JOURNAL OF CRITICAL REVIEWS

ISSN- 2394-5125 VOL 07, ISSUE 08, 2020

The Role of Information Technology in Business Process Reengineering: An Analytical Perspective

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DOI: 10.48047/jcr.07.08.625

Abstract

This research intends to critically examine the role of information technology (IT) in business process reengineering (BPR). Organizations use this as a critical strategy to improve their productivity, competitiveness, and operational effectiveness. The successful implementation of BPR efforts is facilitated and enabled in large part by IT. This study pinpoints and investigates the primary ways that IT contributes to BPR through a thorough literature analysis. These include organizational change management, integration and connectivity, data analysis and decision support, and process automation. This study also examines potential hazards and difficulties that may arise with IT-enabled BPR and suggests mitigation measures. Based on a synthesis of prior research, case studies, and expert opinions, this study is analytical in nature. The research findings can serve as a roadmap for practitioners and decision-makers when developing IT-enabled BPR efforts for today's fast-paced corporate environment.

Keywords: Business process reengineering, company, information technology, management, organization

Introduction

Organizations are always looking for methods to increase operational effectiveness, save expenses, and boost customer satisfaction in today's quickly changing business environment. A crucial strategy for attaining these goals is business process reengineering (BPR), which has arisen in recent years. For major increases in performance, quality, and productivity, BPR entails a fundamental restructuring of current business processes. However, careful planning and the use of information technology (IT) as a strategic enabler are necessary to effectively implement BPR. Modern organizational procedures now heavily rely on information technology, which has completely changed how firms work. Information collection, storage, analysis, and dissemination

are made easier by a wide range of technical tools, systems, and applications. Information technology is an important part of BPR projects because it has the power to affect and modify business processes profoundly. This research study's goal is to examine, from an analytical standpoint, how information technology affects business process reengineering. This study intends to offer insights into how businesses may effectively use IT to create successful BPR results by looking at the numerous ways in which IT contributes to BPR. Figure 1 shows the various technological applications in the BPR.

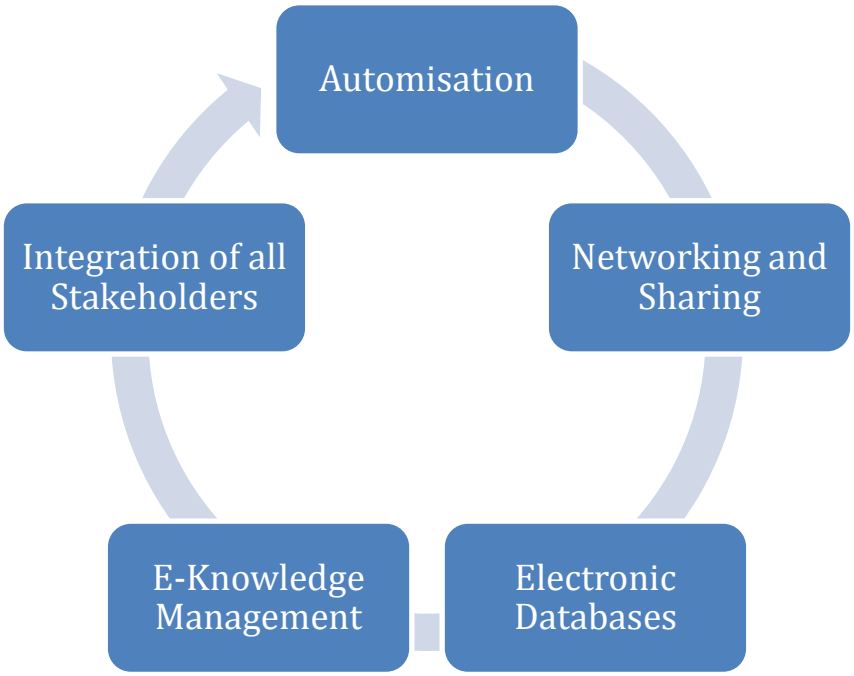

Figure 1 Technological Applications in BPR

BPR often entails the discovery, analysis, and revision of current business processes with the goal of obtaining substantial improvements. By offering the essential resources and tools to aid in the redesign efforts, information technology plays a crucial part in this process. Automation of processes is one of the main ways that IT supports BPR. Automation is the process of using technology to optimize and streamline repetitive and normal processes. This reduces the amount of manual labor required, boosts productivity, and minimizes mistakes. By creating and implementing workflow management systems, robotic process automation (RPA), and other process automation tools, IT enables the automation of processes. Data analysis and decision

support are two other major responsibilities of IT in BPR. Organizations can use IT tools like business intelligence systems, data analytics, and predictive modeling to mine their data for insightful information and make wise decisions. Organizations can find bottlenecks, inefficiencies, and possibilities for improvement by using IT to simplify the gathering, integration, and analysis of data from diverse sources. With the help of these insights, business process transformation projects may make more strategic decisions.

Aside from that, information technology is essential for facilitating communication and integration both within and across organizational boundaries. Supply chain management (SCM), enterprise resource planning (ERP), and customer relationship management (CRM), are a few examples of IT solutions that enable seamless information sharing and cooperation between various functional areas and stakeholders. In BPR activities, this integration promotes coordination, facilitates communication, and increases overall process effectiveness. The successful integration of IT into BPR is not without difficulties, though. Organizations frequently need help with issues like change aversion, a lack of IT infrastructure, data security issues, and the problem of system integration. This research will contribute towards the presently available knowledge by bringing out the relationship between IT and BPR outcomes as well as the variables affecting successful IT integration in BPR initiatives.

Literature Review

The word "reengineering" first arose in the realm of information technology (IT) and has since expanded to describe a more comprehensive change process. This radical improvement method attempts to rethink the primary business process so as to accomplish quick and significant developments in organizational performance. Reengineering became popular among US businesses in the 1990s as a method for enacting changes to improve the organization's efficiency and competitiveness. The impetus was typically the recognition of the need to expedite the process, reduce the amount of resources required, increase efficiency and productivity, and boost competitiveness. Business process reengineering (BPR) is becoming more popular among forward-thinking companies worldwide as a result of the shifting economic climate. According to one study, 87% of the companies surveyed were either working on BPR projects or had stated they intended to in the upcoming years. In their 2001 book, *Reengineering*

the Corporation, Hammer and Champy resurrect the subject. They reintroduce the objective of significantly decreasing "waste" throughout the firm. They recommend that we reevaluate each and every procedure and rebuild businesses (Attaran, 2004).

BPR and IT have the capacity to develop more adaptable, collaborative, coordinated, and communication-based work capabilities when they work together. Information technology encompasses much more than just a set of tools for process automation or mechanization. It can significantly alter how business is conducted while facilitating process design. Information technology enables BPR and makes it valuable in cutting-edge practices. IT and BPR are natural partners, but little is known about how they interact. Their cyclic relationship needs additional investigation and redesigns due to the growing dominance of services (Attaran, 2004). According to Devaraj & Kohli (2003), information technology has undergone rapid innovation and advancement, which has created a competitive climate for enterprises today. Over the past ten years, IT has had a significant impact on enterprises, shifting from supporting roles to helping to create and shape new strategies that support the company's objectives. Organizations strive to adapt more quickly to IT innovations so that they may use them to provide better services to their clients. According to research, the US economy spends over 46% of all capital investments on IT-enhanced organizational efficiency.

Graham & Williams (2005) wrote regarding business process reengineering and how it all begun in the 1990s when Michael Hammer, known as the "father of reengineering," produced an essay for the Harvard Business Review called *"Reengineering work: don't automate, obliterate"*. For several businesses, they said, the article's substantial improvements in results led to a trend in 1994. Success stories like "Ford cuts accounts payable headcount by 75%", "Mutual Benefit Life improves insurance underwriting efficiency by 40%", and "Xerox redesigns its order fulfillment process and improves service levels by 75% to 97% and cycle times by 70% with inventory savings of $500 million", continue to shine brightly. As we can observe, definitions have altered over time, encompassing both technology and other perspectives on processes. BPR is viewed as a dated approach for reinventing business procedures. Historically, the ability to innovate has been largely dependent on management insight, creativity, and sensible judgment in managing change. As a result, BPR is by nature in favor of completely overhauling the business process

and substituting new ones. Making definitions is easy; putting them into use is another story. However, as definitions have evolved, studies now seem to include technical components to encourage redesigning company processes (Smith, 2006).

These concepts have some validity because firms nowadays must adapt their services to a constantly changing context that includes politics, technology, and the outside world. To maintain their position in the market, they are increasingly required to raise the caliber of the services they offer (Tehraninasr & Darani, 2009). Additionally, firms can no longer rely on conventional management techniques to serve their customers. Additionally, they now operate in a demanding atmosphere with high expectations, where high volume productivity and quick turnaround of quality services are essential. BPR's fundamental tenet is the redesign of processes, particularly those that contribute to the growth of an organization's business value, while IT is merely a tool for automating procedures. Therefore, by using BPR, firms are able to assess their fundamental company procedures and structures and regularly restructure them to make them more adaptable to future redesigns (Miao, 2010).

For the purpose of determining the origins and effects of BPR, Chan & Peel (1998) polled 37 businesses across 17 distinct industries. They concluded that improving customer service (external) and internal efficiency are the main drivers of BPR. Francis and McIntosh (1997) identified factors such as customers, international competitiveness, technological advancement, and IT as causes for the emergence of BPR. The majority of businesses prioritize departments or functions over processes. When fulfilling orders, several people are frequently involved, yet nobody ever directly tracks a product or reports the progress of an order. According to Self (1995), reengineering places one person in charge of the entire company process. According to a different study, innovation among employees plays a role in the BPR's performance.

BPR calls for organizational restructuring (product types, facility location, technology, capacity, and personnel) as well as changes in behavior in workers (training, job enrichment, job enlargement, education, and employee empowerment) to take into account and encourage radical changes for achieving dramatically improved business performance. IT tools including the Internet, CAD/CAM, CIM, MRP, E-Commerce, Multimedia, ERP and WWW, EDI, and EFT

could assist reorganization of an organization and stimulate changes while ensuring that employees accept any significant changes to the company's operations. A business process that has been re-engineered will have better process delivery mechanisms, which will lead to better customer service.

Conclusion

As a result, this research study has provided an analytical analysis of the use of IT in business process reengineering (BPR). The findings show how crucial IT is to enabling effective BPR initiatives and fostering enterprise operational advancements. Process automation, data analysis and decision support, integration and connectivity, and organizational change management were among the major ways that IT supports BPR that the study highlighted. Organizations may promote cooperation, optimize workflow, and streamline operations by utilizing IT tools and systems, which will increase production and efficiency. But incorporating IT into BPR is not without its difficulties. Change reluctance, technical difficulties, and security issues can all affect organizations. Organizations must devise plans for tackling technical obstacles, managing organizational change, and assuring data security and privacy in order to overcome these difficulties. The research's conclusions offer useful information to practitioners and decision-makers who want to use IT in BPR projects. Organizations may establish sensible judgments and successful strategies for IT-enabled BPR implementation by recognizing the role of IT and the difficulties that it presents. The final results would include improved operational performance, increased customer satisfaction, and sustained competitive advantage. The results of this study provide recommendations for leveraging the potential of IT to improve business processes and achieve organizational success as firms continue to adapt to changing business environments.

References

- Attaran, M. (2004). Exploring the relationship between information technology and business process reengineering. *Information & Management, 41*(5), 585–596. doi:10.1016/s0378-7206(03)00098-3
- Chan, P. S., & Peel, D. (1998). Causes and impact of reengineering. *Business Process Management Journal, 4*(1), 44–55.

- Devaraj, S., & Kohli, R. (2003). Performance Impacts of Information Technology: Is Actual Usage the Missing Link? *Management Science*, *49*(3), 273–289.
- Francis, A. & McIntosh, R. (1997). The market, technological and industry context of business process re-engineering in the UK. *International Journal of Operations & Production Management*, *17*(4), 344–364.
- Graham, I., & Williams, R. (2005). The use of management texts: Hammer's reengineering. *Scandinavian Journal of Management*, *21*(2), 159–175.
- Gunasekaran, A., & Kobu, B. (2002). Modelling and analysis of business process reengineering. *International Journal of Production Research*, *40*(11), 2521–2546. doi:10.1080/00207540210132733
- Miao, Y. J. (2010). How Does the Enterprise Implement Business Process Reengineering Management. In *2010 International Conference on E-Business and E-Government (ICEE)*, 4100–4102.
- Self, A. (1995). Company reengineering: a prerequisite for growth. *Assembly Automation*, *15*(1), 15–17.
- Smith, H. (2006). P-TRIZ in the History of Business Process. *BPTrends.*
- Tehraninasr, A., & Darani, E.H. (2009). Business Process Reengineering: A Holistic Approach. In *International Conference on Information and Financial Engineering, ICIFE 2009*, 79–82.