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Full Length Research Paper

Moderating effect of Information technology (IT) capability on the relationship between business process reengineering factors and organizational performance of Bank

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The increasing competitive pressure as a result of technological development, globalization, changing customer demand led to survival challenges of many banks in the developing countries and demanded for improvement in quality customer service and speed to enhance profitability performance and cost reduction. This study is aim to examine the moderating effects of information technology (IT) capability on the relationship between business process reengineering (BPR) factors and organizational performance of Nigerian banks. Field study survey has been conducted under natural research setting. The sample of the data was received from commercial banks, microfinance banks and primary mortgage financial institutions in Nigeria. The tool of analysis used in this study was hierarchical regression analysis using SPSS software. The findings showed that IT capability moderated the relationship between BPR factors such as change management, customer focus, management commitment and overall organizational performance of bank. Also, the result revealed that IT capability moderated the relationship between IT investment, management commitment and customer service management performance of bank. The outcome of this study provides important insight to researchers for further understanding on the effects of BPR factors and IT capability on organizational performance.

Key words: Business process reengineering, information technology capability, organizational performance, Banks, Nigeria.

INTRODUCTION

Business process reengineering (BPR) is a popular management tool for dealing with rapid technological and business changes (Ranganathan and Dhaliwal, 2001). It was first introduced by Hammer (1990), as a radical redesign of processes in order to gain significant improvements in cost, quality and services (Ozcelik, 2010). BPR creates changes in people (behavior and culture), processes and technology (Al-Mashari and Zairi, 2000). It does not seek to alter or fix existing processes; but, it forces companies to ask, whether or not a process is necessary and then seeks to find a better way to do it (Siha and Saad, 2008). BPR integrates all departments into a complete process which have been designed to fulfill a specific business goal (Cheng et al., 2006). Successful implementation of BPR enables organizations to achieve dramatic gains in business performance (Shin and Jemella, 2002).

BPR helps banks to deal with new economic challenges and change the traditional processes to

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improve their customers' satisfaction. BPR is a management discipline of analyzing and then redesigning current business processes and their components in terms of efficiency, effectiveness and added value to the objectives of the business. The conduct of business process reengineering steps is planned to gather and process business requirements in support of a modernization effort for defined area. The BPR starts with planning activities that include the creation of BPR team, the development of a BPR scope document and an examination of existing proposal that relate to a given area, examines the existing and future business process and improve accordingly. Similar to any other management approaches, the successful implementation of BPR depend on how well it can be fitted to the bank/companies cultural norms and information technology (IT) suggested by Davenport and Short (1990), Hammer and Champy (1993), Murray and Lynn (1997), Al-Mashari and Zairi (1999), Bhatt (2000), Khong and Richardson (2003), Attaran (2004) and Ahmad et al. (2007).

Reengineering in a bank should be undertaken as a project, the project management expertise of IT department become a key ingredient in the success of reengineering. The IT capability includes both the technical and managerial expertise required to provide reliable physical services and extensive electronic connectivity within and outside firm. Information technology (IT) increase the market share of the bank through offering of a product or service that is not offered by another bank (for example, those customers that prefer private/personalized banking or use debit cards have become the focus of retail and investments in banking (Beyers and Lederer, 2001; Peffers and Dos Santos, 1996; Post et al., 1995). In Nigeria, the liberalization of the banking sector has brought competitive changes in the banking industry (Aregbeyen, 2011). For example, managers are concern with quality service delivery; formulate strategies to respond to market demand through new innovative banking practice to bridge the service gap in the system (Sidikat and Ayanda, 2008). Therefore, the application of IT capability would enhance service delivery process, produce new product, new processes, new strategy, make the productivity of work faster, eliminate all communication barriers in the organization and empower workers to link up with customers and suppliers to achieve competitive advantage (Davenport, 1990; Hammer, 1990; Teng et al., 1994). High technology banking via IT capability has revolutionized customer banking relationships as customer demand for 24/7 banking services.

In addition, globalization led to survival challenges by way of reengineering of banks to reposition themselves to meet and exceed customer needs (Aregbeyen, 2011). Information technology has helped Nigerian banks to streamline the back office operations by improving both efficiency and cost reduction. Advances in technology also influence the way banks services are delivered with aimed of making it more convenient for customers. For example, many banks in Africa now have their branches connected on-line real time (24/7). This clearly reduces the danger of carrying cash. Some banks have automated teller machine (ATM) to make cash available to their customers 24/7. Some Nigerian banks practice e-banking, telephone and mobile banking. Money transfers services through MoneyGramme and Western Union Money transfer to enable Nigerian in Diaspora to send money to their family (CBN, 2008). Information technology capability (IT operations and IT knowledge) moreover, makes Nigerian banks to participate more effectively in international banking arena. For instance, some technologically up to date banks enable them to access international banking networks in order to efficiently affect fund transfer, open, amend and negotiate letter of credit, retrieve up to date status of customer transactions among the banks that joined the Society for Worldwide Inter-bank Financial Telecommunication (SWIFT).

Research problem statement

As the world becomes technologically advanced with increased global competition in financial service industry, banks are left with no choice but to look beyond local competition (Randle, 1995). In Nigeria, liberalization of the banking sector has changed the form of competitive advantage in the industry. New generation banks emerged. The old generation banks consolidate operations either by merger, acquisition, raised up capitalization based and reengineer their operations in order to be able to improve their performance and compete effectively. The consequences of merger and consolidation of operational process and an intensified foreign competition in the financial service industry through liberalization and globalization faced by the organizations led to radical changes in operations, and services that resulted in conflicting performance (Wei and Nair, 2006). Customer retention became a key factor in determining the success of an organization (Idris, 2011). The bank that has the largest customer base and highest customer retention rate is the market leader in the industry. Hence, the quality of customer service becomes a driving force in ascertaining business survival in the banking industry (Tang and Zairi, 1998). To survive and excel in this type of business environment, organizational performances become the main concern for the banks in Nigerian banking industry. Implementation of business process reengineering alone cannot fully results to sustainable organisational performance of banks operating in turbulent business environment.

Previous empirical studies that examined the BPR factors performance relationships such as Cheng and Chiu (2008), Khong and Richardson (2003) have ignored

the specific nature of IT capability, and, also, have not fully considered important environmental conditions that influence the relationships. The literature in BPR implementation is widespread with lack of thorough empirical evidence of BPR impact on performance. Hence, there is need to relate BPR to organizational performance in the context of other variables that also affect performance (Devaraj and Kohli, 2000).

Using resources based view (RBV) of firm performance, the theory explains the relationship between organization resources and sustaining competitive advantage for superior performance relative to competitors (Barney, 1991; Fahy, 2000). The dynamic capability in form of IT capability was introduced to address the theoretical limitation of RBV on issues of having sustainable performance in turbulent business environment (Paulous, 2004). The complementarity theory is also mentioned to address the inadequacy of RBV for isolation of resources in creating or sustaining competitive advantage (Dedrick et al., 2003; Kohli and Devaraj, 2003; Melville et al., 2004). This paper aims to study the moderating effect of IT capability attributes on the relationship between BPR factors and organisational performance of Nigerian banks using survey questionnaires.

Previous studies that had IT capability as a moderator are Yongmei et al. (2008), Said et al. (2009), Shao et al. (2010), and Huang et al. (2009). However, the relationship and influence has not been explicitly explained. The financial service industry is one of the early adopters of new information technologies; that means the effect of IT capability on firm performance is inconclusive in the sector in general unlike in the manufacturing sector (Brynjolfsson, 1993). Hence, there is a need to understand the effect of the IT capability attributes on the relationship between BPR factors and performance particularly of Nigerian banks.

LITERATURE REVIEW

The Information systems literature on BPR can be classified into four parts (Thong et al., 2000). The first part examined lessons learned from BPR approaches which are case studies on critical success factors (Broadbent et al., 1999; Candler et al., 1996; Caron et al., 1994; Clemons et al.,1995; Davenport and Beers, 1995; Earl et al., 1995; ElSawy and Bowles, 1997; Guha et al., 1997; Hengst and De-Vreede, 2004; Lucas et al.,1996; Newman and Kozar, 1994; Sarker et al., 2006; Stoddard and Jarvenpaa, 1995).

The second research team focuses mainly on the inter-organizational aspects of BPR (Chatfield and Bjorn-Andersen, 1997; Clark and Stoddard, 1996; Lee and Clark, 1996; Riggins and Mukhopadhyay, 1994). The third research stream investigates the effectiveness of BPR methodologies, tools and techniques (Datta, 1998; Dennis et al., 1999, 1994; Holden and Wilhelmij, 1995; Kettinger et al., 1997; Nissen, 2001).

The forth research focus that is most relevant to this study aimed at explaining the relationship between business process reengineering and organizational performance, moderating role of IT capability. This gives rationale as to why BPR, supported by closely aligned IT, generated value for the firm. In 1995, Barua et al. (1996) proposed the theory of business value complementarities based on the theory of complementarities suggests that the economic benefit of a factor increases with the use of its complementary factors.

In the context of reengineering, IT allows for innovative business processes, new skills and new organizational structures (Brynjolfsson and Hitt, 2003). Hence, Barua and Whinston (1998) and Barua et al. (1996) argue that IT is complementary to organizational characteristics and processes, and that investments in IT are less likely to succeed if done in isolation. Devaraj and Kohli (2000) showed in 2000 that IT investments contribute to a higher level of revenue when combined with BPR initiatives. However, Loveman (1990) found no relationship between various IT ratios and performance measures for return on investment. Likewise, Sager (1988) and Venkatraman and Zaheer (1990) reveal that IT has no impact on performance. Brynjolfsson (1993) has suggested that researchers should look beyond conventional productivity.

Empirical test of RBV theory started in the field of strategic management (Mahoney and Pandian, 1992) and were followed by studies in other management disciplines (Barney, 2001; Fahy and Smith, 1999; Foss, 1998; Priem and Bulter, 2001) including information systems (Bharadwaj et al., 1998; Ray et al., 2004; Ravichandran and Lertwongstien, 2002; Santhanam and Hartono, 2003). Bhatt and Grover (2005) and Tippins and Sohi (2003) started to include IT capabilities in their IT studies and explored the link between various dimensions of IT such as IT knowledge, IT operations, IT object, relationship infrastructure and IT business experience on organizational performance. Finding from their study showed that IT capabilities enhance organizational performance (Bhatt and Grover, 2005; Powell and Dent-Micallef, 1997; Santhanam and Hartono, 2003). In addition, findings from IT studies conducted by researchers (Adam, 1993; Bharadwaj, 2000; Floyd and Wooldridge, 1990; Quinn et al., 1994; Santhanam and Hartono, 2003) revealed that IT capabilities provide a basis of gaining competitive advantage and enhances organizational performance.

Information technology capability

Tippins and Sohi (2003) define IT capabilities as the extent to which an organization is equipped with IT infrastructure, IT skills knowledge and experience as well

as effective IT operations utilization. A high level of IT experience enables the smooth implementation of the organization's strategy, develops reliable and cost effective systems for the organization and anticipates customer needs (Bhatt and Grover, 2005). Clark (1997) noted that, IT experience in combination with other IT elements directly determines an organization's ability to rapidly develop and deploy more innovative techniques to enhance performance.

Researchers and practitioners have addressed a variety of IT-related variables. For example, Li et al. (2006) and Tippins and Sohi (2003) classified IT capability into three dimensions: IT knowledge, IT operations and IT infrastructure. This study adopts Tippins and Sohi (2003) ideas with modification to includes human IT resources because of the following reasons: 1) People are important when implementing a system and can directly affect its success or failure; 2) The skills of the knowledge management development team have a major influence on the outcomes of the project; 3) Only a competent team can identify the requirements of complex projects.

Therefore, a highly skilled project team should be much better equipped to manage the project of knowledge management. Human IT resources include technical IT knowledge. IT knowledge concerns with the extent to which a firm possess a body of technical knowledge about objects such as computer based systems (Tippins and Sohi, 2003). IT knowledge encompasses professional qualification, expertise and skills such as programming, systems analysis and design, and competencies in emerging technologies. IT operations include IT functions, coordination and interaction with user community. Hence, IT operation was conceptualized as the extent to which organization utilizes IT to manage market and customer information. The computer based hardware, software and support staff were referred as IT object.

According to RBV, firms with strong human IT resources are able to integrate the IT and business planning processes more effectively, develop reliable and cost effective applications that support the business needs of the firm, communicate with business units efficiently, and anticipate future business needs of the firm and innovated valuable new product features before competitors (Bharadwaj, 2000). Previous study and researchers have developed many theories on the competitive advantage of firms, however, resource based view (RBV) emerged as the perspective that facilitated the explanation for the existence of firm specific assets and capabilities that are important to the preparation of firm strategy (AbuBakar et al., 2009). Resource based view is the underlying theory in this study which explain the relationship between organizational resources and sustaining a competitive advantage for superior organizational performance relative to competitors (Barney, 1991; Fahy, 2000). RBV perspectives view organization as a rent seeking unit that developed and deployed resources (assets and capabilities) to realize competitive advantage (Greenaway and Chan, 2005).

Resources have been identified and categorized by various researchers to pursue competitive advantage. For example, Mills et al. (2003) argued that resources are classified as follows: 1) tangible resources such as financial, organizational, physical and technological resources, 2) knowledge resources such as skill and experience, 3) system and procedural resources, 4) cultural values and resources, 5) network resources and resources with potential dynamic capability, 6) intangible resources such as innovation, human and reputation resources. Also, Fahy (2000) classified resources into three (3) categories: tangible, intangible and capabilities. RBV focuses on organization' ability to develop and deployed its internal resources (Hitt et al., 2001). Resources are input to firm's production processes to improve competitiveness and performance. Meyer and Utter back (1992) highlighted the role of technology, RandD, production, manufacturing capacity and marketing capability. Leonard-Barton (1992) pointed out the importance of knowledge and considers organizational capabilities to includes employees skill, learning, technology system, managerial system and value system of the firm. Capabilities are firm's ability to develop and deploy integrated resources for the objective of achieving a targeted goal.

Examples of capabilities include: teamwork, organizational culture, trust between management and workers, information technology, etc. Fowler et al. (2000) argued that there exist three types of capabilities: information technological capabilities, market driven and integration capabilities. Information technological capability (IT capability) relates to the operational aspects of firm business processes. Mills et al. (2003) noted that research still found that resources are inter-related and sticky bundles even though effort was made to identified, classified and categorize them accordingly. In a turbulent business environment, it was suggested that firm should establish resource competence rather than focus on product market (Menor et al., 2001). Therefore, this study used RBV to govern the theoretical framework. BPR factors are more of resource as the factors (such as IT investment, personnel commitment, strategy alignment, strong capital base, volume of financial activities, customer focus, effective reward system, communication, training and education) are more of intangible resources within the organization that would be used with influence of IT capability (IT skill knowledge, IT operations and IT object) to achieve a remarkable performance and competitive advantage by Nigerian banks operating in a dynamic business environment that is characterized by intense competition and frequent intervention by government.

Previous studies that focus on a direct relationship between IT and organization performance fail to take into

consideration those intervening firm capabilities that are improved by IT and which are true facilitators of performance improvement (Tippins and Sohi, 2003). Other studies have relied on erroneous assumption that adoption of IT would improve performance (Dewett and Jones, 2001). While IT can improve efficiencies, it may not provide competitive advantage, because the same technology could be adopted by competing organization. Therefore, Tippins and Sohi (2003) proposed that, IT related benefit can only be realized when organization develops IT competency and then use it as a set of co-specialized resources to leverage other complementary resources. Empirical study include: Yongmei et al. (2008) who suggested that, IT capability is an important moderating variable linking IT investments to firm performance. The model and hypothesis are verified by sample data from leading IT firms in China. Similarly, Said et al. (2009) found that IT capability moderates the relationship between customer-focused strategies and organizational performance by providing a justification for LGA's to invest in term of resources and commitment, in adopting CF-strategies and IT. Also, Shao et al. (2010) examined the moderating effect of chief information officers' (CIO's) competence on IT investment and organization performance. The study re-conceptualized CIO's competence into six sub-dimensions (includes interpersonal communicative ability, political skills, dynamic leadership, strategic IT knowledge, business knowledge and IT management experience) based on RBV and KBV to explain the phenomenon of IT productivity paradox. In addition, Huang et al. (2009) argued that the empirical evidence of Italian banks suggests that the development of IT capability, such as creating an Intranet to serve as a repository and communication tool, that can support the redefinition of the overall strategy of the bank. Furthermore, cultural integration of the branch network and a life-long training process can be conducted to sustain the banks' large scale network (Canato and Corrocher 2004). Despite the fact that the financial service industry is one of the early adopters of new information technologies, the effect of IT capability on firm performance is inconclusive in the service sector in general, which is contrary to its manufacturing counterpart (Brynjolfsson, 1993).

The role of IT capabilities in enhancing organizational performance is well established in the literature. Various IT studies suggests IT capabilities provide a basis of gaining competitive advantage and enhancing organizational performance (Santhanam and Hartono, 2003; Bhatt and Grover, 2005). An extensive body of IT capabilities literature agrees that IT capabilities are resource to facilitate an effective collection and utilization of information (Bharadwaj, 2000). Floyd et al. (1990) contend that IT capabilities enhance service reliability, reduce transaction errors and increase consistency in performance. Furthermore, contentions are that capabilities can contribute to enhancing service quality through better customized or individualized services and in creating knowledge links for identifying and sharing organizational expertise (Quinn et al., 1994). Tippins and Sohi (2003) argued that IT capabilities which is also known as IT competency enhance performance through an elimination of inefficiency, reduction of long term cost, improve service reliability and reduced transaction errors. While Bharadwaj (2000), Ross et al. (1996) and Li et al. (2006) studies focuses on the importance of IT capability as well as relationship between IT spending (IT investment) and productivity/performance with moderating effect of IT capability. Therefore, IT capability can provide the ability to understand the existing operations. It is also one of the most considered in bring changes into the business process.

Organizational performance

Banks are concentrating their efforts on market segments offering the potential for growth and enhancing performance, resulting in a re-direction within the overall financial services sector. Innovative banking services and processes were evolved as the market consolidates due to mergers and acquisitions. This dual trend toward specialization and consolidation is forging banks that will be able to compete in international and global markets. Performance enhancement efforts are aimed at a complete realignment of internal processes. In addition, to cost containment strategies, focus is now on improving customer service delivery. Organization processes must be effective, efficient and be more customer-friendly. Attempts are being made to transfer approaches like process reengineering initiatives that have proven effective in other industries, particularly manufacturing to the financial sector.

Organizational performance comprises the actual output or results of an organization as measured against its inputs. Organizational performance measures allow companies to focus attention on areas that need improvement by assessing how well work is done in terms of cost, quality and time. Today's business environment is characterized by the increasing importance and strength of various stakeholder groups. It has become quite obvious that all stakeholders need to be taken into account when assessing modern company's performance. This is the main idea of Freeman's Stakeholder theory (Freeman, 1984, 1994). The stakeholder view maintains that firms have stakeholders rather than just shareholders to account for. The view that the corporation has obligations only to its stockholders is replaced by the notion that there are other groups to whom the firm is also responsible. Groups with a stake in the firm include shareholders, employees, customers, suppliers, lenders, the government and society (Berman et al., 1999; Harrison and Freeman, 1999; Hillman and Keim, 2001; Riahi-Belkaoui, 2003).

One important notion revealed in many studies is that building better relations with primary stakeholders like employees, customers and suppliers could lead to increased shareholder's wealth. A sustainable organizational advantage may be built with tacit assets that derive from developing relationships with key stakeholders (Hillman and Keim, 2001). When studying the relationship between stakeholder management and a firm's financial performance, Berman et al. (1999) found that fostering positive connections with key stakeholders (customers and employees) can help a firm's profitability.

Therefore, due to the significance of various stakeholders, organizational performance should not be solely assessed by financial indicators. There are several approaches to organizational performance measurement that encompass different stakeholder's perspectives (Hasnan, 2006; Tangem, 2004). The balanced scorecard (BSC) (Kaplan and Norton, 1992, 1993, 1996) is the most established and most commonly used (Neely, 2005; Razalli, 2008), but by far not the only one. The multi-model performance framework (MMPF) model by Weerakoon (1996) is also very interesting and has four-dimensions including employee motivation, market performance, productivity performance and societal impact, and covers the satisfaction of various stakeholders such as customers, investors, employees, suppliers, and society. A more recently developed conceptual framework is the performance prism, which suggests that a performance measurement system should be organized around five distinct but linked perspectives of performance (Hasnan, 2006; Tangem, 2004).

Organizational performances in this study refer to the level of bank performance (increase/decrease) in terms of both financial and non financial performance indicators. Organizational effectiveness represents the outcome of organizational activities (Henri, 2004). Organizational effectiveness empirically is the ultimate dependent variable in research on organization (Cameron, 1986). The perception of organizational performance is linked to the continued success and achievement of an organization. There are wide ranging literatures on performance, but there is still no consensus definition of the term performance (Johannessen et al., 1999). Murphy et al. (1996), study found the use of term performance to include 71 different measures of performance categorized into eight (8) dimensions of both financial and non financial measures. Majority of the previous studies used financial and non financial indicators to measure performance (Johannessen et al., 1999; Murphy et al., 1996). The debate on what performance measurement to use would continue as criteria could not apply to all settings (Cameron, 1986). A review of the literature on the evaluation of performance in organization context by Gomes et al. (2004), reveals different emphasis on the performance measurement depending on the objective of the organization in that particular situation. There are many possible benefits from reengineering that translate into improved organizational performance.

However, because of wide possibility of benefit from company innovativeness on performance a multiple dimensional scale of performance measurement offers more comprehensive operationalization of organizational performance than on uni-dimensional approach. Examples on some financial performance indicators employed in previous studies are: profitability, success rate of new service (product) introduction, after tax return on investment, sales growth and after tax return on assets. Example of non financial performance indicators includes: customer satisfaction, customer focus, market research and customer relationship management, quality and process improvement.

Therefore based on the previous studies, this study would consider multiple measurement of performance (financial performance and customer service management performance). The financial and non financial performance indicators would consist of: profit, profit growth performance target, sales growth, overall response to competition, future outlook and success rate in new product launch, overall business performance, customer service management, market research, customer relationship management, customer satisfaction, operational performance, speed, quality service and process improvement. In this study, the perceived measures of financial and non financial performance of organization would be used because subjective measure was found to be correlated with objective measure of performance (Dess and Robinson, 1984; Dawe, 1999). Also, the previous studies (Lyles and Salk, 1996; Hansen and Wernerfelt, 1989; Bart et al., 2001) confirmed the reliabilities and correlations between objective measures and perceived measures are strong. Similarly, previous studies conducted by Bontis (1998), Bontis et al. (2000), Idris (2011) and Nura and Osman (2012) revealed that subjective measure of performance (financial and non financial) are feasible. Therefore, many organizations are convinced that the implementation of BPR could bring significant and measurable benefits (Vergidis et al., 2008). In fact, the risky nature of BPR has motivated a detailed investigation of its critical success and failure factors (Abdolvand et al., 2008) and many researchers (Ariyachandra and Frolick, 2008).

METHODOLOGY

This study focus on descriptive and causal research (hypothesis testing) type, since the objective of the study is to examine the link among the independent variable, moderating and dependent variable. Moreover, the nature of the investigation is cross-sectional whereby data is gathered on certain time using hand delivery questionnaire survey. The survey instrument was typed into six page questionnaire divided into four parts. The first part describes statements about the factors of bank's business process reengineering and is sub-divided into eight units. The research

statements were adapted from previous researches with modification after consultation with experts in academics and industry. The second part in the questionnaire relates to the statement to assessing the performance of IT capabilities in the banks. The third part of the questionnaire relates to organization performance outcome, that includes both financial and non financial. The fourth and final part was designed to capture the respondent profile and background information about the organization BPR implementation, IT and branches network spread linked via wide area network (WAN) and local area network (LAN) with ATM online 24/7.

The variables measured in this research consist of eight factors of BPR as independent variables: 1) Change Management; 2) BPR Project Management; 3) Top Management Commitment; 4) Customer Focus; 5) I.T Infrastructure; 6) Process Redesign; 7) Financial Resource; 8) Less Bureaucratic Structure. The dependent variable is Organizational Performance with two dimensions – financial and non financial, while the moderator was IT Capabilities with two dimensions – I.T knowledge and I.T operations. Hierarchical regression analysis was applied to scrutinize the impact of IT capabilities as the moderator on the relationship between BPR factors and organizational performance in Nigerian banks context. The method of analysis employed was descriptive statistics and hierarchical regression analysis. Organization was the unit of analysis and the study was conducted between May until August 2011.

Description of study sample

The data for this study was collected from senior management, executives, managers and head of departments that represent the respective banks in Nigeria. In this study, attempts were made to increase the response rate such as, by reminding the respondents through telephone call, SMS and self visits (Sekaran, 2006). As a result of these efforts, we had 460 questionnaires response from the banks out of the 560 questionnaires distributed by hand delivery to the respondent banks (commercial, microfinance and mortgage) in Nigeria as shown in Table 1. This makes the response rate of 82.14% based on the definition of response rate (Jobber, 1989). Out of these 460 responses collected, 417 questionnaires were useable for further analysis making a valid response rate of 74.0%. This response rate is considered adequate according to Sekaran (2006) who state that the response rate of 30% is acceptable for any surveys. Majority of the respondents in the organization were male (68%).

In terms of job title of the respondents, 35% are holding the responsibility of head of department, 30% senior manager's, 20% deputy general managers/assistant general managers. Hence, these represent the majority of the targeted respondent for the study. Others include top management (ED/GM) that represents 16%. The respondents represented their organizations that were categorized into three different types of banks viz: commercial bank 4.3%, of population sample (representing 75% of registered Commercial bank with Central bank of Nigeria). Microfinance bank is 74.8% of sample size (representing 35% registered microfinance bank with central bank of Nigeria) and primary mortgage banks were represented by 21% of the sample that accounted for 88.75% of registered primary mortgage bank with apex bank.

As for the number of employees in these organizations, the highest was 60% for 1 to 50 numbers of employees including the outsourced personnel. This is followed by 15% for above 2,000 employees inclusive of outsourced. Out of 417 responses received from the banks, 75% of them fall under a category of organization (microfinance bank and primary mortgage bank) without ATM machines, POS, etc. Only 14% of banks have 99 branches network with ATM machines, 5.0% of the participating banks have 300 to 499 branches network with ATM machines and 4% of banks involved in the survey have 100 to 299 branch network that have ATM machine installed onsite. As for the location of branches, 47% of the respondent indicated that most of their bank branches are located in the commercial and state capital, 21% were sighted in state capitals and few in cities, while 13% were located in urban and rural areas with few branches in cities.

In terms of BPR implementation in general, the Nigerian banks have been implementing BPR in their operational processes. Specifically, we found that 57% of the banks have been implementing electronic banking services, such as, operational transactions of cash/cheques received and payment through ATM, POS, mobile, telephone, cards transaction, loan processing, credit transactions and others; 67% of the banks have restructured and improved their operational processes; 61% of the banks reengineered their credit risk operational processes of loan appraisal and administration, as well as rendition of periodic returns to the regulatory authority using information technology software for credit risk reporting; while, 51% of the banks confirmed to have redesigned their domestic and international operational processes, respectively.

On the objective of adopting BPR initiative by the organization, 25% of the respondent bank indicated that their organization's objective was to enhance their profitability performance by increasing revenue. 23% of the respondent bank indicated their motive to improve quality of customer service of the organization. 21% of the respondent banks implemented BPR in order to be proactive for future challenges while 12% expressed their goals to reduce operating cost and be reactive to competitive pressure from foreign banks. On the overall objective of BPR implementation by Nigerian bank was to improve profitability through cost containment strategy, improve customer service delivery by providing effective and efficient service with error free operational processes. Therefore, the reengineering processes in banks involved redesigning of core processes and restructuring of the domestic and foreign operational processes that involved some kind of innovations and value added services to the various processes such as cheque clearing and settlement, interbank transfers, remittances for payment of bills, fund transfers both local and international payment through MoneyGramme, Western Union Money transfer, Wire transfer through SWIFT and opening of letter of credit.

HYPOTHESIS TESTING AND RESULTS

Before the summary of the hypothesis testing in Table 4, all variables measures were tested for validity and reliability. Inter-correlation analysis was conducted and the results for the test were significant at 0.01 levels. The reliability test for each dimension emerged after factor analysis was conducted. Cronbach's alpha coefficient is widely used as a measure of reliability. A value of 0.7 in the Cronbach's alpha is considered adequate to ensure reliability of the internal consistency of the questionnaire (Nunnally, 1978).

Hierarchical regression or moderator regression has been suggested by many authors as the technique in analyzing the moderating effect (Baron and Kenny, 1986; Frazier et al., 2004). In this study, three levels of significance (1, 5 and 10%) were used to detect the moderating effect of IT capability on the relationship between BPR factors and organization performance. To test the moderator effect a three (3) step hierarchical was

conducted to determine what proportion of the variance in a particular variable is explained by other variables when these variables are entered into the regression analysis in a certain order (Cramer, 2003).

To test the extent of IT capability attributes that moderates the relationship between BPR factors and overall organisational performance, a hierarchical multiple regression was conducted. The BPR factors were first entered into the step 1, followed by the moderator (IT capability) into step 2, and the interaction terms in step 3 of the regression model. It was hypothesis that IT capability moderates the relationship between BPR factors and overall performance. Table 2 indicates the result of the hierarchical multiple regression analysis of the moderating effect of IT capability on the relationship between BPR factors and overall performance (details see Table 5). BPR factors were entered first in step 1, explaining 15.4% of the variance. After the entry of IT capability at step 2 the total variance explained by the model as a whole was 19.7%. In step 3, the interaction terms were entered, which resulted in additional variance explaining up to 22.8%. The Sig. F change from step 1 to 2 at the 1% significance level and from step 2 to 3 was significant at the 5% level. However, inspection of the individual interaction terms between IT capability x management commitment (β=0.225, t=2.646, p=0.008); IT capability x customer focus (β=-.094, t=-1.886, p=0.060) and IT capability x change management (β=-.090, t=-1.735, p=0.084) indicates that management commitment was significant at 1%, customer focus and change management were significant at 10%, level respectively. IT capability moderates the relationship between the BPR factor (customer focus, management commitment and change management) and overall performance. Whilst, hypotheses HA 3A- 1, 3 and 4 are supported, hypotheses HA 3A – 2, 5 and 6 are rejected.

To test the extent of IT capability attributes that moderates the relationship between BPR factors and customer service management performance, a hierarchical multiple regression was conducted. The BPR factors were first entered into the step 1, followed by the moderator (IT capability) into step 2, and the interaction terms in step 3 of the regression model. Table 3 shows the result of the hierarchical multiple regression analysis of the moderating effect of IT capability on the relationship between BPR factors and customer service management performance (Table 6). BPR factors were entered first in step 1, explaining 21.3% of the variance. After the entry of IT capability at step 2 the total variance explained by the model as a whole was 24.7%. In step 3, the interaction terms were entered, which resulted in additional variance explaining up to 26.5%. The Sig. F change from step 1 to 2 was significant at the 1% level; however, the F change was not significant from step 2 to 3. However, upon scanning of the beta coefficient for individual interaction terms between IT Capability × IT Investment (β=-0.168, t=-1.989, p=0.047) and IT capability × management commitment (β=0.190, t=2.288, p=0.023) both at the 5% significant level. This suggests that IT capability moderates the relationship between BPR factors (IT investment, Management commitment) and customer service management performance. Whilst, hypotheses HA 3C – 3 and 4 supported, hypotheses HA 3C – 1, 2, 5 and 6 are rejected.

DISCUSSION

In general, results of the moderating effects of IT capability on the relationship between BPR factors and organizational performance variables support the literature on the resource-based view that focuses on, that it is costly to copy attributes of a firm which are seen as fundamental drivers of performance (Conner, 1991; Bharadwaj, 2000). Researchers have adopted the perspective of RBV in linking IT to the success of knowledge management (Goldet al., 2001; Khalifa and Liu, 2003; Lee and Choi, 2003) and to firm performance (Bharadwaj, 2000; Tippins and Sohi, 2003; Li et al., 2006).

Empirical evidence predicts that information technology needs to interact with other human and business resources to create IT resources that are valuable, rare and applicable to achieve initial, short-term competitive advantage. To achieve a long-term advantage, IT resources must be difficult to imitate, and hard to substitute (Wade and Hulland, 2004). This study contributes to managerial implications for managers, especially in a bank setting. Managers are encouraged to invest in terms of time, money, commitment and other resources to implement business process reengineering strategies. Evidence from this study suggests that organizations should develop IT support in order to further benefit from various strategic activities.

The concept of IT capability was adapted with slight modification from the version of the instrument developed by Tippins and Sohi (2003). The three dimensions of IT capability refer to the extent to which a firm is knowledgeable about and effectively utilizes IT to manage information within the firm. Also, the firm possesses IT objects. Cumulatively, the three dimensions of IT capability represent co-specialized resources that provide an indication of the organizational ability to understand and utilize IT tools and processes that are needed to manage customer information. All three dimensions are required to be present in order to achieve IT competency. Hence, IT knowledge, IT operations and IT objects have to be present in order to achieve IT competency in the form of the capability of the organization.

This study found that IT capability moderates three (3) BPR factors, that is, 1) change management, 2) management commitment, and 3) customer focus. This finding indicates that management commitment has both a direct and indirect significant effect on the overall

performance of banks. The indirect effect is via IT capability. This finding also entails that banks that have excellent management competence would have a strong IT capability that would lead to a higher level of performance. Previous studies by Shao et al. (2010) have suggested that the interaction between the chief information officer competence and top management team moderate the relationship between IT investment and organizational performance. This also explains the experience of the IT productivity paradox based on the resource based view and knowledge-based view. Empirical research shows that the CIO's strategic IT knowledge and business knowledge, as well as the interaction with top management team members, has a significant influence on the distribution and integration of IT within the organization (Armstrong and Sambamurthy, 1999; Smaltz and Sambamurthy, 2006). The issues of IT knowledge or CIO's competence are new. Previous research mainly focused on the direct association for IT knowledge of the CIO's on organizational performance.

In a similar way, the moderating effect of IT capability on the relationship between customer focus and overall performance support the literature, which suggested that IT capability in combination with customer focus strategies enhance an organization's ability to rapidly develop and deploy more innovative customer focused techniques or processes to enhance performance (Clark et al., 1997). An empirical study by Said et al. (2009) also reported that a high level of IT capability enables organizations to perform services with greater speed, more accuracy and more convenient ways for customers. This finding is consistent with the argument put forward by Barney et al. (2001) who suggest that the synergy between two or more resources will create a sustainable competitive advantage.

The moderating effect of IT capability on the relationship between change management and overall performance was in line with study conducted by Hong and Kim (2002) and Ahmed et al. (2006) findings that reported, resistance to change was negatively related to achievement of predetermined goals and user satisfaction. Furthermore, a change management initiative was found to moderate the relationship between resistance and user satisfaction. When Change management is high it means that the users are not very happy with the changes imposed on them. This in turn will lead to lower performance. This indicates that managing the change effectively by acknowledging resistance as natural and expected, giving importance to employees concern, having regular and open communication, get everyone's participation, and promote skills and development are some of the ways to lower the organizational resistance. Employees are not really resisting the change, but rather they may be resisting the loss of jobs, loss of pay, or loss of comfort.

However, this study does not find any statistical evidence that IT capability moderates the relationship between project management and overall performance or its dimensions. The most plausible explanation may be due to the weak and insignificant value of the inter-correlation between the variable and IT capability. Another justification for the insignificant results between BPR strategy alignment and overall performance or other dimensions of performance may be related to the lack of connectivity between strategy and BPR project as one of the reasons for failures in the organization (Bandara et al., 2007). The non-significant relationship between BPR strategy alignment and performance might be due to the implementation of BPR by the organization as a quick fix, that is, for reactive purposes not as a proactive initiative (Terziovski et al., (2003). BPR factors- IT capability-–customer service management, cost reduction and business operations efficiency performance.

The moderating effect of IT capability on the relationship between IT investment, and management commitment on the three dimensions of performance variables (cost reduction, business operations efficiency and customer service management) is consistent with previous literature, which suggested that IT payoff and RBV literature provides a theoretical rationale for how IT capability moderates the relationship between IT investment and firm performance (Yongmei et al., 2008). The IT productivity paradox is explained by the revised model, with IT investment affecting firm performance indirectly through IT infrastructure. To some extent, the influence that IT investment has on human-IT resources and IT-enabled intangibles also affects firm performance, however, these relationships are moderated by the IT capability, implying that no matter how much a firm spends on IT, enhanced performance will not occur without advancing IT capability.

The overall findings of the study prove that links between IT capabilities on the relationship between BPR factors and organizational performance have been established in the study. This linkage provides a new empirical contribution to academic knowledge and practitioners. The challenge for academia is to carry out more research on multi-disciplines to establish the links for the benefit of the industry and society as a whole. As for practitioners, in the search for organizational excellence, organizations should not be dependent on a particular management technique, but rather, multi management techniques are essential for organizational survival and success. The following section discusses the implications of the study.

Conclusion

Besides providing the data regarding the general characteristics of the sample and descriptive statistics of the main variables involved in the study, this chapter presented the empirical results and tested the hypothesis of the study. The findings from the data collected by hand

delivery survey showed support for the hypothesis of the study. Finally, hierarchical regression analysis results of the study pointed out partial support for these moderating effects.

The results of this study establish the important role of IT capability toward competitive advantages and organizational performance. IT capability has been proven in the study as the most important variable that contributes to higher organization performance. Stakeholder in the organization should recognize the important roles of IT operations plays in managing organization. Putting in the competent CIO's leadership will provide the right culture for organizational excellence since, IT have necessary capabilities to drive strategic competitive advantages and performance. The role of IT capability is not only to coordinate but also provide competitive advantage for organization profitability performance and growth. The overall findings of the study have proven that relationship between BPR, IT capability on organization performance have been established in the study despite some few results that indicated insignificant association out comes. This study provides new empirical contribution to academic knowledge and practitioners. To the academia, more research on multi-disciplines need to be conducted to establish the relationship to the benefit of the industry and society in general. To the practitioners, in the search of organizational performance and competitive advantage, should not be dependent on a particular management technique but multiple management initiates that are important for survival and success.

IMPLICATION OF THE STUDY

In summary, this study provides evidence that IT capability plays a critical role in moderating the relationship between BPR factors and organizational performance. This finding provides support for the resource-based view of the firm, which highlights the importance of intangible resources (management commitment, customer focus, change management and IT investment) and capability (IT capability) in explaining organizational performance. Furthermore, this study not only provides evidence of a significant relationship of BPR factors and performance, but it also provides relationship between BPR factors and dimensions of organizational performance.

LIMITATIONS OF THE STUDY

The study is subjected to several shortcomings that limit the interpretation of the findings. One of the limitations of this research is the application of cross-sectional design for survey research that captures the perceptions of respondents at a point in time. Thus, the study cannot prove causal relationships on a longitudinal basis.

Another limitation of the study is the use of subjective self-reported perceptual measures in assessing the studies. Even though, an attempt was made to identify the best respondents by contacting the key personnel that provide the best information, the accuracy of self-perceptions might be strongly influence by the respondent experience in the management of the organizations and frame of reference at the point in time. For instance, perceive biasness may occur if a person with a high reputation strongly believes that their management practices are more advanced compared to other organizations.

In addition to the above limitations, the findings cannot be generalized in a larger context across the cultures of other countries and business environments may give different relationship between BPR factors and IT capability on organizational performance. Although, the sample size is adequately representing 74% of the required sample size, a more complex data analysis such as structural equation modeling (SEM) should have been performed.

DIRECTIONS FOR FUTURE RESEARCH

To overcome the limitations of the study, this research has suggests the need for further investigation. As the survey research in the study was based on cross-sectional design, further work needs to be done to establish the effects of changes over a longer period of time in the aspect of BPR and IT capability. Therefore, future research should consider longitudinal study to examine BPR and IT capability implementation and how their impact influence organizational performance.

Since the present study employed quantitative technique in the design and analysis, the information gathered is limited to the questionnaires response. The use of qualitative information should be incorporated in future research because this approach provides insights and understanding of the problem setting. The result of the study will be more meaningful if both quantitative and qualitative techniques are employed as both of them can complement each other.

The use of single person to answer the questionnaires may result in mono-response bias. Thus, future research should consider multiple respondents to provide a more balanced perspective of BPR variables, IT capability and organization performance perspectives.

The study sample is limited to Nigerian banks. Future research should consider replicating this study in other cultures or countries especially on the moderating effect of IT capability dimensions. In addition, further research is also, needed to be conducted in other sector or industry besides banking such as manufacturing, or construction sector. This research would help to generalize the findings of this study in a broader context.

Alternatively, a cross-cultural comparative analysis would further enhance the understanding of BPR and IT capability of different cultures.

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APPENDIX

Table 1. Response rate of the questionnaires.

Response	Commercial	Microfinance	Mortgage	Freq/Rate
No. of distributed questionnaires	21	449	90	560
Returned questionnaires	21	349	90	460
Returned and usable questionnaires	18	312	87	417
Returned and excluded questionnaires	3	37	3	43
Questionnaires not returned	0	100	0	100
Response rate (%)	100	77.72	100	82.14
Usable response rate (%)	86	69	97	74

Source: Developed for the research.

Table 2. Hierarchical regression results: the moderating effect of IT capability on the relationship between BPR factors and organization performance.

Independent Variables	Std. Beta Step 1	Std. Beta Step 2	Std Beta Step 3	P/Value
IT Investment	0.136	0.040	0.031	0.007**
Strategy alignment	0.050	0.039	0.043	0.266
Customer focus	-0.020	-0.006	0.002	0.654
Personnel commitment	0.207	0.124	0.146	0.000***
Effective communication	0.021	0.012	0.005	0.676
Training and education	0.027	0.015	0.004	0.601
Volume of financial activity	0.267	0.194	0.159	0.000***
Reward system	-0.035	-0.041	-0.022	0.425
Strong capital base	0.059	0.031	0.051	0.222
Moderating variable				
IT capability (IT CAP)		0.283	0.344	
Interaction				
IT invest x IT CAP			-0.163**	0.028**
StraAlign x IT CAP			-0.010	0.979
CF x IT CAP			0.028	0.247
P/Commit x IT CAP			0.217***	0.005***
EffComm x IT CAP			-0.008	0.924
TrgandEdu x IT CAP			-0.032	0.467
Vol. Finact x IT CAP			-0.094*	0.048**
Rwdsysm x IT CAP			0.064	0.329
StrgCap x IT CAP			0.035	0.645
R Square	0.269	0.326	0.379	
R Square Change	0.269	0.057	0.057	
F Change	16.627	34.548	1.875	
Sig. F change	0.000	0.000	0.020	
Durbin-Watson	1.934	1.934	1.934	
***: significant@ p<	0.001***	0.050*	0.1*	

Table 3. Summary of hypothesis.

H3:	IT capability moderates the relationship between BPR factors and organizational performance of bank	Partially supported
1	IT capability moderate the relationship between personnel commitment and overall organization performance of bank.	Accepted
2	IT capability moderate the relationship between IT investment and overall organization performance of bank.	Accepted
3	IT capability moderate the relationship between volume of financial activities and overall organization performance of bank.	Accepted
4	IT capability moderate the relationship between strong capital base and overall organization performance of bank.	Rejected
5	IT capability moderate the relationship between communication and overall organization performance of bank.	Rejected
6	IT capability moderate the relationship between strong training and education and overall organization performance of bank.	Rejected
7	IT capability moderate the relationship between reward system and overall organization performance of bank.	Rejected
8	IT capability moderate the relationship between customer focus and overall organization performance of bank.	Rejected
9	IT capability moderate the relationship between strong strategy alignment and overall organization performance of bank.	Rejected

Table 4. Hierarchal regression and multicollinearity analysis.

Model		Un-standardized coefficients		Standardized coefficients	t	Sig.	Collinearity statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	24.298	0.127		190.935	0.000		
	NITinV	0.133	0.049	0.136	2.695	0.007	0.704	1.420
	NSTRAGN	0.051	0.046	0.050	1.114	0.266	0.882	1.134
	NCF	-0.019	0.043	-0.020	-0.449	0.654	0.906	1.104
	NPCommit	0.260	0.062	0.207	4.222	0.000	0.746	1.341
	NECOMM	0.024	0.058	0.021	0.419	0.676	0.716	1.397
	NTRGEDU	0.031	0.059	0.027	0.523	0.601	0.697	1.435
	NVOLACT	0.285	0.054	0.267	5.313	0.000	0.711	1.406
	NRWDSYSM	-0.048	0.060	-0.035	-0.798	0.425	0.939	1.065
	NSTRGCAP	0.106	0.087	0.059	1.222	0.222	0.781	1.281
2	(Constant)	24.298	0.124	0.196	0.646	0.000		
	NITinV	0.042	0.051	0.043	0.816	0.415	0.617	1.620
	NSTRAGN	0.033	0.045	0.033	0.745	0.457	0.877	1.141
	NCF	-0.003	0.042	-0.003	-0.072	0.942	0.901	1.110
	NPCommit	0.176	0.062	0.141	2.845	0.005	0.693	1.443
	NECOMM	0.014	0.057	0.012	0.241	0.809	0.715	1.398
	NTRGEDU	0.017	0.057	0.015	0.304	0.762	0.695	1.438
	NVOLACT	0.223	0.054	0.208	4.157	0.000	0.674	1.484
	NRWDSYSM	-0.047	0.059	-0.034	-0.805	0.421	0.939	1.065
	NSTRGCAP	0.053	0.085	0.029	0.625	0.532	0.769	1.301
	ITCAP2	0.137	0.027	0.283	5.072	0.000	0.546	1.832
3	(Constant)	24.386	0.139		175.007	0.000		
	NITinV	0.033	0.052	0.034	0.630	0.529	0.573	1.746
	NSTRAGN	0.033	0.045	0.032	0.735	0.463	0.853	1.172
	NCF	0.007	0.042	0.007	0.157	0.875	0.865	1.156
	NPCommit	0.197	0.063	0.157	3.104	0.002	0.645	1.550
	NECOMM	0.001	0.057	0.001	0.011	0.991	0.686	1.457
	NTRGEDU	0.004	0.057	0.004	0.076	0.940	0.669	1.494

Table 4. cont'd

	NVOLACT	0.188	0.055	0.176	3.439	0.001	0.629	1.591
	NRWDSYSM	-0.018	0.059	-0.013	-0.312	0.755	0.919	1.088
	NSTRGCAP	0.088	0.086	0.049	1.027	0.305	0.723	1.383
	ITCAP2	0.144	0.029	0.297	4.990	0.000	0.465	2.149
	ITCAP2XITinv	-0.017	0.008	-0.180	-2.205	0.028**	0.246	4.064
	ITCAP2XSTRAGN	0.000	0.008	0.001	0.026	0.979	0.592	1.689
	ITCAP2XCF	-0.008	0.007	-0.054	-1.160	0.247	0.752	1.330
	ITCAP2XPCOMMIT	0.028	0.010	0.226	2.798	0.005***	0.253	3.959
	ITCAP2XEFFCOMM	0.000	0.010	-0.006	-0.095	0.924	0.382	2.620
	ITCAP2XTRGEDU	-0.007	0.009	-0.044	-0.728	0.467	0.456	2.194
	ITCAP2XVOLACT	-0.015	0.008	-0.104	-1.986	0.048**	0.597	1.676
	ITCAP2XRWDSYSM	0.010	0.010	0.041	0.977	0.329	0.923	1.084
	ITCAP2XSTRGCAP	0.007	0.014	0.029	0.461	0.645	0.410	2.438

Dependent variable: OveralNPERFM.

Table 5. Hierarchical regression it capability – BPR factors and overall performance**.**

Model		Coefficients[a]						
		Unstandardized		Standardized	t	Sig.	Collinearity statistics	
		B	Std. error	Beta			Tolerance	VIF
1	Constant	49.200	0.309		158.970	0.000		
	Cmgt	0.003	0.059	0.002	0.046	0.964	0.956	1.046
	AdqFin	0.493	0.099	0.272	4.968	0.000***	0.689	1.451
	ITinvest	0.177	0.120	0.080	1.474	0.141	0.705	1.418
	MgtCompt	0.328	0.149	0.115	2.198	0.028**	0.750	1.333
	CUSF	0.047	0.103	0.022	0.460	0.646	0.922	1.085
	STRAT	0.041	0.112	0.018	0.370	0.712	0.884	1.131
2	Constant	49.198	0.302		162.972	0.000		
	Cmgt	0.017	0.057	0.014	0.302	0.763	0.951	1.052
	AdqFin	0.359	0.101	0.198	3.562	0.000	0.634	1.577
	ITinvest	0.028	0.125	0.013	0.226	0.821	0.619	1.616
	MgtComit	0.140	0.151	0.049	0.930	0.353	0.697	1.434
	CUSF	0.082	0.101	0.037	0.810	0.419	0.917	1.090
	STRAT	0.000	0.109	0.000	0.003	0.998	0.879	1.138
	ITCAP2	0.309	0.066	0.281	4.682	0.000	0.547	1.829
3	Constant	49.218	0.337		145.972	0.000		
	Cmgt	0.024	0.059	0.019	0.404	0.686	0.885	1.130
	AdqFin	0.323	0.103	0.178	3.120	0.002	0.588	1.701
	ITinvest	0.020	0.128	0.009	0.158	0.874	0.578	1.730
	MgtCompt	0.187	0.154	0.066	1.212	0.226	0.653	1.532
	CUSF	0.097	0.101	0.045	0.959	0.338	0.887	1.127
	STRAT	0.006	0.109	0.003	0.058	0.953	0.860	1.163
	ITCAP2	0.350	0.070	0.318	4.971	0.000	0.468	2.139
	ITCapChgMgt	0.016	0.009	0.090	1.735	0.084*	0.711	1.407
	ITCapFin	0.014	0.014	0.060	0.953	0.341	0.489	2.047
	ITCapITinvst	0.024	0.019	0.108	1.249	0.212	0.257	3.898
	ITCapMgtCopt	0.063	0.024	0.225	2.646	0.008***	0.265	3.770
	ITCapCF	0.033	0.017	0.094	1.886	0.060*	0.772	1.296
	ITCapStrat	0.011	0.019	0.032	0.590	0.555	0.638	1.567

Dependent variable: OrgPerfm. ***P/Value<0.01; ** P/Value <0.05; and *P/Value<0.10.

Table 6. Hierarchical regression: I.T CAPABILITY – BPR FACTORS and CUSTOMER SERVICE MANAGEMENT.

Model		Coefficients[a]						
		Unstandardized		Standardized	t	Sig.	Collinearity statistics	
		B	Std. error	Beta			Tolerance	VIF
1	Constant	14.835	0.094		157.731	0.000		
	Cmgt	0.026	0.018	0.064	1.435	0.152	0.956	1.046
	AdqFin	0.153	0.030	0.268	5.070	0.000***	0.689	1.451
	ITinvest	0.078	0.036	0.111	2.135	0.033**	0.705	1.418
	MgtComit	0.149	0.045	0.166	3.280	0.001***	0.750	1.333
	CUSF	0.008	0.031	0.012	0.263	0.793	0.922	1.085
	STRAT	0.029	0.034	0.040	0.850	0.396	0.884	1.131
2	Constant	14.835	0.092		161.010	0.000		
	Cmgt	0.020	0.018	0.050	1.142	0.254	0.951	1.052
	AdqFin	0.116	0.031	0.202	3.756	0.000	0.634	1.577
	ITinvest	0.021	0.038	0.030	0.543	0.587	0.619	1.616
	MgtCompt	0.096	0.046	0.108	2.095	0.037	0.697	1.434
	CUSF	0.018	0.031	0.026	0.577	0.564	0.917	1.090
	STRAT	0.017	0.033	0.024	0.522	0.602	0.879	1.138
	ITCAP2	0.086	0.020	0.248	4.271	0.000	0.547	1.829
3	Constant	14.901	0.104		143.816	0.000		
	Cmgt	0.021	0.018	0.053	1.162	0.246	0.885	1.130
	AdqFin	0.114	0.032	0.201	3.600	0.000	0.588	1.701
	ITinvest	0.013	0.039	0.019	0.332	0.740	0.578	1.730
	MgtCompt	0.101	0.047	0.113	2.132	0.034	0.653	1.532
	CUSF	0.023	0.031	0.034	0.741	0.459	0.887	1.127
	STRAT	0.016	0.034	0.021	0.466	0.641	0.860	1.163
	ITCAP2	0.086	0.022	0.247	3.951	0.000	0.468	2.139
	ITCapChgMgt	-0.001	0.003	-0.011	-0.213	0.831	0.711	1.407
	ITCapFin	-0.005	0.004	-0.068	-1.112	0.267	0.489	2.047
	ITCapITinvst	-0.012	0.006	-0.168	-1.989	0.047**	0.257	3.898
	ITCapMgtCopt	0.017	0.007	0.190	2.288	0.023**	0.265	3.770
	ITCapCF	-0.008	0.005	-0.069	-1.417	0.157	0.772	1.296
	ITCapStrat	0.001	0.006	0.011	0.208	0.835	0.638	1.567

a. Dependent variable: Customer Service Management. .***P/Value<0.01; ** P/Value <0.05; and *P/Value<0.10.