

The Diverse Approaches and Reasons in the Implementation of Business Process Reengineering Between the Government Sector and the State Owned Enterprises in Botswana

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ABSTRACT

Organisations may be influenced by different reasons to change their business processes. The approaches to changing the processes may also differ across organisations. This study looks at the diversity of reasons for carrying out business process reengineering (BPR) and the approaches used in the government sector and the state owned enterprises (SOEs) in Botswana. A survey questionnaire was used to collect data from the two sectors. The study shows that the government sector and the state owned enterprises were influenced by different reasons to reengineer their business processes. It is the deficiency in service delivery after the implementation of the performance management system which compelled the government sector to venture into BPR while the state owned enterprises were heavily influenced by the implementation of new technologies such as the enterprise resource planning systems and advanced communication networks. It is concluded that the government sector will be forced to reengineer its processes again when they decide to fully innovate their processes using new technologies.

Keywords: Business Processes, Business Process Reengineering, Public Sector Innovation, Business Process Management.

INTRODUCTION

To survive in a bitterly competitive world, organisations must constantly evolve. According to Cardozo, McLaughlin, Harmon, Reynolds, and Miller (1993) innovation of business processes is one of the major drivers of corporate success. Organisations innovate through introduction of new processes or improving the existing ones (Cunningham, 2005; Girma, Gong, & Görg, 2009). Hammer and Champy (1993, p. 47) have defined business process reengineering (BPR) as the “fundamental rethinking and radical redesign of the business processes to achieve dramatic improvements in critical, contemporary measures of

performance, such as cost, quality, service and speed". The need for innovation does not apply to the corporate sector alone but to non-profit making institutions as well including the government sector. However, Borins (2001) argues that the public sector has not been as successful as the private sector in encouraging innovations. He points out that issues which tend to limit innovations in the public sector include ownership of innovations, low and inflexible remunerations, and stringent policies and controls which aim at limiting corruption but which in turn have the effect of stifling innovation. Furthermore, Daglio, Gerson, and Kitchen (2014) are of the opinion that the aims of the two sectors are also different. While the main aim of a business firm in pursuing innovation is to improve the bottom line (Daglio et al., 2014), the achievements of the public sector are not gauged by the amount of profit generated but by the quality, efficiency and effectiveness of the services it offers. The consequences of the divergent objectives of the two sectors can lead to differences in the reasons and approaches they take in innovating their business processes.

This study which was carried out in Botswana aimed at understanding the differences in approaches and the reasons for carrying out BPR between the government sector and the state owned enterprises. The government sector in this study refers to the central and local government. In Botswana, SOEs are commonly referred to as parastatal organisations. SOEs are wholly owned by the government and are similar to private firms in their operations because most of them operate commercially. SOEs, however, are not exposed to stock market pressures because they do not issue shares to the public (Bozec & Dia, 2007). In Botswana, unlike in China until very recently (Girma et al., 2009; Song, Wang, & Cavusgil, 2015; Xia & Walker, 2015), SOEs are not involved in the production of commercial goods but operate in several sectors of the economy such as water, power and rail transport and account for a major proportion of government activities (Bozec & Dia, 2007).

The Botswana Environment

After mining, Botswana's government sector is the second largest contributor to the country's GDP (16.3%) and the private sector is virtually dependent on it (Malema, 2013). A sector which is that important in the country needs to operate efficiently and effectively as its operations touch many sectors of the economy directly and indirectly. In 1999 the Government of Botswana introduced Performance Management System (PMS) in a bid to improve service delivery. Although the introduction of PMS led to improvement of service delivery a customer survey done by the government found that customer satisfaction level stood at a lowly 25% (Republic of Botswana, n.d.-a). In March 2006 the government of Botswana's Directorate of Public Service management (DPSM) decided to augment PMS by embarking on a Business Process Reengineering (BPR) initiative (Republic of Botswana, n.d.-b). By focusing on the business processes the BPR initiative aimed at improving public service delivery by setting and monitoring public service performance standards. Through BPR the government embarked on identifying all services which are given by every government unit and determining the requisite level of service delivery. Service standards for each process in the government units were therefore published and a monitoring mechanism to ensure compliance was instituted. Apart from the government, several state owned

enterprises (SOEs) commonly known as parastatals in Botswana also reengineered their business processes, although not at the same time but over a number of years.

Therefore, the aim of this study was to understand the approaches and the reasons for carrying out BPR between the government sector and the public owned enterprises. Specifically the study wanted to understand the reasons for reengineering, the role of ICT in the reengineering, reception of the new processes, the impact of reengineering on both sectors of the economy, and lessons learnt by the BPR participants. A questionnaire was therefore administered to personnel from both sectors who participated in the BPR projects in the government sector and the state owned enterprises.

The rest of the paper is structured as follows: next section is dedicated to literature review followed by methodology and design. Section four covers research findings while sections four and five cover discussion and conclusion respectively.

LITERATURE REVIEW

Business process reengineering (BPR)

Innovations which aim at improving productivity in organisations have always targeted the business processes, be they manufacturing processes or back-office processes. The term process has mostly been defined in terms of input, process, and output. According to Thomas H Davenport (1993, p. 5) a process is a “specific ordering of work activities across time and place, with a beginning, an end, and clearly identified inputs and outputs”. Zairi (1997) defines a process as an approach for converting inputs into outputs while Ould (1995) defines a process as a purposeful activity which crosses functional boundaries carried out by a group of people and is driven by outside agents or customers.

The definitions of a business process are similar to those of a process. Lindsay, Downs, and Lunn (2003), for example, have defined business process as a sequence of activities which transform inputs into outputs. However, the most quoted definitions of business process are those by Hammer and Champy (1993) who define business process as the production of specific output for a particular customer or market. Hammer and Champy (1993) who coined the term business process reengineering unequivocally call for changes in organisation structures, entire processes and organisation climate. To realize the expected benefits, BPR leans heavily on the use of information and communications technologies to electronically link organisations, organisational departments and units.

Business process reengineering comes from a long tradition of managers’ efforts to improve productivity by simplifying business processes and controlling cost and quality of output (Davenport & Stoddard, 1994; Harmon, 2010). It was Frederick Winslow Taylor who specifically developed a set of ideas which aimed at improving productivity, controlling quality of output and thus maximizing profits to the shareholders through maximizing the efficiency of machines and workers by identifying the best way of performing any task (Taylor, 1911). Taylor advocated the breaking of every action, job, or task into small and simple segments which can be easily analysed and taught. Given this background, Davenport

and Stoddard (1994) argue that there is nothing new about business reengineering except that familiar concepts have been combined in a new synthesis.

According to Harmon (2010), Hammer (1990) argued for use of advanced computer technologies similar to the Internet which did not exist in the form we know today. Currently available advanced technologies such as intranets/extranets, workflow and groupware applications enable increased process efficiency and improved communications across functional units and organisations. Harmon (2010) argues that after the coming of emails and web browsers most of BPR's prescriptions have successfully been implemented by organisations.

Unlike Frederick Taylors' scientific management which segmented processes into functional departments the modern approach takes a holistic view of a process that starts with a request by a customer and ends with delivery of goods or service to the customer. Putting aside the functional units, process orientation emphasizes the importance of an end-to-end view of business processes as they cut through functional units of the organisation. As such the process perspective takes a horizontal view of an organisation that cuts across the organisation with inputs at the beginning and outputs and customers at the end deemphasizing the organisational functional structures(Thomas H Davenport, 1993). In order to optimize their processes organisations are therefore asked to pay more attention to the processes and not the functional units.

By taking an end-to-end view of business processes it is emphasized that processes that follow the organisation's functional structures impede efficiency. In the government system the functional silos may exist in the form of departments or sections within one ministry and at a higher level we can also view the whole government structure as being made up of several silos called ministries. These departments and sections may need to cooperate in carrying out certain business processes because every department has an input in the process. The output of one department, in the Ministry of Agriculture for example, may be an input into several other ministries such as Health, Commerce and Finance. A processing delay in one ministry delays the start of a process in other ministries which may end up delaying the delivery of goods or services to the customer. This happens because in functionally structured organisations it is very difficult to coordinate the handoffs between functions as there is no single owner of the entire process.

Currently in vogue is business process management (BPM). Just like BPR, BPM puts emphasis on process orientation and thinking. It is a management philosophy which sees organisations as driven and structured around its processes rather than its functional units(Reiter, Stewart, Bruce, Bandara, & Rosemann, 2010). According to Alves de Medeiros, van der Aalst, and Weijters (2003) BPM is a field of knowledge that encompasses methods, techniques and tools that are used to design, enact, control and analyse business processes. Supporters of BPM approach argue that business processes can be planned, monitored and controlled because the inputs and outputs, and required qualities are known (Lohrmann & Reichert, 2013).

While the BPR approach was radical in its orientation because it asked organisations to trash all existing processes so as to start on a blank slate(Hammer, 1990), the approach by the business process management approach is more mollifying. It recognizes that business processes are very complex which tend to be affected by internal and external environments.

The external environment is invariably in flux hence the need for organisations to continually optimize its processes. In divergence from BPR which calls for radical approach by trashing existing processes and starting afresh the BPM approach calls for optimization, improvement and management of existing business processes in order to satisfy its internal or external customers in the most efficient and effective ways. The focus of BPM therefore is on continuous and evolutionary improvement of business process as opposed to one off revolutionary change championed by BPR. That does not mean that BPM is opposed to radical changes in business processes through measures such as outsourcing or introduction ICTs where beneficial.

Although the term business process reengineering was at some point ostracised in favour of business process management it is in back in use because organisations tend to use BPR when many processes are renovated after a long period while BPM refers to the continuous appraisal and improvement of business processes(Thomas H. Davenport, 1993). This study therefore is about process reengineering as it involves projects which changed many business processes after the passing many years.

Reasons for Carrying out BPR

Competition is forcing all types of organisations to innovate by looking at their processes so as to serve their customers efficiently and effectively. The most commonly touted goals for undertaking business process reengineering include cost reduction, cycle-time reduction, flexibility, service level improvements, quality improvements, increased level of customer satisfaction, increased worker productivity and reduction of defects (Thomas H Davenport, 1993; Grover, Jeong, Kettinger, & Teng, 1995). Business processes which are scattered across an organisation normally lead to duplication of personnel and facilities. Cost reduction and improved efficiency can occur by reducing the number of employees who are involved in undertaking a business processes by taking a processual rather than a functional view of business. Automation of the streamlined processes leads to further reduction of employees(Vergidis, Turner, & Tiwari, 2008).

Budget reduction is a major issue in many governments today at a time when the public is continually demanding quality services similar to those provided by the corporate sector. Curristine, Lonti, and Joumard (2007) define efficiency in the public sector as the ability to provide more public service with less public spending. Governments have resorted to using management practices developed and used by leading private companies to improve performance and cut costs (Mazzucato, 2013; Niven, 2011; Weerakkody, Janssen, & Dwivedi, 2011). According to Curristine et al. (2007, p. 2) these measures include “increasing devolution and decentralisation; strengthening competitive pressures; transforming workforce structure, size, and HRM arrangements; changing budget practices and procedures; and introducing results-oriented approaches to budgeting and management”.

The introduction of some powerful information and telecommunication technologies such as enterprise resource planning systems (ERPs) with their functionalities which span the breadth of an organisation has also forced organisations to redesign their business processes in order to fit the organisations into the requirements of ERPs. ERPs are considered to embody industrial ‘best practices’ in the way they organise data and processes and can seamlessly transform an organisation into a monolithic integrated business entity by bridging

traditionally separated organisational functions and geographically dispersed locations (Elbanna, 2007). Comm and Mathaisel (2003) define “best practice” as a process, technique, or innovative use of equipment or resource that has a proven record of success in providing significant, simultaneous improvement in cost, schedule, quality, performance or other measurable factors which impact the systemic health of an organisation. ERP technology continues to be sold in the boardrooms of organisations across the world and is touted by software vendors, management consultants and user organisations as the industry standard for business operations (Davenport, 2000). Buck-Emden (2000) opines that the development of enterprise systems was caused by the increasing demand for reengineering of processes and now ERPs are seen as important tools to optimize the reengineering of business processes. Process design and ERP, however, depend on each other because any implementation of an ERP must be preceded by the reengineering of business processes so as to fit the organisation into the requirements of the ERP software.

Problems in Carrying out BPR

Amoako-Gyampah (2004) argues that innovation in an organisation tends to induce uncertainty and equivocality normally associated with the breaking of the status quo. The upshot of innovations which involve change of processes include employee redundancies, new organisational values, employee transfers, change of job titles, change of procedures, introduction of new organisational structures, change of performance requirements, and so on (Al-Mashari & Zairi, 1999; Amoako-Gyampah, 2004; Grover et al., 1995). Such changes may not be successfully implemented because of technical and non-technical factors. Extant literature, however, points out that the most important barrier encountered in the implementation of new systems and business processes is resistance to change. Hirschheim and Newman (1988) define resistance to change as an overt or covert adverse reaction to a proposed change.

Several reasons for resisting change have been put forward in literature (Georgalis, Samaratunge, Kimberley, & Lu, 2015; Schuler, 2003; Xue et al., 2015). Moran and Brightman (2000) have put forward three core drivers of work behaviour which when violated tend to trigger resistance. The first core driver is purpose in which they argue that people tend to resist changes which violate their senses of purpose, desire and value. The second core driver of work behaviour is identity. They argue that people need a sense of personal integrity and consistency over time and tend to resist all changes which strike at the core of a person's sense of who they are and would always like to maintain the status quo. The third core driver of work behavior is mastery which makes people fear that they may lack skills, abilities and knowledge to perform changed tasks.

Lack of proper change management is pointed out as being the most prevalent source of difficulty in processes reengineering and implementation and occupies the centre stage in the implementation of BPR projects (Al-Mashari & Al-Mudimigh, 2003; Grover et al., 1995). Moran and Brightman (2000, p. 66) posit that change management is not about managing change but is about managing the impact of some particular environmental and/or organisational change on core drivers of work behaviour. According to Jeston and Nelis (2008) communication and honesty are the powerful ways of overcoming the fear of change.

Lack of communication was pointed out by Al-Mashari and Al-Mudimigh (2003) as being one of the causes for failure to use SAP R/3 to re-engineer the business processes of a major manufacturer. Al-Mashari and Al-Mudimigh (2003) argue that communication is important for building competence in the organisation during the reengineering process as well as for gaining stakeholders' commitment, response and support. They further point out that organisations that properly communicated with stakeholders used a variety of channels such as emails, newsletters, and establishment of focus groups to communicate with their employees.

Lack of understanding the BPR concept is cited as another cause of BPR failure. According to Davenport and Stoddard (1994) the concept of business process redesign which was very fashionable in the early 1990s because of positive press attracted many managers to embark on reengineering even without understanding what it was all about.

Furthermore, using actor-network theory (ANT) Sidorova and Sarker (2000) have argued that political processes that take place during the implementation of the BPR projects have the critical potential of causing most of the BPR failures. In their study they cite the wrangling that took place between top management and senior executives of a telecommunication company during the implementation of a BPR project as being the cause of the project failure. When implementing BPR in any organisation the political processes can take place between any two important major groups in the organisation such as between the trade unions and management.

METHODOLOGY AND RESEARCH DESIGN

Sample and Measures

Two groups made up the population of this study: employees from the government sector who participated in business process reengineering and those from the state owned enterprises. The Government of Botswana has fifteen ministries and sixteen state owned enterprises (Republic of Botswana, n.d.-b). In March 2006 the Government of Botswana embarked on implementing BPR. Several state owned enterprises have also implemented BPR most of them being driven by the requirements of implementing enterprise resource planning systems. The target group for this study were all the personnel who directly participated in the BPR exercise in the government sector and state owned enterprises. The questionnaire was first administered to two government sector BPR participants and two SOE BPR participants. Their input helped to prepare the final questionnaire used for data collection. The final questionnaire was distributed in 2014 to 74 government employees who participated in BPR in five years between 2008 and 2013. The aim was cover all the employees who participated in the BPR projects. The BPR exercise in the government sector did not take place at the same time in all ministries and departments because a core group of experts visited these ministries and departments in turns. The same questionnaire was given to a total of 67 employees in SOEs who also participated in BPR projects in their organisations. Being independent institutions, SOEs carried out the BPR projects independently and at their own pace.

Questionnaire Design

A single questionnaire was administered to BPR participants from the government sector and the state owned enterprises. The questionnaire did not come from an existing instrument but was created based on literature reviews. The questionnaire was made up of six parts. The first part was designed to collect general information of the respondents and their organisations such as gender, position, and respondent's role in the BPR project. The second part of the questionnaire was made up of seven statements which aimed at getting the respondents' views on the reasons for their organisations carrying out BPR. The third part which was divided into two sections was designed to collect information on the involvement of ICTs in BPR. In the fourth part of the questionnaire the researcher wanted to know the extent to which the implementation of BPR required certain organisational changes in the government sector as well as in the state owned enterprises. In the last part the questionnaire was constructed to solicit views from the respondents on whether there were any signs of resistance towards the adoption of the reengineered processes, the type of resistances they encountered and the lessons learnt from the exercise.

RESEARCH FINDINGS

A total of 29 questionnaires out of 74 questionnaires given to government employees were completed and collected while 33 questionnaires out of 67 given to employees of state owned enterprises were completed and collected. All questionnaires from the government employees were completed satisfactorily but two questionnaires collected from employees of state owned enterprises were rejected because they were not completed properly. Descriptive statistics were used to summarise and organise some of the data especially in the demographics section while some inferential statistics such as t-test and binomial test were used to test the differences in the mean responses of the two groups. Open ended questions were summarised through the analysis of emerging themes as communicated by the respondents.

Demographics

Out of 60 respondents 23 (38.3%) were females while the remaining 27 (61.7%) were males. The government sector had more female respondents (60.9%) compared to the state owned enterprises (39.1%). Table 1 shows the positions and roles played by the respondents in the BPR projects in the government and state owned enterprises. Comparing the positions held by the participants, it is clear that most of the members in the state owned enterprises came from the IT departments while in the government sector most of them held management analyst positions.

Table 1: Positions and roles played by Respondents in BPR Projects

Positions Held By Respondents					
Government Sector			State Owned Enterprises		
Position	N	%	Position	N	%
IT Manager	1	3.7	Computer Engineer	1	3.2
Management Analyst	17	63.0	Database Administrator	2	6.5
Programme Implementation Coordinator	8	29.6	Infrastructure Support	1	3.2
Systems Analyst	1	3.7	Internal Auditor	1	3.2
			IT Manager	6	19.4
			IT Security Manager	3	9.7
			Manager IT Projects	1	3.2
			Network Administrator	3	9.7
			Risk Specialist	1	3.2
			Supply Chain Specialist	1	3.2
			Systems Analyst	11	35.5
Total	27	100	Total	31	100
Role Played by Respondents in the BPR Projects					
Government Sector			State Owned Enterprises		
Role in BPR Project	N	%	Role in BPR Project	N	%
Facilitator	3	10.3	Analyst	1	3.2
Member	18	62.1	Internal Auditor	1	3.2
Project Manager	7	24.1	Member	23	74.2
Sponsor	1	3.4	Project Manager	5	16.1
			Stakeholder	1	3.2
Total	29	100	Total	31	100

Reasons for carrying Our BPR

In the second part of the questionnaire the researcher wanted to know the reasons that made the government sector and the state owned enterprises to undertake BPR. For each statement the respondents were required to indicate their level of agreement or disagreement using a five-point Likert-like scale constructed as follows: (1) Completely agree, (2) Agree, (3) Neutral, (4) Disagree, and (5) Completely Disagree. Responses from the respondents are summarized in Table 2 sorted on the overall mean column. The results show that the top four reasons for carrying out BPR included improving productivity, improving customer satisfaction, reducing cycle time, and cost reduction. The results also show that the government sector was keener in fulfilling the mentioned aims than the state owned

enterprises. The differences in the mean responses between the two groups were found to be statistically significant for two of the reasons in this group, improving productivity and reducing cycle time. The least reason for carrying out BPR for both groups was to enable business growth followed by achieving competitive advantage. Once more there were differences in the means of the two groups which were tested to be statistically significant.

Table 2: Reasons for Undertaking BPR

Reason for carrying out BPR	Government Sector			SOEs			Overall		t-value	p-value
	N	Mean	SD	N	Mean	SD	Mean	SD		
To improve productivity	29	1.14	0.441	31	1.74	0.815	1.45	0.723	-3.53	0.001**
To improve customer satisfaction	29	1.31	0.541	31	1.65	0.798	1.48	0.701	-1.89	0.064
To reduce cycle time	29	1.17	0.384	31	1.84	0.583	1.52	0.596	-5.19	0.000**
To reduce operational costs	29	1.45	0.736	31	1.97	1.303	1.72	1.091	-1.88	0.065
To add value to organisation	29	1.97	1.085	31	1.77	0.990	1.87	1.033	0.71	0.478
To achieve competitive advantage	29	2.97	1.476	31	2.03	1.080	2.48	1.359	2.81	0.007**
To enable new business growth	29	4.31	1.417	31	2.13	1.118	3.18	1.672	6.64	0.000**

** Indicates significant at $p < 0.01$ **Scale:** 1-Completely Agree, 2-Agree, 3- Neutral, 4-Disagree, 5-Completely Disagree

Involvement of Information and Communication Technologies in BPR

Two sets of questions were asked in this section. In the first set a single question asked the respondents to indicate the extent to which information and communication technologies were incorporated in the design and implementation of business processes in their organisations. Answers from the respondents show that ICT was incorporated in the redesign and implementation of business processes both in the government and the SOEs although it was more so in the SOEs than the government sector. Further investigation of their mean responses showed that the differences in their responses were statistically significant ($F=4.93, p \leq 0.05$).

In the second set of questions respondents were given four statements in which they were asked to indicate the extent to which four types of ICTs influenced the carrying out of process reengineering in their organisations. For each statement the respondents were required to indicate their level of agreement or disagreement using a five-point Likert-like scale constructed as follows: (1) Completely agree, (2) Agree, (3) Neutral, (4) Disagree, and (5) Completely Disagree. As shown in Table 3 the overall mean shows that shared databases which can make information available in many places had the biggest influence on the carrying out of process reengineering followed by enterprise systems such as SAP and Oracle. Most respondents agreed that expert systems had little influence on the carrying out of process reengineering. Further observation of the data shows that across the board ICTs had more influence on carrying out of process reengineering in the SOEs than in the government sector.

Table 3: Technologies Involved in BPR

Technologies Involved in BPR	Government Sector			SOEs			Overall		t-value	p-value
	N	Mean	SD	N	Mean	SD	Mean	SD		
Shared databases to make information available in many places	29	1.86	0.875	29	1.31	0.604	1.59	.795	2.794	0.007**
Expert systems for performing special tasks	28	2.43	0.959	30	2.20	0.925	2.31	.940	0.924	0.360
Telecommunications networks	28	2.54	0.793	30	1.67	0.711	2.09	.864	4.401	0.000**
ERP such as SAP and Oracle	29	2.90	0.900	29	1.24	0.511	2.07	1.106	8.611	0.000**

** Indicates significant at p<0.01 **Scale:** 1-Completely Agree, 2-Agree, 3- Neutral, 4-Diasgree, 5-Completely Disagree

Organisational changes required in areas impacted by the BPR project

Respondents were asked to respond to eleven statements concerning the organisational changes that happened in their organisations as a result of implementation of reengineered processes. For each statement the respondents were required to indicate their level of agreement or disagreement using a five-point Likert-like scale constructed as follows: (1) Completely agree, (2) Agree, (3) Neutral, (4) Disagree, and (5) Completely Disagree. The statements are shown in Table 4 sorted on the overall mean column. The table shows that most of the respondents agreed that the top six changes brought by the BPR projects led to introduction of new customer focused processes; use of new ICT systems to support the new processes; re-skilling of employees; use of new procedures, rules and regulations; changes in the organisational structure; and introduction of new organisationally shared values and beliefs. These views were not held at the same level of importance between the government sector respondents and those from the SOEs. The differences of opinions were not statistically significant except for the introduction of new organisationally shared values and beliefs where more respondents from the government sector than from the SOEs indicated that it was one of the major changes. Respondents also indicated that the least outcome of the BPR projects was reduction of employees followed by introduction of performance related schemes and appraisal schemes for assessing new behaviour. Overall, the averages from SOEs for all the statements except one were lower than from those of the government sector. The differences in opinion were not statistically significant except for two statements: introduction of new organisationally shared values and beliefs; and introduction of appraisal scheme to assess new behaviour.

Resistance to Changes Brought by BPR

The researcher wanted to know if there was any resistance in the redesign and implementation of the BPR projects in the government sector and the SOEs. Firstly the respondents were asked to answer a simple Yes/No question on whether there was resistance in the implementation of BPR projects. Overall, 83.3% of the respondents answered that they encountered resistance during the redesign and implementation of BPR projects. A binomial

test indicated that the proportion of 0.83 was higher than the expected 0.50, $p=.000(1\text{-sided})$. However, a higher proportion of respondents from the SOEs (93.5%) reported that they encountered resistance towards the adoption of reengineered processes compared to those from the government sector (86.3%) but the differences were not statistically significant. Respondents who answered yes to the question were asked through an open ended question to elaborate on the resistances they experienced.

Table 4: Organisational changes required in areas impacted by the BPR project

	Government Sector			SOEs			Overall		t-value	p-value
	N	Mean	SD	N	Mean	SD	Mean	SD		
Introduction of new customer focused processes	29	1.31	0.471	31	1.52	0.724	1.42	0.619	-1.295	0.2
Use of new ICT systems to support new processes	29	1.69	0.712	30	1.4	0.724	1.54	0.727	1.549	0.127
Re-skilling of employees	29	1.52	0.509	31	1.61	0.761	1.57	0.647	-0.569	0.572
Use of new procedures, rules and regulations	29	1.9	0.409	31	1.61	0.667	1.75	0.571	1.968	0.054
Introduction of new type of organisational structure	29	1.83	0.966	31	2	1.125	1.92	1.046	-0.635	0.528
Introduction of new organisationally shared values and beliefs	29	1.72	0.702	31	2.29	1.101	2.02	0.965	-2.356	0.022*
Redeployment of employees to new areas	29	2.14	1.125	31	2.37	0.928	2.25	1.027	-0.853	0.397
Old routines were ended and new ones established	29	2.24	0.83	31	2.58	0.992	2.42	0.926	-1.431	0.158
Appraisal scheme to asses new behaviour were established	29	2.45	0.783	31	2.97	1.08	2.72	0.976	-2.121	0.038*
Performance related pay scheme was established	29	2.86	0.932	31	3.19	0.792	3.03	0.87	-1.498	0.14
There was reduction of employee numbers	29	3.1	1.113	31	3.4	0.932	3.25	1.027	-1.111	0.271

*Indicates significant at $p<0.05$ **Scale:** 1-Completely Agree, 2-Agree, 3- Neutral, 4-Diasgree, 5-Completely Disagree

Some of the respondents pointed out that resistance to change was triggered by the fact that employees did not understand why the changes were necessary. This is because employees were not involved in the reengineering process (buy in). Furthermore, People were unnerved by the glitches associated with the implementation. As a result, some users were not sure whether they should adopt the new processes or not.

Analysis of the responses further show that people felt that the three core drivers of work behaviour as propounded by Moran and Brightman (2000) were being violated. The first core driver is purpose in which people tend to resist changes which violate their senses of purpose, desire and value. Employees in this case expressed fear of the unknown, job

security, redeployment and transfer, and inability to learn and use the new processes. Such employees were somehow reluctant to implement the new processes.

The second core driver of work behaviour identified by Moran and Brightman (2000) is identity. They argue that people need a sense of personal integrity and consistency over time and tend to resist all changes which strike at the core of a person's sense of who they are and would always like to maintain the status quo. Responses from the study show that employees, top management and staff resisted to change the way they have been doing things because they felt what they have been doing is right. Employees deliberately took time to change and understand the new processes. One respondent reported that although the reengineered process were accessible through the company's system still users were not making any effort to access them.

The third core driver of work behavior according to Moran and Brightman (2000) and (Schuler, 2003) is mastery which makes people fear that they may lack skills, abilities and knowledge to perform changed tasks. Responses from the study show that old people were at the forefront in resisting the new developments, especially those which were technologically driven. Employees, for example, took their time to change from manually completing the leave application forms to completing them electronically.

Lessons Learnt

Through an open ended question, respondents were asked to narrate the lessons learnt from the BPR projects that they had participated. According to most of them, they found out that most of the processes were redundant with irrelevant steps. Respondents pointed out that the BPR projects revealed a lot on how some of the processes were unnecessary and were being performed ritually without understanding why they had to be performed that way. Worst of all some process owners could not explain how certain processes were carried out.

The respondents also highlighted the importance of change management for any reform to be accepted by the stakeholders. One respondent was of the opinion that sometimes it is not the process that needs more attention but the attitudes of people. Another respondent said that "for any reengineering project to be successful it is critical to involve people who work on the job on a daily basis and thus understand the processes very well. It is equally important to get project sponsors to be involved in the implementation so that the required attention can be given to the exercise".

Communication was pointed as being a key enabler of any BPR project. It is important in all stages of the project, Respondents pointed out that communication is needed to create awareness before the project starts so that those who will be affected by the project are made aware of impending changes. They further pointed out that any BPR project must have a communication strategy.

Respondents also pointed out the importance of participation of all stakeholders in the BPR projects. A respondent emphasized that it is important to use as many members of staff as possible when mapping the processes so that ownership of the processes is built at the mapping stages. Another respondent insisted that it is critical to involve people who work on the job on a daily basis because they understand the processes very well. It is equally important for project sponsors to get involved in the implementation so that the required attention can be given to the project.

A small number of respondents discussed the importance of project planning, thorough testing of the new systems and training of users.

DISCUSSION

Table 2 and Table 3 which show reasons for undertaking BPR and the influence of ICTs respectively are related. Compared to the SOEs, Table 2 shows that the government sector's foray into BPR aimed at improving productivity, customer satisfaction, and reducing cycle time and operational costs. This was after it was discovered that the introduction of PMS did not lead to any dramatic improvement of service delivery. We observe from Table 3 that the implementation of ERPs, shared databases, and advanced telecommunication networks such as the internet, intranets and extranets heavily influenced the decision to carry out BPRs in the state owned enterprises but not the government sector. This means that the government sector was changing its business processes without at the same time reasonably changing or taking advantage of the technologies which can support them. Table 4 supports this scenario as it shows that only a smaller proportion of respondents from the government sector agreed that one of the impacts of the implementation of BPR was the use of new ICT systems to support new processes. It is expected that technologies should be introduced to run processes which have been optimized. However, based on this scenario the government sector might be forced to embark on another round of BPR when it decides to introduce advanced ICTs to carry out some of the processes which are currently being performed manually or have been semi-automated. This will not be unexpected because new technologies, especially ERPs call for reengineering of business processes.

By analysing the positions held by those who participated in the BPR projects as shown in Table 1 we can also see that most participants from SOEs came from ICT departments which tends to support the observation that the BPR projects in SOEs were heavily influenced by the decision to implement new technologies, especially ERPs, advanced communication technologies, and shared databases. We can only speculate that because the process innovation in most SOEs was technology-led not much emphasis was put on soft issues such as optimising the organisational structures, changing the culture of the workforce by introducing new organisationally shared values and beliefs. Table 4 shows other behavioural issues which SOEs scored low marks compared to the government sector. Only when it came to the use of new ICT systems to support new processes were the mean scores from the government respondents lower than those from the SOEs.

The study's results show that the BPR projects in government and in SOEs did not lead to the establishment of new performance related pay schemes or the establishment of new work related assessment methods. The government had already established a performance management system and the purpose of the BPR project was not to annul it but to support it. The results also indicate that the SOE were leaning heavily on the introduction of technologies such as ERPs and advanced communication networks.

Table 2 further shows that the government sector was least interested in achieving competitive advantage or fostering the growth of new business. This is understandable because government departments do not operate commercially while most SOEs do provide services and products which the private sector can provide and are therefore keen in gaining competitive advantage. For example rail transport which is normally provided by SOE in

many countries face stiff competition from private bus and lorry operators. Government owned hospitals which normally operate as SOEs also face competition from private hospitals.

One of the striking outcomes of BPR in the government as well as the state owned enterprises is that it did not lead to job losses. This is so because the government which is the largest employer in the country takes a political stand that introduction new technologies in the public sector should not lead to unemployment (Shemi, Mgaya, & Nkwe, 2014) . This stance has a big influence on the state owned enterprises which are fully owned by it.

CONCLUSION

This study shows that what triggered the SOEs to reengineer their processes was the introduction of new technologies, especially ERPs. That is, it was the fitting of the organizations to the requirements of ERPs. However, innovating processes by merely introducing technologies does not automatically lead to multiplicative levels of improvement in service delivery. An ERP forces an organization to enter data once but it does not change the mindset of its employees. If the employees are not time conscious before the introduction of an ERP they will not automatically be so after its introduction.

In the case of the government sector process reengineering was not caused by the introduction of new technologies such as ERP but by the need to streamline its processes in order to improve service to customers. This may be a good approach but it again shows that the government sector tends to lag behind the private sector in the introduction of new technologies. When these new technologies are introduced in the future the processes will have to be reengineered again.

Have we reached the end of redesigning business processes? Research shows that there is still interest in BPR in developed as well as in developing countries (Hanif, Khan, & Zaheer, 2014; Houy, Fettke, & Loos, 2010; Pattanayak & Roy, 2015; Weerakkody et al., 2011). Redesign of business processes will never stop because new technologies which are used to support business processes keep on coming and changes to the organization's internal and external environments are inevitable. Processes must always be simplified first to make them efficient before new technologies are introduced to amplify the efficiency (Davenport & Stoddard, 1994; Jeston & Nelis, 2008).

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