

INFLUENCE OF BUSINESS PROCESS RE-ENGINEERING (BPR) ON OPERATIONAL EFFICIENCY IN CORPORATE ORGANIZATIONS

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ABSTRACT:

In the rapidly evolving business landscape, operational efficiency is essential for organizational success. This study investigates the influence of Business Process Re-engineering (BPR) on operational efficiency within corporate organizations, specifically focusing on Sterling Bank Plc. Employing a descriptive survey research design, data were collected from 100 respondents through a structured questionnaire. The demographic findings reveal a gender imbalance, with males constituting 62% of the sample, and indicate a predominance of younger employees, with 76% under the age of 36. The analysis demonstrates a strong positive correlation between BPR and operational efficiency, highlighted by an adjusted R-squared value of 58.1% and a significant p-value of 0.007, confirming BPR as a critical determinant of organizational performance. These results underscore the importance of BPR in enhancing operational effectiveness, particularly in the banking sector. Based on these insights, the study recommends that corporate organizations prioritize BPR initiatives to streamline processes and improve efficiency. Additionally, investing in training programs to facilitate knowledge transfer between younger and more experienced employees and implementing inclusive recruitment strategies to address gender imbalances will further enhance team dynamics and operational outcomes. This study contributes valuable knowledge to the field of organizational management and operational efficiency.

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1. Introduction

Organizations today face significant challenges in maintaining operational efficiency, with over 82% of new businesses failing within two years (Connolly, Turner, & Potocki, 2018). These challenges arise from both internal factors like business processes and external factors such as economic conditions and technology. Successful organizations are those that adopt strategies to address these challenges, with Business Process Re-engineering (BPR) being a key tool for improving efficiency (Akanbi & Oiku, 2023).

BPR, introduced by Michael Hammer in 1990, involves rethinking and redesigning business processes to improve performance. It includes elements like process redesign, benchmarking, and the strategic use of information technology. BPR follows the three R's: Rethink, Redesign, and Retool, starting with a clean slate and analyzing current processes from the customer's perspective (Hammer, 1990).

While BPR has had success in improving operational efficiency, such as at Ford Motor Company, studies show that 50% to 70% of BPR initiatives fail due to issues like lack of management commitment, unrealistic expectations, and resistance to change (Dereje, 2010). This study aims to assess the impact of BPR on operational efficiency in corporate organizations.

To examine the relationship between the variables under investigation, this study proposes the following null hypothesis:

H0: Business Process Re-engineering implementation has no statistically significant effect on operational efficiency at Sterling Bank Plc.

2. Literature Review

2.1. Business Process Reengineering (BPR) and Corporate Organizational Performance

Business Process Re-engineering (BPR) has been described in various ways by scholars. Zaini and Saad (2019) defined it as the analysis and design of workflows within and across organizations. Hidayatullah, Munir, Sobandi, & Furqon (2024) noted that BPR involves creating new processes rather than just improving old ones, encouraging organizations to rethink operations based on desired outcomes rather than existing functions.

The relationship between Business Process Reengineering (BPR) and corporate organizational performance is multifaceted, involving core business process examination, fundamental redesign, customer focus, integration of cross-functional teams, and leveraging information technology. BPR aligns strategies, operations, and systems to significantly enhance financial results and customer satisfaction by matching market opportunities with corporate capabilities (Al-Shammari, 2023). Organizational performance, which includes both financial and non-financial aspects, is measured against set goals and objectives. Financial performance indicators, such as earnings, profit margins, and return on investments (ROI), provide quantifiable monetary metrics, whereas non-financial indicators, like company reputation, customer retention, and innovation, offer qualitative insights into a business's impact on stakeholders and society. Tools like the Balanced Scorecard, which encompasses financial data, customer perspective, business processes, and learning and growth, help organizations improve internal operations to enhance external outcomes. By reengineering core business processes, organizations can improve performance and gain a competitive advantage, as a comprehensive approach to performance measurement, which includes both quantitative and qualitative metrics, offers a more holistic view of organizational success (Eke & Achilike, 2014).

Exploring the relationship between intangible resources and organizational performance, particularly through the lens of IT capabilities, reveals key moderating variables that influence this

dynamic. IT capabilities are well-documented in enhancing organizational performance by providing competitive advantages, increasing service reliability, reducing transaction errors, and improving overall consistency. A study conducted by Bhatt (2000) supported the notion that IT capabilities contribute to service quality through customized services and knowledge sharing. Examples include Ford Motor's reengineering of its accounts payable department, which improved efficiency and reduced costs.

2.1.2 Relationship between BPR and Operational Efficiency

Operational efficiency in corporate organizations means achieving more output while using fewer resources like time, money, and effort. It involves streamlining processes, reducing waste, and making sure every resource is used effectively to reach business goals. This kind of efficiency helps organizations stay competitive by allowing them to deliver products or services faster, at lower costs, and with better quality. Garrison, Wakefield, & Kim (2015) emphasized that operational efficiency is crucial for success, as it affects an organization's ability to innovate and keep up with market demands.

Business Process Re-engineering (BPR) plays a major role in boosting operational efficiency. It involves a complete rethink and redesign of business processes to bring significant improvements in cost, quality, speed, and service (Kepramareni, Apriada, Putra, & Rini, 2022). According to Zaini and Saad (2019), BPR helps cut out inefficiencies, improve workflows, and make better use of resources. When properly implemented, BPR can help businesses align their processes with strategic goals, leading to better overall performance and stronger market positioning.

BPR also makes organizations more flexible and able to respond quickly to market changes. Hussein, Hammoud, Bazzi, & Haj-Ali (2014) noted that this flexibility is essential in today's fast-changing business world. BPR allows companies to respond to customer needs, develop new

products or services, and explore new markets. However, challenges like employee resistance and the need for cultural and structural changes can make implementation difficult (Taher & Krotov, 2016). To succeed, organizations need strong leadership, clear communication, and continuous employee training. While BPR offers many benefits, it requires careful planning and long-term commitment to maintain improvements.

2.2. Theoretical Review

2.2.1 Systems Theory

Systems theory, developed by Ludwig von Bertalanffy in the mid-20th century, emphasizes understanding complex phenomena as interconnected systems rather than isolated parts (Minati, Pessa, & Licata, 2018). It proposes that the behavior of a system, whether biological, ecological, or organizational, can't be understood without considering its environment and interdependencies (von Bertalanffy, 2008). This perspective shifts focus from individual elements to relationships within the whole system. In Business Process Re-engineering (BPR), systems theory highlights that business processes are part of a broader organizational system. By applying this theory, managers can anticipate the effects of changes across departments and identify synergies or conflicts. It reinforces the need for comprehensive planning, considering technological, human, and environmental factors. Systems theory ensures that BPR efforts lead to sustainable improvements by integrating changes smoothly into the existing system. This holistic approach helps optimize operational efficiency and enables adaptability to future challenges, enhancing overall performance.

2.2.2. Socio-Technical Theory

From a socio-technical perspective, any effort to redesign business processes must integrate both human and technological elements to ensure lasting harmonization of people, workflows, and tools

(Holt, Armenakis, Field, & Harris, 2007). In this view, the technical subsystem—comprising equipment, information systems, training, and procedures—must be deliberately aligned with the social subsystem, which encompasses norms, attitudes, beliefs, motivation, and interpersonal relationships (Morris & Venkatesh, 2010; Hadi, Alnoor, Abdullah, & Eneizan, 2019). By treating BPR not simply as a technical overhaul but as a simultaneous reconfiguration of roles, responsibilities, communication patterns, and reward structures, managers can foster collaboration between engineers, social scientists, and frontline employees to achieve smoother transitions and greater acceptance of new processes (Abdulaali, Alnoor, & Eneizan, 2019; Momoh, Roy, & Shehab, 2010). Moreover, socio-technical theory encourages viewing change across multiple levels—where established regimes provide stability, niches serve as protected spaces for radical innovations, and the broader landscape of economic and regulatory forces shapes feasible transformation pathways—so that BPR initiatives are both grounded in existing organizational commitments and adaptable to external pressures (Self, Armenakis, & Schraeder, 2007; Hadi *et al.*, 2019).

2.3. Empirical Review

Sungau and Ndunguru (2015) studied the impact of Business Process Re-engineering (BPR) on operational costs in Tanzanian service organizations. Using a cross-sectional survey and data from 95 firms, they found that BPR and delivery speed do not directly reduce costs but do so indirectly through improved service quality. The study recommends using BPR as a strategic approach to lower operational costs by enhancing service delivery.

Bako and Banmeke (2019) examined BPR's effect on the performance of commercial and microfinance banks in Ilaro, Ogun State. They surveyed 124 bank employees and analyzed responses using multinomial regression. The results showed that BPR significantly improved

organizational performance. They suggested improving incentive systems and adopting innovative management strategies to maximize BPR's benefits and support organizational growth.

Njuguna and Wanjohi (2021) explored how restructuring, knowledge management, IT capabilities, and process monitoring affect agro-processing firms in Nairobi. Surveying 65 firms, they found that these factors collectively explain 77% of the variation in firm performance. The study advised aligning restructuring with firm goals, investing in IT and knowledge management, and consistently monitoring processes to enhance efficiency and long-term success.

Garcia-Garcia *et al.* (2021) conducted a case study on applying BPR and digital tools to improve quality control in a food company. They found that digitalizing quality checks reduced inspection time, improved defect detection, and enhanced communication between quality teams and production staff. The study concluded that integrating BPR with Industry 4.0 technologies boosts efficiency, cuts waste, and supports better decision-making in production environments.

3. Methodology

This study used a descriptive survey research design to explore the impact of Business Process Re-engineering (BPR) on operational efficiency at Sterling Bank Plc. The survey method allowed for effective data collection from a broad group of respondents using both questionnaires and interview guides. A mixed-method approach provided a comprehensive understanding of how BPR affects corporate performance. Descriptive statistics were used for data analysis, and a sample of 100 staff from Sterling Bank in Lagos was selected using Taro Yamane's formula. Lagos was chosen for its role as Nigeria's commercial and financial hub. Simple linear regression analysis was used to test hypothesis and assess the effect of BPR on operational efficiency, offering valuable insights and recommendations.

4. Findings

4.2. Demographic Data

Table 1: Demographic data of respondents

Variable	Sample Composition	Frequency	Percentage
Gender	Male	62	62%
	Female	38	38%
	Total	100	100%
Age	18 – 25 years	31	31%
	26 – 35 years	45	45%
	36 – 45 years	19	19%
	Over 46 years	5	5%
	Total	100	100.0%
Educational background	High School	4	4%
	Bachelor's Degree	57	57%
	Master's Degree	30	30%
	PhD or equivalent	9	9%
	Total	100	100.0%
Years of Experience in the Banking Industry	Less than 1 year	14	14%
	1 – 5 years	35	35%
	6 – 10 years	32	32%
	11 – 15 years	17	17%
	Over 15 years	2	2%
	Total	100	100%

Source: Field Survey, 2024

Table 1 shows a gender imbalance among respondents, with 62% male and 38% female, suggesting either industry-wide disparity or possible sampling bias. Age-wise, 76% are under 36, with a majority in the 26–35 range, indicating a predominantly young workforce and limited representation of older employees.

Educational qualifications are high: 57% hold a Bachelor’s degree, 30% a Master’s, and 9% a PhD, reflecting a well-educated workforce that may enhance sector performance. Only 4% have a high school diploma.

Experience levels vary, with 35% having 1–5 years, 32% with 6–10 years, and 17% with 11–15 years. Only 2% have over 15 years of experience, suggesting a sector dominated by early- and mid-career professionals, and possibly highlighting challenges in retaining long-term employees.

4.3. Test of Hypothesis

Table 2: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.778 ^a	.606	.581	1.026

a. Predictors: (Constant) BPR

Table 3: ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	39.834	1	13.216	57.169	.000 ^b
	Residual	22.649	98	.435		
	Total	62.483	99			

a. Dependent Variable: Operational Efficiency

b. Predictors: (Constant), BPR

Table 4: Coefficients ^a

Model		Un-standardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	9.418	1.511		9.862	.000
	BPR	.473	.112	.778	1.581	.007

a. Dependent Variable: Operational Efficiency

Source: SPSS version 29 output

The results indicate that implementation of BPR is strongly and positively associated with operational efficiency at Sterling Bank Plc. The model summary shows a multiple correlation coefficient of 0.778, meaning that predicted efficiency scores track observed scores quite closely, and an R^2 of 0.606, which tells us that 60.6% of the variability in operational efficiency is explained by BPR implementation. The ANOVA table confirms that this explanatory power is very unlikely to be due to chance ($F = 57.169$, $p < 0.001$), demonstrating that the regression model as a whole is statistically significant. Examining the coefficient for BPR, the unstandardized B of 0.473 means that for each one-unit increase in the BPR implementation measure, operational efficiency increases by 0.473 units on average, and the standardized beta of 0.778 indicates a strong effect relative to the data's standard deviation. The t-test for this coefficient ($t = 2.581$, $p = 0.007$) likewise shows that BPR's contribution differs significantly from zero. Because the probability of observing such an effect under the null hypothesis (that there is no relationship) is well below 5%, the null hypothesis (H_0) is rejected and it is concluded that BPR implementation has a statistically significant positive effect on operational efficiency at Sterling Bank Plc.

5. Discussion of Findings

The demographic findings reveal a gender imbalance, with 62% male and 38% female respondents, suggesting possible overrepresentation of men in the banking sector and reflecting broader societal or industry-specific barriers to gender diversity. Addressing this gap is important for fostering inclusivity and improving organizational performance. Additionally, 76% of respondents are under 36, mostly within the 26–35 age range, indicating the sector's strong appeal to younger professionals. The low representation of employees over 46 points to a potential experience gap, emphasizing the need for strategies that encourage knowledge transfer and generational balance. Survey analysis shows a strong positive relationship between Business Process Re-engineering (BPR) and operational efficiency, with an adjusted R-squared value of 58.1% indicating that BPR significantly explains variations in efficiency. A standardized coefficient of 0.735 further suggests that improvements in BPR align closely with gains in performance, while a significant p-value of 0.007 confirms BPR as a key factor in enhancing operational outcomes. These results support the rejection of the null hypothesis and affirm BPR's strategic role in driving performance in the banking sector. The findings also align with earlier studies by Ugoani & Ugoani (2019), Kasim, Haracic, & Haracic (2018), Khashman (2019), and Garcia-Garcia *et al.* (2021).

6. Conclusion

In conclusion, the study shows that Business Process Re-engineering significantly improves operational efficiency at Sterling Bank Plc, with a strong positive link between BPR practices and performance. It also emphasizes the need to address workforce demographics—such as gender imbalance and youth dominance—to support a more inclusive and innovative organizational environment. To enhance operational efficiency, corporate organizations in the banking sector

should prioritize Business Process Re-engineering (BPR) and invest in training programs that promote knowledge transfer between younger and more experienced employees. Addressing gender imbalance through inclusive recruitment will also foster diversity and strengthen team dynamics. Regular monitoring and evaluation of BPR strategies are essential to ensure alignment with organizational goals and responsiveness to evolving business conditions. This study is limited by its focus on Sterling Bank Plc, which may affect the generalizability of the results. Moreover, reliance on self-reported data could introduce bias. Future research should involve a broader sample across multiple organizations for a more comprehensive assessment of BPR's impact on operational efficiency.

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