

Understanding Critical Success and Failure Factors of Business Process Reengineering

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Abstract

In today's business world with rapid change and global expansion, the trends are also changing. Companies are shifting from product centered approach to customer oriented approach. Therefore the priorities are also changing and the companies are trying to satisfy their customers to deliver what they want in terms of values. Thus, to meet customer's need and expectation and to get competitive advantage, a need to change in existent process arises. Companies need to identify the tasks that are unnecessary, causing delay and inefficiency, identification of areas and jobs that can be reengineered with the help of developed and up to date technology. Thus, BPR provides roadmap to achieve organizational goals that results in profit optimization and productivity enhancement.

Key Words: *Business Process Reengineering, Profit Maximization, Information Technology and organizational structure.*

Introduction

The concept of reengineering was adopted by US based firms in early 1980's while in public sector the issue to increase productivity took place in almost late 1990's (Hales & Savoie, 1997; Pollitt & Bouckaert, 2000). Hammer and Champy (1993) defined Business process Research (BPR) as "the fundamental rethinking and radical redesign of business process to achieve dramatic improvement in critical contemporary measures of performance, such as cost, quality, service and speed."

Every new day brings, incredibly new developments in the technology, thus the demand and markets are becoming much more dynamic than before. Companies keep on thinking to survive the intense competition and ultimately strike with BPR. In such a haphazard situation of survival, mostly organizations ignore to work properly on the elements of BPR and results in failure. BPR is ideal for every firm that utilizes it properly in both public and private sectors and is equally applicable in service as well as production firms. BPR requires time and proper paperwork (planning) before introducing this new process otherwise there are great chances of failure. Al-Mashari and Zairi (1999) said that 70% of the BPR fails during the implementation because of lack of planning and proper measures. The causes of failure mainly include not proper implementation and high expectation for BPR. For successful implementation of this radical change process it is necessary to insure that change is properly communicated, human workforce of the firm are taken on board in discussion and radical change, teams that are going to perform BPR are empowered to make sure a proper teamwork, workforce is trained and educated about the change, committed and strong leadership, and adequate resources are provided to make sure process is run smoothly.

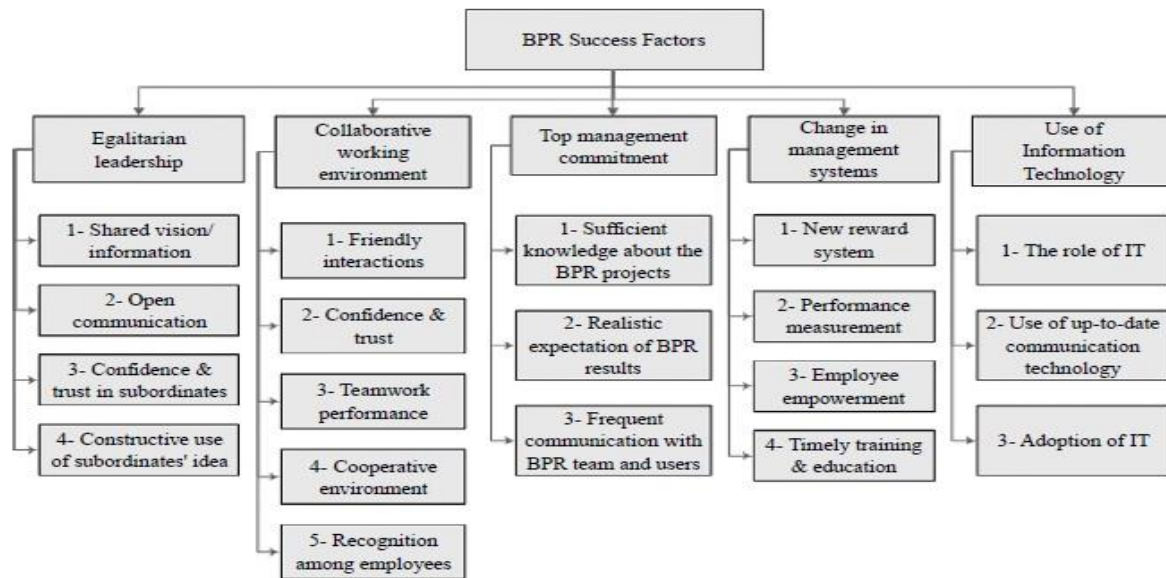
According to Huang and Palvia (2001) change management and corporate culture have played important role in BPR and ERP acceptance in a variety of countries. Factors affecting BPR execution results can be classified into two categories National and environmental and organizational and internal. Further causes of BPR success and failure are extracted from published literature and are discussed below.

Critical Success Factors

Critical success factors (CSF) of BPR described by authors varies from each other. Components of effective BPR described by authors in available survey are shown in table (see table: critical success factors) were discussed by HerzogHerzog, Polajnar, and Tonchia (2007). These factors play an important role in successfully achievement of organizational goals and fulfillment of expectations from BPR. BPR does not guarantee profits unless the CSF is properly worked out.

McAdam and O’Hare (1998) conducted a study on BPR in public sector and to identify CSF of BPR in public sector. Their study also aimed to verify whether CSF in private sector is equally important in public sector or not. Analysis revealed that top management, employee’s commitment, effective communication, teamwork and their empowerment are the important CSFs in public sector of UK. Researchers argued that public sector is influenced by government and the politics (politicians) but besides that still BPR is implemented and it is as important as it is in private sector. Thus, for successful implementation of BPR in public sector, top management commitment and support, education of workforce regarding BPR, their commitment and teamwork plays an important role in success of BPR.

Abdolvand, Albadvi, and Ferdowsi (2008) assessed the readiness of two companies from Iran towards the BPR and to understand the degree of success and failure factors effect on the readiness. These factors were derived from previous studies, CSF was categorized in four main and 17 sub categories (factors) while only one failure factor (category) of resistance to change was taken for this study (see figure below).



(a)



(b)

Ahmad, Francis, and Zairi (2007) conducted a study on identification of CSF of BPR in higher educational sector. It was found that the common CSFs were;

- Teamwork and quality culture
- Quality management system and satisfactory rewards (motivational incentives)
- Change management (very difficult to deal with HR)
- Less bureaucratic and participative
- IT/ IS
- Project management
- Adequate financial resources

As these CSFs are proved to be the most significant contributors in the higher educational institutes of Malaysia and the previous studies has also confirmed that they are important for the success of BPR regardless on sector, firm or departments. Authors have also suggested that for better results, OD (organizational development) for managing change in the organization so that employees gets satisfied in all aspects and they get the right amount of information as required.

In a recent study of Habib and Wazir (2012) it was found that educating employees and providing them proper training help in successful implementation of BPR in public sector. Similarly, in another study it was supported with evidence that developing cross-sectional teams and encouraging teamwork is a source for successful implementation of BPR (Habib, 2011).

After critically evaluating the proposed CSF's from different authors, it has been observed that all agrees upon the use and utilization if IT and are considering IT being an integral part of BPR. Moreover, from employees perspectives (i.e. HR) authors have concentrated on HR factors, employees' empowerment, education and training, skills requirement, teamwork and employees' cooperation. This study is also focusing on factors relating to HR and its role in BPR, therefore based on available literature about the role and importance of HR factors (being CSF) in BPR cannot be ignored. As several authors just mentioned HR factors or involvement of Human factors being CSF for BPR but fell short to provide complete evidence as what major aspects of HR are the Critical Success factors in BPR. Therefore, this study will be analyzing and will be based on the employee education & training, and teamwork as CSF defined (used) by Herzog et al. (2007) (see table below).

Table 1: Critical Success Factors

CSF	Hall et al. (1994)	Maul et al. (1995)	Guimaraes and Bond (1996)	Terziovski et al. (2003)	Maul et al. (2003)	Herzog et al. (2007).
1	Organizational structure	Scope of changes	Leadership	Management commitment		Top management commitment
2	Skills	Human Factor	Employee empowerment	Customer focus	Involving Human and organizational factors	Education and training.
3	Roles and responsibilities	Business process architecture	Methods & tools	Continuous improvement	Business process architecture	Project of BPR.
4	Measurements And incentives	Performance measure	Communication	Performance outcome	Integrating Performance measurement	Team work.
5	Information technology	Information technology	Operational	Information technology	Role of information Technology.	Information technology support.
6	Shared values	Strategy	External	Strategy	Strategic approach	Employee cooperation
						Levers and results.

Causes of Failure

Besides the success stories of BPR there is a list of failures in business world. These causes of failure vary from case to case and company to company. Some of the common reasons pointed by authors (Al-Mashari & Zairi, 1999; Tânia R. Belmiro, Gardiner, John E.L. Simmons, & Antonio F. Rentes, 2000; Bhandiwad, 1998; Hammer & Stanton, 1995) are;

- Management heterogeneity: BPR requires the coordination of people, processes and technology but it can only be achieved with clear vision and values. Top management sometimes is rigid in this regard and fails to bring harmony and integration in the key components.
- Vague methodology: adaptation of proper methodology is essential for the success of radical change process but companies when adopting BPR often fails to choose the right method for introducing the change.
- Cross-functional teams creating problem: most of the time companies fail to build proper teams and because of the need for cross functional teams, it creates problem for management.
- Employee commitment and job security: top management sometimes forgets to assure job security and this result in low morale and decrees in employee commitment.
- Focus on short-term objectives: sometime companies expect that BPR will deliver results soon in short-term but it is not the case. BPR is long-term process due to change enduring and it takes much longer time than the TQM and value-chain process to provide results.
- Basic concept: companies that are following someone's footprints ignore or are not able to fulfill the prerequisites of BPR and results in failure.
- Lack of proper training: when BPR is implemented, most of the jobs and functions change. Therefore employee needs to gain the new skills but company pays less attention to provide training.
- Other reasons including, lack of resources, leadership, communication, resistance to change, organizational structure, organizational culture.

Magutu, Nyamwange, and Kaptoge (2010) argued that manufacturing as well as human resource practices within an organization influencing the success and failure ratio of BPR. Further in their study based on African firm suggested that among the HR functions project teamwork and top management plays vital role in success and failure of BPR. Firm can achieve competitive advantage through cost, management, productivity and customer services. This can only be possible when employees are informed and taken on board in the change process.

He (2004) surveyed 150 organizations and stated that resource based perspective that BPR is major success factor with the help of executive support. He (2005) conducted a research on 110 China base enterprises to understand the BPR Implementation in china and their role and impact on these enterprises, to reveal the factors effecting BPR, and to highlight the managerial role in BPR. Study was based on primary data using questionnaires with 7 scale rating from senior management, the study revealed that majority of firms agrees and accept the importance of BPR. BPR improves the information and communication.

Two major success factors in BPR are improving cross functional communications and management support. Among various barriers, resistance to change and new ideas (creativity) are major obstacles. The researcher suggested improving technology and business process by utilizing firms resources, take corrective actions while keeping the existing culture in mind.

Tânia R. Belmiro et al. (2000) studied BPR in UK and Brazilian companies who adopted BPR. Sample was four companies from each country. Although the culture and economic conditions of both nations varied a lot but the results showed similarity among those eight firms. From the case study approach in this study they concluded that in practical ground BPR is practiced and implemented differently. In both countries, firms are lacking the basic concepts of BPR and this leads to the birth of so many unanticipated problems and issues and problems. These issues play a role as a barrier and finally a failure to all the efforts. This is due to more focus on short term objectives rather than long-term orientation, among the sample firms; streamlining was done successfully but proper reengineering was yet to be conducted. Ignorance towards HR, team building, job security and organizational culture are the major causes of failure. This is due to lack of basic awareness and ignorance of understanding the process flow and not communicating the causes of redesigning. Thus the researchers recommend that all those companies who are in thinking or implementing process of reengineering should work on organizational structure, re-work design, reducing burden and to increase flexibility and competitiveness, firms' should reduce the number of layers between company and client. Furthermore, emphasis should be given to training and education. For educating and implementing the radical change, top management should play their role. Finally, authors suggested that educational institutes are having an important role in fulfilling the market need by providing educated fresh blood to the economy and also in mentoring.

Princeton, Peppard, and Rowland (1995) argue that bringing change in organization through BPR results in better financial performance, but most of the organizations fail to achieve the objectives. Hedley, Ojiako, Eric Johansen, and Maguire (2010) in their study referring to the study of Balogan & Hope-Hailey (2004) stated that about 70% failure rate was recorded during change process and mostly it fails while implementing objectives. Furthermore the study conducted on banking sector of UK by Hedley et al. (2010) identifies that the change was not communicated properly to all stakeholders and so were the reasons of that change. Moreover, training was not provided to all the employees but to certain level of management. Although it is the fact that within services sector, mostly line management deals with customers but due to ignorance the bank faced failure in BPR. Similar to study conducted by Belmiro et al. (2000), the banking sector of UK were ignorant of the BPR basics, thus were facing similar problems in incorporating change.

In addition to other factor, lack of financial resources and HR and insufficient I.T are main obstruction in success of BPR along with executive support, vision, inflexible organizational structure as discussed by Ranganathan and Dhaliwal (2001).

Further Evidences

Cao, Clarke, and Lehane (2001) considers that there may not be a single reason that causes high rate (about 70%) of failure to BPR implementation however; there may be several reasons that contribute to the failure of implementing change successfully. Objectives of this study were to provide a "holistic view of managing change" and to discuss the possible methodology for incorporating change.

According to the authors (based on previous studies) organizational change requires change four dimensional change i.e. change in organizational process, structure or design, change in organizational culture and change in organizational politics (i.e. change in organizational power distribution etc.). If one wants to bring change in any dimension, it will raise a need for change in the other dimension (as they are interrelated and interdependent). However, it is a well-known fact that every department and function of an organization is interrelated and interdependent. Subsequently, a negligence towards the other issue may create problem and will result in failure. Thus, authors of this study suggest not to use a single method rather insist on use of multiple methods to incorporate change and implement BPR successfully. However, change in culture is considered to be very difficult to mend and it is one of the major reasons that were not highlighted in their arguments.

This study concluded that BPR is a process that is used for bringing radical change in an organization but it is having over emphasis on bringing change in organizational process and it almost ignores the rest of three dimension that are likely to deal more frequently with the human (workforce) and behavioral side of organization and suggests that different approaches should be used for different dimensions of change and the interaction of different dimension should be considered while bringing change. The arguments provided in this study are valid to some extent however, the purpose of BPR is to bring a radical change into every part and process of organization therefore several researchers are of the opinion to educate the change and provide training before it takes place (Habib and Wazir (2012))

T.R. Belmiro, Gardiner, Simmons, and Rentes (2000) studied BPR in UK and Brazilian companies who adopted BPR. In both countries, firms are lacking the basic concepts of BPR and this leads to the birth of so many unanticipated problems and issues and problems. These issues play role as a barrier and finally a failure to all the efforts. This is due to more focus on short term objectives rather than long-term orientation, among the sample firms; stream lining was done successfully but proper reengineering was yet to be conducted. Ignorance towards HR, team building, job security and organizational culture are the major causes of failure. This is due to lack of basic awareness and ignorance of understanding the process flow and not communicating the causes of redesigning. Thus the researchers recommends that all those companies who are in thinking or implementing process of reengineering should work on organizational structure, re-work design, reducing burden and to increase flexibility and competitiveness, firms' should reduce the number of layers between company and client. Furthermore, emphasis should be given to training and education. For educating and implementing the radical change, top management should play their role. Finally, authors suggested that educational institutes are having an important role in fulfilling the market need by providing educated fresh blood to the economy and also in mentoring.

Luo and Tung (1999) stated that, availability of complete information at the time of BPR planning and then right tools selection for the analysis of situation that best suits organizational requirements is vital for BPR success.

Al-Mashari and Zairi (1999) conducted an extensive study on the analysis of success and failure factors of BPR implementation process (both soft and hard factors). Literature suggests that these factors broadly includes; change management, management competency and support, organizational structure, project planning and management, and I.T infrastructure. Change management is one of the most important factor which plays vital role in successful implementation of any change brought into the organization.

Change management includes adjusted human and social related changes as well as adjustment to organizational culture. This includes adjusting reward system to bring motivation, communication channels (top to bottom, bottom to top, horizontal and vertical), shifting power and accountability to as lower level as possible (empowerment), involve personal from every level and cross functional departments and encourage participation, educate employees about the change taking place and provide them exclusive training (also suggested to increase 30-50% training budget), organizational culture is an important attribute in change management so common goals may play an important, and openness to change i.e. positive perception towards change and support the change process. Management competencies and support is another important factor in success of BPR. This factor includes; commitment from top management and transformational leadership having strong will to bring and manage change, and risk management (planning and managing) skills.

Next success factor defined in this study was of organizational structure including; adequate job integration approach (organizational structure that is also known as HR infrastructure of an organization should be adjusted as per need of BPR to support the radical change), to support BPR firm needs to develop cross functional and effective team (that is skillful, experienced, competent and credible), and proper definition of job (i.e. job description, specification) and distribution of responsibilities. Yet another factor which is related to BPR project management is a very basic and fundamental factor for success and sub factors in this category includes; creating a link of BPR strategy with organizational (corporate) strategy and effective planning for project management. To identify and measure organizational performance and defining goals

to achieve will serve as a benchmark and roadmap for BPR success and it includes; arranging and providing sufficient resources to achieve goals, organization should setup their own methodology that best fit to their organization and helps in achieving goals effectively and efficiently, keeping an eye on external environment (for customer research, analysis of competitors and setting standards), (if needed) hire the expertise of consultants and take advantage from their skills, constructing a sound vision for the organization, redesigning the process effectively that clearly explains the core and supporting process, link BPR with TQM and Organizational development (OD) etc., and this profit should create values for all stakeholders. Finally the factor that is known as call of the day i.e. Information technology is among the most important factor for the success of BPR which includes; interaction of IT infrastructure with BPR strategy, transforming process with the help of latest technology, IT induction at every level of organization, developing information system (IS), and effective use of software tools.

However, same factors may be a cause for failure thus they need to be considered, planned and worked very carefully. BPR process may fail due to change management and factors including are; problems with communication i.e. change may not be communicated properly, failure may be due to poor communication or lack of reward and motivation, resistance to change is one of the common factor faced by most of the organization and one of the biggest barrier in change. Furthermore, lack of organizational readiness for change, cultural changes, and lack of training and education might be other reasons for failure caused by change management system not properly management. Support from top management is also found to be a cause of failure as lack of commitment, support and absence of leadership, championship and lack of sponsorship from top management might be reasons for failure. Some authors are of the opinion that organizational structure with flaws might cause failure to BPR as ineffective BPR teams and problems with integration, lack of description and allocation of duties and responsibilities are of key concern. Some other factors that may be caused as failure including; lack of BPR project planning and consideration, lack of proper modeling and ineffective design of goals, having no or narrow focus on technology, resource allocation, and selecting wrong I.T structure for organization.

Most of the time reengineering effort fails because of resistance as it is considered as a threat to middle management. Other reasons for BPR failures are communication gap, always aiming for profitability from top management while employees resists because they consider failure as too risky and resulting in bankruptcy, lack of commitment and lack of coordination among cross-functional groups. Bureaucratic system will not work in BPR as in process of change organization needs to involve workforce and empower them. According to author, there is a strong need for empirical work in the field of BPR to test the theories and concepts in reality as very less focus is on this side of effort however, the work of authors itself was not empirical (Grey & Mitev, 1995).

First factor proposed by Hammer and Stanton (1995) as success is Reengineering Leadership. Success of reengineering project's needs "process orientation" by top managers. Whenever change is planned in an organization it should be communicated throughout the organization in a motivating way, so that employees may welcome the change process (Davenport, 1993; Grint, 1997). Style of Implementation is the third factor change should be made according to organizational resources.

Drago and Geisler (1997) also pointed towards the mistakes management is making as undertaking BPR and therefore it is not that much fruitful to them as it should be. As this technique is to improve productivity, reduce cost, and improve efficiency and the quality of goods and services to the end users. Thus, it requires change in organizations' vision and mission statements as well as in the whole process. Information technology (I.T) and adaptation of latest technologies are the key "enablers" of the success of BPR and it is essential for the survival in today's dynamic business environment. Among many of problems faced by BPR is lack of sufficient preparation. BPR in early 90s was one of the top most subject (issue) to talk over and thus without estimating the worth of this process so many companies adopted BPR as a tool for change and ignoring other change process. The perceived importance given to this process and ignorance of the other change processes was one of the problem and reason for increase in the chances of failure.

Top management should know what type of improvement they need, how they want to achieve and what is the best source of achievement of such performance. There are other problems that includes; lack of proper planning, narrow scope, lack of direction, improper involvement of I.T, and considering a change as a normal process may also create problems and results in insufficient planning for BPR. At the time of implementations, problems that can be faced include; lack of management commitment towards implementation of BPR, status quo (i.e. not willing to change their attitude), unable to communicate vision and organizational goal (expectations from BPR), focus on cost reduction, not utilizing I.T, not supporting employees (involved directly or indirectly in implementation process), top and middle managements' unwilling to change management style, not considering change as a strategic while considering it as operational process, not justifying paradigm shift and poor team development, and ineffective decision making abilities are the problems faced during implementation. In response to problems discussed above, authors in this study suggested that companies undergoing through radical change should plan effectively each and everything (from vision till goal setting and also plan the implementation), involve the most loyal and willing people to change, select areas and emphasize on efficiency and effectiveness, always keep contingency plans and design effective control system.

However, authors were unable to provide any statistical evidence to the problems and their ratio (commonality) of occurrences. Moreover, the guideline provided is not justified. Additionally BPR proves is customized and varies from company to company (based on requirements) thus, these needs to be tested. Ranganathana and Dhaliwal (2001) undergone to study the success and failure of BPR efforts in Singapore because of the fact that Singapore has been ranked very high on the basis of technology use and is one of the top competitive country.

Findings of survey revealed that 64 firms (i.e. 50.4%) were having BPR projects while 37 firms (29.1) had strong intentions for BPR projects in near future while this ratio was less in USA (45%). Findings also revealed that private MNCs and other small local businesses are having more of BPR (current) projects than public sector firms (having intention to undertake BPR within 3 years). BPR was used by manufacturing firms (29.82% implemented and 40% planned intention) more than others followed by, retailing (21.05% on going and 8.57% planning to undertake) and financial sector (17.54% undertaken while 20% planned). Furthermore, the major motive behind BPR project in Singapore was found to be for improving efficiency (mean= 4.40) followed by customer service improvement (mean of 4.08), cost reduction (mean of 3.68), and lastly to increase profitability (3.56). Additionally, question was asked from the respondents to identify the role of key members in BPR efforts (top management, IS executives, functional executives and external consultants) and the findings were that the respondents consider top management to act as initiators and as BPR champions while the role of IS executives should be of BPR project coordinators and facilitators, role of functional executives was defined to be of communicators mostly and the role of external consultants should majorly be of project facilitators. Finally, the problems in BPR effort were found to be of lack of adequate human and financial resource (mean=3.24) as a major problem and followed by having no capable IT expertise in the firm (with mean of 3.21), lack of support (3.19), lack of BPR champion (3.18), cooperation between cross-functional teams (3.18), difficulty in adopting right process, organizations' supportive structure, lack of vision, and least problems were arise from lack of adequate IT infrastructure in the firm.

Conclusion

Bringing change into an organization is very difficult and very much demanding. Proper planning from top management is very important in accordance with the organizational needs and resources. The supportive role of management is a key to successful implementation as well as it has been suggested by several authors that involvement of HR in planning and implementation is also essential. It should be understood by management and companies that BPR is a customized change tool thus, do not copy what your competitors are doing or else it will result in only failure.

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