

Business Process Re-engineering and Courier Firms' Delivery Speed in South East Zone of Nigeria

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ABSTRACT: *This study was conducted to examine the influence of business process re-engineering (BPR) on Courier firms' delivery speed in South East Zone of Nigeria. The survey research design was adopted in this study. The study had a population of 239 and sample size of 149. The research instrument recorded 78% response rate. Research data were analyzed with multiple regression. Findings of this study showed that business process re-engineering had a significant positive influence on courier firms' delivery speed in the South East Zone of Nigeria. Specifically, it was established that business process renovation exerted a significant positive influence on courier firms' delivery speed (Beta =0.752, t=4.099, p<0.05); business process automation exerted a significant positive influence on courier firms' delivery speed (Beta =0.782, t=5.179, p<0.05) and that business process networking exerted a significant positive influence on courier firms' delivery speed (Beta 1.039, t=4.023, p<0.05). Following these findings, it was recommended that the Management of courier firms in the South East Zone of Nigeria should regularly renovate their service processes through replacement of old and outdated machines and equipment, prioritize the automation of aspects of its operations through increased investment in emerging ICT infrastructure and should network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.*

KEYWORDS: business process re-engineering, delivery speed, courier firms, business process renovation, business process automation, business process networking

INTRODUCTION

Over the years, business organizations have faced up to 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 expectations of customers. This dynamic nature manifest itself through forces in the business

environment such as economic changes, competition, technological advancement, changes in consumer taste, among others. In view of this, these businesses have to rethink their existing model of service delivery. This suggests that organizations should embrace and use new business solutions that are appropriate given emerging environmental reality so as to give them a chance to re-evaluate their processes with a view to improving its performance. In recent times, an important management tool that has aided businesses in this regard is Business Process Re-engineering (BPR).

Business process re-engineering (BPR) is a term that has been variously defined by different authors. It explains an innovation model that facilitates fundamental rethinking as well as redesigning business processes of an enterprise to achieve marked improvement in organizational performance (Talwar,2013). Also, Arwa and Rizwan (2016) define BPR as a business approach that makes businesses to be more functional, leveraging on proper identification of crucial processes, analysis of these processes and its redesigning to realize efficiency in operations. Rigby (2015) explains that BPR is a tool that assist organizations to revamp its processes via a redesigning of core business processes targeted at conveying on it dramatic improvements in the areas of productivity, cycle times and quality.

Sungau, Ndunguru and Kimeme (2013) identify three key aspects of BPR to 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 (Debela, 2009). Business process automation is concerned with mechanizing business processes aimed at improving efficiency in service delivery (Debela, 2009). Business process networking is the aspect of BPR which links the operations of a business with customers inside/outside the organization to improve its capacity to coordinate through the use of information technology. These ideas on BPR suggest a link between BPR and performance of organizations. 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 spite of widely documented potentiality of BPR in facilitating improvement in service delivery, some organizations are yet to fully adopt the philosophy; even in some cases where BPR seem to have been in place, an ad-hoc and halfhearted adoption makes it rather difficult for its impact to be realized. 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. In the light of the foregoing discussion, this study was considered in order to investigate the influence of Business Process Re-Engineering on the delivery speed of courier firms in the South East Zone of Nigeria. It

was hypothesized that there is no significant positive influence of business process re-engineering on the delivery speed of courier firms in the South East Zone of Nigeria.

REVIEW OF LITERATURE

Business Process Re-engineering(BPR) is an emerging performance improvement technique used by organizations. The technique is employed in redesigning work ways with a view to better supporting 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). Talwar (2013) is of the view that BPR deals with 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 covers a number of operational activities targeted at bringing improvement in business processes. It also combines analysis and modeling of business processes to improve results of business operations. The three major dimensions of BPR as identified by some authors in the literature are business process renovation, business process automation and business process networking (Schmiedel, Vom Brocke and Recker; 2011; Sungu, Ndunguru and Kimeme, 2013).

Business process renovation deals with redesigning and improving business processes. This is with a view to improving the operations of the organization. The process of business process renovation is concerned with efforts to streamline key processes in business. This may include initiative for succession or continuity of progression of work activities; at times it may integrate other business processes (Shin and Jemella, 2012; Debela, 2009). Business process renovation comes before automation. This is because business enterprises must first renovate its processes prior to automation in order in order not to automate business processes that add no value.

Business process automation involves the application of machines in business process with a view to improving process efficiency through the utilization of Information and Communication Technology (ICT) (Shin and Jemella, 2012). This aspect of BPR mechanizes business processes so as to bring about improvement in efficiency of process with ICT playing an important role (Debela, 2009). 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. Also, it permits quicker delivery to customers and support rapid service provision and paperless transactions.

Business process networking is the aspect of business process re-engineering whose aim is to link activities/customers inside/outside the section/organization with a view to improving coordination via IT. It is also known as networking of business process. It uses ICT in coordinating business processes as well as all activities interconnected end-to-end by ICT networks and internet of things (He, 2005). Through business process

networking, employees can work together even at different business locations because of the IT which eases commutation (Al-Mashara, et al., 2001; Attaran, 20014; He, 2005).

Delivering speed is concerned with shortening cycle time used in delivering service to clients; it involves minimizing delays in delivering service to customers; it helps in speeding up communication, fast tracking decision making and shortening the period taken to deliver a service since it was being requested by clients (Al-Mashara, *et al.*, 2001). Technology plays an important role in supporting BPR; it allows rapid development of various ready-to-use best-practice templates that suit most needed business processes; it 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, till reaching the quality levels and a streamlined operation (Sungau and Msanjila, 2012).

The Dynamic Capability Theory (DCT) was considered as the most appropriate theory in this study. The DCT was said to have been proposed originally by David Teece and Gary Pisano in 1994. 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. The DCT goes further to explain how such advantage can be sustained with appropriate managerial practices (Teece *et al.*, 1997). Moreover, the DCT explains how capabilities are developed, deployed and protected in business settings to optimize results (Teece *et al.*, 1997).

The decision to apply Dynamic Capability Theory in a study of business process re-engineering 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 firms 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.

Awolusi and Onigbinde (2014) conducted a study which focused on critical success factors for BPR in Nigerian Gas and Oil Industry and found that critical success factors for implementing BPR were project management and planning, support and competence management and management system. Mungai (2015) aimed at evaluating role of BPR in managing customer relationship, cost and operational efficiency at UAP

insurance company. It was discovered that BPR enhanced UAP's capacity to improve its business processes in addressing clients' complains, boosted consistency in service delivery, aided customers' loyalty and enhanced its capacity to acquire new customers. Ogboet *al.* (2015) conducted a study which was on business process reengineering and performance of commercial banks in north central Nigeria and found that a significant positive association was in place between corporate restructuring and competitive advantage of banks.

Nzewiet *al.* (2015) carried out a research on BPR and its influence on courier service firms' performance. Findings of the study indicated that variables of BPR used in the study (change management, process redesign, management commitment and IT infrastructure) had a significant influence on performance of surveyed courier service firms. Odede(2013) conducted a study on BPR implementation and performance. It was established that BPR contributed to revenue growth, cost reduction, process turnaround time and improved customer service. Orogbuet *al.* (2015) investigated work process innovation and employee retention in telecommunications. It was discovered that process redesign was positively linked with employee satisfaction. It was also found that work process innovation had an influence on employee retention.

Adeyemi and Aremu (2008) studied reengineering and organizational performance. Outcome of data analysis in this study showed that BPR could account for about 89% of performance in the banks studied. It was further revealed that BPR brought about innovativeness in banking service delivery.

Abdolvandet *al.* (2008) conducted a research on BPR readiness and degree of success in Iran. The results revealed that factors such as collaborative working environment, top management commitment, supportive management information technology and egalitarian leadership would positively determined state of readiness in adopting BRP and its successful implementation. Ikon, Onwuchekwa and Nwoye (2018) did a study on BPR and competitive advantage in a recessed economy. Findings of this study showed significant links between management commitment (representing BPR) and innovative strength (representing competitive advantage). Taiwo (2017) studied BPR and organizational performance. It was found that BPR had a positive effective on performance of the banks' branches that were studied.

RESEARCH METHODOLOGY

The research design employed in this study was survey. The population of this study was made up of 239 and 149 sample size determined through Taro Yamane sample size determination formular. The research participants were employees drawn from three (3) courier firms in the South East Zone of Nigeria. The firms were Federal Express (FEDEX), United Parcel Service (UPS) and Dalsey, Hillblom and Lynn (DHL). The core staffing details in the companies were FEDEX 86, UPS 74 and DHL 79. The questionnaire was used in gathering research data. The questionnaire had two sections.

Section one captured respondents' details while section two posed questions on the research variables. The instrument recorded 78% response. Multiple regression was used in data analysis and this was at 0.05 significance level.

DATA ANALYSIS AND DISCUSSION OF FINDINGS

Test of Hypotheses

H₀: There is no significant positive influence of business process re-engineering on the delivery speed of courier firms in the South East Zone of Nigeria.

H₁: There is a significant positive influence of business process re-engineering on the delivery speed of courier firms in the South East Zone of Nigeria.

Table 1: Multiple Regression Analysis on influence of business process re-engineering on the delivery speed of courier firms in the South East Zone of Nigeria

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					

Source: Researcher's Computation (2022)

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

*Dependent Variable=Delivery speed

Table 1 presents regression analysis on influence of BPR variables, business process renovation, business process automation and business process networking on delivery speed of courier firms in the South East Zone of Nigeria. In the table, the R value of 0.954(95.4%) indicates that there existed a strong relationship between sub-variables of business process re-engineering and courier firms' delivery speed. The table also has an adjusted R² of 0.819 which indicates business process renovation, business process automation and business process networking would have an influence of about 81.9% on the delivery speed of courier firms in the South East Zone of Nigeria. The model also showed significant goodness of fit (p-value <0.05). 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 courier firms' delivery speed; business process renovation (BPV), (Beta =0.752, t=4.099, p<0.05) followed while business process networking (BPN), (Beta 1.039, t=4.023, p<0.05) came as third.

The constant (β_0) of 1.207 showed the level of delivery speed of courier firms in the South East Zone of Nigeria 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 influence of business

process re-engineering on the delivery speed of courier firms in the South East Zone of Nigeria was rejected. Hence, its alternative hypothesis which stated that there is a significant positive influence of business process re-engineering on the delivery speed of courier firms in the South East Zone of Nigeria was accepted.

DISCUSSION OF THE FINDINGS

This study was conducted to investigate the influence of business process reengineering on the delivery speed of courier firms in South East Zone of Nigeria. The result of tests of hypothesis in this study indicated that business process re-engineering has a significant positive influence on the delivery speed of courier firms in the South East Zone of Nigeria. In this section of the study, discussion is made on the findings.

The objective of this study was to examine the influence of business process re-engineering (BPR) on Courier firms delivery speed in South East Zone of Nigeria. It was hypothesized that there was no significant positive influence of business process re-engineering on the delivery speed of courier firms in the South East Zone of Nigeria. Result of test of hypothesis indicated that there was a significant positive influence of business process re-engineering on the delivery speed of courier firms in the South East Zone of Nigeria. This result led to rejection of the null hypothesis and the acceptance of its alternative hypothesis. This result suggested that business process re-engineering, through a combination of its sub variables can have a significant positive influence on the delivery speed of courier firms in the South East Zone of Nigeria. Thus, when the idea of business process re-engineering (BPR) is properly implemented in courier firms, the outcome will be an influence on its delivery speed significantly and positively. The result of this analysis is similar to Ringim *et al.* (2012) who examined the relationship between business process re-engineering (BPR) on organizational performance on small and medium banks.

Similarly, Aregbeyen (2011), carried out a study on Business Reengineering and organizational performance of First Bank Nigeria Plc and found significant improvement of financial intermediation by the bank. Furthermore, Ringim, Razali and Hasnan (2011), carried out a study on aspect of Business Process Reengineering Factors on organizational performance of Nigerian banks with results showing that the dimensions of BPR are reliable and valid in impacting banks' performance. In the same vein, Mlay, Zlotnikova and Watundu (2013), carried out a study on Business Process Reengineering and organizational Resistance and found that many organizations needed to reengineer their processes to improve on efficiency.

Furthermore, Al-Mashari, Irani and Sari (2010), observed that Business process reengineering creates in people (Behaviour and culture), process and technology and offers a better way to deliver service. Cheng, Tsai and Xiao (2006) were of the view that BPR integrates all departments into a complete process which have been designed to fulfill a specific business goal hence, successful implementation of BPR enables

organizations to achieve dramatic gain in business performance. Again, Graham (2010) advises that. In order to create a dramatic increase in efficiency, productivity or profitability, a drastic change in the design of the organization's processes is required. The author concludes that reengineering is a useful tool that has been adopted by and hailed as one of the current major agent of change within many organizations.

In an increasingly dynamic business environment, which mounts pressure on business survival and stresses the desire to close competitive gaps, it behooves on businesses in the service industry particularly courier firms that are overwhelmed with increasing volume of transactions and changing customers' expectations to regularly rethink and fundamentally bring changes to its processes in order to meet current reality and customer expectation. Findings of this study thus suggest that business process re-engineering is central to the delivery speed of courier firms in Nigeria.

CONCLUSION

The main objective of the study was to examine the influence of business process re-engineering (BPR) on courier firms' delivery speed in the South East Zone of Nigeria. The core variables for business process re-engineering (BPR) used in this study were business process renovation, business process automation and business process networking. The result of test of hypothesis indicated that BPR variables of business process renovation, business process automation and business process networking had a significant positive influence on courier firms' delivery speed in the South East Zone of Nigeria. It was concluded that business process re-engineering was important and so can influence the delivery speed of courier firms in the South East Zone of Nigeria.

Recommendations

In line with findings of this study, the following recommendations were made:

- i. The Management of courier firms in South East Zone of Nigeria 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 delivery speed
- ii. The Management of courier companies in the South East Zone of Nigeria 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 the South East Zone of Nigeria 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.

REFERENCES

- Abdolvand, N. Albadvi, A. & Ferdowsi, Z. (2008). Assessing readiness for business process reengineering. *Business Process Management Journal*, 14 (4), pp. 497-511.
- Adeyemi, S. and Aremu, M. (2008). Impact Assessment of business process

reengineering on organizational performance.*European Journal of Social Sciences*, 7 (1):14-21

- Al-Mashari, M., Irani, Z. & Sari, M. (2010). Business process Reengineering: A survey of international experience. *Business process management journal*, 7 (5), 437-455.
- Al-Mashari, M., Zahir, I., and Mohamed, Z., (2001). Business process reengineering: A survey of international experience.*Business Process Management Journal*, 7(5): 437-455.
- Aregbeyen, O. (2011). Business Re-Engineering and Organizational Performance in Nigeria: A Case Study of First Bank Nigeria Plc. *International Business Management*, 5(3):151-158.
- Arwa, B. and Rizwan, J. (2016). Business Process Re-Engineering in Public Administration of Kingdom of Saudi Arabia, *International Journal of Information Engineering and Electronic Business*, 4 (8):22-29
- Attaran, M. (2014). Exploring the relationship between information technology and business process reengineering.*Information and Management*, 4(1): 585-596.
- Awolusi, O. D. and Onigbinde, I. O. (2014). Assessment of Critical Success Factors of Business Process Re- Engineering in Nigerian Oil and Gas Industry. *Interdisciplinary Journal of Contemporary Research in Business*, 3(3):104–120.
- Debela, T. (2009). *Business process reengineering in Ethiopian public organizations: The relationship between theory and practice*. JBAS, 1(20):19-28.
- HE, X. J. (2005).*A Comparative study of Business process Reengineering in China*. *Communication, Journal of Business and Social Science*, 5(2): 25–30.
- Ikon, M. A., Onwuchekwa, F.C. &Nwoye, C.O. (2018). Business Process Reengineering (BPR) and Competitive Advantage in a Recessed Economy.A study of Selected Brewing Firms in Anambra State, Nigeria.*International Journal of Management Technology*, 5 (2): 1-15.
- Mlay S.V, Zlotnikova L. &Watnudu, S (2013).A Quantitative Analysis of Business Process Reengineering and Organization Resistance.The Case of Uganda.*The African Journal of Information Systems*, 5(1) 1 – 26.
- Mungai, E. W. (2015). Business process re-engineering and operational performance at UAP insurance company, Doctoral Thesis, University of Nairobi,138p.
- Nzewi, Hope and Nzewi, Ugochukwu-Smooth and Moneme, Patrick Chigozie (2015). Business Process Reengineering and Performance of Courier Service Organizations in Anambra State, Nigeria.*American Journal of Social and Management Sciences*, 6(3): 56-65
- Odede, V. (2013). Business Process Re-Engineering Implementation and Organizational Performance; The Case of Kenya Revenue Authority. *Journal of Business and Management*, 2(3): 41–49.
- Ogbo, A. I., Attah, E. Y., Ewurum, U. J. F. and Ugbam, C. O. (2015).Business process Reengineering and Performance of Commercial Banks in North Central Nigeria.*International Journal of Contemporary Applied Sciences*, 2(10):1 – 13.

- Orogbu, O. L., Onyeizugbe, C. U. and Onuzulike, N. F. (2015). Business Process Reengineering and Organizational Performance of Selected Automobile Firms in Southeast of Nigeria. *European Journal of Business, Economics and Accountancy*, 3(5):12–21.
- Rigby, D. K. (2015). *Management Tools 2015: An Executive's Guide*. Boston: Bain and Company, Inc., 229p.
- Ringim, K. J.; Razalli, M. R.; Hasman, N. (2012). Moderating effect of information technology (IT) capability on the relationship between business process reengineering factors and organizational performance of Bank. *African Journal of Business Management*, 6(4):36-49.
- Schmiedel, T., Vombrocke, J. and Recker, J., (2011). Which cultural values matter to business process management? Results from a global Delphi study, *Business Process Management Journal*, 4(6): 18-29.
- Shin, N.; Jemella, D. (2012). Business process re-engineering and performance improvement: The Case of Chase Manhattan Bank. *Business Process Management Journal*, 8(4): 33-42.
- Sungau, J; Msanjila, S. S. (2012). Business process reengineering in organizations. *Advanced Materials Research*, 2(6):19-33
- Sungau, J; Ndunguru, P. and Kimeme, J. (2013). The influence of Business Process re-engineering on Service Quality: Evidence from Service Industry in Tanzania. *International Journal of Interdisciplinary Studies on Information Technology and Business*, 1(1):83-98
- Taiwo, A.A. (2017). Business Process Reengineering and Organizational performance. *Paper presented at the 11th annual National Conference of School of Management Studies, Federal Polytechnic, Ilaro, Ogun State held on 28th-30th November, 2017.*
- Talwar, R. (2013). Business Re-engineering– a strategy-driven approach. *Long Range Planning*, 2(6): 22-40.
- Teece, D. J., Pisano, G., and Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic Management Journal*, 8(3):46-51.