Business Process Re-Engineering and The Performance of Service Companies in Akwa Ibom State

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Abstract
This study was conducted to examine the influence of business process re-engineering (BPR) on performance of service industry with particular reference to courier companies in Akwa Ibom State of Nigeria. The survey research design was adopted in this study and research data were analyzed with simple and multiple regressions. Findings of this study showed that business process re-engineering had a significant positive influence on performance of courier companies in Akwa Ibom State. The researchers recommend that the Management of courier companies in Akwa Ibom State should regularly renovate their service processes through replacement of old and outdated machines and equipment, prioritize the automation of aspects of its operations through increased investment in emerging ICT infrastructure. It was concluded that business process re-engineering has a significant positive influence on performance of courier companies in Akwa Ibom State.

Keywords: R*e-engineering, Process, Service, Automation, Renovation, Networking, ICT.*

Introduction

Over the years, business organizations have been confronted with the reality of dynamic business environment which results in mounting pressure on them to consider newer ways of approaching their businesses and in delivering service to meet the expectation of customers. This dynamic nature manifest itself through forces in the business environment such as economic changes, competition, technological advancement, changes in consumer taste and in recent times, Covid -19 among others. In view of this, these businesses have to rethink their existing model of service delivery. Business process re-engineering (BPR) explains an innovation model that facilitates fundamental rethinking as well as redesigning business processes of an enterprise to achieve marked improvement in organizational performance (Arwa and Rizwan, 2016). Shahul Hameed et al, (2022) explained that BPR is a tool that assists organizations to revamp its processes via redesigning of core business processes targeted at conveying on its dramatic improvements in the areas of productivity, cycle times and quality. BPR also supports enterprise transformation through redesigning organizational processes that enhance performance improvement in notable areas such as service, speed, quality and cost. Three key aspects of BPR include, business processes renovation, automation and networking.

Business process renovation involves redesigning business processes so as to improve upon business operations. It is concerned with streamlining key business processes; it also

include making of succession or continuity of progression of work activities and sometimes combining other business processes (Bako and Banmeke, 2019). The concern of business process renovation is on redesigning and improving business processes with a view to improving the operations of the organization. Business process automation is concerned with mechanizing business processes aimed at improving efficiency in service delivery. It involves the application of machines in business process with a view to improving process efficiency through the utilization of Information and Communication Technology (ICT) (Onyinyechi, 2023). Business process networking is the aspect of BPR which links the operations of a business with customers inside or outside the organization to improve its capacity to coordinate through the use of information technology. Business process networking aims at linking activities or customers inside or outside the section or organization with a view to improving coordination using ICT.

Performance of organizations is seen as what have been achieved by the organizations in question within a specified time frame usually one year. Such performance has two broad dimensions, namely, financial or non-financial. The financial aspects is concerned with financial performance and is measured in financial terms and include, return on assets (ROA), return on equity (ROE), return on investment (ROI) and the like. The non financial aspect of performance deals with non financial aspect of performance and include, customer satisfaction, quality of service or product, market share, learning and innovation, customer relationship management and cost reduction (Ringim *et al.,* 2012 in Aysar, 2019).

According to Abdolvand *et al., (*2018) assessment of performance can be carried out at both process and overall organizational level. In the case of service companies such as courier firms, redesigning business processes will be of interest to enhance their achievement of improvements in customer satisfaction, service quality, cycle time, cost, competitive advantage and delivery speed among others. In this study, however, service quality and delivery speed have been selected as key performance measures for courier business. This selection was in line with views of researchers who stressed that these two variables account for key considerations that convey competitive advantage upon performing courier services (Sungua *et al.*, 2013 in Aysar, 2019). Changes in the operating environment of courier companies have reshaped the sector and imposed the need for organizational transformation, where the operational processes should be reconsidered (Ahmed *et al.,* 2017).

Statement of the Problem

The dynamic nature of business environment induces changes to the business environment. These changes constitute a reason why businesses should rethink and modify their operational processes in line with reality so as to be able to continue in their business and meet the expectation of its customers. Changes in the business environment result in heightened complexities of the operations of organizations. In an era where customers are becoming more and more aware of the services and processes and the increasing number of business organizations they can do business with, it becomes obvious that businesses are under pressure to meet customers' expectations in an increasingly competitive business space. But achieving these performance goals requires a drastic change in the design of business processes. While there exist a number of tools that may be applied in improving the processes of businesses in contemporary times, BPR has been touted as effective in assisting organizations in rethinking and radically redesigning its service delivery processes to achieve dramatic improvements in performance. Improvements in organizational performance have been attained by businesses leveraging on business process renovation, business process automation and business process

networking in areas such as cost, quality, service, customer satisfaction and speed.

Many organizations have failed in its operations and service delivery owing to the lack of proper alignment of its processes. For instance, courier service companies in Nigeria are still being bugged by declining service quality, customer dissatisfaction, inability to meet cycle time in service delivery, increasing cost of operations while efficiency in service delivery is hardly attained. While the effect of Covid-19 and post Covid-19 improved and increased the patronage of goods and services of online vendors due to government restrictions, fear of contamination (which led people to be scared of going to open markets), remote works, among others, the problem remains that, this rapid growth of online shoppers, overwhelmed these courier services as they were not prepared for this unforeseen circumstances.

Due to these challenges, there is constant delay in the delivery of goods ordered, as and when due, which most times led to customers' rejection of these products when it gets to them outside the stipulated time frame. And this brings huge losses on these online vendors. Therefore, this study focuses on how to proffer efficient solution to this problem in order to improve the performance of both the online vendors and the courier companies.

BPR being an emerging area, there is a compelling need to conduct new studies in different contexts so as to broaden our knowledge and understanding of this important BPR variables. The challenge before this study is therefore to investigate the influence of Business Process Re-Engineering on the performance of service industry with particular reference to courier companies in Akwa Ibom State of Nigeria.

Objectives of the Study

The main objective of this study was to investigate the influence of business process reengineering on the performance of service industry. Specifically, the study was conducted to:

i. investigate the influence of business process renovation on the performance of courier companies in Akwa Ibom State.
ii. examine the influence of business process automation on performance of courier companies in Akwa Ibom State.
iii. investigate the influence of business process networking on the performance of courier companies in Akwa Ibom State.
iv. examine the combined influence of business process renovation, business process automation and business process networking on the performance of courier companies in Akwa Ibom State.

Research Questions

i. To what extent has business process renovation influence the performance of courier companies in Akwa Ibom State?
ii. To what extent has business process automation influence the performance of courier companies in Akwa Ibom State?
iii. To what extent has business process networking influence the performance of courier companies in Akwa Ibom State?
iv. What is the combined influence of business process renovation, business process automation and business process networking on the performance of courier companies in Akwa Ibom State?

Hypotheses of the Study

H0$_1$: There is no significant positive influence of business process renovation on the performance of courier companies in Akwa Ibom State.

H0$_2$: There is no significant positive influence of business process automation on the performance of courier companies in Akwa Ibom State

H0$_3$: There is no significant positive influence of business process networking on the performance of courier companies in Akwa Ibom State

H0$_4$: There is no significant positive combined influence of business process renovation, business process automation and business process networking on the performance of courier companies in Akwa Ibom State.

Review of Related Literature

Conceptual Review

The Concept of Business Process Reengineering

Business Process Re-engineering (BPR) is an emerging performance improvement technique used by organizations. The techniques is employed in redesigning work ways with a view to better support the delivery of organizational mission at reduced cost. As a concept, BPR targets large gains performance through a structured redesign of its core business processes as well as introducing new ones (Attaran, 2014 in Aysar, 2019). Shahul Hameed et al, (2022) sees BPR as the rethinking, restructuring and streamlining structures, processes, and methods of working, management systems and external relationship so as to create and deliver value to clients.

The BPR philosophy is derived from other disciplines. Four major areas that are closed related with BPR are strategy organization, technology and people. The BPR projects reflect strategic initiatives targeted at making business by ensuring that business processes become more effective, efficient and flexible (Abdolvand *et al.,* 2018). Salimifard *et al.,(*2010) in Onyinyechi (2023) presented the key issues in BPR to include Change Management, Management Commitment, Less bureaucratic and flatter organizational structure, Project Management, Customer Focus, effective process redesign and IT infrastructure. The most important success and failure factors of BPR include wrong scope of process objectives, no clear concept of a process, non recognition of BPR benefit, over dependence on IT systems, lack of proper strategy, unrealistic objectives, opposition and lack of commitment from top management. The implemented change demand is inherently too difficult, which is one of the major criticisms in BPR. Another challenge with BPR is its use as euphemism for sacking some workers which is actually a negative effect that may follow its introduction into an organization (Onyinyechi 2023).

Key Dimensions of Business Process Re-engineering

The three major dimensions of BPR as identified by Schmiedel *et al.,* (2011), and Sungau *et al.,* (2013) in Aysar (2019) are business process renovation, business process automation and business process networking.

Business process renovation – This aspect of BPR deals with redesigning and improving business processes. This is with a view to improving the operations of the organization. Business process renovation is concerned with efforts to streamline the business key processes which may include initiative for succession or continuity of progression of work activities that

often times may integrate other business processes (Onyinyechi, 2023). Business process renovation comes before automation because business enterprises must first renovate its processes prior to automation in order not to automate business processes that add no value (Magutu *et al.*, 2016).

Business process automation

Business process automation otherwise referred to as computerizing business process. involves the application of machines in business process with a view to improving process efficiency through the utilization of Information and Communication Technology (ICT) (Aysar, 2019). IT is said to have a role to play in BPR since it provides processes automation even as it enables business to be conducted in different locations. Thus, automation involves using IT, allocation of customer information in line with what is in the database, facilitating information flow and programming a device or machine to function without an operator who would be interacting frequently with the system in place (Abdolvand *et al., (*2018).

Automation involves the use of IT for allocating of customer or patient information from the database, facilitation of information flow and programming a device to function without frequent interaction of operator (Aysar, 2019). Detailed information system automation of the processes or workflow structures takes place at the operational level. Workflow systems are able to support business processes if the business process is clearly structured and defined (Akam et al, 2018).

Business process networking

This is the aspect of business process re-engineering that aim to link activities/customers inside/outside the organization with a view to improving coordination via IT. It is also known as networking of business process and uses ICT in coordinating business processes as well as all activities interconnected end-to-end by ICT networks and internet of things. Both manufacturing and service organizations have successfully applied business process networking to tremendous results in an environment that is ever dynamic with changing techniques and methods in ensuring that customers' needs are being met and even exceeded (Onyinyechi (2023).

Through business process networking, employees can work together even at different business locations because of the IT which eases commutation, facilitate accessibility of organizational information and linking all units of the business. The purpose of business process networking is to help prepare the users for the new or modified automated system that is being developed throughout the organization. The focus is on understanding and documenting current processes and business needs, and identifying where automation may help. Thereafter, the focus shifts to assisting users to modify or use new processes that incorporate the use of the automated system functionality (Abdolvand *et al., (*2018).

The Concept of Performance

Performance measures what has been achieved by an organization in a specified period of time (Abubakar, 2016). It assesses the effectiveness and efficiency of an enterprise and is considered positive given that the outcome indicated an increase in achievement when compared with a previous period (Akam et al, 2018). In this study, two key measures of performance in courier service delivery have been selected. These measures are service quality and delivering speed.

Service Quality

Service quality is concerned with fulfilling clients' customers' requirements, their expectations and eventual satisfactions (Bako and Banmeke, 2019). It is the difference between what the customer judges as product or service performance compared to customer expectations. According to Slack, *et al., (*2007) in Shahul Hameed et al, (2022) BPR improves service quality in a number of ways which include, empowering an enterprise to deliver a promised service in accurate manner, assisting employee willingness to aid customers and provide services promptly, enabling employees to inspire trust to customers and confidence in providing services, enhancing the infrastructure that engenders provision of service to clients and dealing with customers with courtesy.

Delivering Speed

Delivering speed is concerned with shortening cycle time used in delivering service to clients that involves minimizing delays in delivering to customers, speeding up communication, fast tracking decision making and shortening the period taken to deliver a service since it was being requested by clients (Slack *et al.*, 2007 in Shahul Hameed et al, (2022). Technology plays an important role in supporting BPR by allowing rapid development of various ready to-use best-practice templates that suits most needed business processes, and enables and leverages values of standardization, automation, integration and innovation. All this shortens the transition phase and minimizes the impact and duration of transition, and so accelerates the time to benefit the quality levels and a streamlined operation (Onyinyechi, 2023). Proper implementation of BPR projects in courier business may results in benefits such as improvement in delivering speed that delights clients into being loyal to the business.

Business Process Re-engineering and Performance

An important argument in literature is that BPR has a link with organizational performance. Some authors are of the view that the achievement of highest business process improvement and resulting highest business performance levels would translate to improved corporate performance (Magutu, 2016). Firms that follow present-day wave of technological innovations stand a chance to be competitive as well as sustain their operations. Furthermore, BPR can serve as a tool where technology can be employed in enhancing employee satisfaction, teamwork, cooperation and quality of service delivery as well as achieving organizational strategic objectives in companies.

Theoretical Review

The Dynamic Capability Theory was considered as the most appropriate theory in this study.

Dynamic Capability Theory (DCT)

The Dynamic Capability Theory **(**DCT) was proposed by David Teece and Gary Pisano in 1994 cited in Teece et al, (1997). This theory harps on two critical issues: having the capacity to leverage on competencies in order to adapt business to emerging changes and the capacity to employ strategic management in matching environmental dynamism (Teece *et al.*, 1997).

As a theory, DCT strengthens the resource based view. Why Resource -based view is concerned with internal resources as what conveys competitive advantage to firms, DCT goes further to explain how such advantage can be sustained with appropriate managerial practices

(Teece *et al.*,1997). More so, the DCT explains how capabilities are developed, deployed and protected in business settings to optimize results (Teece *et al.*, 1997).

In this theory, three classes of variables have been identified as being useful in explaining where a competitive advantage emerges. These are processes, positions and paths. Process represents the manner of carrying out operations in organizations. Positions deal with organizations' assets and relations. Paths effect strategic direction being headed by an entity. Thus, for an organization to have competitive advantage and dynamic capability, the positions of its assets as well as its past and future paths are crucial (Teece *et al.*, 1997).

The reasoning by proponents of Dynamic capability theory is that owing to the dynamic nature of marketplaces today, what would sustain competitive advantage beyond the medium term are firms' capabilities by which resources of the firms are acquired and deployed. For such capabilities to be meaningful in creating sustained advantage, they must match the firm's market environment which explains inter-firm performance difference (Teece *et al.*, 1997).

The decision to apply Dynamic Capability Theory in a study of business process re-engineering and performance is justified. The BPR management tool emphasizes the importance of adapting to changes in the environment. Adapting to changes by business organizations is anchored on rethinking and redesigning business processes to meet market demands so as to have better results. In this study, business process renovation, business process automation and business process networking as aspects of BPR that may be needed by service providers particularly courier companies that may be overwhelmed by increasing volume of parcels and mails meant for delivery, changing customers' expectations in terms of quality of service and delivery speed and the need to rework its process to ensure that delivery cycle time is shortened in order to effectively reduce the period taken to deliver a service since its request hence address clients' concerns on time. Such changes account for the capacity of courier firms to meet environmental requirements and to sustain its capacity in meeting its performance goals.

Empirical Review

Ikon *et al* (2018) carried out a study on BPR and competitive advantage in a recessed economy to investigate the effect of BPR on performance among brewing firms poxied by competitive advantage. This study was conducted in Anambra State, Nigeria. The researchers used a survey research design. The collection of research data was through questionnaire. Data analysis was done with correlation method. Findings of this study showed significant links between management commitment (BPR) and innovative strength (competitive advantage). It was concluded that BPR had a significant effect on competitive advantage. The present study is different from the study conducted by Ikon *et al* (2018) that focused on BPR and competitive advantage as a measure of performance because its focus was on BPR and performance with quality of service and delivering speed as measures of performance.

Taiwo (2017) studied BPR and organizational performance that used a survey research design and surveyed six UBA branches in Lagos, Nigeria. Questionnaire was used in obtaining data from 86 permanent staff of banks that were studied. Research data were analyzed using Chi-square. It was found that BPR had a positive effect on performance of the studied banks. In line with this result, it was concluded that BPR initiatives were useful in banks' performance. The researcher recommended that banks should embrace BPR initiative and apply them in their operations so as to engender positive effect on their performance. The study by Taiwo (2017) carried out its analysis of research data with Ch-Square while in the present study research data were analyzed with regression method.

Methodology

The survey research design was employed in this study to have insight on the position of the population on the influence of business process re-engineering (BPR) on performance of service companies in Akwa Ibom State. The population of this study constituted of employees drawn from three (3) service companies in Akwa Ibom State. The service companies were Federal Express (FEDEX), United Parcel Service (UPS) and Dalsey, Hillblom and Lynn (DHL). The choice of these three service companies in Akwa Ibom State was because they are the major courier companies that carry out similar operations. Staffing details in the companies were FEDEX 15, UPS 13 and DHL 14. The number of employees stated was restricted to permanent employees who are equipped with adequate knowledge on business process re-engineering (BPR) and performance in their companies. The aggregate of these numbers of employees was 42. Thus, the population of this study was made up of 42 employees. The sample size of this study was made up of the entire respondents that constituted the population of this study from the three service companies studied. The researcher settled for a census study as the population was small. Thus, the sample size of this study was 42 employees drawn from FEDEX, UPS and DHL in Akwa Ibom State. A research instrument, the questionnaire was developed by the researcher for use in this study. The data collected were presented using descriptive statistics and analyzed using inferential statistics at 5% level of significance.

Empirical Specification of Models

The empirical specifications of models in this study were linked to the variables of interest in the objectives. The adapted empirical models were stated properly in accordance with the variables in each of the objectives of the study:

$PRF=\beta_o+\beta_1 BPV+e_t$ Equation (1)

$PRF=\beta_o+\beta_1 BPA+e_t$ Equation (2)

$PRF=\beta_o+\beta_1 BPN+e_t$ Equation (3)

$PRF=\beta_o+\beta_1 BPV+\beta_2 BPA+\beta_3 BPN+e_t$ Equation (4)

Where;

PRF = the dependent variable (Performance proxied by Service quality and delivery speed)

β_o = the intercept

β_1 *to* β_3 = Coefficients of the independent variables

e_t= Random Error Term.

BPV = Business Process Renovation

BPA =Business Process Automation

BPN= Business Process Networking

Model 4 was formulated to test the combined influence of Business Process Renovation (BPV), Business Process Automation (BPA) and Business Process Networking (BPN) on performance of courier companies in Akwa Ibom State.

DATA PRESENTATION, ANALYSIS AND DISCUSSION OF FINDINGS

Out of the 42 copies of questionnaire distributed, only 33 copies were properly filled and returned.

Test of Hypotheses

Hypothesis One

$H0_1$: There is no significant positive influence of business process renovation on the performance of courier companies in Akwa Ibom State.

Table 1: Simple Linear Regression Output

Variable	Beta (β)	t-Stat.	P-Value	Remark	R	R^2	Adjusted R^2	F-ratio	Std Error of Est
Constant	1.047	2.879	0.006	Significant	0.611	0.373	0.336	31.740	1.33423
BPV	0.813	9.785	0.000	Significant					

*Predictors: (Constant), Business Process Renovation

*Dependent Variable=Performance

Source: Researcher's Computation (2024)

From Table .1, R with 0.611 showed that there exist a strong relationship between business process renovation (BPV) and performance of courier companies. The adjusted $R^2$of 0.336 indicated that about 33.6% variations in Performance of courier companies was caused by the influence of business process renovation. From the computed value of F-statistics of 31.740 (prob.<0.05), it was observed that adjusted R^2 was significant in explaining the influence of business process renovation on performance of courier companies in Akwa Ibom State. From the linear regression, business process renovation indicated a positive and significant influence on performance (p-value<0.05) of the courier companies in Akwa Ibom State. This showed that a percentage increase in business process renovation resulted to about 33.6% improvement in performance for the period being considered.

The result of the analysis was in compliance with the *aprori* expectation stated by the researcher in the study. The constant (β_o) of 104.7% showed the level of performance as business process renovation was held constant. In line with this result, the null hypothesis, which states that there is no significant positive influence of business process renovation on the performance of courier companies in Akwa Ibom State was rejected and the alternative hypothesis, which states that there is a significant positive influence of business process renovation on the performance of courier companies in Akwa Ibom State was accepted.

Hypothesis Two

$H0_2$: There is no significant positive influence of business process automation on the performance of courier companies in Akwa Ibom State

Table 2: Simple Linear Regression Output

Variable	Beta (β)	t-Stat.	P-Value	Remark	R	R^2	AdjustedR^2	F-ratio	Std Error of Est.
Constant	2.258	13.966	0.000	Significant	0.701	0.491	0.442	44.903	0.68941
BPA	0.560	14.660	0.000	Significant					

*Predictors: (Constant), Business Process Automation

*Dependent Variable=Performance

Source: Researcher's Computation (2024)

From Table 2, R of 0.701 indicates a strong relationship between business process automation (BPA) and performance of courier companies. The adjusted R^2 of 0.442 indicated that about 44.2%variation in Performance of courier companies was caused by the influence of

business process automation. From the computed value of F-statistics of 44.903 (prob.<0.05), it was observed that adjusted R^2 was significant in explaining the influence of business process automation on performance of courier companies in Akwa Ibom State. From the linear regression, business process automation indicated a positive and significant influence on performance (p-value<0.05) of the courier companies in Akwa Ibom State. This showed that a percentage increase in business process automation would lead to about 44.2% improvement in the performance of courier companies studied for the period being considered.

The result of the analysis was in compliance with the *aprori* expectation stated by the researcher in the study. The constant (β_o) of 2.258% showed the level of performance as business process automation was held constant. Following the outcome of this test, the null hypothesis, which states that there is no significant positive influence of business process automation on the performance of courier companies in Akwa Ibom State was rejected. In its place, the alternative hypothesis, which states that there is a significant positive influence of business process automation on the performance of courier companies in Akwa Ibom State was accepted.

Hypothesis Three

$H0_3$: There is no significant positive influence of business process networking on the performance of courier companies in Akwa Ibom State

Table 3: Simple Linear Regression Output

Variable	Beta (β)	t-Stat.	P-Value	Remark	R	R^2	Adjusted R^2	F-ratio	Std Error of Est.
Constant	1.430	7.179	0.000	Significant	0.558	0.311	0.280	23.867	0.98162
BPN	0.733	15.996	0.000	Significant					

*Predictors: (Constant), Business Process Networking

*Dependent Variable=Performance

Source: Researcher's Computation (2024)

From Table 3, shows R with a strong relationship between business process networking (BPN) and performance of courier companies. The adjusted $R^2_{of\ 0.280}$ indicated that about 28.0% variations in Performance of courier companies was caused by the influence of business process networking. From the computed value of F-statistics of 23.867 (prob.<0.05), it was observed that adjusted R^2 was significant in explaining the influence of business process networking on performance of courier companies in Akwa Ibom State. From the linear regression, business process networking indicated a positive and significant influence on performance (p-value<0.05) of the courier companies in Akwa Ibom State. This showed that a percentage increase in business process networking would lead to about 28.0% improvement in the performance of courier companies.

The result of the analysis was in compliance with the *aprori* expectation stated by the researcher in the study. The constant (β_o) of 1.430% showed the level of performance as business process networking was held constant. In line with this result, the null hypothesis, which states that there is no significant positive influence of business process networking on the performance of courier companies in Akwa Ibom State, was rejected. In doing so, the alternative hypothesis, which states that there is a significant positive influence of business process networking on the performance of courier companies in Akwa Ibom State, was accepted.

Hypothesis Four

$H0_4$: There is no significant positive combined influence of business process renovation, business process automation and business process networking on the performance of courier companies in Akwa Ibom State

Table 4: Multiple Linear Regression Output

Variable	Beta (β)	t-Stat.	P-Value	Remark	R	R^2	Adjusted R^2	F-ratio	Std Error of Est.
Constant	1.207	7.686	0.000	Significant	0.954	0.910	**0.819**	62.69	1.04729
BPV	0.752	4.099	0.000	Significant					
BPA	0.782	5.179	0.000	Significant					
BPN	1.039	4.023	0.000	Significant					

*Predictors: (Constant), Business Process Renovation, Business Process Automation, Business Process Networking,

*Dependent Variable=Performance

Source: Researcher's Computation (2024)

Table 4 presents the combined influence of influence of business process renovation, business process automation and business process networking on the performance of courier companies in Akwa Ibom State. In the table, the R value of 0.954 indicates that there existed a strong relationship between sub-variables of business process re-engineering and performance. The table also has an adjusted R^2 of 0.819 which indicates business process renovation, business process automation and business process networking would have a combined influence of about 81.9% on the performance of courier companies in Akwa Ibom State. The model also showed significant goodness of fit (p-value <0.05), this shows that when these variables are combined, there would be a linear relationship. The table also indicated that in terms relative importance of the influence of the respective sub-variables of business process re-engineering, business process automation (BPA), (Beta = 0.782, t = 5.179, p<0.05) *had* the greatest influence on performance; business process renovation (BPV), (Beta = 0.752, t=4.099, p<0.05) followed and subsequently business process networking (BPN), (Beta 1.039, t=4.023, p<0.05).

The constant (β_o) of 1.207 showed the level of performance of courier companies in Akwa Ibom State holding business process renovation, business process automation and business process networking constant. In line with these results, the null hypothesis which stated that there is no significant positive combined influence of business process renovation, business process automation and business process networking on the performance of courier companies in Akwa Ibom State was rejected. Hence, its alternative hypothesis which stated that there is a significant positive combined influence of business process renovation, business process automation and business process networking on the performance of courier companies in Akwa Ibom State was accepted.

Discussion of the Findings

This study was conducted to investigate the influence of business process reengineering on the performance of service industry in Akwa Ibom State. The result of tests of hypotheses in this study indicated that business process re-engineering has a significant positive influence on the performance of service industry in Akwa Ibom State.

The first objective of this study investigated the influence of business process renovation on the performance of courier companies in Akwa Ibom State. In line with this objective, it was hypothesized that there is no significant positive influence of business process renovation on the performance of courier companies in Akwa Ibom State. In the test of hypothesis, it was found that there was a significant positive influence of business process renovation on the performance of courier companies in Akwa Ibom State. This result led to rejection of null hypothesis one while the alternative hypothesis was accepted. The result of the analysis in respect to business process renovation was in compliance with the *apriori* expectation. When management replaces old machines and tools with new ones, improves front and back offices, reworks its business processes to meet current reality in the business environment and in line customers' expectation, performance of the organization could be improved as well. In the present study, the positive and significant influence of business process renovation on performance of courier companies in Akwa Ibom State could be attributed to the fact that with new machines and tools, service delivery is aided, efficiency is enhance while customers are ultimately delighted. This result is in line with studies carried out by Orogbu et al, (2015), and Ogada (2017) in Onyinyechi, (2023).

The second objective of this study examined the extent to which business process automation influences the performance of courier companies in Akwa Ibom State. The outcome of test of hypothesis two however, indicated that there was a significant positive influence of business process automation on the performance of courier companies in Akwa Ibom State. Accordingly, null hypothesis two was rejected while its alternative hypothesis was accepted.

The result of the analysis in respect to business process automation was in compliance with the *a*priori expectation. Thus, as management of courier companies fundamentally change their business delivery process through automation of aspects of its operations, apply relevant ICT infrastructure in its business and prioritizes investment in the area, this may bring about significant positive influence on its operation in terms of service efficiency and improvement in quality of service enjoyed by clients.

This finding of the study strengthens Sungua, *et al.* (2013), and Agarwal, (2010) in Bako and Banmeke, (2019) who in their separate studies found that radical redesign of processes resulted in gaining significant improvement in reduced process time and service delivery while satisfying the needs of the customers in a timely fashion.

The third objective of this study investigated the influence of business process networking on the performance of courier companies in Akwa Ibom State. Following this objective, it was hypothesized that there is no significant positive influence of business process networking on the performance of courier companies in Akwa Ibom State. Result of test of hypothesis three however, showed that there was a significant positive influence of business process networking on the performance of courier companies in Akwa Ibom State. In view of this outcome, null hypothesis three was rejected while its alternative hypothesis was accepted. The result of the analysis in respect to business process automatic was in line with the *a*priori expectation. Thus, as management of courier companies networks its processes, links employees to different business units, makes for ease of information accessibility organization-wide, this may significantly and positively influence its performance of service delivery.

The fourth objective of this study examined the combined influence of business process renovation, business process automation and business process networking on the performance of courier companies in Akwa Ibom State. To test this objective, it was hypothesized that there is no significant positive combined influence of business process renovation, business process automation and business process networking on the performance of courier

companies in Akwa Ibom State. Result of test of hypothesis four indicated that there is a significant positive combined influence of business process renovation, business process automation and business process networking on the performance of courier companies in Akwa Ibom State. This result suggested that business process re-engineering; through a combination of its sub variables can have a significant positive influence on the performance of courier companies in Akwa Ibom State. Thus, when the idea of business process re-engineering (BPR) is properly implemented in an organization, the outcome will be an influence on performance of the company significantly and positively. The result of this analysis is similar to Abdolvand et al, (2018) which found that business process re-engineering had a significant positive influence on performance on banks.

Summary of the Findings

The main objective of the study was to examine the influence of business process re-engineering (BPR) on performance of service industry with particular reference to courier companies in Akwa Ibom State of Nigeria. Business process renovation exerted a significant positive influence on performance (Beta =0.752, t=4.099, p<0.05) of courier companies in Akwa Ibom State. Also, business process automation exerted a significant positive influence on performance (Beta =0.782, t=5.179, p<0.05)of courier companies in Akwa Ibom State. Similarly, business process networking exerted a significant positive influence on performance Beta 1.039, t=4.023, p<0.05)of courier companies in Akwa Ibom State. Business process renovation, business process automation and business process networking exerted a combined significant positive influence on performance (adjusted R^2 was reported as 0.819) of courier companies in Akwa Ibom State.

Conclusion

The study was carried out to investigate the influence of business process re-engineering (BPR) on performance of service industry with particular reference to courier companies in Akwa Ibom State. In line with findings of hypothesis one which indicated that business process renovation has a significant positive influence on performance of courier companies in Akwa Ibom State, it was concluded that business process renovation can determine the performance of courier companies. In line with findings of hypothesis two which showed that business process automation has a significant positive influence on performance of courier companies in Akwa Ibom State, it was concluded that business process automation can make significant contribution to the performance of courier companies.

Result of hypothesis three indicated that business process networking has a significant positive influence on performance of courier companies in Akwa Ibom State, it was concluded that business process networking can predict the performance of courier companies. Furthermore, following the outcome of test of hypothesis four which indicated that the combination of business process renovation, business process automation and business process networking had a significant positive influence on performance of courier companies in Akwa Ibom State, it was concluded that business process re-engineering was important and so can influence the performance of courier companies in Akwa Ibom State.

Recommendations

i. The Management of courier companies in Akwa Ibom State should regularly renovate their service processes through replacement of old and outdated machines and equipment with new ones in line with market demands in order to stand a chance to improve its

performance

ii. The Management of courier companies in Akwa Ibom State should prioritize the automation of aspects of its operations through increased investment in emerging ICT infrastructure in order to reap from service delivery efficiency.

iii. The Management of courier companies in Akwa Ibom State should network its work system to effectively integrate its employees, processes and technology so as to facilitate speedy service delivery that delights clients and so commands repeat patronage.

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