

Business Process Management, Business Process Reengineering and Business Process Innovation

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Abstract

Business process management (BPM), business process reengineering (BPR) and business process innovation (BPI) are major strategies adopted by several organizations to manage their business successfully alongside information technology (IT). In recent years, the concept of BPM, BPR and BPI have attracted huge research interests. The present study gives a review on these concepts.

Keywords: Business process, reengineering, innovation, management

Introduction

In today's world of technological advancement, penetration of information technology (IT) into organizations is rapidly increasing. Adoption of IT in core organizational processes is becoming inextricably interwoven in performing everyday activities. Organizations have realized the importance of technology and the role it can play for improving the efficiency and quality of their business processes through effective business process management (BPM). While BPM helps organizations to continuously improve their processes, it also monitors the technological advancements that can be integrated in the development of efficient processes through business process reengineering (BPR) and business process innovation (BPI) [1]. Hence, organizations are continuously redefining their business by means of IT, clearly showing that IT is acting as a tool/catalyst for BPR and BPI [2-5]. In addition, many empirical researches have observed a positive correlation between the success of the organization and management of process [6, 7].

In light of the above context, awareness of BPM, BPR, and BPI is expected to be largely known and has also been a popular concept. The present study reviews existing literatures on BPM, BPR, and BPI.

Business Process

Business process can be defined as “a collection of activities that takes one or more kinds of input and creates an output that is of value to the customer” [8, 9], or “a specific ordering of activities across time and place, with a beginning and an end with clearly defined inputs and outputs” [10]. Process contains a set of attributes and principled flow of steps in order to achieve a task. In general, process helps in governing the operations of an organization such that it can produce valuable outputs.

Business processes within the organizational context can be divided into (a) operational processes, activities involving a firm's value chain and (b) management process, which consists of information processing, control, coordination and communication governing the overall operation of a system [11].

An organized and controlled flow of operational and management process acts as a core element for the efficient functioning of an organization. Improving the efficiency of the organization directly relates to improving the core business processes. Kohli and Sherer [12] articulate that a process view approach can determine additional factors affecting the conversion of IT assets to successful or unsuccessful impact more clearly at a process level. For example, if an organization decides to improve its efficiency to gain investments and implements IT to achieve the said, then the business value of IT is recognized if it has indeed led to higher efficiency in the organization. Hence, it is eligible to say that analyzing the business process of an organization will gain better results to analyze the impact of IT by identifying the IT mechanisms which add value and understand the relationship between IT and the organization.

Rapid improvements and innovation in IT have led to a competitive environment that organizations are facing today. The impact of IT on organizations has drastically changed over the past decade from supporting roles to building and shaping new strategies to uphold the business goals. Organizations seek to be more agile to the developments of IT such that it can be implemented to produce better services to its customers. It is found that almost 46% of all capital investment in the US economy is being made in improvement of organizational efficiency through IT [13]. As we see, organizations look to get better business value utilizing IT, as IT continues to penetrate and impact the operational and management process of the organizations, and the business value of IT has also increased simultaneously. This prospective is improved by redesigning the processes in organizations which often results in betterment of organizational structures, thus resulting in enhanced services and efficiency provided to the organizations [11]. Hence, organizations are continuously redefining business value by means of using IT, clearly showing that IT is acting as a tool/catalyst for BPR and BPI.

Business Process Management

The origin of BPM dates back to the 1990s where BPM was considered as the next big thing after the workflow wave. Today it has evolved into many concepts including workflow management (WFM), case handling (CH), enterprise application integration (EAI), enterprise resource planning (ERP), customer relation management (CRM) etc. [14]. The definitions of BPM in the various extant literatures incorporate a broader view of managing business process in the organization, utilizing technologies and techniques as tools. Some of the available literatures have built their definitions on technological assessment and the capabilities of changing existing business processes. Others define the concept as the synergetic effects created from the combination of technology and human aspects to redefine existing methods.

Therefore, BPM can be broadly depicted as a provider of tools and techniques to efficiently manage business processes [15]. BPM can play a crucial part in the development of an organization, especially which focuses on a business process view [1] because BPM not only provides discovery, design, deployment and execution of business processes, but due to the fastidious evolution it can also provide interaction, control, analysis and optimization of processes [16]. Today as the complexity of business process is increasing, organizations are becoming more open and distributed. To help deal with the complexities and adopt with new environments, it has become an obligation for organizations to focus on BPM [17].

Business Process Reengineering

This began in the 1990s when Michael Hammer, father of reengineering, published the article "Reengineering work: don't automate, obliterate" in the Harvard Business Review. The improved results from the article were dramatic for many organizations that it became a trend during 1994 [18]. Success stories such as 'Ford cuts accounts payable headcount by 75%', 'Mutual Benefit Life improves insurance underwriting efficiency by 40%' [19], 'Xerox redesigns its order fulfilment process and improves service levels by 75% to 97% and

cycle times by 70% with inventory savings of \$500 million'; 'Detroit Edison reduces payment cycles for work orders by 80%' still shine like beacons [20]. The classic definition for business process reengineering is given by Hammer and Champy [9].

BPR is considered to be an old technique for reinventing business processes. Re-inventing has been primarily dependent on management wisdom, creativity and common sense in changing management. Hence, by definition, BPR supports scrapping the entire business process to build entirely new processes. Formulating definitions is easier, but achieving the same in practical terms is a different task. In contrast, as the definitions have evolved, researches seem to incorporate technological aspects to support the reinventions of business processes [21]. These definitions hold a valid meaning to some extent, because present day organizations are facing ever increasing challenges to acclimatize their services to relentless changes in technology, politics and surrounding environments. It is becoming mandatory to improve the quality of services they are providing [22] to stay firmly in the market. In addition, organizations are no longer able to cope with the traditional management mechanisms to satisfy their clients. Moreover, customers, competition and change have made them enter into the intense environment with excessive demands where mass productivity and quality of services with short turnaround time is necessary [23]. To meet such demands, organizations cannot rely on IT alone to meet the firm's goals, as they also need to look into their core processes to meet the changes needed. The basic foundation of BPR is in redesigning the processes, especially the one which helps in developing business value of the organization, and IT is used as a mere tool which helps in automating processes [23]. Hence, with BPR, organizations are able to analyze the fundamental business processes and systems, restructure them periodically such that they can be flexible to future redesigns.

Business Process Innovation

The best definition of the term "innovation" comes from Joseph Schumpeter [24] who defined innovation as (i) a new way of handling processes, (ii) a new product unknown to clients, (iii) new markets previously not known, (iv) new sources of supplies, and (v) new competitive structure in an organization. Rogers [25] defines innovation as any idea, practice or object that is perceived to be new by an individual or other units of adoption.

Damanpour [26] points out that there are two types of innovations: technical innovations, and administrative innovations. Technical innovations deal with realizing new processes, products or services, whereas administrative innovations are implementing new procedures, policies and organizational forms [27].

In the modern marketplace where technology, globalization, awareness and continuous improvisation decide the overall performances of the organizations [28], it is to be understood that the environment is also becoming more dynamic, complex and unpredictable [29] for the organizations. Organizations are seeking new ways of conducting business, such as stable finance, customer satisfaction and gain competitive edge in the market by responding quickly, to deliver services and products in view of greater returns (organizational learning) [30], and especially in the last decade, innovation has been the key to achieve the above. Studies on innovation suggest that organizations tend to achieve better resource management, improved quality, creativity, performance, strategic planning, cost and time reductions, and administrative controls, resulting in longer survival of organizations [11, 31]. Though innovation is quite complex and hard to achieve for every organization, studies show that organizations are looking towards IT to achieve process innovation and process reengineering to get the greater value [10, 32]. Process innovation is consequently linked with process reengineering because process innovation is creating a new way of handling a process and process reengineering is about achieving that new process innovation. As mentioned earlier, IT is the enabler for process innovation, and process innovation initiates process reengineering, thus showing that IT has a vital role to play in the reengineering process while positioning itself as a key enabler of innovating processes (operational and management).

In the above context, process innovation can be perceived as a method to align resources such as IT with the business strategies of organizations. To attain a significant business value from IT depends on its relationship

with process reengineering. Since process reengineering is where innovations are put into the right place with the applications of IT and to a degree where IT might ultimately facilitate automating the processes. Given that IT is considered as a source for process innovation, while process innovation is considered to be the catalyst for understanding the business value of IT [11], it is important for organizations to focus on process innovation before process reengineering and process management to realize their business strategies through IT.

References

1. Kohlbacher, M., The perceived effects of business process management, in Science and Technology for Humanity (TIC-STH), 2009 IEEE Toronto International Conference. 2009. p. 399-402.
2. Becker, J., R. Fischer, and C. Janiesch, Optimizing U.S. Health Care Processes - A Case Study in Business Process Management. AMCIS 2007 Proceedings. Paper 504, 2007.
3. Becker, J. and C. Janiesch, Restrictions in Process Design: A Case Study on Workflows in Healthcare, in Business Process Management Workshops, A. ter Hofstede, B. Benatallah, and H.-Y. Paik, Editors. 2008, Springer Berlin / Heidelberg. p. 323-334.
4. Framinan , J., et al. Business Process Management techniques for health services: Experiences and Application. in Second World Conference of POM and 15th Annual POM Conference. 2004. Cancun, Mexico.
5. Mariska , N., et al., BPR Best Practices for the Healthcare Domain, in Conference: Business Process Management - BPM. 2009: France.
6. Guha, S. and W.J. Kettinger, Business process reengineering. Information Systems Management, 1993. 10(3): p. 13- 22.
7. Strnadl, C.F., Aligning business and it: The process-driven architecture model. Information Systems Management, 2006. 23(4): p. 67-77.
8. Myers, M. and F. Liu. What Does the Best IS Research Look Like? An Analysis of the AIS Basket of Top Journals. in Pacific Asia Conference on Information Systems. 2009. Hyderabad, India
9. Hammer, M. and J. Champy, Reengineering the corporation: A manifesto for business revolution. Business Horizons, 1993. 36(5): p. 90-91.
10. Davenport, T.H., Process Innovation Reengineering Work through Information Technology. Harvard Business School Press, 1993.
11. Mooney, J.G., V. Gurbaxani, and K.L. Kraemer, A process oriented framework for assessing the business value of information technology. SIGMIS Database, 1996. 27(2): p. 68-81.
12. Kohli, R. and S. Sherer, "Measuring Payoff of Information Technology Investments: Research Issues and Guidelines,". Communications of the Association for Information Systems, 2002. 9(14): p. 241-268.
13. Devaraj, S. and R. Kohli, Performance Impacts of Information Technology: Is Actual Usage the Missing Link? Management Science, 2003. 49(3): p. 273-289.
14. Weske, M., W.M.P. van der Aalst, and H.M.W. Verbeek, Advances in business process management. Data & Knowledge Engineering, 2004. 50(1): p. 1-8.
15. Huang, Z., et al., Reinforcement learning based resource allocation in business process management. Data & Knowledge Engineering, 2011. 70(1): p. 127-145.
16. Smith, H., Business process management—the third wave: business process modelling language (bpml) and its picalculus foundations. Information and Software Technology, 2003. 45(15): p. 1065-1069.

17. Wang, M. and H. Wang, From process logic to business logic—A cognitive approach to business process management. *Information & Management*, 2006. 43(2): p. 179-193.
18. Graham, I. and R. Williams, The use of management texts: Hammer's reengineering. *Scandinavian Journal of Management*, 2005. 21(2): p. 159-175.
19. Hammer, M., Reengineering Work: Don't Automate, Obliterate. *Harvard Business Review*, 1990. 68(4): p. 104-112.
20. Grover, V. and M.K. Malhotra, Business process reengineering: A tutorial on the concept, evolution, method, technology and application. *Journal of Operations Management*, 1997. 15(3): p. 193-213.
21. Smith, H., P-TRIZ in the History of Business Process. 2006, BPTrends.
22. Tehraninasr, A. and E.H. Darani, Business Process Reengineering: A Holistic Approach, in *Information and Financial Engineering*, 2009. ICIFE 2009. International Conference on. 2009. p. 79-82.
23. Miao, Y.-j., How Does the Enterprise Implement Business Process Reengineering Management, in *E-Business and E-Government (ICEE)*, 2010 International Conference on. 2010. p. 4100-4102.
24. Schumpeter, J.A., *The Theory of Economic Development*. 1938, Cambridge, MA: Harvard University Press.
25. Rogers, E., *Diffusion of Innovations*. 1995, New York: Free Press.
26. Damanpour, F., Organizational innovation: a meta-analysis of effects of determinants and moderators *Acad Manage J*, 1991. 34(3).
27. Dewar, R.D.D., Jane E., The adoption of radical and incremental innovations: an empirical analysis. *Management Science*, 1986. 32(11): p. 1422-33.
28. Hitt, M.A., et al., Introduction to the special issue—strategic entrepreneurship: Entrepreneurial Strategies for wealth creation. *Strategic Management Journal*, 2001. 22.
29. Coopers and Lybrand, *How to Innovate with Trust and Passion*. 1997, London: Coopers and Lybrand.
30. Utterback, J., *Mastering the dynamics of innovation: how companies can seize opportunities in the face of technological change*. Harvard Business School, 1994
31. Hitt, M., et al., The market for corporate control and firm innovation. *Acad Manage J*, 1996. 39: p. 1084-1119
32. Serrano, A. and M. den Hangst, Modelling the integration of BP and IT using business process simulation. *Journal of Enterprise Information Management* 2005. 18((5/6)): p. 740-759.