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Abstract

Commercial State owned enterprises (CSOEs) in Kenya have recently recorded poor performance forcing the government to constantly bail them through exchequer funding. This has continued to put pressure on the country’s fiscal landscape. To reverse the negative trend, the government implemented business process re-engineering measures. However, to the best of my knowledge, there is no empirical evidence that supported the initiative. This study therefore sought to investigate the effect of business process re-engineering on performance of state-owned enterprises in Kenya. Descriptive survey style of research design was adopted for the study using questionnaire to obtain primary data. Primary data was drawn from a census sample size of 48 Commercial state-owned enterprises where the unit of analysis included two employees from each CSOE comprising of one manager and one head of departments involved in the transformational strategy initiation and implementation for at least the last five years. Out of the 96 questionnaires administered, 81 responses were received reflecting 84.4% response rate. Using Ordinary Least Square, the findings revealed that implementation of business process re-engineering led to an increase performance of Commercial state-owned enterprise by a factor of 0.755. The study concludes that a continuous improvement aimed at redesigning business process reengineering is enough to enhance performance in the state owned enterprise. The study therefore recommends that the state should fully implement Business Processes re-engineering strategy as a means of improving their overall performance of Commercial State-owned Enterprises in Kenya.

Keywords: *Business Process Reengineering, State owned Enterprises, Performance, Kenya*

1.0 Introduction

In recent years, the commercial State-Owned Enterprises (SOEs) in Kenya have experienced significant poor performance. This poor performance prompted the government to implement various reforms with an aim of reversing the negative performance (Republic of Kenya, 2022).

The government evaluation of the financial position of commercial state owned enterprises in 2021 showed that out of 18 enterprises, only four of them were profitable. The four included the Kenya Pipeline Company Limited, Kenya Ports Authority, Kenya Electricity Generating Company (KenGen) and Kenya Airports Authority. The rest commercial state-owned companies including Kenya Power and Kenya Railways Corporation were either making losses or were operating below cost recovery levels (Wanyama & Mutugi, 2023). Further making the situation worse, Nyongesa and Jagongo (2024) showed the enterprses were relying on short-term debt which had a negative effect on financial performance of the enterprises. These financial challenges have not only strained public resources but also hindered the realization of positive economic growth, prompting the government to consider restructuring or divesting underperforming SOEs. The poor financial performance of the commercial state owned enterprises posed significant fiscal risks due to their debts and overreliance on government support.

The government in responding to the poor performance of the enterprises embarked on a series of reforms. One of the notable reform was where the government turned to Business Process Re-engineering. The business Process Re-engineering was seen as a strategic intervention aimed at revitalizing the commercial state owned enterprises. The Business Process Re-engineering involves the radical redesigning of business processes so as to improve in critical performance indicators for example cost, quality, service and speed (Ogada, 2017). Although the government implemented the Business Process Re-engineering as a measure to reverse the negative performance of the commercial state owned enterprises, there is no empirical study to the best of my knowledge studying the relationship between the two variables. Although Ogada (2017), investigated the role of Business Processes Re-engineering on commercial state enterprises in Kenya, the study was qualitative and no inferential analysis was performed. Other studies are narrow in scope. For example, Odede (2013) examined the impact of Business Process Re-engineering on performance of state owned enterprises but with a focus on Kenya Revenue Authority (KRA) only. It is based on this drawback that this study sought to investigate the role of Business Process Re-engineering on state owned enterprises in Kenya. The study used data collected from 48 Commercial state owned enterprises. The Ordinary least square was used to carry out the estimation. The regression results showed that the embracing Business Re-Engineering Process leads to an improvement in performance of the state owned enterprises by 43.8 percent. The rest of the paper is organized as follows. Section II shows the empirical review section. This is followed by methodology section. The fourth section presents the results and end with conclusion and recommendation.

2.0 Empirical Literature Review

In Kenya, Odede (2013) investigated the effect of Business Process Re-engineering on the performance of Kenya Revenue Authority (KRA). The findings showed that business process re-engineering initiatives had a positive effect on performance of KRA. Improved performance was noted in terms of better customer service, decreased process turnaround time, reduced cost, enhanced adoption of technology, increased corporate competitiveness and increased tax revenue. In another study, Ogada (2017) investigated the relationship between Business Process Re-

engineering and performance of state enterprises. The study used correlation to investigate the nature of the relationship. The correlation results showed a positive and significant correlation between business process re-engineering and the performance state owned enterprises in Kenya. The performance indicators considered included Return on Investment, the market share and profitability. In another study Kariuki (2023) investigated the implementation of business process re-engineering with focus on the Public Service Commission in Kenya. The study used Ordinary Least Square to carry out the estimation. The results showed that the organizational structure, change management and information technology had significant influence on the performance outcomes of the public service in Kenya. The study also established a positive relationship between employee training and the organizational performance. However, the relationship was insignificant.

In Nigeria, Genty, Atiku and Villet (2023) studied the effect of business process re-engineering on commercial banks performance in Lagos State, Nigeria. The results showed that leadership change, the top management commitment and information technology adoption had a positive and significant effect on performance of the commercial banks. In Rivers State, Nigeria, Nneji (2023) studied the effect of business process re-engineering on the performance commercial banks using ordinary least square. The study's results revealed that business process re-engineering had a positive and significant effect on the quality service delivery and innovation. In another study, Edewhor and Okoh (2024) investigated the effect of business process re-engineering on the performance of selected commercial banks Nigeria. The study used ordinary least square. The study results revealed that business process re-engineering had a significant effect on the profitability of the selected commercial banks. Kuhl (2014) also studied the effect of business process re-engineering on the performance of public commercial banks in Ethiopia. The study used ordinary least square to perform the estimation. The results showed that implementation of business process re-engineering had a positive and significant effect on the performance of commercial banks in Nigeria. Notable improvement in performance was the reduction in the cost reduction, improved service delivery and increased customer satisfaction.

3.0 Methodology

The study adopted a descriptive research design, since it helps describe the characteristics of a population which is being studied, which in this case it's the State is owned enterprises. A descriptive research is a process of collecting data in order to answer questions concerning the current status of the subjects in the study (Cooper & Schindler, 2014). There are two types of descriptive studies; the longitudinal which observe phenomenon over a period of time and cross sectional which observes phenomenon only once and in a particular time. Due to time constraint, the study adopted a cross sectional research approach. The descriptive research design was used since the study gathered quantitative and qualitative data that describe the nature and influence of transformational strategies identified in this study, on the performance of state owned enterprises in Kenya.

The study adopted census sampling because the number of state owned enterprises was 48 and therefore could easily be investigated by the researcher. Data for this study were collected through primary sources while enterprise Performance data was collected from secondary sources. A structured questionnaire was distributed to the management of the 48 Commercial state-owned enterprises in Kenya. The questionnaire was fully checked, validated and its reliability capacity measured before it delivered to the study area for responses. The primary data collected through questionnaire was analyzed using Statistical package for social sciences (SPSS version 25) and the

stated research hypotheses were tested using regression inferential statistical tools. The regression model used is shown below.

$$perf_i = \beta_0 + \beta_1BPR_i + \mu_i$$

Where perf represents performance of a state owned enterprise, BPR represents Business Process Re-engineering strategy and μ represents the error term.

4.0 Finings and Discussion

A total of 96 questionnaires were distributed during field work for the purpose of data collection. At the end of the exercise, 81 of questionnaires returned translating to a response rate of 84.4%. According to Mugenda & Mugenda (2013) the response rate (RR1) of 70% is considered feasible. These results as shown in table 1.

Table 1: Response Rate

Questionnaires	Frequency	Percent
Responded	81	84.4%
Un-responded	15	15.6%
Total	96	100.0%

Factor Analysis

Factor analysis is a statistical technique used to identify a relatively small number of underlying dimensions or factors, which can be used to represent relationships among interrelated variables (Bryman, 2012; Garg, Kothari, Netrapalli & Sherif, 2021). The technique is often used to measure variables that cannot be measured directly, to summarize large amounts of data, and to develop and test theories. In this study, factor analysis was carried out in order to test for the validity of the research instrument.

Adequacy of sample size was determined using the Kaiser-Meyer Olkin (KMO) measure of sampling adequacy. According to Yin (2014) KMO is a statistic used to examine and justify the appropriateness of application of factor analysis, in other words KMO is used to examine whether the data collected is adequate and appropriate for inferential statistical tests such as the factor analysis, regression analysis and other statistical tests. The KMO statistic varies between 0 and 1. Accordingly, the value of 0 implies that the sum of partial correlations is large relative to the sum of correlations, indicating diffusion in the pattern of correlations hence factor analysis is likely to be inappropriate. A value close to 1 indicates that patterns of correlations are relatively compact and so factor analysis should yield distinct and relative factors.

The study employed KMO and Barlett’s Test of sphericity for measurement of sampling adequacy. Barlett’s Test of sphericity is usually used to demonstrate the strength of relationships among variables of interests in a scientific study. It tests the null hypothesis that the correlation matrix is an identity matrix. This means all off-diagonal elements are zero and the diagonal elements are equal to one (Sarstedt & Mooi, 2011). According to Burns and Burns (2008) and Kaiser (1974), the value of KMO must be greater than 0.5 for a data set to be considered as adequate and

appropriate for statistical analysis. The following sections outline construct validities for various research variables.

The performance of state-owned enterprise was reviewed for reliability and factor analysis as shown in Table 2 below, it was measured by the eight items; Enterprise Performance had a Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy of 0.652, which was above the threshold of 0.4, (Taherdoost, 2016). Barlett’s test of sphericity was significant ($p<0.05$), showing that there were sufficient relationships among the variables to investigate. A Cronbach’s alpha coefficient of 0.775, which was above the 0.7 coefficient threshold indicated that the measuring scale was reliable.

Table 2: Factor loadings for performance of State-Owned Enterprise

Construct	Item	Cronbach’s Alpha	KMO	Bartlett’s Test (p-value)	PCA Loading	Variance Extracted (%)	Items Deleted
Performance Contracting Strategy	P1	0.775	0.652	< 0.001	0.491	83.784	None
	P2				0.418		
	P3				0.455		
	P4				0.091		
	P5				0.655		
	P6				0.273		
	P7				0.091		
	P8				0.473		

Business Process Re-Engineering was reviewed for reliability and factor analysis as indicated in Table 3 below, it was measured by the eight (8) items; Business Process Re-engineering had a Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy of 0.657, which was above the threshold of 0.4, Taherdoost, H. (2016). Barlett’s test of sphericity was significant ($p<0.05$), showing that there were sufficient relationships among the variables to investigate. A Cronbach’s Alpha coefficient of 0.803 for Business Process Re-Engineering which indicated that the measuring scale was reliable.

Table 3: Factor loadings Business Processes Reengineering Strategy

Construct	Item	Cronbach’s Alpha	KMO	Bartlett’s Test (p-value)	PCA Loading	Variance Extracted (%)	Items Deleted
Business Process Re-Engineering	BPR1	0.803	0.657	< 0.001	0.618	57.946	None
	BPR2				1.000		
	BPR3				0.691		
	BPR4				0.491		
	BPR5				0.800		
	BPR6				0.764		
	BPR7				0.491		
	BPR8				0.291		

Regression Results

The study tested the following hypothesis.

H₀: There is no significant relationship between Business Processes Re-Engineering and Performance of Commercial State Owned Enterprises in Kenya.

The study tested the hypothesis on whether there was a statistically significant relationship between Business Process Re-Engineering strategy and the performance of State owned Enterprises in Kenya. The regression model summary as shown in Table 4 revealed that the adjusted R-square (R^2) was 0.182. This is an indication that 18.2% of the variation in performance of the of the state owned Enterprises is as a result of Business Processes Re-Engineering. The regression model summary is presented in Table 4.

Table 4: Model summary for Business Process Re-Engineering

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.438 ^a	0.192	0.182	6.865

a. Predictors: (Constant), Business Process Re-Engineering

The Analysis of Variance (ANOVA) results are as shown in the table below. As the results revealed, the F-statistic for the model was 18.754 at a significance level of $0.000 < 0.05$. This is an indication that the model is statistically significant to test the relationship between Business Processes Re-Engineering strategy and performance of the State owned Enterprises. The ANOVA test results are presented in Table 5.

Table 5: ANOVA for Business Process Re-Engineering Strategy

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	883.832	1	883.832	18.754	.000 ^b
	Residual	3723.155	79	47.129		
	Total	4606.988	80			

a. Dependent Variable: performance

b. Predictors: (Constant), Business Process Re-Engineering

The regression coefficients for the model as shown in the table below indicates the Beta coefficient for the model was 0.755, p-value of $0.000 < 0.05$. A conclusion can therefore be made that that the relationship between Business process Re-Engineering and performance of the State-owned Enterprises is statistically significant. The regression coefficients of the model are presented in Table 6.

Table 6: Coefficient for Business Process Re-Engineering Strategy

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
	(Constant)	10.267	5.881		0.045	0.000
1	Business process Re-Engineering	0.755	0.174	0.438	4.331	0.000

a. Dependent Variable: performance
b. b. Predictors: (Constant), Business Process Re-Engineering

The model was represented as below

$$perf_i = 10.267 + 0.755BPR_i$$

The model shows that implementing Business Processes Re-Engineering Strategy would increase performance by a factor of 0.755.

This study sought to investigate the effect of business process re-engineering on the performance State owned enterprises in Kenya. The study had a one research hypothesis underpinning. The hypothesis stated that business process re-engineering does have significantly affect performance of state owned enterprise in Kenya; findings revealed a coefficient of 0.755, and indicated that implementation of Business Processes Re-Engineering lead to increase in performance of the state owned enterprise by a factor of 0.755. The study corroborated Ogada (2017), Kariuki (2023) and Genty et al. (2023) who concluded that implementation of Business Processes Re-engineering strategy has a significant effect on the performance enterprises in Kenya and Nigeria respectively.

5.0 Conclusion

This study makes a conclusion that Business Process Re-engineering strategy has a significant influence on Performance of state owned enterprise. Consequently, the study recommends that business process re-engineering should be implemented to improve performance of Commercial State-owned Enterprises in Kenya.

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