Business Process Re-engineering in Saudi Arabia: A Survey of Understanding and Attitudes

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[33]

***Abstract* — This survey was conducted in the Kingdom of Saudi Arabia (KSA) to investigate the level of awareness of BPR. Respondents (customers, employees, and managers) had different educational backgrounds and were from private and public sectors. Findings of the study indicate a general awareness of BPR in KSA.**

Keywords: Business Processes, Business Process Re-engineering, BPR, Information Technology

I. INTRODUCTION

BUSINESS process reengineering (BPR) is the result of a new process-orientation that is trying to overcome some of the problems raised by Taylor's traditional view of structural specialisation. It stresses the radical change of processes concerning different departments. However, the redesign of processes is only one aspect of the management of business processes. At least three different kinds of process management can be identified: the management of ongoing business processes, the improvement of business processes and the re-engineering of business processes [1]. In order to reengineer a business process, both internal and external process capabilities; such as product development, production, distribution suppliers and markets, and inter-organisational relationships; especially in a global manufacturing environment, need to be integrated.

The purpose of re-engineering is to achieve lean production by integrating production activities into self-contained units along the production flow, with Information Technology an important element [4]. Information Technology holds a key integral factor in developing data integration strategies in various legacy systems and current technology frameworks. Systems need to reflect a Service-Oriented-Architecture approach to effectively manage resources to enhance work practices, and provide optimal feedback mechanisms to improve efficiency and conform to ISO environmental standards [21].

Universal middleware standards, including Web Services play a key role in integrating autonomous systems in a global scale for multinational companies.

By harmonising data exchange mechanisms, real-time information can be relayed to a managing authority that can respond to changes in system behaviour before tolerance thresholds reach unacceptable levels, potentially avoiding environmental tragedies in volatile industries such as petroleum refineries.

Transformation involves changing many of our assumptions and principles of management and re-examining the nature of work and workers. Jobs should be organised around outcomes, not tasks. Individuals should be empowered to use discretion and judgment in performing their duties and obligations. Control, accountability, and processing must be built into the work process so that individual efforts contribute directly to the success of the organisation [2]. There are several reasons for organisations to re-engineer their business processes:

1. to re-invent work methods to satisfy customers;
2. to be consistently competitive;
3. cure systemic process and behavioural problems;
4. enhance capability to expand in other industries;
5. to accommodate an era of change;
6. to satisfy their customers, employees, and other stakeholders who want them to be dramatically different and/or to produce different results,
7. to survive and be successful in the long term; and
8. to invent the "rules of the game" [3].

In Hammer and Champy [20], they argue the labour division model designed in the nineteenth century simply do not work as companies enter the twenty-first century. They present concepts of redesigning business processes and propose to move the organisation from a narrow mesh of task-oriented jobs to one comprised of multi-dimensional jobs where workers are expected to think, take responsibility, and act accordingly [5]. They cite three reasons:

- Firstly, Processes tied with 21st century products and services are complex and require many tasks.
- Secondly, several management layers are needed for coordination, which creates "distance" between customers and management.
- Finally, as task decomposition and coordination becomes an intricate process, adapting it to changes in environment becomes more difficult.

II. DEFINITION OF BPR

Hammer and Champy [20] noted that in the business environment, nothing is constant or predictable—not market growth, customer demand, product life spans, technological change, or the nature of competition. As a result, customers, competition, and change have taken on entirely new dynamics in the business world. Customers now have choice, and they expect products to be customised to their unique needs. Competition, no longer decided by "best price" alone, is driven by other factors such as quality, selection, service, and responsiveness. In addition, rapid change has diminished product and service life cycles, making the need for inventiveness and adaptability even greater. This mercurial business environment requires a switch from a task orientation to a process orientation, and it requires re- inventing how work is to be accomplished. As such, reengineering focuses on fundamental business processes, as opposed to departments or organisational units [2]. According to Hammer and Champy, reengineering is defined as "The fundamental rethinking and radical redesign of business processes to achieve dramatic improvements in critical contemporary measures of performance, such as cost, quality, service and speed". In other words, they proposed a radical shift: rather than defining a business by the products or services it produces, businesses are defined by what they do well. They believed such a view of business barriers to growth as businesses found new ways to adapt what they did well to new markets. It also eliminated the gap between strategy and implementation since senior management no longer simply set goals but had to understand exactly what goals to achieve. Reengineering, like restructuring, is a method of revolutionary change and thus embodies all general features of such radical changes [6].

BPR has contributed to the provision of techniques for continuous improvement [20]. Since technology is constantly advancing, and the business environment is constantly changing, processes and the systems supporting them are in need of methods to facilitate and guide their parallel improvement. This in turn enables businesses to focus on the customer and adapt to the customer's changing requirements (Hammer, 1993; Harrington, 1991). In a business environment, where the customers' needs are driving forces, BPR provides business organisations with the opportunity to adjust dynamically to customer demands [7].

Chan and Peel (1998) conducted a survey of 37 companies in 17 different industries to investigate the causes and the impact of BPR. They concluded that the primary reasons for BPR are increasing efficiency (internal) and improving customer service (external). Francis and McIntosh (1997) identified causes for the emergence of BPR such as customers, competition (global), technological development and IT. Most companies are function or department-oriented, and not process-oriented. Often, many people are involved in order fulfilment, but nobody tracks a product and reports the status of an order directly. Reengineering makes one individual responsible for the complete business process (Self, 1995). In another study, the success of BPR is related to the creativity of the people in the organisation (Paper, 1997). Some of the factors that will prevent reengineering and hence innovation and growth are:

i. correcting the process instead of changing it;
ii. loss of nerve;
iii. the barons;
iv. change of company champion;
v. settling for minor results;
vi. culture, attitudes and skill-base;
vii. skimping on resources; and
viii. pulling back when people resist change [8].

III. SUCCESSFUL IMPLEMENTATIONS OF BPR

Business process reengineering means moving from the 'assembly-line approach' to the bundled-responsibility or task-subsuming approach, where a process is overseen and handled by key people doing this job from start to end [9] . The fundamental pattern is to widen individual responsibility in the sense of job enlargement in order to meet market-driven needs. This is an extension of Herzberg's concept of job enlargement [10]. Reengineering is the fundamental rethinking and radical redesign of business processes to achieve dramatic improvements in critical, contemporary measures of performance, such as cost, quality, service and speed. BPR advocates that enterprises go back to the basics and re-examine their very roots. It doesn't believe in small improvements, but rather it aims at total reinvention.

As for results, BPR is clearly not for companies who want a 10% improvement. It is for those who need a ten-fold increase. BPR can succeed only when the importance of both people skills and technical skills is fully recognised, and both are properly applied. Many attempts at reengineering have failed because this has not been understood [11]. Empirical studies provide mixed evidence regarding the success of BPR

On the one hand, researchers at Computer Sciences Corporation index (CSCIndex) reported that approximately one-fourth of the re-engineering projects they had studied in North America were not meeting their goals (Cafasso, 1993). In another industry survey conducted by Deloitte & Touché in 1993, Chief Information Officers (CIOs) indicated that the actual benefits of BPR projects had generally fallen short of expectations [12].

According to Hammer and Champy [20]; BPR focuses on processes and not on tasks, jobs or people. It endeavours to redesign the strategic and value added processes that transcend organisational boundaries [13]. An organisation creates value through its processes. BPR provides a method for work groups to identify and prioritise issues and concerns in work processes. Many articles point out that BPR must have the full support of top management to succeed. If resistance is encountered, the leader must be willing to drive change, even to the point of ruthlessness. Managers in a company undergoing reorganisation must

work to quell the fears of employees and resistance to change (despite the fact that they may have their own apprehensions) [14]. It also provides a structure for employees for all levels in the organisation to have open dialogue regarding those issues and concerns. BPR causes an organisation to become introspective and assess how it does its business and utilises its staff. BPR also helps business units to begin preparing for managed competition by streamlining processes and optimising the use of employees [15].

The progression of BPR concept from theory to sustained practice is dependent on the development of its theoretical base, and the introduction of methodological approaches that are capable of being used by practitioners [16]. Andrews and Stalick (1992) have argued for a systemic approach to BPR, suggesting that "reengineering...should be based upon numbers and facts, not guts and politics". BPR projects cannot be planned meticulously and organised into precise steps which can be prescribed as universally applicable in all situations (Caron et. al., 1994; Hammer, 1990). Nevertheless, since BPR requires a fundamental reappraisal of business operations, a methodology which can act as an anchoring framework to coordinate the complex web of BPR activities is essential. A clear and committed approach to BPR is necessary, but a possible danger identified in the literature is that those involved in the BPR project will confuse motion with progress, and charge about in random directions hoping that any recommended changes can be successfully implemented as a matter of course (Evans, 1993). Caron et. al. (1994) state that implementing BPR recommendations may require a fundamental change in organisational culture and mind-set and this cannot be left to chance, but must be carefully managed. They also argue that visibility into the BPR exercise is vital and must intensify as the project proceeds. Thus, the adoption of some methodological support is appropriate [17].

There are nine major elements considered by experts to be stepping stones to successful business process reengineering. They cover a wide range of activities, such as identifying customer needs and performance problems, reassessing strategic goals, defining reengineering opportunities, managing reengineering projects, controlling risks and maximising benefits, managing organisational changes, and successfully implementing new processes. Taken together, these nine elements provide a general framework for assessing a reengineering project, from initial strategic planning and goal-setting to post-implementation assessments [17]. According to the BPR Online Learning Centre, more than half of early reengineering projects failed to be completed or did not achieve bottom-line business results, and for this reason business process re-engineering "success factors" have become an important area of study. The success factors below are derived from benchmarking studies with more than 150 companies over a 24 month period. Success factors are a collection of lessons learned from reengineering projects.

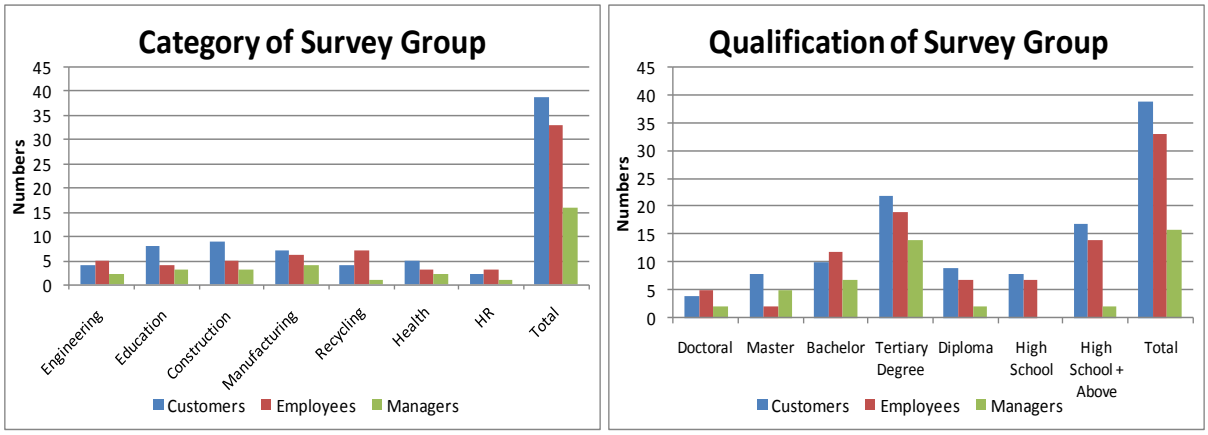

Figure 1(a)(b): Histogram of Survey Group Background and Qualifications

Type of Industry	*Public*	*Private*	*Customers*	*Employees*	*Managers*	*Total*
Engineering	6	5	4	5	2	11
Education	9	6	8	4	3	15
Construction	9	8	9	5	3	17
Manufacturing	10	7	7	6	4	17
Recycling industry	7	5	4	7	1	12
Health	4	6	5	3	2	10
Human resource	2	4	2	3	1	6
Total	47	41	39	33	16	88
%			*44.25*	*37.50*	*18.25*	*100*

Table 4: Categorising Survey Groups to Industry and Economic Sectors

Qualifications	*Customers*	*%*	*Employee*	*%*	*Managers*	*%*	*Total*	*%*
Doctoral	4	36.36	5	45.45	2	18.18	11	12.50
Master	8	53.33	2	13.33	5	33.33	15	17.05
Bachelor	10	34.48	12	41.38	7	24.14	29	32.95
Higher degree	22	40.00	19	34.55	14	25.45	57	62.50
Diploma	9	50.00	7	38.88	2	11.11	18	20.45
Higher school	8	53.33	7	46.67	0	0	15	17.05
High school & above	17	51.51	14	42.42	2	6.06	33	37.50
Total	39		33		16		88	100.00

Table 5 Categorising Survey Groups to Educational Level

These success factors are [18]:

- Top Management Sponsorship (strong, consistent involvement).
- Strategic Alignment (strategic direction)
- Compelling Business Case for Change (with measurable objectives).
- Proven Methodology (includes a vision process)..
- Effective Change Management (address cultural transformation)
- Line Ownership (pair ownership with accountability).
- Reengineering Team Composition (in both breadth and knowledge).

IV. BUSINESS PROCESS RE-ENGINEERING CONCEPTS IN KSA

It is well known that the concept of BPR is currently very topical and is ubiquitous in recent organisational, management and information technology literature. The extent of the widespread popular interest in the BPR can be gauged from the fact that Hammer and Champy's recent book on Business process reengineering featured at the top of the US best-seller lists [19]. The researcher conducted a survey from January 2007 to October 2007 to study the level of awareness of BPR in Saudi Arabia and to what extent this concept is perceived as a fundamental approach to design business processes. This comprised of 88 respondents from Saudi and non-Saudi individuals, from the private and public sector in three groups:

a. Customers,
b. Managers, and
c. Employees (Refer to Table 1).

Respondents had different educational backgrounds, ranging from doctoral certifications to high school level. In Table 2, it shows respondents categories and their educational level.

V.ANALYSIS OF THE RESULTS

The questionnaire including six general questions was sent by hand, electronically, and by post or facsimile (Table 3). Table 4 shows responses of the three groups to the six general questions aimed at investigating:

1. The understanding and contexts of Business Process Re-engineering in their business domain;
2. The need for recycling resources and fortuitous improvements in efficiency;
3. The acceptance of new technology in their current systems;
4. Overall mentality about changes in management and impacts on current work structures;
5. The correlation between process performance and product quality, both in terms of direct and indirect influences and;
6. The acceptance of changes in management, in terms of the change in strategies and ideas.

In particular, the survey indicates that while respondents were overall positive about the need for management to change their work ideas and structures, a lesser number acknowledged there is a correlation between process performance and product quality. Furthermore, a lesser number understood the context of business process re-engineering in their current work practice, indicating a reduced appreciation of how proper BPR practice can influence improvement in product quality and control.

In these circumstances, there is a concern that while people acknowledge that change is necessary in the mindset of management, a lesser number indicate an empowerment to explore how business process re-engineering can positively affect their current business strategies. Managers are not actively responsive to realising that Information technology serves as a critical resource when factoring business process strategies, and how supply-chain processes can be enhanced with Service Oriented Architectures (SOA).

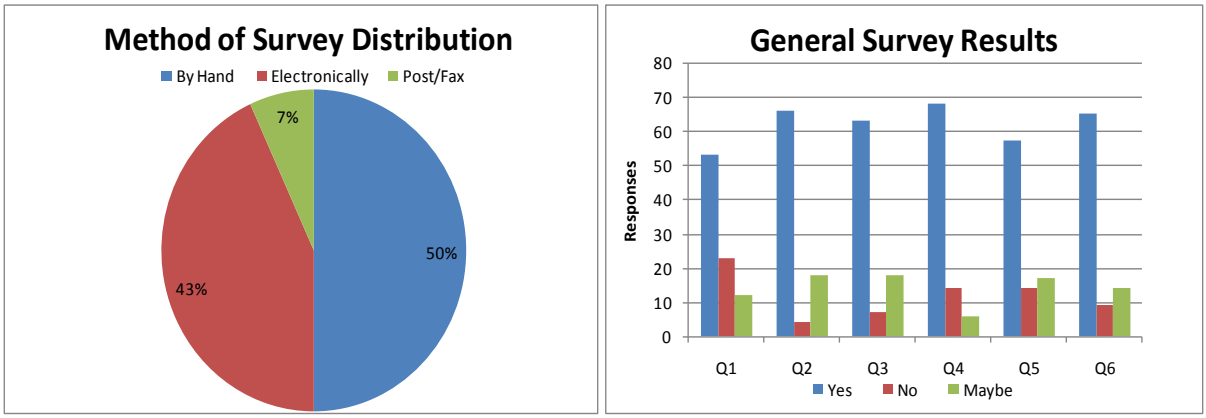

Figure 2(a)(b): Chart of Survey Distribution and Histogram of Survey Results

	By Hand	***Electronic / Email***	***Postal / Faxes***	***Total***
Number	44	38	6	*88*
%	*50%*	*43.18%*	*6.82%*	*100%*

Table 6 Distribution Methods of Survey Questionnaire

General Question	***Q1***	***Q2***	***Q3***	***Q4***	***Q5***	***Q6***	***Total***	***%***
Yes	53	66	63	68	57	65	372	70.45
%	60.23	75.00	71.57	77.27	64.77	73.86		
No	23	4	7	14	14	9	71	13.45
%	26.14	4.55	7.95	15.91	15.91	10.23		
Maybe	12	18	18	6	17	14	85	16.10
%	13.64	20.45	20.45	6.82	19.32	15.91		
							528	*100*

Table 7 Responses of Groups to General Questions

VI. CONCLUSION

The responses show attitudes of the respondents (managers, employees and customers) towards the issues of understanding
BPR, acceptance of new technologies and mentalities about changes in management. Responses revealed that there is a positive attitude towards these issues, with 75% of respondents agreeing with the importance of Recycling business approaches and 71.57% respondents would readily accept new technologies. However, this is contradicted by the fact that only 60.32% of respondents understood and had a positive attitude towards Business Process Re-engineering. Furthermore, only 64.77% of the respondents understood the importance of the correlation between process performance and product quality. The contrast between respondents agreeing with acceptance of new technologies, but at the same time a lower percentage of respondents do not see the how business process re-engineering can improve product quality is a notable difference of opinion among respondents.

This difference could be explained by the fact that people do not see their own roles in promoting or having any positive influence on the overall situation. The discrepancy of the results indicates that there is a degree of disconnect with managers understanding the nature of their current business processes on product delivery and quality; or employees and customers are not adequately voicing their concerns to improve product service and quality above minimum expectations, or a combination of both these factors.

A strategy focussed on improving current business process strategy needs to be maintained in order to improve performance thresholds on environmental concerns, such as recycling resources and minimising wastage through continuous monitoring and control, which will eventually result in improving the financial performance of the organisation. Furthermore, this strategy needs to be reinforced in all levels of the organisation for any long-term benefit. Environmental sustainability in any industry is critical in all regards, not just in terms of credentials and marketability, but also the economic performance of the organisation.

In conclusion, while there is an overall positive awareness of the importance of BPR between the three groups investigated in this study, the culture of improving current business process models in the industries of Kingdom of Saudi Arabia requires greater transparency for respondents to have a positive influence in promoting BPR strategies. The verification and validation of operational systems relies on proactive SOA middleware infrastructure that can adhere to corporate policy governance and enduring environmental sustainability.

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