Driving Operational Excellence: Assessment of the Impact of Information Technology on Business Strategies and Business Process Reengineering

Stephen Kwarteng Obeng[1], Bryan Takudzwa Nyawasha[2], Amita Garg[3]

[1]MBA candidate, Faculty of Management Studies, Parul University, India.
[2]MBA candidate, Faculty of Management Studies, Parul University, India.
[3]Professor, Faculty of Management Studies, Parul University, India.

ABSTRACT

Organizations have undergone transformation as a result of the modern, globally competitive business environment, which has compelled them to be inventive and adopt cutting-edge tools, techniques, and technology.

The business procedure and available resources are seen as rivals by them. As a result, they continuously redesign, reorder, and upgrade their technology resources.

In recent years, BPR has grown to be one of the most significant and well-liked change management strategies, garnering significant interest from academics and practitioners.

This paper critically examines the how IT influence business strategies and further affect BPR and uses theory to explore extent to their interrelations drive operational excellence in organizations.

Keywords: Information Technology, Business Strategies, Business Process Reengineering.

INTRODUCTION

Business process reengineering (BPR) concerns the fundamental rethinking and radical redesign of business processes to obtain dramatic and sustaining improvements in quality, cost, service, lead time, outcomes, flexibility, and innovation (Kuhil, 2014). It was introduced by Hammer, as radical redesigns of processes to gain significant improvements in cost, quality, and services (Ozcelik, 2010). BPR is a major management approach that focuses on doing things in a better way that is clearer and easier to achieve a radical improvement on quality, speed, customer service, and reduction in cost (Goll & Cordovano, 1993). As a management tool it seeks to analyze and redesign current business processes and their components in terms of efficiency, effectiveness and added value to the objectives of the business. It does not seek to alter or fix existing processes, but forces companies to ask whether a process is necessary, and then seeks to find a better way to do it (Siha & Saad, 2008). The successful implementation of BPR enables organisations to achieve dramatic improvements in business performance. The BPR steps are intended to gather and process business requirements in support of a modernization effort for a specific area. BPR begins with planning activities such as the formation of a BPR team, the creation of a BPR scope document, and an examination of the proposal that relates to a given area, which examines the existing and future business processes and improves them accordingly. IT and BPR collaborate as a critical mechanism to significantly improve organisational performance. In essence, Information Technology can accelerate the exchange of information about corporate goals and

business strategies while also increasing accuracy. It reduces the amount of human error in complex and repetitive processes. IT reduces errors and the time required to complete processes, resulting in cost savings. IT assists businesses in positioning themselves and capitalising on trends in order to be the first to sell a new product.A high level of IT knowledge enables the smooth implementation of the organization's strategy, develops reliable and cost-effective systems within the organization, and anticipates customer needs (Bhatt & 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. Achieving operational excellence requires businesses to enhance processes and customer service performance through the management approach of cost reduction, improving quality, speed, and customer service for profit maximization. Therefore, management scholars argue that organizations can become proactive in operation by adopting the BPR to achieve a remarkable improvement in organizational performance (Davenport & Short, 1990; Hammer, 1990).

STATEMENT OF PROBLEM

Previous studies have alluded to the criticality IT in BPR and the important role it plays in businesses and organisations in general. The literature on IT and BPR implementation is extensive, but there is a lack of comprehensive empirical evidence on the impact of IT business strategies and BPR on performance. As a result, they have not critically examined how IT influences business strategies and, in turn, BPR, necessitating the need to relate factors to determine how their interrelations drive operational excellence in organizations.

The crux of this study is to fill the gap in literature by making known how IT impacts business strategies and business process reengineering. In addition, paramount to this research is the assessment of how these factors drives operational excellence in organizations.

OBJECTIVES OF THE STUDY

- To examine the role of IT in driving operational excellence.
- To understand the relationship between IT and business strategies.
- To determine the extent to which IT affect business strategies.
- To underscore the impact of IT on business process reengineering.

LITERATURE REVIEW

THE CONCEPT OF BPR

Hammer and Champey have defined BPR as "a fundamental redesign and a fundamental redesign of operations to achieve impressive improvements in critical and modern dimensions of efficiency, such as cost, quality, service, and speed. Over the past decade, the number of articles and books on BPR has progressively increased. The key points of some recent existing BPR literature have been summarized below:

Childe et al. (1994) have presented frameworks for mulderstanding BPR. BPR focuses upon the sequence of activities which form various processes involved in doing business. BPR should enable firms to model and analyze the processes that support products and services, highlight opportunities for both

radical and incremental business improvements through the identification and removal of waste and inefficiency, and implement improvements through a combination of IT and good working practices. Collins and Reynolds (1995) presented the experience of Microsoft Ireland's reengineering program and explained how to solve inventory problems effectively. The company has solved the inventory problems in the supply chain by using online stock control with advanced IT. Kenlaw (1995) explains how IBM's Sales Force Transformation (SFT) business unit provides professional services to Fortune 2000 customers seeking to automate sales and marketing functions. Radical improvements through factory innovation have more to do with a company's ability to change its processes and practice itself than simply automating (Hammer and Champy, 1993). The speed of rapid changes in the markets, shorter product life cycles and consumer's high expectations and demands require fundamental changes within an organization's structures, culture, and other management processes (Goksoy et al., 2012). Smith (1995) indicates that the major aspect of BPR is the human element. Therefore, companies should ensure that their employees are motivated suitably and the technology required for training is available, especially for radical change with BPR. Jones (1995) explains how benchmarking helps to identify and eliminate non-value-added work. BPR requires major organizational and cultural changes to reengineer their business processes through radical change to achieve a dramatic improvement. For such a change effort, the information system (IS) must be restructured to support the reengineering of business processes. The restructuring of IS should support functional integration with the objective of improving the management of the supply chain and hence, an improved productivity and quality.

THE IMPACT OF IT ON BPR

One of the most straightforward assertions about BPR is that IT is a key enabler of the process redesign. It is IT that permits companies to re-engineer business processes; a company that cannot change the way it thinks about IT cannot re- engineer (Hammer & Champy, 1993). Most other BPR proponents also adopt an essentially technical model of organizational change in which IT basically drives the re-engineering effort (Grey & Mitev, 1995; Jones, 1994). These arguments acknowledge the technological determinism inherent to BPR; technology determines not only the work structure, but also the organizational structure, culture, management styles, and beliefs (Grey & Mitev, 1995). Thus, out of fashion, organizational designs can be changed using advanced, enabling technologies that support new business processes that respond to changing market needs. However, It is important to consider the changes that are needed to keep up with the changing technology and the impact of software programs on the organization's processes. BPR may have already produced the organizational structures and processes that will be considered old-fashioned tomorrow, and these processes may be more difficult to change due to the changing software conventions.

Lucas and Olson (1994) provided a clear analysis of this inconsistency in their examination of its effects on organizational flexibility. They argued that technology provides the capability for more flexible organizational structures by allowing a greater variety at the time and place of work while increasing the speed of response. They note that IT also constrains flexibility by embedding routines into software programs that are not easy to change. Resolving the contradiction of IT as an enabler or not in BPR is not easy. Gill (1995) argued that managers should not over program their organizations in search of dramatic productivity gains but to ensure greater flexibility. Lucas (1996) recommends a commitment to continuous investment in new technology, thereby keeping any programmed routines from becoming hardened in the organization.

IMPACT OF IT ON BUSINESS STRATEGIES

The design of the Information systems architecture and acquisition of technology are important aspects of an entity business strategy. Choice regarding technology can be critical to achieving the objectives of the organization. Technology decisions should be an input to the strategy process helping to define innovations and seeking to increase revenue rather than merely an after the fact tool for achieving goals.

Technology is a core input to the development of strategy, just as much as customers, markets, and competitors. Considering the speed with which technology changes, strategy development must be a continual process rather than something that is revised every three to five years. It has power the to change long held business assumptions, managers and executives must be open to this. Technology needs to be managed based on its ability to create innovation in existing business and the ability of emerging technologies to create new markets and products. Technology plays a crucial role in enabling the flow of information in an organization including directly relevant to enterprises risk management across strategy setting and the whole organization. The selection of specific technologies to support enterprises risk management for an organization typically reflects the organization's approach to enterprises risk management and its degree of sophistication, the types of events affecting the entity and its overall information technology architecture as well as the degree of centralization of supporting technology.

THE ROLE OF IT IN OPERATIONAL EXCELLELENCE

The role of IT and its capabilities in driving operational excellence and organizational performance is well established in the literature. Various IT studies suggested that IT capabilities provide a basis of gaining competitive advantage and enhancing organizational performance. An extensive body of literature agrees that IT capabilities are resources to facilitate an effective collection and utilization of information. Floyd et al., (1990) contend that IT capabilities enhance service reliability,reduce transaction errors, and increase consistency in performance. Further 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 an IT capability, which is in a form of IT competency, enhances performance through an elimination of inefficiency, reduction of long-term cost, improve service reliability and reduce transaction errors.

Michael Hammer recommends companies to redefine their processes and automate to achieve operational excellence. According to him IT helps to break down geographical and organizational barriers, provide a useful understanding of a company's strengths, weaknesses, opportunities and threats, track information, manage a process that can be adapted from other company's practices, broaden knowledge in non-technical areas, and transform existing difficult structures to ensure the operation of BPR cross-functional teams. All these steps are necessary to gain market share and achieve a competitive advantage.

THE RESOURCE BASED VIEW THEORY

The Resource-Based View (RBV) theory is the underpinning theory for this study because it explains the relationship between organizational resources and sustaining a competitive advantage for superior organizational performance relative to competitors. The RBV asserts that organizations can outperform

their competitors through developing resources that are unique and diversely distributed (Barney, 1991). RBV defines resources as assets, processes, and capabilities. Barney (1991) asserted that firms achieve sustained performance advantages by securing rare resources of economic value that competitors cannot easily copy, imitate, or substitute. As such, firms with these rare resources should be able to leverage them for their own unique firm benefit. According to RBV, firms with strong human IT resources can 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, anticipate the future business needs of the firm and innovates valuable new-product features before competitors (Bharadwaj, 2000). Since the RBV is an appropriate theoretical framework for addressing performance shortcomings, this study suggests that BPR factors are intangible resources, while the organizational technological competence or IT capability is considered as tangible resources. The RBV perspective has the advantage to facilitate classification of resources, enable comparison and provide strategic measurement of resources. In relation to that, the study identified specific factors that would lead to superior performance in organizations.

METHODOLOGY

The study adopted content analysis and desktop literature review which focused on published journals and research papers on Information Technology and business strategies as well as Information Technology and business process reengineering. Purposive sampling technique was employed in the selection of the literature, specifically, critical case sampling which involves selecting a small number of important cases to yield the most information and have the greatest impact on the development of knowledge.(Patton, 2015). Additionally, primary data was collected through administering questionnaires to support the secondary data gathered.

FINDINGS

The study found that IT plays a significant role in achieving operational excellence in business, reducing human efforts, tracking inputs, outputs of merchandise and statuses, allowing tasks to be performed simultaneously, and making business processes independent of location. IT is a tool for the implementation of business strategies, enabling smooth implementation of the organization's strategy, developing reliable and cost-effective systems, and anticipating customer needs. The results of the study indicated that the IT strategy of a firm is positively related to its overall performance, and higher organizational performance may result from a higher IT competence. The study also found that collaboration between IT and BPR create more flexible, team oriented, coordinative, and communication-based processes, and reengineering processes are within capabilities IT can provide.

RECOMMENDATIONS

Business leaders and managers should prioritize investing to increase their IT competence or to improve the IT capability of their firms since IT competence is positively tied to maintaining competitive advantage.

- Firms should align their business strategies with IT strategy for greater efficiency.

REFERENCES

1. Barney, J. B. (1991). Firm resources and sustained competitive advantage. Journal of Management, 17(1), 99-120.
2. Bharadwaj, A. (2000). A resource-based perspective on information technology capability and firm performance: An empirical investigation. MIS Quarterly, 24, 169-196.
3. Bhatt, G. D., & Grover, V. (2005). Types of Information Technology Capabilitiesand their role in competitive Advantage: An Empirical Study. Journal ofManagement Information Systems, 22(2), 253-277.
4. Childe, S.J., Maull, R.S. and Benette, J. (1994) 'Frameworks for understanding business process reengineering', Int. Journal of Operation & Production Management, Vol. 14, No. 12,
5. Clark, C. E., Cavanaugh, N. C., Brown, C. V., & Sambamurthy, V. (1997). Buildingchange readiness capabilities in the IS organization: Insights from the BellAtlantic. MIS Quarterly, 44, 158.
6. Collins, P. and Reynolds, B. (1995) 'Re-engineering a European supply chain', Logistic Focus,Vol. 3, No. 2, pp.2–6.
7. Davenport, H. T., & Short, J. E. (1990). The New Industrial Engineering:Information Technology and Business Process Redesign. SloanManagement Review, 11-26.
8. Floyd, S. W., & Wooldridge, B. (1990). Path Analysis of the Relationship between competitive strategy, information technology and financial performance. Journal of Management Information Systems, 7(1), 47 64.
9. Gill, T. G. (1995). High-tech hidebound: case studies of information technologies that inhibited organizational learning. Accounting, Management and Information Technologies, 5, 41-60.
10. Goksoy, A., Ozsoy, B. and Vayvay, O. (2012) 'Business process reengineering: strategic tool for managing organizational change an application in a multinational company', International Journal of Business and Management, Vol. 7, No. 2, p.89.
11. Goll, E. O., & Cordovano, M. F. (1993). Construction time again. CIO, 7, 32-36.
12. Grey, C., & Mitev, N. (1995). Re-engineering organizations: a critical appraisal. Personnel Review, 24, 6-18.
13. Hammer, M. (1990) 'Re-engineering work: don't automate, obliterate', Harvard Business Review, Vol. 68, No. 4, pp.104–112.
14. Hammer, M. and Champy, J. (1993) Reengineering the Corporation, Nicholas Brealy, London
15. Jones, E.K. (1995) 'Reengineering the maintaining function: adapt to change but don't lose sight of sound maintenance principles', Plant Eng., Vol. 49, No. 2, p.64.
16. Kenlaw, W. (1995) 'Transformation = Re-engineering + Automation', Sales & Marketing Management, Vol. 147, No. 4, p.21
17. Lucas, H. C., Berndt, D. J., & Truman, G. (1996). A reengineering framework for evaluating a financial imaging system. Communications of the ACM, 39(5),86-96.
18. Lucas, H.C., & Olson, M. (1994). The impact of information technology on organizational flexibility. Journal of Organizational Computing 4(2), 155-176
19. Ozcelik, Y. (2013) 'Effects of business process reengineering on firm performance: an econometric analysis', in Business Process Management, pp.99–110, Springer, Berlin, Heidelberg
20. Patton, M.Q. (2015). Qualitative research & evaluation methods: Integrating theory and practice (4th ed.). Thousand Oaks, CA: Sage

21. Quinn, J. B., Baily, M. N., Herbert, G. R., & Willett, D. (1994). Informationtechnology: Increasing productivity in services: Executive commentary. TheAcademy of Management Executive, 8(3), 28.

22. Siha, S. M., & Saad, G. H. (2008). Business process improvement: empiricalassessment and extensions. Business Process Management Journal, 14(6),

23. Smith, B. (1995) 'Process reengineering: the toughest challenge', Hr Focus, Vol. 72, No. 2, p.24.

24. Tippins, M. J., & Sohi, R. S. (2003). IT Competency and firm performance: Is organizational learning missing link? Strategic Management Journal, 24, 745-761