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The Essence and Analysis of Approaches to Reengineering Innovative Business Processes

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ABSTRACT

This article seeks major analysis of approaches to reengineering innovative business processes. On this way, both theoretical and practical points were mentioned in the study. Reengineering and major points of it has seen as a major point of development in the innovative business processes. This study was conducted with the aim to collect and review the work done so far in the field of BPR. Focus of this study was on providing a comprehensive overview of overall development of BPR concept, theories, models, approaches and outcomes, and success and failure causes. According to outcomes study was based on secondary source i.e. published and available researches in the field of BPR. Research papers were critically reviewed and then were divided into sub headings i.e. introduction, why do firm need change, background of BPR, BPR methodologies, approaches, causes of success and failure, and BPR in practice (both in public and private sectors. Conclusion drawn was based on the previous research studies and it was concluded that there is no universal approach to the BPR nor can it be guaranteed that BPR will ensure the success of an organization.

Keywords: *Reengineering, innovative, business, process, Uzbekistan*

INTRODUCTION

Many companies with a long history of managing the market continue to hold onto their old managerial ideas in an inertial way. Therefore, it is necessary to rethink the ways of business organization and use a fundamentally different approach that will fully realize the advantages of new technologies and human resources. This approach is the basis of business engineering (business processes), the most important direction of which is reengineering, or the restructuring of existing companies.(Novak & Schwabe, 2009; Razakov Sh & Shakhgunova, 2001)

Today, many national assessment bodies in Uzbekistan and in several bordered countries are still working in the form of working capital and financial resources to upgrade their fixed assets and technology, facing the problem of low-skilled staff (Abdukarimov B.A, 2013). These problems can be solved through the reorganization of the business. Incompleteness of enterprises' restructuring is largely due to the lack of a systematic approach to the analysis of financial and economic activity. Specific aspects of reorganization include financial provision or staff training, technological equipment or organizational structure(Ajwad et al., 2014). Reorganization may be interconnected, basic and auxiliary business processes. Therefore, based on engineering methods, there is a need to formalize the process of reorganization of enterprises, which would substantiate the most appropriate project decisions on the strategy of organizational renewals, based on the identification of highly effective business processes, such as business-process reinforcement(Harris, 2007). Modeling, analysis and redesign of existing business processes, as well as systematic analysis, can be achieved through the creation of new business processes that can be evaluated efficiently. The systematic approach, by using a number of indicators, shows the valuation of large amounts of information in nature(Ghatak, 2003; Strzyz, 2016).

The use of a structured approach involves reflecting all aspects of the criterion, each of which can be explored using appropriate analytical methods, the universally accepted results of the evaluation, the results, and the elaboration of recommendations to improve the criterion.

Reengineering of business processes of enterprises is used in cases when it is necessary to make an informed decision on the

reorganization of activities: radical changes, business restructuring, replacement of existing management structures by new ones, etc. An enterprise striving to survive or improve its position in the market should constantly improve production and ways of organizing business processes. To do this, they resort to consulting, which is based on past experience, judgments of experts of ready-made solutions, analogies, heuristic assessments, comparison of opinions. But you can use an alternative way, which is engineering. Such an approach guarantees a result if the rules and methods of using the reengineering tools are observed, it allows you to monitor the floor of the implementation note of the proposed solutions and evaluate their quality. This approach is based on the concept and methods of business process reengineering.

According to Hamscher (1994), every company can be seen as a sum of processes that respond to customer needs by creating, producing, supplying and invoicing goods and services. These processes differ between individual businesses, but in most cases the processes that organizations carry out were never meaningfully assembled, but rather occurred in response to market conditions. Business process reengineering (BPR) is a generic term that includes several different views on how to achieve radical change in an organization (Hamscher, 1994). Hammer and Champy (1993), originators of the concept of reengineering, define reengineering as "the fundamental rethinking and radical redesign of business processes to achieve dramatic improvements in critical contemporary modern measures of performance, such as cost, quality, service, and speed." (Hammer et al, 1993). Reengineering is the most radical form of change and restructuring of business processes, and if executed correctly, it should lead to a complete recovery and revitalization of a business. The objective of reengineering is not merely corporate restructuring, but a fundamental and radical remodeling of business processes and practices to immediately increase performance. In the early 1990s when the concept of reengineering first appeared, it promised a new approach to corporate change (Hindle, 2009). Reengineering as a method or technique for fundamental corporate change begins with an analysis of central business processes, which are then evaluated, changed, and repeatedly assembled into a new and more efficient structure. The long-established processes then change, including the original, inefficient organizational structures, while the organizational units are reassembled into more effective vertical structures.

The essence of reengineering is a radical change in processes, which differs from the typical development of a business that is characterized by only symptomatic, gradual changes. Therefore, the defining characteristic of reengineering, when compared to other methods of change management, is that it is a radical change and not a gradual improvement of processes. BPR is the analysis and redesign of workflow within a company and between companies. According to Michael Porter, the literature on reengineering refers to a complete change of business processes, where the term "processes" is synonymous with activities, operations, or a sum of operations of individual organizational departments. Porter states that in every case there is a considerable emphasis on the level of activity. The originators of the principles of reengineering, Hammer and Champy, emphasized that the concept of reengineering cannot be reduced to processes alone because its principles are applied in all parts of an organization, and it has significant fundamental objectives.

Methods

The article deals with concepts, essence, principles, as well as methods of reengineering business processes in business entities with the aim of step-by-step increase of activity indicators. At the same time, methods of comparative analysis of approaches to this issue are used by a number of authors, both the founders of the instrument being studied, and scientists who have developed this direction in the light of current conditions. Also, analysis methods were used to study the nature and components of the restructuring and the role of reengineering in the above process.

A structured approach requires the full, comprehensive understanding and accountability of relationships, influences, relationships, and changes that are possible. The concept of its essence is the concept of business reorganization; identifying and structuring the main goals and objectives of the business process; using different methods, and developing a methodology that can be implemented. A structured approach is based on the idea of a business process, a systematic process, an output, and a "black box" with a

reverse link. While accessing resources, resources are intended to be achieved, while processes can be used to efficiently use certain quantitative and qualitative resources in achieving the set objectives by demonstrating the rationality of management functions, decisions, methods, and methods. The suitability of a systematic approach to business process management depends on the following reasons:

- organizing business processes is a complex, multidimensional problem;
- systematic analysis combines the achievements of various fields of science and enables them to effectively apply the specific tasks and tasks of business processes management;
- The main focus of a systematic approach is to develop a set of rational ways to achieve goals that will help to achieve the best results in setting goals and implementing business processes;
- a systematic approach replaces information deficits in planning and decision-making to manage business processes;
- A systematic approach will help reduce the burden on the risks associated with risk, inflation and funding;
- Integrated, systematic understanding of production processes and business processes affects the growth of management efficiency.

On this case, Mansar and Reijers (2007) focused on the concept of redesign (also known as Business process redesign (BPR)) which is less fruitful and less risky as compared to reengineering. The focus of study was to identify the best practices in this field for which a framework was designed having six major components (i.e. Customers, Products/Operation view, Behavioral view, External environment, Organization: structure, and Organization: population) as authors considered them as best practices in implementation. Furthermore, this framework was based on the selection of ten best practices of BPR in the past (most frequently used) i.e. Task elimination, Task composition, Integral technology, Empower, Order assignment, Specialist-generalist, Integration, Parallelism, and Numerical involvement. The aim of the study was to find out the use and impact of those practices in the field of redesign thus, for investigation, a survey was designed with the sample of UK and Dutch BPR practitioners (60 from UK and 31 from Dutch) with an average of 20 years of experience in this field. The response rate was 20 and 42 % respectively. The results indicated that most of the concern among BPR framework components was towards the customers and followed by product and information system (3.72, 3.40 and 3.36 mean respectively). It further revealed that the most practice of BPR was of task elimination (removal of unnecessary tasks from the job) with a high percentage of 94, as well as 94 % used was Integral business technology, followed by task composition (89% used), Parallelism (88%), while organization structure (order assignment) was the least used best practice by the practitioners in the field of business process redesign with only 53 % usage by them. Thus it has been concluded that customers are the key reason for redesigning of business process and the best practice most frequently adopted for that purpose was of task elimination (for fast and efficient service) and inclusion of IT in the organization. However, almost similar is the purpose of most of the organizations that adopted reengineering and showing the same concern (reason) for incorporating change. Thus, this study also helped in showing the similarities that are possessed in redesign and reengineering.

LITERATURE REVIEW

The article uses the concepts and approaches of researchers who are pioneers in the study of this problem (M.Hammer, G.Champi, 1997; J. Harrington, 1991; T. Davenport, 1993, 1996), with the aim of studying and developing a generalized concept of business reengineering - processes in the service sector. To this end, the works of such authors as Johansson N., McHugh R., Redlebury J., Yogesh Makhlatra, Manganelli R.L, Klein M.M, Paturyrel R., Mazur I.I, Shapiro V.D, Kondratiev V.V., Krasnova V.B, Akhriev S.A, Vasilyev V.N, Gitelman L.D, Nekrasov V.I, Subanova O.S and so on. Based on the results of the literature study, directions of development and proposals were formed on the introduction of reengineering of business processes in the activities of enterprises providing services.

The business process management mechanism is aimed at radical improvement of the enterprise's activities and is one of the new tools for today. Management of business processes of the enterprise means both ensuring their uninterrupted flow, and their improvement. You can manage business processes in two ways: a) through the quality of products, information, "flowing" within business

processes; while management is aimed at quality customer service; b) through the structure of business processes by varying the ways of coordinating the functions of converting input resources into outputs (changing the order of execution, adding new ones or

Picture1. *Forms and methods of enterprise restructuring*

destroying business functions). The second type of business process management is the methodology for business process reengineering[1].

Mazur I.I, Shapiro V.D. consider the reengineering of business processes as a modern method of restructuring enterprises and companies (Fig. 1). Under the restructuring of the enterprise they are understood as a set of measures to bring the conditions of its

functioning in a complex manner with the changing market conditions and the developed strategy for its development. It includes processes: improving the structure and functions of management, overcoming the backlog in technical and technological activities, improving financial and economic policies to improve production efficiency, competitiveness of products / services, productivity growth reduction of production costs, improvement of economic results.

The authors of the term "reengineering" M.Hammer and J.Champi, define it as "a fundamental rethinking and radical redesign of business processes of companies to achieve fundamental improvements in the main current indicators of their activities: value, quality, services and pace". Nonetheless, unlike optimization, when it comes to a small improvement in the business processes of enterprises - by 10-100%, reengineering is a cardinal increase in the efficiency of business processes, in tens or even hundreds of times. Reengineering is a way of survival for modern enterprises in the conditions of tough competition both in the domestic and global markets.

G. Harrington (H.J. Harington) operates with the concept of "business process redesign" and considers the concept of continuous improvement (improvement) of business processes BPI (business process improvement). This concept implies a smooth (step-by-step) change in business processes. The main difference from reengineering is that M. Hammer and J.Champi, introducing the term "reengineering", pointed to the cardinal restructuring of business processes, in the interpretation of the authors, the reengineering of business processes implies "creating an enterprise anew". The most important of the announced advantages of business process reengineering is that you need to start a business from a "clean slate", destroying old, non-revenue-generating business processes. T. Davenport uses the term "process innovation" as "a significant reduction in the cost of the process or a reduction in time, or a significant improvement in quality, flexibility, service level or other business parameters."

Optimization of business processes is carried out for more effective maintenance of target targets of industrial and commercial activity of the enterprise. Table 1 presents the comparative characteristics and differences between reengineering and improvement of business processes.

Table1. *Comparative characteristics and differences between improvement and reengineering of business processes*[2]

Options	Improvement	Reengineering
Level of change	Gradual	Radical
starting point	Existing	Clean board
Frequency of changes	Continuously / at a time	At a time
Required time	A short	Prolonged
Direction	Down up	Top down
Coverage	Narrow, function level	Wide,
Risk	Moderate	Interfunctional
The main thing	Statistical Office	Tall
Type of change	Cultural	Information

Table2. *Definitions of business process reengineering*

№	Author	Definition of Reengineering
1	Johansson N.,	The way the enterprise achieves radical changes in the functioning (changes in costs, cycle time, quality and service), using various tools and technologies, considering the operation of the enterprise not as a set of functions, but as a set of interrelated,
2	McHugh R.,	oriented to the client of the main business processes.
3	Redlebury J.	Critical analysis and radical redesign of existing business processes to achieve a breakthrough in productivity
4	Yogesh	Rapid and radical redesign of enterprise-specific business processes and systems, policies, and organizational structures supporting these business processes, in order to optimize workflows and improve
5	Makhalta	Productivity of the enterprise.

6	Manganelli R.L.,	A systematic, organized approach to the achievement of cardinal measurable changes in efficiency, through a fundamental review, rethinking and re-design of business processes used by the enterprise to fulfill its mission.
7	Klein M.M.	Rapid and radical reconstruction of strategic procedures of an industrial nature in order to optimize workflows and productivity.
8	Library	The method of cardinal reorganization of business processes in order to achieve a qualitatively different, higher level of indicators of production and economic activity

In the work of O.S Subanova. systematization of the concept of business process reengineering has been carried out (Table 2). Engineering of business processes is considered as the provision of services for the creation and operation of infrastructure facilities for enterprises on a commercial basis, and under the reengineering of business processes we mean a radical change (organizational and hierarchical redesign) of existing structures of management and production of enterprises, based on the interaction of business processes for increase the efficiency of the service organizations.

Thus, we believe that reengineering is a fundamental rethinking and radical redesign of business processes to achieve sharp, spasmodic improvements in decisive, up-to-date performance of the company, such as cost, quality, service and pace. This definition contains five key words: rethinking (focus on consumer value, not cost, costs, investment), fundamental, radical, abrupt (jump), and process (the most important word). Reengineering of business processes is becoming particularly relevant in Uzbekistan, as this institution is called upon to solve the tasks of cardinally redesigning procedures, increasing the availability and "online maturity" of electronic public services, as well as simplifying and reducing the administrative burden for both the public and businessBusiness Process Reengineering (BPR) is not an unknown word to the business world. It has been more than two decades since it was introduced for the first time as a tool for change in American business sector. Hammer (1990) was the first person who introduced BPR and is considered as a father of BPR. BPR is a tool used for bringing radical change in the business process and was adopted initially by the private sector (US- based firms) in early 1990s as an replacement of total quality management (TQM, a Japanese approach) (Hammer and Stanton (1995)). BPR is said to be a new approach for the process management that brings radical change (improvement) in organizational performance. Hammer, M. & Champy (1993) thinks it as radical change and rethinking of overall process to achieve overall performance in terms of cost, quality, service and speed, while Davenport & Short (1990) calls it as a process of analysis and workflow redesign in an organization. Talwar (1993) on the other hand emphasized on rethinking and reconstructing the organizational structure, workflow and value chain. In the era of technology, globalization and rapid change in customer's need, it is essential to realize the importance of change. Thus, Change is becoming necessity in today's environment of massive competition and drastic technological changes thus, it is of great concern for the management and consultants to plan accordingly otherwise, they (company) will get out of competition (out of market). BPR is an important tools used for incorporating change and had proved to be the significant approaches due to its features and the results produced by the effective utilization of these approach over decades. Majed. Al-Mashari, Irani, and Zairi (2001) stated that, every firm wants to achieve efficiency and effectiveness in reducing cost of production, improving quality of product and also by providing timely and speedy products and services to the customer.thus, these requirements are well delivered by BPR. Thus, BPR is the only (consistent) tool (if applied properly) will produce ground breaking results as said by Weerakkody, Janssen, and Dwivedi (2011). Gunasekaran and Kobu (2002) argued that the important feature of BPR adaptation is because of its ability and utilization of Information technology (I.T) and computation. It has been further stated that the gaining acceptance of BPR as a tool for change is due to its openness towards the technology. Thus, the major role played in the success of change process (BPR) is because of its development and ability to incorporate latest technology.

However, on the other hand, failure rate recorded by Cao, Clarke, and Lehaney (2001) is as high as 70%. Marjanovic (2000) also found the failure rate of BPR project is as more than 70% therefore, planning and implementing the BPR properly is necessary. This paper will focus on reviewing the available literature on BPR and will focus on the overall development of BPR concept, theories, models, approaches and outcomes, and success and failure causes. Every reengineering practitioner and BPR experts have their own way of explaining and using this tool. Similarly, there are differences in the approaches towards BPR and even various authors has shown differences in the concepts as well as definitions of this approach (which will be discussed in detail in this paper).Main objective behind this type of study will be to provide a comprehensive discussion on the overall work done in parts on BPR in different phases and to identify the gap so that the interested readers get a holistic insight of this concept and activities in most comprehensive manner as well as to identify the gap for further study in this field. Literature reviewed for this paper concentrated on identifying the need for change, tools and approaches used for bringing change in the organization and the findings of various studies conducted on the firms which utilized those tools for bringing change however, the main focus will remain on discussing BPR as a tool for change, introduction of BPR and development, approaches, methodology, success and failure factors, and comparison of BPR with other tools used for change. BPR is the tool for change thus, it is important to construct a base regarding the need for change and why firms should bring change. The discussion below will start with the importance of change and then it will be followed by background of BPR, literature on BPR, approaches and applications of BPR in public as well as private sectors.

CONCLUSION

To conclude with, this paper has studied key plugs of reorganization on the basic and auxiliary business procedures. On this way, formulas and determinants such as engineering methods, reorganization of enterprises, which would substantiate the most appropriate project decisions on the strategy of organizational renewals, were suggested as a conclusion of study. Moreover, the identification of highly effective business processes, such as business-process reinforcement, modeling, analysis and redesign of existing business processes, as well as systematic analysis were stated and highlighted through the creation of new business processes with effective evaluation systems. To be brief, positive and negative aspects of the sector have been classified for the further research investigations. In this paper, an attempt has been made to identify and classify the tools/techniques available for modelling and analysis of BPR. Initially, we explained the role of BPR in improving competitiveness manufacturing organizations. Following this, the definition of a business process was presented. The importance of modelling and analysis was discussed. The use of fuzzy logic in taking decision about reengineering is also reviewed

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