

Business Process Re-engineering, and its Possible Applications for Improving the Libyan Banking Sector

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Abstract— This paper investigates the possibility for improving the performance level within the Libyan banking sector. A survey methodology was used for this study, along with customers' observations and one-to-one interviews with a couple of decision makers and executive managers within the Jamhuriya Bank, investigating the current status for adapting the principles of Business Process Re-engineering (BPR). Based on the data analysis, the findings show that BPR is widely accepted by majority of the participants, whereas, the working environment needs to be prepared for adapting the BPR concepts throughout the entire banking operations, specifically the electronic services such as ATM cards. The finding also indicates that, improvements in the performance levels of the banking operations leads to improving the customer services in terms of cost reduction and fast services delivery. On the other hand, the results also pointed out that the surveyed organizations do not pay that much attention to some Critical Success Factors that being considered as crucial to implement BPR successfully. So, as a first step for efficiently adapting BPR, the most important issue is to ensure the top management support and allocating all the necessary resources. Only then increased customer satisfaction along with the profitability can be guaranteed within the Libyan banking business area.

Index Terms: ATM, BPR, Improvement, Investigation, Performance.

I. INTRODUCTION

Business organizations are gaining importance for being a source of growth and development around the globe, such organizations could be industrial, commercial, banks and agricultural, regardless their size or number of employees, as well as the value of traded funds and the market share.

At the end of the eighties and the early nineties of the last century, BPR was encountered and has been successfully adapted in the many large companies where substantial performance improvements were achieved in terms of cost, quality, service levels, and delivery times. Many organisations around the globe were compelled to practice many different management techniques for providing the required products and/or services with highest quality levels and with the most appropriate delivery times. [1]

As BPR being considered as one of the leaders in the modern management, several leading companies have managed to gain valuable achievements through BPR adaption, developing and improving their entire administrative and strategic processes and operations. Others used the advanced information technologies as key factors for these improvements, and in most cases BPR works towards making changes in the re-design of the work environment and adjust the operations for improving the functional and communication structures. [1], [2]

II. AN OVERVIEW ABOUT BPR

As Japanese adapted the technologies of JIT & TQM, the products and services have become cheaper and more valuable, getting more acceptances by a large number of customers around the globe. That situation made European and American to re-think about their existing administrative processes [2]. Hence, the term BPR was emerged in the very late of the eighties. The claim was that most of performed work does not add any more values, so it must be removed. Companies should reconsider their operations in order to maximize the value for customers while minimizing the consumption of resources to provide the desired products and/or services more effectively [3], [4].

According to Hasnawi [5], BPR aims to either re-start establishing the processes and methods of the managerial issues within the company, or replacing the old systems by more modern ones, or changing the vision and strategic objectives of the company. Companies usually are motivated to reconsider their tactics through five key-forces; all begin with the letter (C): "Customers",

“Competition”, “Change”, “Communications”, and “China”. Organizations that considered in need to adopt re-engineering are those of deteriorating status or those that did not reach deterioration but expects to reach that situation in the near future. The other situation is that companies already reached the peak of excellence and success but facing challenge and huge completions. [6]

According to Hasnawi [5] and Mohammed [7], BPR provides a range of benefits among of them; cost reduction, quicker delivery of products and/or services, and using advanced technologies to make it easier to perform the operations with high efficiency and effectiveness.

III. LITERATURE REVIEW

Many professional bodies and organisations adopted BPR for reducing cost, minimizing time, improving quality and performance, along with increasing productivity [6].

A lot of research being conducted within this subject area, among of them was in manufacturing, telecommunications, universities, schools, governmental institutions and banks [1],[4]. However, there is a shortage of research within the Libyan institutions and organisations.

To the best of the researchers’ knowledge, no research being published concerning the impact or the application of process re-engineering for the Libyan banking sector, making this business area as a hot topic for conducting such type of research. However, BPR has been widely touched by many researchers around the globe, including a quite large number of organisations that had successfully practiced BPR, among of them GMC, Ford, and IBM. In addition, Saudi Arabian Airlines, Saudi Planning and Programs Agency, and Housing Bank of Jordan, all practiced BPR in somehow [8];[9]. In the field of scientific research, Agha [10] studied the impact of BPR on increasing the internal customer’s satisfaction in Saudi Arabia, in which a descriptive analytical approach was used, the most important findings show that the adoption of BPR makes the organisation capable for innovation, competition, increasing customers’ satisfaction, and gaining new customers. Furthermore, the research pointed out that adopting BPR is deemed as an imperative for banks to get rid of the business routine. In the same line, Alfra [8] investigates the impact of BPR on increasing the internal customers’ satisfaction with Rasheed Bank in Iraq, the main aim was to clarify what is the real implementation status of BPR in the Iraqi governmental banks along with the extent of the BPR impact in terms of increasing personnel’s satisfaction. The most important result was recommending that the internal customer involvement in the decision-making process, working to spread the culture of BPR, supporting to increasing the number of banking technologies, developing quality levels, and introducing new technologies such as ATM will enable the bank to offer new banking services. Furthermore, Murad [11] studied the level of banking services’ quality offered by Bank of

Agriculture and Rural Development (Biskra-Algeria). The researcher recommended that the use of information and communication technologies in the application of BPR is crucial in the success of any implementation of such techniques.

Similar to Agha [10], Satti & Irum [12] studied the relationship between some factors that influencing rebuilding the organizational structures through implementing BPR. The results found a statistically significant relationship between BPR and the efficiency, increasing the efficiency and effectiveness of the banking operations. Furthermore, it highlights that there is a relationship between the re-engineering and improving the overall quality, and rebuilding the organizational structures. The Housing Bank for Trade and the Jordanian Finance was considered for a research in 2012 by Mohammed [7] who conducted a study to verify previous results of the re-engineering processes to reduce cost and increasing profitability. The researcher recommended that there is a need for the departments of Iraqi banks and companies to adopt a strategy process re-engineering, re-examining performance measurement tools in the banking business and its development in order to achieve customer satisfaction, ensuring loyalty, and achieving competitive advantages through introducing modern banking services based on modern technology.

The Ethiopian banks began adapting re-engineering projects since 2004, where the implementation of BPR projects has improved the performance of public commercial banks in Ethiopia. As a result of that implementation, the services’ delivery times were reduced. The researcher recommended an implementation of re-engineering with an emphasis on the need of support by the senior management body towards implementing BPR [13].

Satti & Irum [14], studied the effect of BPR on the performance of Pakistani banking sector. The results confirmed the effect of process re-engineering on the performance of the surveyed banks, and the information technology was found playing a role in improving the processes which affects the overall performance of the surveyed sector. In the same line, Kumar & Mishra [15] conducted a study investigating the effect of process re-engineering at the State Bank of India. The key-findings pointed out that customers have become more satisfied about the banking services as the operational costs were reduced by 50%, and the services’ quality was also improved, and the organizational culture for the whole branches of the surveyed banks was also improved.

As it was clearly illustrated, it can be said that many banks practiced BPR [16], achieved a reduction in costs as well as decreasing delivery times, increasing customers’ satisfactions, winning new customers, increasing profitability. These valuable achievements encouraged the researchers to conduct this research for investigating the current situation in order to adopt BPR in the Libyan banking sector.

IV. METHODOLOGY AND DATA COLLECTION

Most of the needed data were gathered through a survey questionnaire. A total of 53 hard copies of the questionnaire were distributed to the targeted participants. The developed questionnaire focuses on several issues, all considered as Critical Success Factors (CSF) for successfully implement BPR. The questionnaire was divided into three sections, section (I) contains general questions about the targeted organisations and the related participants. Section (II) was designed to include the main areas being considered for any successful and effective BPR adaption, and investigating the need to implement re-engineering in the targeted sector. The areas being considered as CSF for effective implementations of BPR are listed as follows:

- The level of top management support towards developing and improving the operations.
- The need for change towards developing and improving the banking operations.
- The effectiveness of the banking operations and their performance levels.
- The dependence on information technology within the surveyed sector.
- The effect of competition within the banking business area.
- Using any cost and banking impact indicators.
- Flexibility for improving the banking operations.
- Using quality standards throughout the banking services.
- The overall profitability levels.

Finally, section (III) of the developed questionnaire investigates the internal customers' satisfaction levels.

V. DATA ANALYSIS AND DISCUSSION

As a first step of analysing the gathered data, a reliability test was conducted for the entire questionnaire. Cronbach's Alpha was used for testing the internal consistency of the entire questionnaire. The calculated value of Cronbach's Alpha was found to be 0.95, giving strong evidence that the questionnaire responses were reliable.

A: Participants' General Information

The analyzed data regarding the gender of all the participants that working within the surveyed sector showing a range of about 90% are males, whereas, about 70% from the participants are found in the age group from 36 to 60 years old.

Their educational levels were also investigated and the findings are illustrated on Figure 1. Clearly It can be seen that more than 60% of the employees participated within this survey are holding university degrees, indicating that the surveyed sector is running its business with qualified

and professional personal. The job titles of all the participants were also investigated. The findings show that thirteen job titles were considered to be participant for this survey, giving a very positive indicator for such type of survey research.

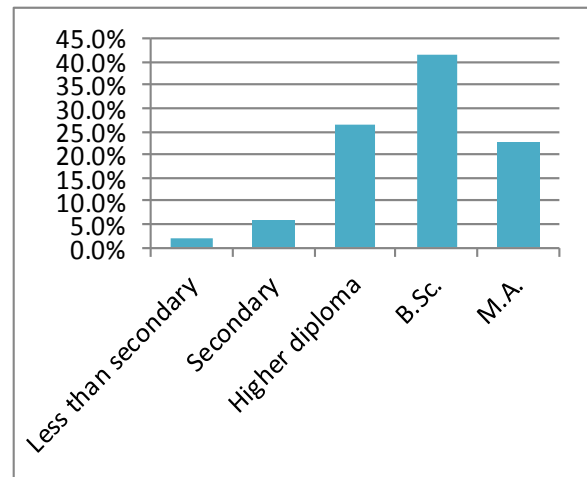


Figure 1: The educational levels for all the participants

The work experience for all the participants was also investigated. The results are illustrated on Figure 2. The figure shows that various categories of employees' experience, it shows few participants are with less than five years of experience, whereas, about the fifth of the participants are speeding their second decade working for the banking sector. Surprisingly, the findings also show that about 75% of the participants are with experience of less than ten years within their current managerial positions.

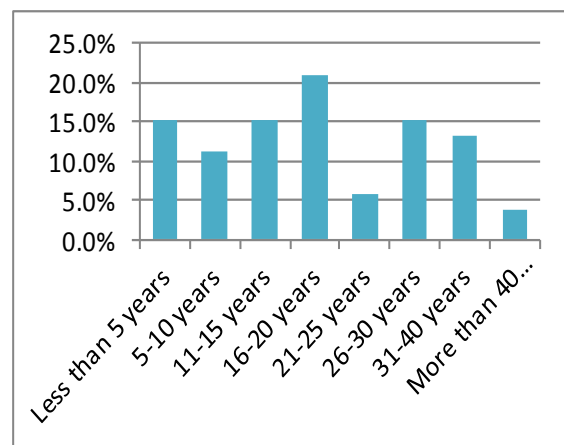


Figure 2: The participants' Work Experience.

The monthly salary was also investigated and Figure 3 illustrates the findings. It shows that majority of the employees within the surveyed banking organisations is found to be in the range between one and three thousands Libyan Dinars as about 70% of the survey participants was found within this category. Surprisingly, a range of 17% of the respondents preferred not to mention their salary.

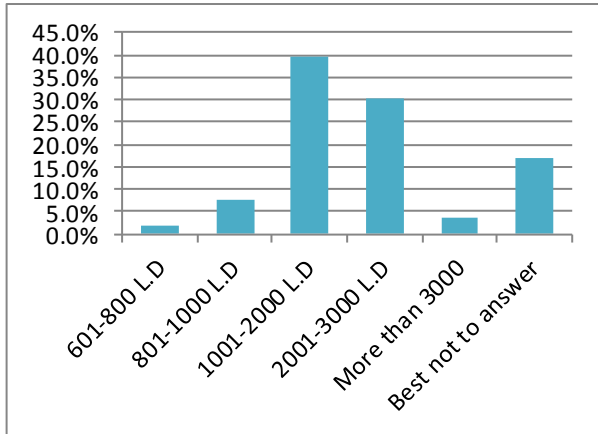


Figure 3: The Participants' Monthly Payments.

B: Investigating The Current Implement Status Of The CSF Of BPR

The current implementation status of the Critical Successes Factors within the surveyed banking sector was also investigated in order to ascertain the existing working environment for adapting BPR. The key findings are shown in Table 1. The Table shows that the overall average mean value stands at 2.98 (from 5 points), which indicates to a modest practicing level of these factors.

These findings pointed out that actions should be taken to build the proper needed BPR environment within the surveyed sector. This part of the investigation focused for all the CSF previously identified, and it can be clearly seen from Table 1 that out the nine investigated factors, four of them got almost the same mean values, standing at about 3 points out of 5.

Table 1: Mean Values of the Investigated CSF for Implementing BPR

Investigated Factor	Mean Value
Management support towards improving the operations.	3.03
The need for change towards improving operations.	3.03
Effectiveness and performance of the banking operations	2.82
The dependence on information technology	3.03
The effect of competition within the business area.	2.93
Using any cost and other impact indicators.	3.01
Flexibility levels for improving the banking operations.	2.97
Using quality standards through the banking services.	2.99
The ooverall profitability levels.	3.04
Overall Mean	2.98

These four factors are; overall profitability level; level of top management support towards developing and improving the banking operations; the need for change towards developing the banking operations; and the level of depending on information technology within the surveyed bank, all are found at modest levels. Surprisingly, the survey participants have seen that the effect of competition within their business area stands at

the lowest mean value level with 2.82 out of 5, which means again modest level for this investigated factor to be ready to adapt and accept BPR.

C: The Levels f Internal Customers' Satisfaction

For this investigation, the employees within the surveyed banking sector are considered as internal customers. They are also considered as the key part of adapting any BPR programs. Table 2 shows the results obtained from this survey. From the table, it can be seen that apart from the *availability of safety and security issues within the surveyed bank*, which is found to be with the lowest mean value, all the other investigated factors are found to be at *modest* levels, not exceeding 3.25 out of 5 points. That could be again the same situation as the CSF. Both situations point to the serious need to reform the current existing working environment, making higher level of customers' satisfactions thereby achieving more satisfaction levels for the bank's external customers.

Table 2: Mean Values of the Internal Customer Satisfaction Levels

Investigated Factor	Mean Value
Respect between the management body and employees	3.25
Interest to address the workers' complaints	2.85
Interest to address the workers' proposals for improvements	2.85
Dealing with complaints from workers	2.87
Encouraging employees to submit improvement proposals	2.96
Encoring facilities for employees to carry out their duties	3.13
Encouraging employees to be creative	2.77
Encouraging training programs in the field of elec. services	3.17
Encouraging comfortable working environments	2.91
Encoring safety and security issues	2.42
Overall mean	2.92

In general, for evaluating the level of the surveyed bank's internal customers' satisfaction, it can be said that it is still modest and do not reach the desired level. The management body within the Jamhuriya Bank (Libya) should take actions for improving the working environment. Only then the working environment will be more appropriate for implementing improvement programs and adapting BPR principles. That situation will ensure much higher level of the external customers' satisfaction levels.

VI. CONCLUSIONS

This paper can be considered as the first to investigate the possibility for adapting the principles of Business Process Re-engineering (BPR), and improving the operations within the Libyan banking sector. Based on data analysis (gathered from the survey, interviews, and direct observations), the key-findings pointed out that there is a need for the banking sector to apply the concepts of BPR for improving the performance rates

throughout all the banking operations, more ever, the electronic service cards such as ATM. The electronic banking services are considered with a direct impact on improving the customer services in terms of cost reduction, fast service delivery, and higher quality levels, along with providing an enthusiasm and reliable working environment, ensuring the employees to be more effective and efficient. Furthermore, the findings also showed although there is a need to implement BPR within the Libyan banking sector, the management body within the surveyed organisations doesn't pay that much attention for considering the investigated Critical Success Factors as with a high level of priorities for managing and improving all the exciting operations. So, for BPR successful and effective implementations within the Libyan banking organisations, it is very crucial to train the management body about BPR concepts and their most desired benefits. Only then an effective BPR adaption can be achieved.

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BIOGRAPHIES



Dr. Rajab Abdullah HOKOMA began his career in Industrial Engineering in 1990, after his graduation from Industrial Engineering, Garyounis University, Libya; he received his MSc in Enterprise Management at Warsaw University of Technology, Poland. In 2007 Mr. Hokoma was awarded his PhD in the area of Manufacturing and Quality Planning and Control from The University of Bradford, England (UK). Presently, his duties and research at Tripoli University (*main university in Libya*) are in the area of Manufacturing and Quality Planning and Control, JIT, MRPII, TQM, Supply Chain Management, Maintenance Planning, Operations Management, Pollution Control, Risk Management and Strategy. His non-lecturing duties include among others, (acting as) the consultant and advisor for manufacturing and quality planning and control and liaison with Industry and Education. Dr. HOKOMA published more than 50 reviewed papers in National & International Conferences and Journals within the scope of his interested area.



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