assess the existence of multicollinearity among predictors in regression analysis. Multicollinearity arises when independent variables exhibit significant intercorrelations, resulting in distortion of parameter estimates, inflated standard errors, and undermined statistical significance of predictors (Fornell & Bookstein, 1982). Consequently, this would provide unreliable coefficient estimation and decreases the model's explanatory power (Gujarati & Porter, 2009). Hair *et al.* (2016) suggested the corrective measures including transformation, removal, or model re-specification if VIF values were more than five, indicating the presence of significant multicollinearity. The

study indicated that VIF values in Table 3 were significantly lower than the critical threshold, confirming that there were no multicollinearity problems. The absence of strong collinearity will guarantee that their predictor variables influence their model independently, minimizing any bias in estimation and enhancing the precision of interpreting their coefficients (Kline, 2015). The consequent strengthening of estimation robustness confirms the reliability of statistical inferences; hence the relationships observed among variables would not be spuriously magnified by redundancies among the predictors. Thus, the results of this study were fortified into validity and reliability, providing a strong basis for inferential conclusions.



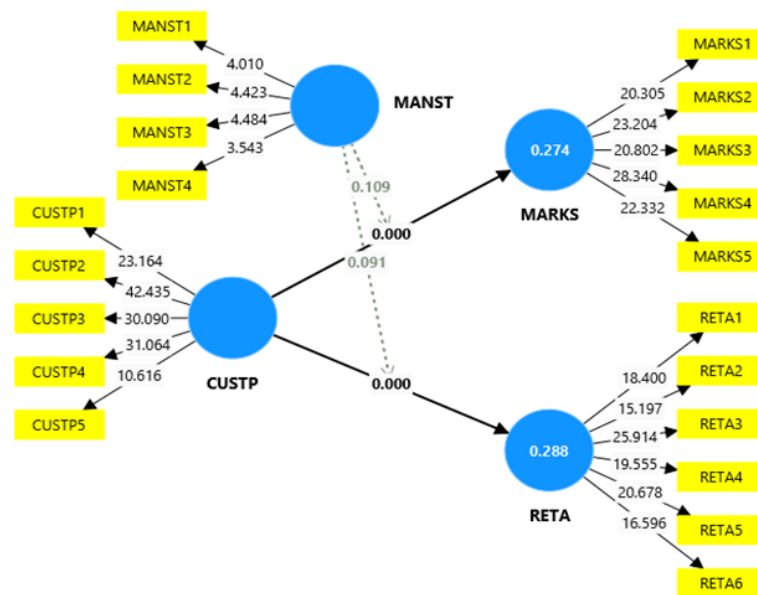


Figure 2.

Table 3. Direct relationship result (IBP)

	Beta coefficient	Standard deviation	T statistics	P values
IBP -> MARKS	0.492	0.058	8.465	0.000
IBP -> RETA	0.576	0.051	11.331	0.000
MANST -> MARKS	0.023	0.084	0.274	0.784
MANST -> RETA	0.048	0.069	0.698	0.485
MANST x IBP -> MARKS	-0.056	0.080	0.701	0.483
MANST x IBP -> RETA	-0.101	0.080	1.274	0.203

Source: Field Data (2025)

4.2. To assess the influence of internal business process perspective measures on organisational performance indicators and investigate the moderating effect of management support on the relationship between internal business process perspective measures and organizational performance indicators.

i. To what extent does the internal business process perspective measure impact return on assets as an organisational performance indicator? The examination of the impact of internal business process perspective measures on return on assets (ROA) yields important insights regarding their contribution to improving organisational performance. Table 4.11 presents results that demonstrate a positive and statistically significant relationship between the internal business process perspective measures and ROA, with statistical values of ($\beta = 0.492$, $t = 8.465$, $p > 0.001$). This finding indicates that enhancements in internal business processes substantially impact financial performance, as demonstrated by a 49.2% increase in ROA for each 1% increase in internal business process metrics. An analysis of these results indicates that the efficiency and effectiveness of an organization's internal operations are vital for improving its financial outcomes. Internal business process measures include operational efficiency, process innovation,

workflow optimization, and resource utilization, which are essential for enhancing cost efficiency and profitability. Refining these processes allows organizations to reduce waste, improve productivity, and ultimately increase financial returns. The substantial statistical value highlights that effectively organized and strategically overseen internal business processes directly influence financial metrics, including ROA. The strong positive effect indicates that improvements in internal business processes optimize resource allocation and enhance value creation within the organization. Optimized operational processes enhance output efficiency, lower production costs, and elevate service delivery, thereby directly influencing profitability. This is consistent with the performance management frameworks that highlight the significance of internal efficiency in achieving long-term financial success. Organizations that emphasize continuous process improvement, automation, and lean management strategies are likely to achieve improved financial stability and competitive advantage. The importance of internal business processes in enhancing financial performance underscores the need for organizations to invest in business process reengineering, technological advancements, and process standardization. The integration of data-driven decision making, performance



monitoring systems, and process automation enhances the effectiveness of internal operations. The internal business process efficiency is directly associated with operational cost savings. Organizations that do not optimize these processes may experience heightened operational inefficiencies, which can adversely impact their financial results. The finding that internal business process measures significantly influence ROA underscores the importance of strategic alignment between operational activities and organisational financial objectives. Organizations must structure internal workflows, production mechanisms, and service delivery models to support financial sustainability. Adopting methodologies such as Six Sigma, Total Quality Management (TQM), and continuous process improvement can improve internal efficiency, resulting in increased financial returns. The statistically significant relationship between the internal business process perspective measures and ROA highlights the essential role of operational efficiency in influencing financial performance. The findings indicate that process optimization enhances profitability and organisational sustainability, underscoring the necessity for ongoing innovation and efficiency-oriented management practices. Organizations that strategically invest in internal process improvements are more likely to attain sustained financial success, thereby enhancing their long-term competitiveness.

ii. What is the effect of the internal business process perspective measure on market share as an organisational performance indicator? The examination of the correlation between internal business process perspective metrics and market share yields essential insights into the influence of operational efficiency on organisational competitiveness and growth. The findings shown in Table 4.11 demonstrate a positive and statistically significant impact of the internal business process perspective measures on market share, with statistical values of ($\beta = 0.576$, $t = 11.331$, $p > 0.001$). This indicates that a 1% enhancement in internal business process metrics correlates with a projected 57.6% increase in the market share. This finding highlights the essential role of internal business processes in improving a firm's competitive position and increasing its market share. An analysis of these results indicates that organizations with well-structured and efficient internal processes are more capable of providing superior value to customers, which in turn enhances customer loyalty and market penetration. Efficient internal operations enhance product quality, expedite service delivery, reduce costs, and improve customer satisfaction, all of which are critical to customer attraction and retention. Firms that optimize their business processes establish an environment conducive to continuous improvement, resulting in sustainable competitive advantages that ultimately enhance their market share. The strong statistical significance of this relationship indicates that internal business processes are crucial for determining a firm's competitive effectiveness. Companies that enhance their operations via automation, workflow optimization, and process innovation generally attain increased operational agility. This agility allows for rapid responses to market dynamics, capitalization on emerging opportunities, and adaptation to shifting consumer preferences, thereby enhancing the market position. Efficient scaling operations

while maintaining quality and controlling costs enable firms to expand their customer base, thereby enhancing market share. The significant positive impact of internal business process measures on market share underscores the necessity for firms to invest in process improvement strategies, including Lean Management, Six Sigma, and Total Quality Management (TQM). These strategies improve efficiency, minimize waste, and ensure that internal operations are consistent with market demands. Consistent delivery of high-quality products and services at competitive prices enhances brand loyalty and customer retention, thereby facilitating market expansion. These findings highlight that internal business processes are fundamental to sustainable growth. Organizations that do not optimize their internal workflows are susceptible to inefficiencies, resulting in operational bottlenecks, diminished service quality, and increased production costs, which may ultimately compromise market share. By contrast, companies that consistently enhance their business processes may achieve a strategic advantage through improved responsiveness, cost efficiency, and increased market appeal. The statistically significant relationship between the measures of the internal business process perspective and market share highlights the essential role of operational efficiency in achieving competitive success. Companies that focus on optimizing internal processes are more likely to achieve sustained market growth and establish themselves as industry leaders through improved productivity, innovation, and customer-focused strategies.

iii. To what extent does management support moderate the relationship between the internal business process perspective measure and organisational performance indicators? The examination of management support's moderating role in the relationship between internal business process perspective measures and market share yields important insights into the influence of managerial involvement on the efficacy of internal processes in enhancing organizational competitiveness. The findings shown in Table 4 demonstrate that management support exerts a positive but statistically insignificant direct influence on market share and return on assets, with statistical values of ($\beta = 0.023$, $t = 0.274$, $p = 0.784$) and ($\beta = 0.048$, $t = 0.698$, $p = 0.485$), respectively. This indicates that, although management support may play a role in firm performance, its direct impact is limited and lacks statistical significance in influencing market share or financial returns. Additionally, the analysis of management support as an interactive variable revealed a negative and statistically insignificant moderating effect on the relationship between internal business process perspective measures and market share, as evidenced by the statistical values ($\beta = -0.056$, $t = 0.701$, $p = 0.483$) and ($\beta = -0.101$, $t = 1.274$, $p = 0.203$). These findings indicate that management support does not significantly enhance or diminish the effect of internal business processes on market share, suggesting that its influence on this relationship may be restricted or dependent on additional factors. An analysis of these findings indicates that the efficacy of internal business processes in improving market share may not be substantially influenced by direct managerial intervention. Firms with established operational structures, standardized workflows, and process optimization frameworks may achieve performance improvements without



active managerial influence. This supports the idea that companies possessing robust internal capabilities and clearly articulated process-oriented cultures can attain competitive advantages via efficiency, innovation, and customer responsiveness independent of top-down management interventions. The negative coefficient of the interaction term indicates that excessive managerial involvement may impose bureaucratic constraints that impede the efficiency of internal business processes in certain instances. Over management, excessive control mechanisms, and rigid hierarchical decision-making structures can impede innovation and responsiveness, consequently diminishing the agility required for market-share expansion. This may explain the weak and statistically insignificant moderating effect of management support. These results underscore the potential impact of decentralized decision making on market share growth. Organizations that enable

lower-level managers and frontline employees to enhance internal processes and execute strategic initiatives are likely to be more effective in optimizing business operations for market competitiveness. This highlights the significance of cultivating an organisational culture that emphasizes operational excellence, continuous improvement, and data-driven decision-making, rather than relying on direct managerial interventions. The findings indicate that management support is a crucial element of organisational success; however, its direct and moderating effect on the relationship between internal business processes and market share is constrained. This underscores the significance of process-oriented performance models that priorities operational efficiency, employee autonomy, and strategic flexibility, as these factors may exert a greater influence on market share growth than direct managerial involvement.

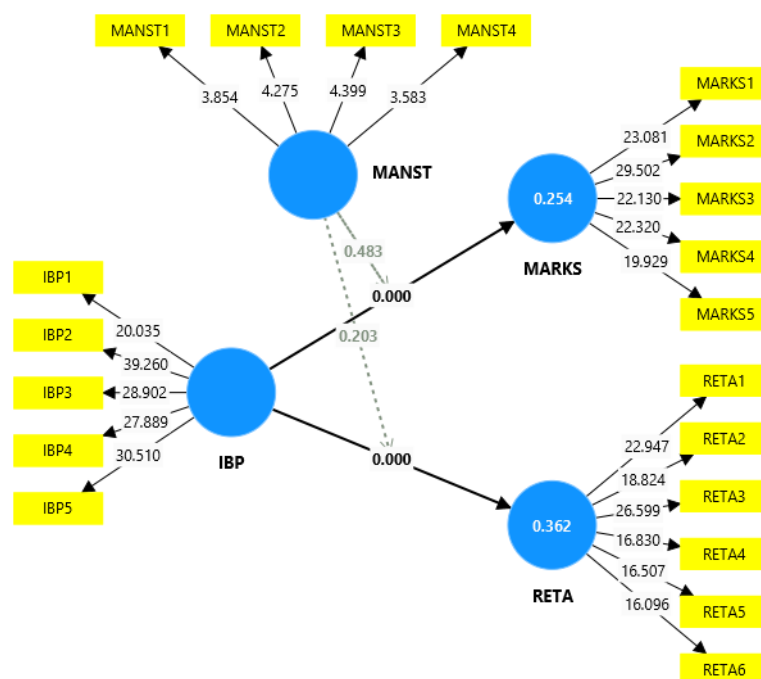


Figure 3.

Table 4. Direct relationship result (LGP)

	Beta coefficient	Standard deviation	T Statistics	P values
LGP -> MARKS	0.596	0.058	10.335	0.000
LGP -> RETA	0.649	0.047	13.823	0.000
MANST -> MARKS	-0.014	0.074	0.194	0.846
MANST -> RETA	0.012	0.071	0.171	0.864
MANST x LGP -> MARKS	-0.083	0.076	1.087	0.277
MANST x LGP -> RETA	-0.063	0.074	0.852	0.395

Source: Field data (2025)

4.3. Discussions and implications of the findings

The relationship between measures of internal business process perspectives and organisational performance

has been extensively studied in the fields of strategic management and operational efficiency. These findings indicate that improvements in internal business processes



significantly enhance financial performance, as evidenced by return on assets (ROA). Organizations that optimize internal processes demonstrate significant enhancements in profitability, consistent with previous research highlighting the importance of business process efficiency in influencing financial performance (Sarwar & Rehman, 2024). Efficient internal processes allow firms to allocate resources effectively, lower operational costs, and enhance productivity, thereby improving asset utilization and profitability. This finding is consistent with the resource-based view (RBV), which asserts that organizations can attain competitive advantages through the development, and utilization of internal capabilities, such as process efficiency (Barney, 1991). The significant relationship observed between internal business process measures and market share supports the notion that process efficiency is a crucial factor in determining an organizations' competitive position. Previous research indicates that companies with effective internal processes are more capable of adapting to market demands, optimizing production, and improving service delivery, resulting in an increased market share (Benedettini, 2024). This study substantiates the idea that enhancements in internal business process metrics lead to a significant growth in market share. This positive impact results from an organization's capacity to provide enhanced value to customers via superior product quality, expedited service delivery, and cost efficiency, thereby strengthening its competitive position within the industry. Furthermore, companies that engage in process optimization can achieve market differentiation, resulting in enhanced customer retention and brand loyalty (Schniederjans *et al.*, 2022). This study indicates that management support does not have a significant impact on market share or ROA when evaluated as an independent variable. These findings challenge previous research and indicate that robust managerial support is essential for process improvement initiatives. Van Assen (2018) posited that management involvement in lean and process improvement initiatives is essential for attaining operational excellence. Managerial support is linked to enhanced resource allocation, increased employee motivation, and improved strategic alignment, all of which are critical for achieving process improvements. The minimal effect of management support identified in this study prompts enquiries regarding the circumstances that enable managerial support to result in measurable performance improvements. The nature of management involvement (directive, participatory, or transformational) may influence its effectiveness. Additionally, when management support is analyzed as a moderating variable, its influence on the relationship between internal business process measures and performance indicators is statistically insignificant. This finding indicates that management support does not influence the positive relationship between internal business processes and market share or ROA. This finding is unexpected given that earlier research has shown that managerial support is essential for maintaining process improvement initiatives (Sousa & Voss, 2022). A potential explanation for this inconsistency is that organizations with well-structured internal processes may possess mechanisms that reduce the need for active managerial intervention. In these instances, frontline employees and automated systems

may assume a more prominent role in enhancing efficiency, consequently diminishing the direct impact of management support on performance. Conversely, the negative yet statistically insignificant moderating effect of management support indicates that, in certain contexts, excessive managerial intervention may impede rather than facilitate process optimization efforts. Van Assen (2018) observed that excessive managerial involvement in operational activities may result in bureaucratic inefficiencies, hinder innovation, and provoke employee resistance. This indicates that effective management support requires strategic application, promoting an environment of autonomy and continuous improvement, instead of excessive oversight. Organizations should priorities employee empowerment, cultivate a culture of accountability, and utilize technology-driven process enhancements instead of depending exclusively on managerial oversight. The findings of this study enhance the discourse on internal business processes and organisational performance by confirming the direct positive impact of process efficiency on financial performance and market share. These findings challenge traditional assumptions regarding management support, indicating that its influence may vary depending on the context. Future research should investigate the conditions that influence managerial support to improve or undermine the effectiveness of internal business processes. Examining the intricate function of management in process optimization may yield valuable insights into how organizations can effectively balance autonomy and oversight to enhance performance.

The findings of this study offer significant insights into the application of Resource-Based Theory (RBT) to examine the relationship between internal business process perspective measures and organisational performance. The Resource-Based Theory, articulated by Barney (1991), asserts that firms attain a sustainable competitive advantage through the development and utilization of valuable, rare, inimitable, and non-substitutable (VRIN) resources. The positive effect of internal business process measures on assets (ROA) and market share is statistically significant, supporting the theory that internal capabilities are essential drivers of superior performance. The substantial influence of internal business processes on ROA ($\beta = 0.492$, $t = 8.465$, $p > 0.001$) supports the Resource-Based Theory by indicating that firms optimizing internal operations improve their financial efficiency. This indicates that process-oriented enhancements, including workflow automation, quality management systems, and lean operations, serve as strategic assets to enhance financial performance. Refining internal operations enables firms to lower costs, enhance productivity, and optimize asset utilization, resulting in increased profitability. The findings support Peteraf and Barney's (2003) assertion that the efficient deployment of organisational resources is essential for achieving competitive advantages, thus affirming the significance of process optimization in enhancing financial performance. The positive and statistically significant effect of internal business processes on market share ($\beta = 0.576$, $t = 11.331$, $p > 0.001$) further validates Resource-Based Theory by illustrating that internal capabilities lead to external competitive advantages. Expanding market share typically depends on a firm's capacity to provide consistent value to



customers through operational excellence. Firms' capacity to cultivate advanced internal processes, including agile supply chain management, customer-responsive production strategies, and innovation-driven operational frameworks, enhances their market positioning. This is consistent with Grant's (1996) assertion that firms possessing strong internal capabilities are more effectively positioned to maintain competitive advantage, resulting in enhanced market dominance. This study's findings concerning the role of management support contest specific assumptions of RBT. The lack of a statistically significant direct effect of management support on ROA ($\beta = 0.048$, $t = 0.698$, $p = 0.485$) and market share ($\beta = 0.023$, $t = 0.274$, $p = 0.784$) indicates that managerial support alone may not be considered a strategic resource within Resource-Based Theory unless integrated with wider organisational capabilities. This finding diverges from those of previous studies that highlight leadership and managerial commitment as critical resources for achieving organisational success (Newbert, 2007). The non-significant moderating effect of management support suggests that its influence may depend on other organisational factors, including culture, employee engagement, and technological capabilities. These findings enhance the theoretical discourse on RBT by elucidating the complex role of managerial resources in influencing organisational performance. Although internal business processes serve as important resources that enhance performance, managerial support does not seem to lead to substantial improvements. This indicates that companies should align management practices with overarching strategic initiatives to fully realize their potential as a source of competitive advantage. Future research should investigate the interaction between managerial support and other firm-specific resources in influencing performance outcomes, thereby broadening the theoretical applicability of Resource-Based Theory across various organizational contexts. The findings of this study offer significant practical implications for business leaders, operational managers, and policymakers aiming to improve organisational performance through internal business process enhancements. The substantial influence of internal business process perspective measures on return on assets (ROA) highlights the importance for organizations to focus on process efficiency, operational excellence, and strategies for continuous improvement. Investing in the refinement of internal workflows, optimization of production processes, and utilization of technology-driven solutions enables businesses to attain enhanced financial performance. This indicates that organizations ought to incorporate lean management principles, automation, and data-driven decision-making to enhance resource allocation and cost efficiency, thereby maximizing profitability. The significant impact of internal business processes on market share highlights the importance of process optimization in enhancing competitive positioning. Companies that optimize supply chain management, elevate product quality, and enhance service delivery can successfully distinguish themselves from the market. This finding highlights the necessity for organizations to adopt effective customer-focused process enhancements, including agile product development and responsive service systems, to achieve market dominance. Businesses must consistently assess and improve

their internal operations to align with consumer expectations and industry trends for a competitive advantage. Firms should implement digital transformation strategies, including artificial intelligence-driven process automation and big data analytics, to improve decision making and market responsiveness.

Although internal business processes offer clear advantages, the results suggest that management support does not have a significant direct or moderating effect on performance outcomes. This indicates that managerial involvement by itself is inadequate for fostering process-driven improvements unless combined with additional structural and cultural facilitators. Managers should cultivate a performance-oriented organisational culture that aligns with internal process improvements, ensuring that employees possess the requisite skills and motivation to effectively implement strategic initiatives. Leadership must priorities the development of competency-based training programs, establish cross-functional collaboration mechanisms, and implement innovation-driven incentives to enhance the effectiveness of internal process improvements. These findings highlight the need for policymakers and industry regulators to establish an environment conducive to business process innovation. Regulatory frameworks should facilitate investments in R&D, advocate for the implementation of quality management systems, and offer financial incentives to companies that emphasize process improvement initiatives. Policymakers can enhance organisational efficiency and promote sustained economic growth by fostering a business-friendly ecosystem. This study highlights the essential role of internal business processes in influencing financial and market performance. Organizations should strategically allocate resources towards operational enhancements, utilize emerging technologies, and foster a supportive internal culture to maintain competitive advantage. Future research should investigate the contextual factors that could improve the effectiveness of management support in process-driven performance enhancements and provide deeper insights into managerial strategies that optimize organizational success. The findings of this study offer essential insights for policymakers aiming to improve organisational performance via regulatory frameworks and policy interventions that facilitate internal business process enhancements. The substantial and noteworthy influence of internal business process metrics on financial performance underscores the necessity for policy measures that encourage firms to invest in process optimization, operational efficiency, and innovation. Policymakers ought to contemplate the implementation of financial incentives, including tax relief, grants, and low-interest financing, for firms that integrate advanced process management systems, lean production methodologies, and digital transformation strategies. Establishing a supportive policy framework can motivate businesses to improve their internal processes, thereby resulting in greater profitability and economic development. The robust correlation between internal business processes and market share indicates that competitive strategies ought to priorities the promotion of process-driven innovation and operational excellence across various industries. Policies that encourage technology adoption, research and development (R&D),



and guidelines for industry-specific process improvements can improve market competitiveness. Collaboration among governments, regulatory bodies, and industry leaders is essential for establishing benchmarking standards that promote the adoption of best practices in process management among firms. Additionally, policies that promote knowledge-sharing networks, business development services, and training programs can assist organizations in consistently improving their internal processes and maintaining market leadership. The findings suggest that although internal business processes are crucial, management support does not have a significant impact on organisational performance. This indicates that policy interventions must target not only managerial involvement, but also structural and cultural barriers that hinder the effectiveness of management support. Policymakers should advocate leadership development initiatives and governance frameworks that strengthen managerial capabilities to facilitate process enhancements. Regulatory frameworks ought to promote the integration of employee-driven innovation and participatory decision-making mechanisms within firms, thereby ensuring that process improvements are embedded at all organizational levels. Policymakers should prioritize the development of an ecosystem that promotes continuous process enhancements via digitalization and automation. Investment-promoting policies in artificial intelligence, big data analytics, and smart manufacturing technologies can improve firms' capacity to optimize internal operations. Implementing comprehensive policy frameworks that integrate financial incentives, capacity-building programs, and digital transformation strategies can enhance the resilience and competitiveness of a business environment.

5. CONCLUSION

The assessment sheds light on the correlation between certain business process metrics and business performance for the oil and gas and telecommunications industries in Ghana. Improving internal processes raises an enterprise's financial performance by increasing its return of assets (ROA) and simultaneously capturing greater market share. This finding stresses the importance of operational effectiveness especially in driving profitability and competitive edge. Sufficiently sophisticated internal systems incorporating quality control, innovation, resource optimization, and agility stand as a remarkable boost to customer satisfaction. The findings of this study indicate that management support influences the internal business processes, while there was no statistical significance in the moderating effect. Organizations with strong control systems structures can still operate effectively without undergoing intensive managerial oversight which challenges the conventional view on the need for active leadership to bring about process improvements. The blunt message for other stakeholders is to devote attention in lean management and invest in technologies and automation in order to achieve sustainable growth. This should be the kind of policy considered in order to enable industrial continuous development and innovation. Managers may be allowed to carry on with a little less supervision without compromising results by encouraging ownership and accountability. Finally, the study highlights the

need for aligning internal business processes with strategic goals, thereby creating an organization resilient in focus and performance. On these bases, it is assumed that the organization is in command of most internal capabilities; hence, these set the stage for achieving a sustainable competitive advantage. Against this background, future research can aim to understand how dynamics associated with culture, technology, and regulation interrupts these processes and provide fresh insights into process-based success across varying setups.

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