

BUSINESS PROCESS REENGINEERING: IS IT RELEVANT TO THE ISLAMIC BANKS?

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Abstract

The emergence trends and the changing behavior of customers have led to the evolution of the Islamic finance. This has put high pressures for the Islamic banks to be competitive. The focus is no longer on cutting costs alone, but simultaneously improving services to customers. Owing to this fact, most banks have given special attention to the “processes” which able to produce values to the customers. One of the popular management tool, Business Process Reengineering (BPR), has been widely applied particularly in the manufacturing industries towards gaining significant improvement in organizational performances. Nevertheless, there is still lack of thorough empirical evidence of BPR impact on performance in Islamic bank services. It is still unsure whether BPR relevant and meaningful in enhancing the banks performance. Hence, this paper aims to explore the applications of the BPR factors in the Islamic banks and assess the effects towards the bank performance. Survey has been conducted on all banks and financial companies applied Islamic banking in Malaysia. The study received 65.6% feedback and successfully collected to be analyzed. . The overall result shows that the BPR factors and IT capability are able to influence overall performance of Islamic banking in Malaysia. However, for individually, the analysis using multiple regression analysis indicates that only Strategy alignment, Management Commitment, Information Technology (IT) Investment, Process redesign and Less Bureaucratic Structure have significant impact to performance of Islamic banking in Malaysia. The study provides meaningful insight for policy makers, banks practitioners and academicians on the bank performance enhancement.

Keywords: Business Process Reengineering, Malaysian Islamic Banks, Banks Performance

Introduction

The rapid changes in financial markets had demanded market participants to make changes to their operational processes beyond local to global competitiveness. This trend has led many banks in developing countries to improve customer service quality, speed, reduce operating costs, and enhance profitability performance. Hence, special attention has been paid to improve the “business processes” where the targets are to produce valuable outputs to the customers. The focus is no longer on cutting costs alone, but simultaneously changing the thinking of processes that enhance the quality services.

Numerous literatures in BPR implementation have widely recognized its contribution towards improving the business performance (examples Lin et al., 2002; Fadel and Tanniru, 2005; Adbolvand, Albadvi and Ferdowsi, 2008). Nevertheless, BPR has been regarded as costly, time consuming and risky operations. Not many companies able to implement it successfully (Chiplunkar et al., 2003). Due to this risky nature, has motivated this study to explore further the applications of BPR particularly in the Islamic banks.

Hence, the main objective of this study is to explore the application of BPR factors on the organizational performance of Islamic bank in Malaysia. BPR factors have been operationalized by the variables of change management, BPR strategy alignment, customer focus, management commitment, IT investment, and adequate financial resource. Data was collected through a hand-delivery method. A proportionate simple random sampling was used for sample selection. 500 questionnaires have been sent to Islamic banks’ managers. The outcome of this study able to provide important insights to both managers and researchers for further understanding on the BPR factors and its link towards organizational performance of Islamic banks.

Overview of Malaysian Islamic Banks

Islamic banking in Malaysia began in September 1963 when Perbadanan Wang Simpanan Bakal-Bakal Haji (PWSBH) was established. PWSBH was set up as an institution for Muslims to save for their Hajj (pilgrimage to Mecca) expenses. In 1969, PWSBH merged with Pejabat Urusan Haji to form Lembaga Urusan dan Tabung Haji (now known as Lembaga Tabung Haji).

The first Islamic bank in Malaysia was established in 1983. In 1993, commercial banks, merchant banks and finance companies were allowed to offer Islamic banking products and

services under the Islamic Banking Scheme (IBS). These institutions however, are required to separate the funds and activities of Islamic banking transactions from that of the conventional banking business to ensure that there would not be any co-mingling of funds. In the early implementation period of Islamic banking in Malaysia, the performance was lower than conventional banks (Saiful Azhar and Mohd Afandi, 2003). Nevertheless, the industry has progressively growing from year to year (Al Nasser and Jorah (2013; Wasiuzzaman and Gunasegavann, 2013). The development of banking industry that is based on *shariah* principle in Malaysia is supported by the government of Malaysia and contributed by the aspiration to develop a strong Islamic banking in the region (Dusuki and Abdullah, 2007).

Today, Malaysia has successful in implementing a dual banking system and able to obtain a full-fledged Islamic banking system operating side by side with the conventional banking system. It has been the Government's aspiration to develop the country as the capital or hub of Islamic banking worldwide (Suffian, 2007). After the liberalisation of the Malaysian Islamic banking sector in 2004, the number of full-fledged Islamic banks has increased from two institutions in 2004 to 20 institutions in 2013. In contrast, there are 27 conventional banks in Malaysia in 2013 as compared to 29 in 2004. The reduction in the number of conventional banks is mainly due to merger and acquisition exercises of several banking institutions within the observation period (Muhamad Azhari Wahid, 2017). Under The Economic Transformation Programs (ETP), the Malaysian Government and Bank Negara Malaysia (BNM) predicted that the Islamic banking sectors would achieve more than 40% of growth towards 2020 ("Islamic Banking To", 2014). Recognizing the importance to the country, Islamic banks are expected to be flexible, being fast in taking action, and maintaining low production.

Business Process Reengineering

In a volatile global world, organizations enhance competitive advantage through Business Process Reengineering (BPR) by radically reengineering whole processes. BPR gained immense and unexpected popularity due to the early articles of Hammer (1990) and Davenport (1993). BPR implies transformed processes that together form a component of a larger system aimed at enabling organizations to empower themselves with contemporary technologies, business solutions and innovations. According to Ntaliani et al. (2010), as the primary aim of BPR is to improve the business processes, improvement could be achieved by innovation of business processes or by the improvement of existing business process. If the business

process is relatively stable, and incremental (enhanced) changes should be introduced, priority is given in applying the business process improvement. Meanwhile, for a huge business process that needs to be redesigned in an understandable way, re-engineering of business processes is more suitable (Bakotić, and Krnić (2016). The choice between these two options depends on the company's business strategy. Huang et al., (2015) claims that business process reengineering improves employee performance, creates a new working environment, and support the need for building new and better employee work habits. This is in line with indicated by Al-Mashari and Zairi (1999) have analyzed business process reengineering related to personnel cost and discovered that business process reengineering increases personnel costs by around 30-50% of excellence, which should ensure a focal point for the accumulation of business process management knowledge. Hence, those points highlighted above showed the significant contribution of BPR is not only to ensure adequate resources, but also to achieve the worker's optimal engagement and commitment. The abilities to acquire, develop and transfer new knowledge, to improve creative thinking, and to adopt business behavior are critical factors for the improvement of the business processes, particularly in the service sectors.

The BPR concept has been introduced in Malaysia in the 1990s and gained popularity when Malaysia's famous Vision 2020 was revealed by former Prime Minister, Tun Dr. Mahathir Mohammad in the year 1994. Malaysian government has successfully implemented many reengineering projects such as MyKad - a multipurpose digital application card for all citizens over the age of 12, Public Services Network (PSN) – an online network application system that enables user to make payment or renewal of various Government agencies' services at the Post Offices and E-Government (began in 1997 with the launch of the Multimedia Super Corridor's (MSC) E-Government Flagship Application) for the sake of the public and the country by changing the way government interacts with citizens and businesses through new ways of the government's operation.

Business Process Reengineering can be defined as "the analysis and design of workflow and processes within and between organizations" (Hammer and Champy, 1993). BPR has three key target categories:

1. Customer Friendly: To get a competitive edge and that can only be gained by providing the customers more than what the others in the market are asking for.
2. Effectiveness: How effective is the product or service that the business or manufacturing company is providing the customer?

3. Efficiency: How efficient is the company that is manufacturing the product before introducing it to the market to minimize costs? Efficiency is not just about being efficient at the production floor level but also the management level.

BPR is a popular management tool for dealing with rapid technological and business changes. It was introduced by Hammer and Champy (1993), as radical redesigns of processes in order to gain significant improvements in cost, quality, and services. BPR creates changes in people (behaviour and culture), processes and technology (Al-Mashari and Zairi, 2001). It does not seek to alter or fix existing processes, but forces companies to ask whether or not a process is necessary, and then seeks to find a better way to do it. BPR integrates all departments into a complete process that has been designed to fulfil a specific business goal. Hence, successful implementation of BPR enables organizations to achieve dramatic gains in business performance.

BPR helps banks to deal with new economic challenges and change the traditional processes to improve their customers' satisfaction. BPR is a management discipline for analysing and redesigning current business processes and their components in terms of efficiency, effectiveness and added value to the objectives of the business. The conduct of the BPR steps is planned to gather and process business requirements in support of a modernization effort for a defined area. The BPR starts with planning activities that include the creation of a BPR team, the development of a BPR scope document and an examination of the proposal that relates to a given area, examines the existing and future business process and improves it accordingly.

Objectives

Based on the above discussion, the study interested to address the following objectives:

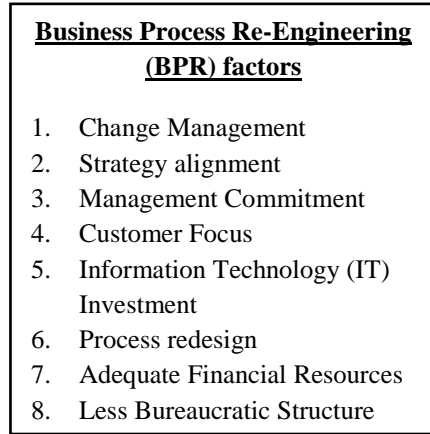
- 1) To explore the application of BPR factors in the Islamic banks in Malaysia.
- 2) To determine the effect of BPR factors on the organizational performance of Islamic banks in Malaysia.

Methodology

This study focused on descriptive and causal research (hypothesis testing). Descriptive research would be undertaken to identify the implementation level of BPR attributes by Islamic banks. The research framework is as shown in figure 1.

Research framework

Independent Variable



Dependent Variable

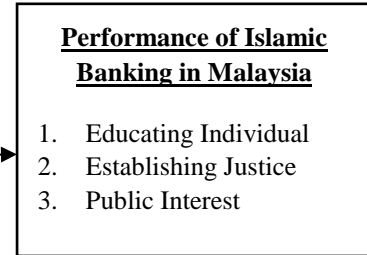


Figure 1: Research framework

The study used the organization as the unit of analysis. Organizations are being chosen as a unit of analysis because this study focuses to measure the organizational performance (Sekaran and Bougie, 2013). The population of the study is the Islamic banks Headquarters (HQs) in Malaysia. A total population of sixteen (16) organizations are participating in the Islamic banking scheme (Islamic full-pledge and Islamic window of conventional bank) registered with the Bank Negara Malaysia. In this study, four (4) questionnaires were distributed for every banks. Concurrent with previous researchers' views (for instance Sung, and Gibson, 1998; Cheng and Chiu, 2008; Ringim, Razalli, and Hasnan 2012; Ringim, Osman, Hasnan, and Razalli 2013), they suggested that a study should select multiple respondents in an organization in order to avoid bias and balanced the perspective of BPR variables. In addition, the concern with negative or positive feeling on the study's issues can be minimized (Cheng and Chiu, 2008). Hence 64 questionnaires were distribute to all Islamic banks HQs. The target respondents are those who in the position of top managerial level which seem to be knowledgeable on the issues addressed and able to represent their organization. The respondents selected also have a vast experience and understanding on BPR (Cheng and Chiu; 2008).

The table 1 below summarized the research design employed in this study.

Table 1: Research Design

Population of Interest	All banks and financial companies applied Islamic banking in Malaysia
Respondent	Top management to represent organization
Sampling Technique	Probability Sampling method – Simple random sampling
Unit of Analysis	Organization
Time Horizon	One-shot or cross-sectional study

Results

The study managed to obtain 42 (65.6%) complete questionnaires that provide significant feedback. However, only 35 of questionnaires can be analyzed after the process of data cleaning. Although it seems to be low participation, it able to provide meaningful output as Pallant (2001) claimed that 30 set of questionnaire are acceptable to run the statistical analysis. The results has been categorized into descriptive analysis and correlation analysis

Descriptive Analysis

Frequency analysis was one of the important analyses in research development. Frequency analysis is being conducted to gain the total number of participation in this study with the differences of respondents' values and background. Based on 35 samples that successfully collected by the researcher, researcher can effectively analyze the different demographic between respondents. Demographic information was divided into two categories namely personal information and BPR information. In term of personal information, the gender composition showed that 51.4% were male and 48.6% were female. The composition of gender is shown in Table 2.

Table 2: *Composition of Respondents by Gender*

Gender	Frequency	Percentage (%)
Male	18	51.4
Female	17	48.6

Respondents were asked whether the implementation of BPR can reengineer their operation process. Based on the findings, 100% of the respondents agreed that BPR able to reengineer the Islamic banking operation process. Respondents were also been

addressed on which composition of the Islamic banking organization that need to restructure. The findings show that most of the Islamic banking restructured their operation process in term of Branch operations' (CSO and Teller). This followed by electronic banking services (22.9%), processes related to Islamic financing (11.4%), International Operations (5.7%) and other support services (2.9%). Table 3 shows the composition of the organization restructure.

Table 3: *Composition of the organization restructure.*

	Percent
Branch operations' (CSO and Teller)	57.1
Electronic banking service (ATM, POS)	22.9
Processes related to Islamic financing	11.4
International Operations (L/C, FX, etc.)	5.7
Other support services (FINCON, AUDIT and Legal)	2.9

With regards to the objectives of BPR implementation, the results show that 31.4% of the respondents agreed that BPR able to increase the revenues, meanwhile the lowest percentages (11.4%) received for item "Proactive approach to prepare the organization". The composition of respondents based on objective of BPR is shown in Table 4.

Table 4: *Composition of the Objective of BPR*

BPR Objectives	Percent
Increasing revenues	31.4
Improving the quality of customer service	28.6
Reactive approach to competitive pressure	14.3
Reducing operating cost	14.3
Proactive approach to prepare the organization	11.4

Next, the category of Islamic banking was divided into three categories such as Local Commercial Bank, Foreign Bank, Developmental Finance. Local Commercial Bank presented only 71.4%, while Foreign Bank and Developmental Finance was 14.3%. All the composition of banking category is shown in Table 5.

Table 5: *Composition of Respondents by the category of Islamic banking*

Category of Islamic banking	Percentage (%)
Local Commercial Bank	71.4
Foreign Bank	14.3
Developmental Finance	14.3

Based on the finding on descriptive analysis, the mean for Islamic banking performance was 4.5667 and the standard deviation is 0.34715. While skewness for performance is 0.157 and for kurtosis is -0.187.

BPR factors in this study are comprised of Change Management, Strategy alignment, Management Commitment, Customer Focus, Information Technology (IT) Investment, Process redesign, Adequate Financial Resources and Less Bureaucratic Structure. Hence, in order to understand the application of the BPR factors in the Islamic banking environment, the respondents were asked to rate the six scale dimension ranging from 1 as “strongly disagree” to 6 as “strong agree”. Overall to the respondents gave a moderate views on the BPR factors application with the mean for Change Management, Strategy alignment, Management Commitment, Customer Focus, Information Technology (IT) Investment, Process redesign, Adequate Financial Resources, Less Bureaucratic Structure are 4.6222, 4.7571, 4.7388, 4.6357, 4.6343, 4.5714, 4.6238 and 4.5543 respectively. Meanwhile for standard deviation, the values are 0.38697, 0.51623, 0.49908, 0.45107, 0.43246, 0.36987, 0.33661 and 0.51125. In term of skewness, the highest value for BPR factors is 0.222 (process redesign) while for kurtosis the highest value is 0.402. verall summary for mean, standard deviation, skewness and kurtosis are explained as in Table 6 below.

Table 6: *Summary of Descriptive Analysis*

Items	Mean	Standard Deviation	Skewness	Kurtosis
Dependent variable (DV) Islamic banking performance	4.5667	.34715	.157	-.187

Independent variable (IV) BPR factors				
1. Change Management	4.6222	.38697	.135	-.129
2.Strategy alignment	4.7571	.51623	-.189	-.469
3.Management Commitment	4.7388	.49908	-.143	.402
4.Customer Focus	4.6357	.45107	-.185	-.430
5. IT Investment	4.6343	.43246	-.234	.132
6.Process redesign	4.5714	.36987	.222	-.307
7.Adequate Financial Resources	4.6238	.33661	-.058	-.732
8.Less Bureaucratic Structure	4.5543	.51125	.102	-.483

Pearson's Correlation Analysis

As in the objectives, the study interested to explore the strength and direction of the BPR factors towards the Islamic banking performance. If value of the correlation is 0, it means no correlation, 1.0 means positive correlation and -1.0 means the correlation is negative correlation (Pallant, 2001). Therefore, a hypothesis can be developed as below:

H1: There is positive relationship between BPR factors towards the Islamic banks in Malaysia

Based on the Pearson Correlation Analysis, Table 7 shows the relationship between BPR factors and Islamic bank performance. . All of the procedure is subjected to two-tailed test which were divided into two level; significant ($p < 0.05$), and significant ($p < 0.01$).

Table 7: *Pearson's Correlation between the Constructs (N=35)*

	Islamic baking performance	BPR factors
Islamic banking performance	N/A	
BPR factors	0.532** 0.01	N/A

As portrayed in Table 7, the correlation analysis between BPR factors toward Islamic banking performance in Malaysia shows a positive correlation where $r = 0.532$ for BPR factor and performance. This indicates that BPR factors have a significant correlation

towards the performance, therefore relevant in enhancing the Islamic banks performance in Malaysia.

Multiple Regression Analysis

For a better understanding on the relevancy of BPR in the Islamic banks, multiple regression analysis was conducted. This analysis able to provide information on the BPR factors (IV) influences towards the Islamic banking performance (DV). Hence, to support objectives of the study, a hypothesis can be formulated as below:

H2: The BPR factors have positive relationship towards the performance of Islamic Banks in Malaysia.

The hypothesis above has been tested using multiple regression analysis. The t value should more than 1.645 ($t > 1.645$) and the significant value should less than 0.05 ($p < 0.05$). The result of analysis explained that R Square value was 0.612 or 61.2% of variance. The F value = 5.131 and significant value was 0.001 ($p < 0.05$). The hypothesis H2 was accepted and it means the BPR factors were influence overall performance of Islamic banking in Malaysia.

With regards to the BPR individual factors, Strategy alignment, Management Commitment, Information Technology (IT) Investment, Process redesign and Less Bureaucratic Structure have significant impact to performance of Islamic banking in Malaysia with the values of $\beta = 0.0483, 0.011, 0.005, 0.002$ and 0.002 respectively. Meanwhile the values for $t = 2.078, 2.741, 3.051, 3.402$ and 3.45 indicate that all the positive factors will influence the performance of Islamic banking in Malaysia. Nevertheless, other factors such as Change Management, Customer Focus and Adequate Financial Resources were rejected after the value of $\beta = 0.444, 0.452$ and 0.246 , which seems to have negative impacts on performance. Table 8.below illustrates the summary of the multiple regression analysis.

Table 8: *Multiple Regression Analysis for Hypothesis 3 (N=35)*

BPR factors and Islamic banks Performance	Variables	R²	F	P	(β)	Sig.	t
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Independent Variables	performance Islamic banks	0.612	5.131	0.001 ^b	0.493		
Statistic							
Summary							
BPR factors	1. Change Management				0.166	0.444	0.777
	2. Strategy alignment				0.552	<u>0.048</u>	2.078
	3. Management Commitment				-0.693	<u>0.011</u>	2.741
	4. Customer Focus				-0.114	0.452	-0.764
	5. Information Technology (IT) Investment				0.749	<u>0.005</u>	3.051
	6. Process redesign				-0.694	<u>0.002</u>	-3.402
	7. Adequate Financial Resources				0.188	0.246	1.187
	8. Less Bureaucratic Structure				0.588	<u>0.002</u>	3.451
p* < 0.05, p** < 0.01							

1.5 Discussion

BPR factors and performance of Islamic banking in Malaysia

The hypothesis H1 and H2 were accepted which proves the significant relationship between BPR toward the performance of Islamic banking. According to Khong and Richardson, (2003); Ahmad, Francis, and Zairi, (2007); Cheng and Chiu, (2008); Ringim, Razalli, and Hasnan, (2011), BPR have a significant relationship with organization performance. It also supported by Setegn, Ensermu, and Moorthy (2013) that the implementation BPR approach in organization will give biggest benefit and achieve the dramatic improvement (Sidikat, and Ayanda, 2008). Hanafizadeh and Osouli (2011) also agreed that most of the researchers indicate that the BPR was the best approach for continuous improvement for organization performance. In term of individually, Strategy alignment, Management Commitment, Information Technology (IT) Investment, Process redesign and Less Bureaucratic Structure have significant impact to performance of Islamic banking in Malaysia

Morrison, Ghose, Dam, Hinge and Hoesch-Klohe (2011) clarify that strategic alignment is a method to understand the relationship between process and strategy. Other than that, strategic alignment is able to convince the organization to look forward for the future. Others researcher such as Cheng and Chiu (2008) found there is no significant relation. It means that, to successful manage Islamic banking, manager of banks should align all the process with BPR project to ensure there is under control.

Al-Mashari and Zairi (1999); Ringim, Razalli, and Hasnan (2012) emphasized that there were significant relationship between management commitment and banking performance. The significant relationship explains that the higher management commitment were increased the banks performance. The significant management commitment was proved based on findings result by Cheng and Chiu (2008); Ringim, Razalli, and Hasnan, (2012). Effective in management commitment toward the management teams of bank will influence the performance and managerial practices directly will affect the organizational success (Guimaraes and Bond, 1996). In other words, the commitment from top management will ensure that all of the employees to doing better and improve the banks performance.

Process redesign also one of the important factor in order to successful manage Islamic banking. Sheehy (1997) viewed the effective process redesign as the ability of finding a new way of adding value to customers. It means that, every redesign should have a direct impact on customer value and cost (Ringim, 2012). It will help bank to improve their performance.

McAdam (2003) suggested that organizations could implement less bureaucracy to encourage innovativeness. It also supported by Hall et al. (1993), and Peppard and Fitzgerald (1997) where, they are suggested ways to achieve successful results in BPR implementation by significantly changing the organization's structure, with emphasis on cross-functional work teams. That the reason this study found the process redesign have significant impact toward performance.

The others factor such as Change Management, Customer Focus and Adequate Financial Resources have insignificant or not influence the performance. Based on previous researchers, Change management includes communication, motivation, empowerment, training, reward, and education in which all of these items do not influence the overall banks performance. According to Ringim, Razalli, and Hasnan (2012), insignificant

relationship between change management and bank performance. Cheng and Chiu (2008); Storey and Westhead (1994) also have been conducted the study to examine the relationship between change management such as training and development to enhance performance. Unfortunately, the result shows that there is no relationship between change management and organizational performance.

In term of customer focus, almost all the previous researchers found that there is are strong relationship with performance of Islamic bank. Nevertheless, this study found customer focus is insignificant influence the performance of Islamic banking. The findings from Ringim, Razalli, and Hasnan (2012), demonstrate that customer focus does not directly influence the overall performance of banks in Malaysian setting. Empirical evidence showed that high level of customer loyalty does not lead to increase profitability (Reinartz and Kumar, 2002).

The last part is Adequate Financial resource where this study found that there is insignificant influence the Islamic banking performance in Malaysia. Refer to the result, it show that, financial resource is not the biggest factors that influence the performance. The insignificant relationship between adequate financial resources and performance relationship might be as a result of the weak inter-correlation values between variables. This could cause an insignificant result in the multiple regressions (Sekaran, 2003).

1.6 Conclusion

The overall result shows that the BPR factors are able to influence overall performance of Islamic banking in Malaysia. The findings indicate that BPR although it has been implemented successfully in other industries, it is relevant and can be implemented in the context of Islamic banks. Majority of the respondents viewed that BPR can be meaningful and gives positive impacts especially in increasing the revenues and improve the customer services. However, for individual BPR factors, through the multiple regression analysis, it shows that only Strategy alignment, Management Commitment, Information Technology (IT) Investment, Process redesign and Less Bureaucratic Structure have significant impact to performance of Islamic banking in Malaysia. Based on the study empirical, it is suggested that more focuses should be given on the BPR factors in order to enhance the banking performance. Henceforth, it is hopes that this study able to provide assistance to other potential future researchers to extend and explore exhaustively of this topic area.

References:

- Ahmad, H., Francis, A., and Zairi, M. (2007). Business process reengineering: critical success factors in higher education. *Business Process Management Journal*, 13(3), pp. 451-469.
- Abdolvand, N., Albadvi, A and Ferdowsi, Z. (2008). Assessing readiness for business process reengineering., *Business Process Management Journal*, 14(4), pp. 497-511.
- Al-Mashari, M., Zairi, M., (1999), "BPR implementation process: an analysis of key success and failure factors", *Journal of Business Process Management*, Vol. 5, No. 1, pp.87-112.
- Al-Mashari, M., Irani, Z., and Zairi, M. (2001). Business process reengineering: a survey of international experience. *Business Process Management Journal*, 7(5), pp. 437-455.
- Al Nasser, S. A. S., and Joriah, M. (2013). Introduction to history of Islamic banking in Malaysia. *Humanomics*, 29(2), pp. 80-87.
- Asika, N. (1991). *Research methodology in the behavioural sciences*. Lagos: Longman Nigeria Plc, Nigeria.
- Bank Negara Malaysia (2005), Annual Report.
- Bank Negara Malaysia, List of Licensed Banking Institutions in Malaysia, Islamic Banks. Retrieved on October 27, 2015, from <http://www.bnm.gov.my/index.php?ch=liandcat=islamicandtype=IBandfund=0andcu=0>
- Bontis, N. (1998). Intellectual capital: an exploratory study that develops measures and models. *Management Decision*, 36(2), pp. 63–76.
- Boyle, R. (1995). Avoiding common pitfalls of reengineering. *Management accounting*, 77(4), pp. 24-38.
- Campbell, S., and Kleiner, B. H. (2001). New Developments in Re-Engineering Organizations. *Management Research News*, 24(3/4), pp. 5-8.
- Cavana, R. Y., Dalahaye, B., and Sekaran, U. (2001). *Applied Research: Qualitative and quantitative methods*. Australia: John Wiley and sons.
- Cheng, T. C. E., and Chiu, I. S. F. (2008). Critical Success Factors of Business Process Re-engineering in the Banking Industry. *Knowledge and Process Management*, 15(4), pp. 258-269.
- Chiplunkar, C., Deshmukh, S.G. and Chattopadhyay, R. (2003), Application of principles of event related open systems to business process reengineering. *Computer and Industrial Engineering*, Vol. 44, pp. 673-693.
- Coakes, S. J., and Steed, L. (2007). *SPSS: Analysis without Anguish Using SPSS Version 14.0 For Windows*. Australia: John Wiley and Sons Australia, Ltd.
- Bakotić, D and Krnić, A. (2016). Exploring the relationship between business process improvement and employees' behavior. *Journal of Organizational Change Management*, <https://doi.org/10.1108/JOCM-06-2016-0116>
- Davenport, T. (1993). *Process innovation: reengineering work through information technology*, Harvard Business School Press, Cambridge.

- Davenport, TH., and DeLong, DW., Beers, MC. (1998), Successful knowledge management projects. *Sloan Management Review*, winter, pp. 43-57.
- Dess, G. G., and Robinson, R. B. (1984), Measuring organizational performance in the absence of objective measures: The case of the privately held firm and conglomerate business unit. *Strategic Management Journal*, 5(3), pp. 365-374.
- Dusuki, A. W., and Abdullah, N. I. (2007), Why do Malaysian customers patronize Islamic banks? *International Journal of Bank Marketing*, 25(3), pp. 142-160.
- Fadel, K.J. and Tanmiru, M. (2005), A knowledge-centric framework for process design, 2005 ACM SIGMIS CPR Conference on Computer Personal Research, Atlanta, GA, pp. 49-58.
- Floyd, S. W., and Wooldridge, B. (1990). Path Analysis of the Relationship between competitive strategy, information technology and financial performance. *Journal of Management Information Systems*, 7(1), pp. 47-64.
- Guimaraes T., and Bond, W. (1996). Empirically assessing the impact of business process reengineering on manufacturing firms. *International Journal of Operations Production Management*, 16(5), pp.5-28.
- Habib, M. N. (2013). Understanding Critical Success and Failure Factors of Business Process Reengineering. *International Review of Management and Business Research*, 2(1), pp. 1-10.
- Hair, J. F. J., Babin, B., Money, A. H., and Samouel, P. (2003). Essential of Business Research Method. USA: John Wiley and Sons.
- Hair, J. F. J., Babin, B., Anderson, R. E., and Tatham, R. L. (2007). Multivariate Data Analysis. Upper Saddle River, NJ: Prentice Hall.
- Hair, J.F.J., Black, W. C., Babin, B. J., and Anderson, R. E. (2010). *Multivariate data analysis (7th ed.)*. Upper saddle River, New Jersey: Pearson Education International.
- Hall, G., Rosenthal, J., and Wade, J. (1993). *How to make reengineering really work*. Harvard Business Review, 7, pp. 119-131.
- Hammer, M. (1990). Re-engineering work: Don't automate; obliterate. *Harvard Business Review*, 68, pp. 104-112.
- Hammer, M., and Champy, J. (1993). *Reengineering the Corporation* (1st ed.). USA: Harper Collins Inc.
- Hanafizadeh, P. and Osouli, E. (2011). Process selection in re-engineering by measuring degree of change. *Business Process Management Journal*, 17(2), pp. 284-310.
- Haron, S., and Ahmad, N. (2000). The Islamic Banking System in Malaysia, Some Issues. *Proceedings of the Fourth Harvard University Forum on Islamic Finance: Islamic Finance: The Task Ahead Cambridge, Massachusetts*. Center for Middle Eastern Studies, Harvard University. pp.155-163.
- Huang, Y.S., Lee, C-H., Chiu, A-A., (2015), "How business process reengineering affects information technology investment and employee performance under different performance measurement", *Information Systems Frontiers*, Vol. 17, pp. 1133-1144.
- Idris, F. (2011). Total quality management (TQM) and sustainable company performances: Examining the relationship in Malaysian firms. *International Journal of Business and Society*, 12(1), pp. 31-52.

- Islamic banking to achieve 40% market share in assets. (2014, September 4). The Star Online. Retrieved on August 10, 2015, from <http://www.thestar.com.my/business/business-news/2014/09/04/islamic-banking-sector-likely-toachieve-40-pct-mart-share-in-terms-of-assetssaysbnm/?style=biz>
- Kamhawi, E. M. (2008). Determinants of Bahraini managers' acceptance of business process reengineering. *Business Process Management Journal*, 14(2), pp. 166-187.
- Khong, K. W., and Richardson, S. (2003). Business process re-engineering in Malaysian banks and finance company. *Managing service quality*, 13(1), pp. 54-71.
- Lin, F.R., Yang, M.C. and Pai, Y.H.(2002), A generic structure for business process modeling, *Business Process Management Journal*, Vol. 8, No.1, pp.19-41.
- Lockamy, A., and Smith, W. (1997). A strategic alignment approach for effective business process reengineering: linking strategy, processes and customers for competitive advantage. *International Journal of Production Economics*, 50, pp. 141-153.
- Masruki, R., Ibrahim, N., Osman E., and Wahab, H. A. (2011). Financial Performance of Malaysian Founder Islamic Banks versus Conventional Banks. *Journal of Business and Policy Research* 6(2), pp. 67-79.
- McAdam, R. (2003). Radical change: A conceptual model for research agendas. *Leadership and Organization Development Journal*, 24(4), pp. 226-235.
- Mohammed, M. O., Razak D. A., and Taib, F. M. (2008). The Performance Measures of Islamic Banking Based on the Maqasid Framework. *IIUM International Accounting Conference (INTAC IV)*, pp.1-17.
- Mohammad, M. O., and Shahwan, S. (2013). The Objective of Islamic Economic and Islamic Banking in Light of Maqasid Al-Shariah: A Critical Review. *Middle-East Journal of Scientific Research* 13 (Research in Contemporary Islamic Finance and Wealth Management): 75-84. DOI: 10.5829/idosi.mejsr.2013.13.1885.
- Muhamad Azhari Wahid , (2017)," Comparing the competition of Malaysia Islamic and conventional banks: evidence surrounding the global financial crisis ", *Journal of Islamic Accounting and Business Research*, Vol. 8 Issue 1.
- Moran, J. W., and Brightman, B. K. (2000). Leading organizational change. *Journal of Workplace Learning*, 12(2), pp. 66-74.
- Morrison, E. D., Ghose, A. K., Dam, H. K., Hinge, K. G., and Hoesch-Klohe, J, (2011). Strategic alignment of business processes. *7th International Workshop on Engineering Service-Oriented Applications, Paphos, Cyprus*, pp. 1-14.
- Munawar, I., and Molyneux, P. (2006). Thirty Years of Islamic Banking: History, Performance and Prospects. *J.KAU: Islamic Economic*, 19(1), pp. 37-39.
- Ntaliani, M., Costopoulou, C., Karetos, S., Tambouris, E., Tarabanis, K. (2010), Agricultural e-government services: An implementation framework and case study, *Computers and Electronics in Agriculture*, Vol. 70, No. 2, pp. 337–347.
- Neely, A, Gregory, M and Platts, K 1995, 'Performance measurement system design: a literature review and research agenda', *International Journal of Operations and Production Management*, 15, pp.80–116.

- Nura, A. A., and Osman, N. H. (2012). A Toolkit on effective decision making measurement in organizations. *International Journal of Humanities and Social Science*, 2(4), pp. 296-303.
- Noel, E. O. M. and Farnaz, A. (2010). Towards An Approach for Aligning Strategy with Business Processes a Cross Industry Evaluation of Critical Factors in Jonkoping's SMEs. (Master Thesis (Unpublished)).
- O'Neill, P., and Sohal, A. S. (1999). Business Process reengineering a review of recent literature. *Technovation*, 19(9), pp. 571-581.
- Pallant, J. (2001). *SPSS Survival Manual: A Step by step guide to data analysis using SPSS for windows (3rd ed.)*. England: McGraw Hill Open University Press.
- Peppard, J., and Fitzgerald. (1997). The transfer of culturally grounded management techniques the case of business process reengineering in Germany. *European Management Journal*, 15(4), pp. 446-460.
- Randle, W. M. (1995). Delivering the future: Redefining the role of banks in new competitive environment. *Bank Management*, 71(1), pp. 45-58.
- Ranganathan, C. and Dhaliwal, J. S. (2001). A survey of business process reengineering practices in Singapore. *Information and Management*, 39(2), pp.125-134.
- Reinartz, W.J., and Kumar, V. (2002). The mismanagement of customer loyalty. *Harvard Business Review*, 80, 7, pp. 86-94
- Ringim, K. J. (2012). Effect of the business process reengineering factors and information technology capability on organizational performance. *PhD. dissertation, School of Technology Management, Universiti Utara Malaysia*.
- Ringim, K. J., Razalli, M. R., and Hasnan, N. (2011). Effect of Business Process Reengineering Factors on Organizational Performance of Nigerian banks: Information Technology Capability as the Moderating Factor. *International Journal of Business and Social Science* 2(13), pp.198-201.
- Ringim, K. J., Razalli M. R., and Hasnan, N. (2012). The Moderating Effect of IT Capability on the Relationship between Business Process Reengineering Factors and Organizational Performance of Bank Journal of Internet Banking and Commerce. *Journal of Internet Banking and Commerce*, 17(2), pp.1-21.
- Ringim, K. J., Osman, N. H., Hasnan N., and Razalli. M. R. (2013). Exploring the Implementation of Business Process Reengineering in Banks Asian. *Social Science*, 9(11), pp. 243-253.
- Razalli, M. R., Ringim, K. J., Hasnan, N., and Hassan M. G. (2015). A Framework of Best Practices in Managing Business Reengineering for Islamic. *Journal of Advanced Management Science*, 3(1), 22-25. doi: 10.12720/joams.3.1.
- Ross, J., Beath, C., and Goodhue, D. (1996). Develop long-term competitiveness through information technology assets. *Sloan Management Review*, 38(1), pp. 31-42.
- Saiful Azhar R., and Mohd Afandi, A. B. (2003). Performance of Islamic and mainstream banks in Malaysia. *International Journal of Social Economics*, 30(12), pp.1249- 1265.
- Salimifard, K., Abbaszadeh, M. A., and Ghorbanpur A. (2010). Interpretive Structural Modeling of Critical Success Factors in Banking Process Re-engineering. *International Review of Business Research Papers*, 6(2), pp. 95-103.

- Salkind, N.J. (2003). Exploring Research. ISBN-10: 0130983527 USA
- Sekaran, U. (2003). *Research methods for business* (4th ed.). New York: John Wiley and Sons, Inc.
- Sekaran, U., and Bougie. R. (2013). *Research methods for business* (6th ed.). New York: John Wiley and Sons, Inc.
- Sheehy, B. (1997). *Quality comes back*. Executive Excellence, 14, pp. 7-8.
- Shao, Z., Feng, Y., Hu, J. H., and Liu, H. J. (2008). *A conceptual Model for studying the influence of charismatic Leadership on ERP implementation life style*. Paper presented at the 42nd Hawaii International Conference on System Science, Hawaii USA.
- Setegn, D., Ensermu, M., and Moorthy, P. K. (2013). Assessing the effect of business process reengineering on organizational performance: a case study of bureau of finance and economic development (BoFED), Oromia regional state. *Ethiopia International Refereed Research Journal*, IV (1), pp.115-123.
- Sidikat, A., and Ayanda, M. A. (2008). Impact Assessment of Business Process Reengineering on Organizational Performance. *European Journal of Social Sciences*, 7(1), pp.115-125.
- Sufian, F. (2007). The Efficiency of Islamic Banking Industry: A Non-Parametric Analysis with Non-Discretionary Input Variable. *Islamic Economic Studies*, 14(1 and 2), pp. 53-78.
- Sung, T. K., and Gibson, D. V. (1998). Critical success factors for business process reengineering and corporate performance: The case of Korean corporations. *Technological Forecasting and Social Change*, 58(3), pp. 297-311.
- Tabachnick, B. G., and Fidell, L. S. (2007). *Using Multivariate Statistics*, (5th ed.) Boston: Pearson Education, Inc.
- Tang, K. H., and Zairi, M. (1998). Benchmarking quality implementation in a service context: a comparative analysis of financial services and institutions of higher education Part 1: financial service sector. *Total Quality Management*, 9(6), pp. 407-420.
- Wasiuzzaman, S., and Gunasegavan, U. N. (2013). Comparative study of the performance of Islamic and conventional banks the case of Malaysia. *Humanomics*, 29(1), pp. 43- 60.
- Wei, K. K., and Nair, M. (2006). The effect of customer service management on business performance in Malaysian banking industry: an empirical analysis. *Asia Pacific Journal of Marketing and Logistics*, 18(2), pp. 111-128.