A Study on Keshavarzi Bank Readiness for Process Re-Engineering (Case Study: Kurdistan Province)

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Abstract: This paper seeks to study Keshavarzi Bank readiness for re-engineering in Kurdistan Province. It uses a descriptive survey research method and its statistical universe comprises all employees and managers of Keshavarzi Bank branches in this province. The number of employees is 354 and the number of statistical sample is estimated 185 based on Cochran formula and sample is selected by stratified random sampling method. The descriptive results indicate that 80% of the respondents are male and 84.2% are married. 58.7% of the respondents have Bachelor of Science degree, and 55.9% have an intermediate familiarity with re-engineering. Total average of bank readiness for re-engineering is 3.478 of 5, the maximum and minimum averages belong respectively to IT utilization and lack of resistance against change. The inferential data indicates that Keshavarzi Bank readiness for re-engineering in its six dimensions including equity-orientation in leadership and management, collaboration, top management commitment, change in management system, IT utilization, and lack of resistance against changes is not favorable. Data results reveal that according to the single sample t-test, there is a significant difference between the current situation and favorable situation in Keshavarzi Bank readiness for re-engineering. With regard to the high failure rate of projects, the optimal point has been considered 4 of 5. Also according to the results of Pearson test, there is a direct and positive correlation among most dimensions in terms of the Bank overall readiness for re-engineering.
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Key words : Re-engineering, process management, systems and methods

1. Introduction

Today organizations encounter such matters as rapid and unpredictable changes, particular orders, different tastes of customers and global competition. Therefore, organizations are bound to take unprecedented and revolutionary strides to overcome challenges of the external environment and make fundamental changes to remove their traditional image. Organizations must either accede to deep and fundamental changes or accept failure. Nowadays all over the world, these fundamental changes are called "business process re-engineering" (BPR) (Azar, A., 2011). Re-engineering means a new beginning, another opportunity for reconstructing processes and methods. Re-engineering refers to leaving aside a large part of knowledge and findings of industrial management in the recent one hundred years and breaking the rules and assumptions inside the organization. Re-engineering is a new reference to business processes to achieve a major improvement in the organization performance including cost, quality, services, and speed (Guo, Hong-xia, 2012). The success of business re-engineering projects is measured based on actualization of the project goals. Companies that implement business re-engineering projects seek mainly remarkable improvements in the results of business processes. In a research carried out recently regarding business re-engineering projects in 30 Mexican firms that have all been among 500 top companies, remarkable results have been obtained. According to these results, business process re-engineering has been mainly effective on reduction of managerial costs (82 percent), production costs (57 percent), and distribution costs (39 percent) (Ali Babaei, A., 2011). At present, evaluation of an organization readiness for re-engineering projects has been converted into the first step of re-engineering implementation in order to analyze the current situation before bearing high costs and failure of high risk re-engineering projects, to determine whether there is any weakness or strength in the organization departments and remove weaknesses before undertaking any measure (Gabriela GHEORGHE, 2012).

This paper is mainly aimed at identifying the difference between the current situation and favorable situation of Keshavarzi Bank for re-engineering. Also it seeks to identify the difference between the current and favorable situations of equity-orientation in leadership and management, collaboration, commitment, management systems, IT utilization, and resistance against changes for re-engineering in Keshavarzi Bank.

2. Literature Review

2.1 Theoretical Bases

Network marketing: network marketing or systemic multi level networks in which a main distributor hires other persons as distributors. The main distributor sells the company main products to

other persons that it hires and they receive commission after total sale.

Re-engineering: it refers to leaving old methods and applying new methods required for producing goods and services and transmitting value to customers.

Equity-orientation in leadership: it refers to the integrated vision of managers and leaders of the organization to the employees in terms of trust in them, sharing information, and open communications with them.

Collaboration in the workplace: it refers to creation of work groups that have friendly interactions and high cooperation.

Commitment of top management: belief in re-engineering and accepting its necessity is called commitment of top management for re-engineering.

Change in management system: it refers to ability of making changes required for re-engineering.

IT utilization: making optimal use of information technology before, during, and after re-engineering.

Resistance against change: the employees' reaction to and disagreement with changes in the organizations.

2.2 Research Background

(Guo, Hong-xia, et. al, 2012), through the process analysis of cold chain logistics of agricultural products, they find that cold chain logistics of agricultural products contradict the development model of low-carbon economy to some extent. They apply the development idea of low-carbon economy, introduce the third-party logistics companies, establish distribution center of cold chain logistics of agricultural products, and strengthen information sharing, to reengineer the process of cold chain logistics of agricultural products in China. The results show that applying low-carbon economy to process reengineering of cold chain logistics of agricultural products, has advantages of increasing added value of products, promoting scale merit and abating lag, plays a role in promoting emission reduction, high efficiency and environmental protection in the process of cold chain logistics of agricultural products in China. (Gabriela GHEORGHE, 2012), this case study shows that the company decided to implement Business Process Reengineering (BPR) not only because external environment had changed, but also due to its obsolete business processes and organizational structure. The article will highlight the importance of the organizations' focusing on sub-goals, in order to finally reach the desired result in the organization's main goals. (Pellicelli Michela, et. al, 2012), this article will analyze the logic behind the adoption of Business Process Reengineering and outsourcing. The first part analyzes Business Process Reengineering as a technique for analysis and for defining the business processes implemented by organizations in order to make the achievement of corporate objectives more efficient and effective. This approach has some limits when the reengineering project aims solely at cost reduction. (Olawumi Dele Awolusi, 2012), the empirical study was conducted via the administration of 2,280 self-administered questionnaires to a randomly selected junior and senior staff of six, out of the 22 reengineered banks, post-2004 consolidation exercise of the Central Bank of Nigeria. Using the framework from Khong and Richardson (2003), factors manifesting customer services were regressed on the CSFs, manifesting successful BPR. Findings based on the survey revealed that successful BPR can positively affect CS in Nigerian banks. (Melnik Leonid, G. et. al, 2012), in this article the considered essence and nature of business processes during realization of reengineering on industrial enterprises. Investigational description and feature of business processes, the conceptual chart of management a business process is formed on a production.

3. Research Methodology

This paper is an applied research in terms of objective and a descriptive research in terms of data collection because it is aimed at describing the studied conditions or phenomena. It is a survey research since the questionnaires (data collection tool) are distributed among the statistical universe and data is gathered. Survey research method is a kind of non-experimental research methods. This method seeks to gather data pertaining to a variable, a method, a feature, and in general a universe. This paper population comprises all employees (354 persons) of Keshavarzi Bank in Kurdistan Province.

3.1 Sampling Method and Sample Size

This paper uses stratified random sampling method and the sample size is determined based on Cochran relation.

$$n = \frac{354 \times 1.96^2 (0.5)(0.5)}{(0.1)^2 (354-1) + (1.96)^2 (0.5)(0.5)} \approx 185$$

Through stratified random sampling method, Sanandaj, Ghorveh, Marivan, Dehgolan, and Kamyaran cities and managers of the bank branches are selected and as per table 1, the number of sample has been distributed based on class and gender.

Table 1- Sample size and distribution

Row No.	City	Sample Number
1	Branch manager	31
2	Sanandaj	63
3	Ghorveh	37
4	Marivan	19
5	Dehgolan	18
6	Kamyaran	17
Total		**185**

3.2 Research Reliability and Validity

Since the questionnaire used in this paper is standard and has been localized by Albadvi, its validity has been proved. To estimate reliability, Cronbach's alpha test and a questionnaire designed by Likert scale have been used. In so doing, first the questionnaire was distributed among 20 persons of the statistical universe as a pilot and Cronbach's alpha was estimated 0.869. Since it is more than 0.7, reliability of this questionnaire was approved.

3.3 Research Hypotheses

Main Hypothesis

✓ There is a significant difference between the current and favorable situations in Keshavarzi Bank for re-engineering.

Subordinate Hypotheses

✓ There is a significant difference between the current and favorable situations of equity-orientation in leadership and management in Keshavarzi Bank for re-engineering.

✓ There is a significant difference between the current and favorable situations of collaboration in Keshavarzi Bank for re-engineering.

✓ There is a significant difference between the current and favorable situations of top management commitment in Keshavarzi Bank for re-engineering.

✓ There is a significant difference between the current and favorable situations of management system change in Keshavarzi Bank for re-engineering.

✓ There is a significant difference between the current and favorable situations of IT utilization in Keshavarzi Bank for re-engineering.

✓ There is a significant difference between the current and favorable situations in lack of resistance against changes in Keshavarzi Bank for re-engineering.

4. Research Findings

4.1 Descriptive Statistics of Sample Demographic Data

Table 2 presents sample descriptive statistics in terms of marital status and education.

Table 2- Sample descriptive statistics

Statistic / Criterion	Diploma	Associate Degree	Bachelor of Science	Master of Science and higher	Single	Married
Frequency	32	21	115	28	31	165
Percentage	16.3	10.7	58.7	14.3	15.8	84.2

Table 3 presents the respondents status in terms of work experience.

Table 3- Frequency and frequency percentage of sample members based on work experience

Group (year)	Frequency	Percentage
1-5	32	16.3
6-10	54	27.6
11-15	51	26
16-20	34	17.4
21-25	15	7.7
26-30	10	5

4.2 Data Distribution State

To test normality of data distribution, Kolmogorov-Smirnov and Shapiro-Wilk tests have been used. Table 4 presents the tests results. With regard to the tests results, one can conclude that all data has normal distribution at a 99% confidence level.

Table 4- The results of Kolmogorov-Smirnov and Shapiro-Wilk tests

	Kolmogorov-Smirnov			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
A1	.320	197	.000	.840	197	.000
A2	.303	197	.000	.855	197	.000
A3	.258	197	.000	.869	197	.000
A4	.269	197	.000	.871	197	.000
B1	.293	197	.000	.818	197	.000
B2	.336	197	.000	.787	197	.000
B3	.372	197	.000	.252	197	.000
B4	.276	197	.000	.855	197	.000
B5	.300	197	.000	.856	197	.000
C1	.244	197	.000	.892	197	.000
C2	.246	197	.000	.891	197	.000
C3	.254	197	.000	.886	197	.000
D1	.291	197	.000	.860	197	.000
D2	.257	197	.000	.886	197	.000
D3	.329	197	.000	.829	197	.000
D4	.317	197	.000	.742	197	.000
E1	.296	197	.000	.830	197	.000
E2	.354	197	.000	.763	197	.000
E3	.350	197	.000	.766	197	.000
F1	.145	197	.000	.961	197	.000
F2	.308	197	.000	.834	197	.000
F3	.312	197	.000	.842	197	.000
F4	.251	197	.000	.887	197	.000

4.3 Variables Correlation Test

To examine correlation among different dimensions of readiness, Pearson test has been applied. Table 5 presents the results.

Table 5- Pearson correlation test for independent and independent variables

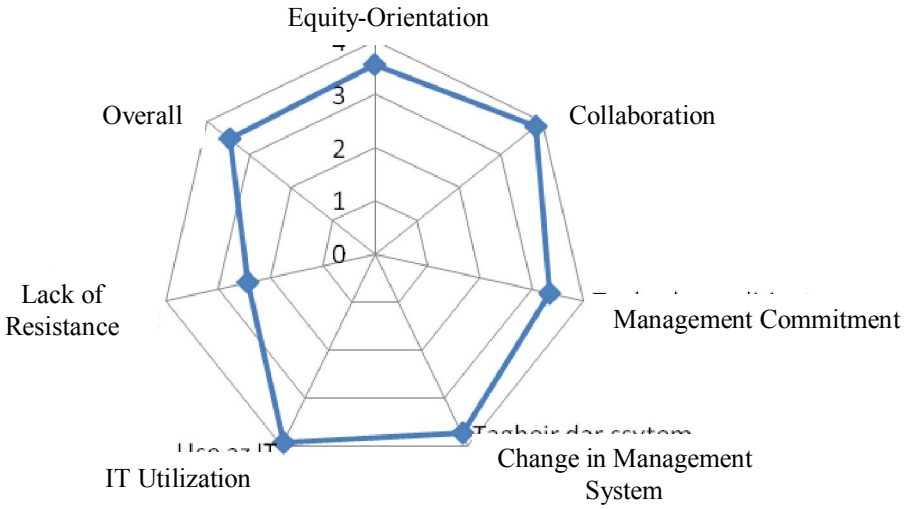
Readiness Index		A	B	C	D	E	F
Equity-orientation in leadership and management	Correlation Coefficient	1	.553**	.594**	.575**	.417**	-.003
	Sig.		.000	.000	.000	.000	.963
Collaboration	Correlation Coefficient	.553**	1	.443**	.425**	.310**	.109
	Sig.	.000		.000	.000	.000	.124
Commitment of top management	Correlation Coefficient	.594**	.443**	1	.651**	.471**	-.014
	Sig.	.000	.000		.000	.000	.846
Management system	Correlation Coefficient	.575**	.425**	.651**	1	.599**	-.151*
	Sig.	.000	.000	.000		.000	.034
IT utilization	Correlation Coefficient	.417**	.310**	.471**	.599**	1	-.180*
	Sig.	.000	.000	.000	.000		.011
Employees' resistance against change	Correlation Coefficient	-.003	.109	-.014	-.151*	-.180*	1
	Sig.	.963	.124	.846	.034	.011	
Overall readiness for BPR	Correlation Coefficient	.807**	.746**	.799**	.781**	.649**	.162*
	Sig.	.000	.000	.000	.000	.000	.022

The results reveal that all variables except for "employees' resistance against change" have direct and positive correlation with each other. The variable "employees' resistance against change" does not have correlation with equity-orientation in leadership and management, collaboration, and top management commitment. Also it has a negative significant correlation with system management and IT utilization. Also it was revealed that all variables (except for employees' resistance against change) have direct positive correlation with overall readiness for BPR.

4.4 Research Hypotheses Test

To examine the research hypotheses, single sample t test is used in which the mean is compared with a standard value. In this paper, the performance standard or balance point has been considered 4. This mean has been selected stringently for the research validity and reliability so as to reduce its risk. Figure 1 depicts the average dimensions of readiness for BPR.

Figure 1- The average dimensions of readiness for BPR



As shown in the figure, the maximum average belongs to IT utilization (3.93) and the minimum average belongs to employees' resistance against change (2.43). That is, employees will show resistance against changes and this is among the main factors of re-engineering projects failure. Table 6 and 7 show the tests results.

Main Hypothesis

✓ There is a significant difference between the current and favorable situations in Keshavarzi Bank for re-engineering.

Table 6- Main hypothesis test

	Number	Mean	Standard Deviation	Df	t	P
Overall readiness for BPR	200	3.47	0.59	199	-12.43	0.001

Subordinate Hypotheses

- ✓ There is a significant difference between the current and favorable situations of equity-orientation in leadership and management in Keshavarzi Bank for re-engineering.
- ✓ There is a significant difference between the current and favorable situations of collaboration in Keshavarzi Bank for re-engineering.
- ✓ There is a significant difference between the current and favorable situations of top management commitment in Keshavarzi Bank for re-engineering.
- ✓ There is a significant difference between the current and favorable situations of management system change in Keshavarzi Bank for re-engineering.
- ✓ There is a significant difference between the current and favorable situations of IT utilization in Keshavarzi Bank for re-engineering.
- ✓ There is a significant difference between the current and favorable situations in lack of resistance against changes in Keshavarzi Bank for re-engineering.

Table 7- Subordinate hypotheses test

Variable	Number	Mean	Standard Deviation	Df	t	P
Equity-orientation in leadership	200	3.56	0.94	199	-6.59	0.001
Collaboration	200	3.84	1.04	199	-2.123	0.035
Top management commitment	200	3.35	0.912	199	-10.11	0.001
Management systems	200	3.75	0.831	199	-4.22	0.001
IT utilization	200	3.93	0.794	199	-1.22	0.225
Employees' resistance against change	200	3.93	0.794	199	-29.81	0.001

With respect to the test results, there is a significance difference between the current and favorable situations of equity-orientation in leadership and management, top management commitment, management systems, employees' resistance against change for re-engineering in Keshavarzi Bank at a 99% confidence level.

Also, there is no significant difference between the current and favorable situations in collaboration and IT utilization for re-engineering at a 99% confidence level.

5. Conclusions

The present paper sought to investigate Keshavarzi Bank readiness for re-engineering. According to the results of t tests, only the opinions of women and men have significant difference in lack of resistance against change, and opinions of married and single respondents do not have any significant difference in any dimension. Furthermore, for analyzing opinions of more than 2 groups, variance analysis test has been used and opinions of the respondents in different groups of work experience do not have any significant difference in any dimension. But the opinions of respondents in different groups of education have significant difference in change in management system, IT utilization, and lack of resistance against change. That is, the education affects re-engineering project implementation. While according to the results of variance analysis test, there is no significant difference in the opinions of the groups with different familiarity with re-engineering. Among six variables of readiness of re-engineering, five variables have had positive correlation, and lack of resistance has only negative correlation with change in management system and IT utilization. It can be inferred that resistance against changes will be among factors that lead to failure of re-engineering project in the bank. Also all dimensions have direct positive correlation with overall readiness. This is consistent with the findings of Crowe (2002), Dennis (2003), and Guimaraes (1999) research.

The main result of this paper indicates that there is a significant difference between the current and favorable situations in Keshavarzi Bank for re-engineering. Also with respect to the test results, there is a significant difference between the current and favorable situations of equity-orientation in leadership and management, top management commitment, management systems, employees' resistance against change for re-engineering in Keshavarzi Bank at a 99% confidence level; and there is no significant difference between the current and favorable situations of collaboration and IT utilization for re-engineering.

- **Suggestions**

✓ Before re-engineering project implementation, the rate of readiness must be investigated.
✓ Creating an open working environment and trust in the employees in the communications between middle and senior managers.
✓ Creating friendly interactions in the workplace and cooperation among employees.
✓ Increasing knowledge of top managers about re-engineering.
✓ Training employees to create changes in the bank management system.
✓ Using bank electronic systems and modern technologies of electronic banking.
✓ Planning for informing employees about advantages of re-engineering in the organization.

- **Suggestions for Future Research**

✓ Studying factors causing resistance and conflict among employees facing with changes.
✓ Studying the methods of increasing collaboration to reduce conflicts in the re-engineering projects.
✓ Studying the effects of IT on success of re-engineering projects in the banks and financial institutions.
✓ Studying the factors of failure of re-engineering projects in the Iranian banks.
✓ Studying how awareness and expectations of re-engineering are increased in the bank top managers.
✓ Studying the factors of employees' negative attitude towards the organizational changes.

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