International Journal of Finance and Managerial Accounting, Vol.11, No.41, Spring 2026 IJFMA

Designing and explaining the model of financial re-engineering in the Cement company of Ilam province

Fatemeh Ahmadi
Assistant Professor, Department of Accounting, Ilam Branch, Islamic Azad university of Ilam, Iran
(corresponding Author)
fatemehahmady60@gmail.com

Reza mashhadizadeh
Assistant Professor, Department of Accounting, Karaj Branch, Islamic Azad university of Karaj, Iran.

Submit: 21/10/2023 Accept: 20/04/2024

ABSTRACT

The aim of the current research is to design and explain the model of the financial re-engineering in the Cement company of Ilam province. The current research method is mixed in nature and qualitative-quantitative combination. The statistical population of the research in the qualitative part includes experts and specialists in the field of re-engineering and managers with experience in the Cement company of Ilam province, and in the quantitative part, it includes all the employees of the Cement company of Ilam province. To analyze the data in the qualitative part and to identify the factors, the foundational data theory method has been used. In the quantitative part, for the impact of the identified factors on financial re-engineering, the information was first collected using a questionnaire, and then the influence of the factors was tested using the confirmatory factor analysis method and using Lisrel software. The results showed that the four main factors influencing the financial re-engineering in the Cement company of Ilam province are; Support and processes, team participation, financial conditions and regulatory improvement.

Keywords: financial re-engineering, financial conditions, team participation, regulation improvement

1. Introduction

One of the important processes of any organisation is its financial processes. An organisation can be defined as a system comprising three units - the environment, the Metasystem and the Base system.

The Metasystem exists to design as well as to control. It is that part of an organisation which plans, makes policies for the base system to operationalise these plans, in order to realise the vision of the organisation in consonance with the needs of the environment. Within this framework finance deals with three transforms - firstly, physical transforms like raw material to finished products, secondly, information transforms to map physical events into descriptive and predictive models and thirdly, value transforms which map the physical and informational transforms into preference schedules. Finance plays a strategic role in formulating, systematising and managing these three transforms, in the form of acquisition of funds, its application and distribution leading to value maximisation. Thus any process, which involves the flow of funds, can be termed as a financial process.

The principles of BPR as applied to reengineering financial processes are called Financial Process Reengineering (FPR). FPR is currently widely applied to a large number of financial processes. These processes include:

1) Accounts Receivables
2) Accounts Payables
3) Travel and Entertainment Expense Reporting
4) Controls and Compliance
5) Financial Information management'
6) Purchasing
7) Billing
8) Cheques Clearances
9) Loan Disbursals and
10) Customer Service

Once financial processes are reengineered they take the following characteristics:

1) Several jobs are combined into one
2) Workers connected with the process make decisions
3) The steps in the process are performed in a natural order
4) Process have multiple versions
5) Work is performed where it makes most sense
6) Checks and controls are reduced
7) Reconciliation is minimized
8) A case manager provides a single point contact
9) Hybrid centralized/decentralized operations are present

Unlike other processes, financial processes deal with both internal and external customers. For example, while accounts payable process deals with external customers, the capital budgeting process deals with internal customers. The fundamental aim of FPR is to provide value to customers, both internal and external(Datla and Sivakumar, 1997).

Therefore, the present research aims to design and explain the model of the financial re-engineering in the Cement company of Ilam province.

Theoretical foundations and a review of research literature

Financial reengineering is one of such tools which many organizations have used to implement change. It involves how business financial processes are redesigned and reengineered to spur the organization"s growth.According to Orogbu et al. (2015), business process reengineering initiatives have had low rates of success and such failures have raised a range of challenging questions about the effectiveness of reengineering especially financial reengineering to address the problem of business survival among the SMEs. The concept of reengineering calls for many debates, especially in its relation to a concept of restructuring. The traditional definition of reengineering claims that an enterprise reengineering represents a "vital re-thinking and radical reconstruction (redesign) of enterprise processes so that dramatically improvement can be obtained in terms of critical measures of efficiency such as: costs, quality, service and speed" . Reengineering focuses on remodeling enterprise processes that are thus straightened – it strives for eliminating all useless duplicate activities, uniting the activities and innovating the ineffective ones. The changes of the basic corporate modules are reflected in internal processes of the firm. Nadeem and Ahmad (2016); Thakkar (2017) described financial reengineering as always trying to improve performance, services, and quality. They stated that, organizations are taking initiatives to provide better and different services to their customers in different ways to meet the expectations of the customers. Organizations need satisfied and loyal customers to survive and operate in the long run. Mergers and acquisitions are also playing their role as an important tool to enhance the resources, skills, abilities, operations, market access and performance and to meet the global requirements. Financial Reengineering is also important and organizations are using this approach in the present days to improve their performances, to become more efficient and effective. Financial Reengineering approach is better because it focus on those goals, objectives and targets which are not only understandable but also easy to attain to reduce the cost, improve the customer satisfaction, loyalty and performance of the organizations(Dada, et al, 2023).

Financial reengineering can be successfully implemented in any company no matter the size, as

long as the company owner has the determination for making changes and the vision for creating a new culture focused on people and innovation. Financial reengineering involves the development of innovative financial processes. These new processes reduce the cost of developments, time to product appearance, and generally the result of legislative or regulatory changes (for example, the low interest rate of loan from the Bank of Industry (BOI)), or of technological developments (electronic security trading). Equally important for measuring an organization‟s performance is process-oriented management or business process management (BPM), which Grover and Malhotra (1997) described as managing entire chains of events, activities and decisions that ultimately add value to the organization and its customers. These chains of events, activities and decisions are called processes (Ugochukwu and Patrick, 2015).

Thakkar (2017) stated that financial engineering uses tools and knowledge from the fields of computer science, statistics, economics and applied mathematics to address current financial issues as well as to devise new and innovative financial products according to finance Revathy and Santhi (2012). Financial engineering involves the design, the development, and the implementation of innovative financial instruments and processes, and the formulation of creative solutions to problems in the term "innovative" is used here to describe a solution that is nontrivial. Innovative financial solutions may involve a new consumer type financial instrument, such as IRA and Keogh accounts; a new security, such as money market preferred stock; a new process, such as the shelf registration process; or a creative solution to a corporate finance problem, such as the design of customized security arrangements for a project financing or a leveraged buyout (Thakkar, 2017)

Importance of Financial Re-Engineering

As a business grows in stages, there is always a need to restructure it so as to maintain growth.It is said, in the absence of growth, death is imminent. In the infancy of a business, the owners are usually predisposed to crafting their products to fit the market but as clients come in and the business grows, business dynamics change. Managerial skills start counting more as enterprises grow towards their youthful stage and the value of money changes in meaning and form. Hence there is a need for a comprehensive 360 degrees inside–out vision-guided strategy on the finance structure of the company.

The design, development, and implementation of innovative financial instruments and processes can be achieved by an agile professionally crafted financial reengineering undertaking. This is through the formulation of creative solutions to problems facing the organization. Financial reengineering is a formidable strategic tool that businesses should use to outshine competition and is an essential means for them to maintain their effectiveness and improve their performance in the market.

Why Financial Re-Engineering

A firm needs an optimal capital structure to enable it maximize its market value while minimizing its cost of capital. It is known that too much debt increases the financial risk to shareholders hence affecting the return on equity that they require. Financial re-engineering enables a firm to maintain a well-organized capital structure so as to keep it afloat in the changing economic times. Higher performance and continuing efforts in innovations boosts organizational learning and improves the quality and speed of the operations. Therefore innovation advancements and reengineering financial processes can be incorporated easily and any quality or design deficiencies can be overcome faster resulting in better performance. Product and services restructuring offers a potential protection to a firm from market threats and competitors. All financial innovation strategies are implemented using a few basic techniques such as increasing or reducing risk, pooling risk, swapping income streams, splitting income streams and connecting long-term obligations into short-term ones in financial institutions.

Jafar Mahmoudi and colleagues presented a new framework for evaluating the maturity of organizational architecture by using information technology processes. The results of their research showed that information technology processes are a suitable basis for evaluating the maturity of organizational architecture; Therefore, the validity of the framework presented by them was confirmed.

While criticizing existing process reengineering theories, Sepehri and Kermanshah explored the roots of success and failure of reengineering projects and presented alternative and complementary approaches for better execution of such projects.

Madhoshi and Rafiei examined the different pyramids of change in process reengineering and analyzed the role and place of information technology, which is one of the most important tools in the success of process reengineering.

Adegbie and Olaore (2020) discovered that financial re-engineering impacts positively on the liquidity and profitability of the SMEs including the tangible assets growth and went ahead to recommend that SMEs should adopt measures that will improve on the efficiency of operating practices and reduce their operational cost. This was supported by the work of Esokomi and Otuya (2020) in the study of the impact of financial re-engineering on the financial

performance of Kenyan cooperative societies as a service organization.

Gilaninia explored the concept, principles and how to apply the philosophy of pure thinking, one of the most useful conceptual tools in the design of the organization's information processes, in improving the reengineering process of organizational processes.

Saedi and Yazdani presented a process model for implementing knowledge management based on organizational learning in Iran Khodro Company. They outlined the path of organizational maturity in utilizing knowledge to achieve competitive advantage Cravo et al. (2002) divided reengineering success factors into five main groups:

1) Same-minded leadership: includes vision/common information, open communication, self-confidence and trust in subordinates and effective use of subordinates' ideas.
2) Cooperation in the work environment: includes: friendly interactions, self-confidence and confidence, teamwork performance, company environment and recognition among employees.
3) Commitment of senior management: including: sufficient knowledge about process reengineering projects, realistic expectations of results, frequent communication with the reengineering team and users.
4) Management support: including: new reward system, performance measurement, employee empowerment and timely training.
5) IT application: including: use of up-to-date communication technology and IT adoption.

In this research, Cravo and his colleagues introduced the main factor of reengineering failure only as employee resistance, which has four subfactors: middle management's fear of losing power, employees' fear of losing their jobs, doubts about The result of the project and the feeling of discomfort due to the new work environment.

Wells stated that organizational enablers effective on the successful implementation of BPR are: organizational culture, resource management, resistance management, change management (Wells, 2000: 170).

Ziri and al-Mashari (2001): According to them, the process of implementing process reengineering is complex. They have reviewed the literature related to soft and hard cases that have caused the failure and success of re-engineering efforts, which are presented as extracts from various articles and experimental researches on the application of re-engineering. Then, these factors have been classified into subgroups that indicate different dimensions related to the use of re-engineering.

research method

The current research method is mixed in nature and qualitative-quantitative combination. In the qualitative part, the grounded theory technique was used, and for the quantitative part, the confirmatory factor analysis method was used. According to the nature of the present research, we have two statistical populations in this research. In the qualitative part of the research, the statistical population of 15 experts and specialists familiar with the topic of financial reengineering was selected, the sampling method in this part was snowball sampling. The statistical population of the research in the quantitative part is 60 experts and managers of the General Directorate of Cement of Ilam province. In the current research, it has been used for content validity from the point of view of expert professors and supervisors, consultants and others. Cronbach's alpha coefficient is also used to measure the reliability of the questions related to each variable and the reliability of the entire questionnaire. The whole questionnaire has reliability or Cronbach's alpha.

Research findings

Qualitative part of the research

Descriptive statistics of the qualitative part

In order to identify the factors affecting financial re-engineering in the Cement company of Ilam province, in the qualitative part of the research, the interview method and then ground theory were used, so that first 15 experts and specialists in the field of engineering and management and managers with experience in the Cement company were selected. and semi-structured interviews were conducted with them. At the beginning of the interview, the interviewees were informed that the purpose of this research is to investigate the factors affecting the financial re-engineering in the Cement company of Ilam province. Then the importance and necessity of this research and then a general definition of financial reengineering was presented. The interviewees were asked to share their experiences or observations in this regard. The interviews varied between 15 and 40 minutes. At the end of the interview, the interviewee was asked if he had any opinion about what happened in the interview. Table No. 1 shows the list of interviewees.

Table 1: Characteristics of the interviewees

organization level	education	Age	gender	Row	organization level	education	Age	gender	Row
Employee	Master of Science	35	woman	9	managerial	P.H.D	45	woman	1
IT	Master of Science	41	man	10	managerial	P.H.D	51	man	2
Employee	Master of Science	39	woman	11	managerial	P.H.D	44	woman	3
Engineering	Master of Science	47	man	12	Engineering	Master of Science	48	woman	4
IT	Bachelor's degree	33	woman	13	managerial	P.H.D	55	man	5
Employee	Master of Science	48	man	14	IT	Master of Science	42	woman	6
Engineering	P.H.D	53	man	15	managerial	P.H.D	45	man	7
					Engineering	P.H.D	49	man	8

Analysis of qualitative data from interviews

According to what was mentioned before, semi-structured interviews were conducted first and then carefully examined and after entering them in the tables, their meaningful sentences in different lines, various concepts used in this research were extracted. . These concepts are coded according to the apparent content in conceptual categories that actually represent an independent concept. These categories have been examined in different sections.

Table 2: Statements from the interview (open coding)

Extracted code (open coding)	code
Sufficient cash in the company	0
Optimal financial conditions	1
Using the new budget	2
Necessary communication with employees	3
Appropriate financial incentives	4
Benefit from appropriate technology	5
Having an organizational chart	6
Benefits of training in the company	7
The intelligence of employees	8
Placement of employees correctly	9
Internal conditions of the company	10
Group participation	11
Send circulars with automation	12
Improvement of directives	13
Amendment of existing laws and regulations	14
Appropriate budget	15
Supporting the implementation of processes	16
Modifying the structure of processes in the company	17
Correct identification of processes	18
Explaining the implementation methods to employees	19
Appropriate teaching to employees	20
Having a friendly environment	21
Emphasis on teamwork	22
Modify the content of the letters section	23
Substitute new instructions	24
Determined to perform	25
Having the right organizational structure	26
Good investment	27
Long-term financial horizons	28
Strong management support	29
Measuring the financial dimension	30

Extracted code (open coding)	code
Costs for employee training	31
Proper communication with employees	32
Proper interaction between management and members	33
Correcting job ratings	34
Correct division of duties between employees	35
Taking the test from trained staff	36
Having an interest in implementing the plan	37
Correct division of teams	38
Having a good relationship between the members	39

Axial Coding (Concept Extraction)

After studying the opinions of the interviewees and their qualitative analysis, in order to create meaning from the obtained tables, these tables were placed in a single file as an integrated table, and after organizing them according to the code, into sentences related to a The code was given a title according to their concepts.

In this research, in naming each of the extracted themes, an effort was made to use names appropriate to the concept. By using short and familiar meaningful sentences in the qualitative data obtained, these data are divided as follows. The titles of each given code can be seen in Table 3.

Table 3: Derived concepts from interview analysis

Conceptualization	Common codes	Conceptualization	Common codes
Liquidity(X2)	0 – 1 –27 - 28	Adequate support(X1)	3 – 4 –16 –29 –30 –31 –32 - 33
Appropriate interaction(X4)	10 –11 –21 –22 –38 - 39	Processes)X3)	5 –17 - 18
budget (X6)	2 - 15	Correct teaming(X5)	8 – 9 –25 - 37
Improvement of directives (X8)	12 –13 - 23	learning(X7)	7 –19 –20 - 36
Proper allocation of jobs(X10)	6 –26 –34 - 35	Amendment of the rules(X9)	14 - 24

Selective coding (extractive categories)

After extracting the common codes and concepts from the raw data, the concepts are categorized, the results of which are reflected in the table below.

Table 4: Derived categories from the analysis of concepts

Categorization	Common concepts	Categorization	Common concepts
Team participation	X5 و X4	Support and processes	X1 و X3 و X7 و X10
Improve regulations	X8 و X9	Financial conditions	X2 و X6

In the qualitative phase, the coding method derived from the foundational data method (ground theory) was used to analyze the semi-structured interviews. In this section, the process of information analysis will be implemented in the form of common codes, conceptualization and categorization, which will finally reach the factors affecting financial reengineering. We should place the identified factors in the paradigm of the ground theory method and achieve a qualitative research model.

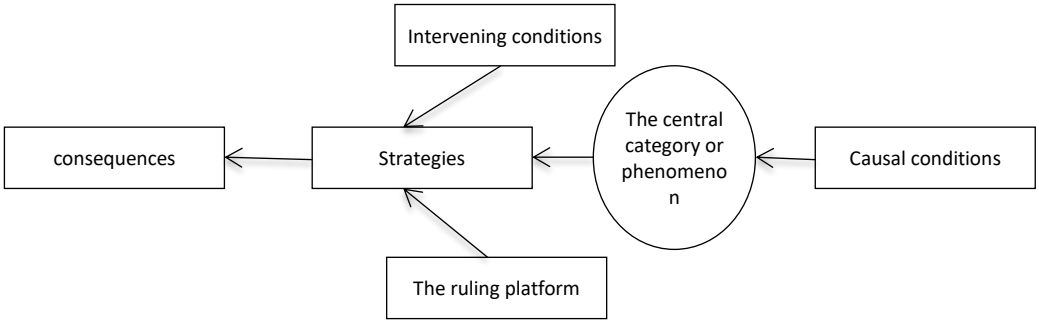

Figure 1- Paradigm model of the grounded theory method

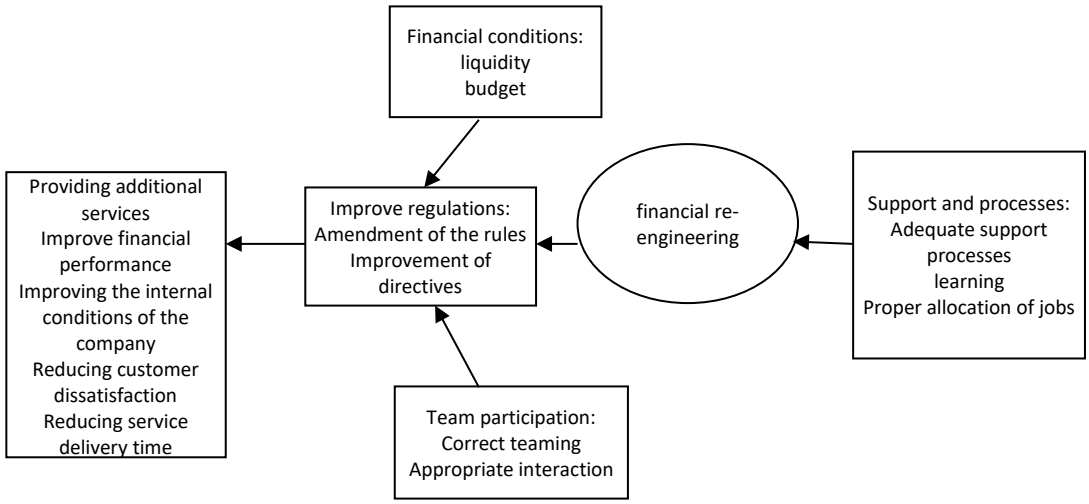

Figure 2- Qualitative research paradigm

Examining research questions

First question: What are the effective factors on financial re-engineering in Ilam province Cement company?

To answer the above question, a sample of engineers, managers, experts and experts in the field of engineering was re-selected and a semi-structured interview was conducted with them. After collecting the information, it was found that 40 phrases in the form of short and concise sentences were collected as raw data from people. We have analyzed 40 expressions through the ground theory method. After coding the collected raw data, 40 raw data were conceptualized in the form of 10 basic concepts, then the concepts were categorized in the form of 4 categories. The discovered categories are presented as effective factors on financial re-engineering in Ilam province Cement company, which are: financial conditions, support and recommendations, team participation and improvement of regulations.

Table 5: The final model obtained in the qualitative section

Common codes	concepts	Categories
Sufficient cash in the company	Liquidity	Financial conditions
Optimal financial conditions		
Good investment		
Long-term financial horizons		
Using the new budget	budget	
Appropriate budget		
Necessary communication with employees	Adequate support	Support and processes
Appropriate financial incentives		
Supporting the implementation of processes		
Strong management support		
Measuring the financial dimension		
Costs for employee training		
Proper communication with employees		
Proper interaction between management and members		
Benefit from appropriate technology	processes	
Modifying the structure of processes in the company		
Correct identification of processes		
Having an organizational chart	Proper allocation of jobs	
Having the right organizational structure		

Common codes	concepts	Categories
Correcting job ratings		
Correct division of duties between employees		
Benefits of training in the company	learning	
Explaining the implementation methods to employees		
Appropriate teaching to employees		
Taking the test of trained employees		
The intelligence of employees	Correct teaming	Team participation
Placement of employees correctly		
Determined to perform		
Having an interest in implementing the plan		
Internal conditions of the company	Appropriate interaction	
Group participation		
Having a friendly environment		
Correct division of teams		
Emphasis on teamwork		
Having a good relationship between the members		
Send circulars with automation	Improve the letters section	Improve regulations
Improvement of directives		
Modify the content of the letters section		
Amendment of existing laws and regulations	Amendment of the rules	
Substitute new instructions		

The second part: the quantitative part of the research

Descriptive findings in the quantitative section

The findings are the output of the research process and justify and prove the existence of the research. The findings of each research include a series of explanations about the current situation and some inferences based on differences and effects.

Inferential findings

The normality test of research variables

In this section, the normality of the data is first examined through the Kolmogorov-Smirnov test, then related tests are used to test each of the hypotheses.

For this purpose, the hypothesis related to this part are:

H0= The data distribution is normal

H1= The data distribution is not normal

The above hypothesis was checked for the research variables through the implementation of the Kolmogorov-Smirnov test (KS test), the result of which is shown in the table below.

Table 6: Normality test of research variables

result	level of significance	number of items	components	Variable
The data distribution is normal	68/0	8	Adequate support	Support and processes
The data distribution is normal	58/0	3	processes	
The data distribution is normal	79/0	4	learning	
The data distribution is normal	66/0	4	Proper allocation of jobs	
The data distribution is normal	62/0	4	Correct teaming	Team participation
The data distribution is normal	55/0	6	Appropriate interaction	
The data distribution is normal	81/0	4	Liquidity	Financial conditions
The data distribution is normal	49/0	2	the budget	
The data distribution is normal	72/0	3	Improvement of directives	Improve regulations
The data distribution is normal	60/0	2	Amendment of the rules	

Normally in the humanities, confirmation or rejection of hypotheses is expressed with 95% confidence. On the other hand, the level of significance that is obtained with the help of SPSS software indicates the amount of error that can be committed in rejecting the H0 hypothesis. Therefore, when this value is greater than 0.05 (1-0.95), it is not easy to reject the H0 hypothesis. As can be seen in the above table, the significance level of each variable is more than 0.05, therefore, with 95% confidence, it is not possible to reject the H0 hypothesis. In other words, regarding all variables, the H0 hypothesis, which is the normality of the data, is confirmed.

Confirmatory factor analysis of support variables and processes

The variable of support and processes has four components: sufficient support (8 indicators), processes (3 indicators), learning (4 indicators) and proper allocation of jobs (4 questions). Below are the results of its factor analysis.

The results of the confirmatory factor analysis of the first stage of the support variable and processes show that all the factor loadings and significant coefficients are confirmed and the measurement model is suitable and all the numbers and parameters of the model are significant.

Table 7: First-order confirmatory factor analysis of support variable and processes in the case of significant coefficients

Result	significant number (t)	factor load	questions	Components
confirmation	21/9	59/0	H1	Adequate support
confirmation	78/9	63/0	H2	
confirmation	89/10	68/0	H3	
confirmation	35/8	56/0	H4	
confirmation	83/13	71/0	H5	
confirmation	24/10	60/0	H6	
confirmation	45/9	58/0	H7	
confirmation	63/14	76/0	H8	
confirmation	25/11	65/0	F1	processes
confirmation	11/14	73/0	F2	
confirmation	46/11	64/0	F3	
confirmation	31/10	56/0	Y1	learning
confirmation	74/8	49/0	Y2	
confirmation	88/12	70/0	Y3	
confirmation	49/11	69/0	Y4	
confirmation	26/9	51/0	T1	Proper allocation of jobs
confirmation	47/13	73/0	T2	
confirmation	72/11	67/0	T3	
confirmation	44/10	61/0	T4	

Table 8: Correlation matrix between variable components of support and processes

4	3	2	1	Components
			1	Adequate support
		1	73/0	Tips
	1	81/0	79/0	Learning
1	90/0	88/0	75/0	Proper allocation of jobs

Second-order confirmatory factor analysis of support and processes variables

The results of the second-order confirmatory factor analysis of support and processes show that the measurement model is suitable and all the numbers and parameters of the model are significant. Also, the results indicate the existence of positive and significant correlations between the variable dimensions of support and processes.

Confirmatory factor analysis of team participation variable

The team participation variable has two components: correct teaming (4 indicators) and appropriate interaction (6 questions). Below are the results of its factor analysis.

First-order confirmatory factor analysis of team participation

The results of the first-order confirmatory factor analysis of the team participation variable show that all the factor loadings and significant coefficients are confirmed, and its measurement model is suitable and all the numbers and parameters of the model are significant.

Second-order confirmatory factor analysis of team participation variable

The results of the second-order confirmatory factor analysis of the team participation variable show that its measurement model is suitable and all the numbers and parameters of the model are significant. Also, the results indicate the existence of positive and significant correlations between the variable dimensions of team participation.

Confirmatory factor analysis of financial conditions variable

The financial condition variable has two components: liquidity (4 indicators) and budget (2 questions). Below are the results of its factor analysis.

First-order confirmatory factor analysis of the financial condition variable

The results of the first-order confirmatory factor analysis of the financial condition variable show that all the factor loadings and significant coefficients are confirmed, and its measurement model is suitable and all the numbers and parameters of the model are significant.

Table 9: second-order confirmatory factor analysis of support variable and processes in the case of significant coefficients

result	significant number (t)	coefficient of the path	components	variable
confirmation	25/11	76/0	Adequate support	Support and processes
confirmation	69/12	89/0	Tips	
confirmation	31/14	93/0	learning	
confirmation	02/14	91/0	Proper allocation of jobs	

Table 10: First-order confirmatory factor analysis of team participation variable in the case of significant coefficients

Result	significant number (t)	factor load	questions	Components
confirmation	22/10	54/0	T1	Correct teaming
confirmation	41/11	66/0	T2	
confirmation	79/10	61/0	T3	
confirmation	51/13	73/0	T4	
confirmation	78/14	79/0	T1	Appropriate interaction
confirmation	02/11	62/0	T2	
confirmation	13/12	68/0	T3	
confirmation	98/13	74/0	T4	
confirmation	16/14	77/0	T5	
confirmation	36/12	69/0	T6	

Table 11: Correlation matrix between variable components of team participation

2	1	Components
87/0	1	Proper teaming
1	87/0	Appropriate interaction

Table 12: The results of the second order confirmatory factor analysis

result	significant number (t)	coefficient of the path	components	variable
confirmation	89/14	86/0	Correct teaming	Team participation
confirmation	23/15	91/0	Appropriate interaction	

Table 13: Results of confirmatory factor analysis

Result	significant number (t)	factor load	questions	Components
confirmation	25/11	67/0	N1	Liquidity
confirmation	78/10	61/0	N2	
confirmation	99/13	71/0	N3	
confirmation	68/14	78/0	N4	
confirmation	83/14	81/0	B1	budget
confirmation	21/13	70/0	B2	

Table 14: Correlation matrix between variable components of financial conditions

2	1	Components
92/0	1	Liquidity
1	92/0	Budget

Second-order confirmatory factor analysis of the financial condition variable

The results of the second-order confirmatory factor analysis of the financial condition variable show that its measurement model is suitable and all the numbers and parameters of the model are significant. Also, the results indicate the existence of positive and significant correlation between the variable dimensions of financial conditions.

Confirmatory factor analysis of the regulation improvement variable

The regulation improvement variable has two components: improvement of regulations (3 indicators) and amendment of laws (2 questions). Below are the results of its factor analysis.

First-order confirmatory factor analysis to improve regulations

The results of the first-order confirmatory factor analysis of the regulation improvement variable show that all factor loadings and significant coefficients are confirmed, and its measurement model is suitable and all the numbers and parameters of the model are significant.

Second-order confirmatory factor analysis of the regulation improvement variable

The results of the second-order confirmatory factor analysis of the regulation improvement variable show that its measurement model is suitable and all the numbers and parameters of the model are significant. Also, the results indicate the existence of positive and meaningful correlations between the variable dimensions of laws and regulations.

Table 15: The results of the second-order confirmatory factor analysis of the financial condition variable

result	significant number (t)	coefficient of the path	components	variable
confirmation	13/15	89/0	Liquidity	Financial conditions
confirmation	58/13	75/0	the budget	

Table 16: Results of the first-order confirmatory factor analysis of the regulation improvement variable

Result	significant number (t)	factor load	questions	Components
confirmation	46/12	74/0	B1	Improvement of directives
confirmation	18/11	65/0	B2	
confirmation	95/14	81/0	B3	
confirmation	74/13	79/0	E1	Amendment of the rules
confirmation	06/13	72/0	E2	

Table 17: Correlation matrix between variable components of regulation improvement

2	1	Components
78/0	1	Improving the directives
1	78/0	Amendment of laws

Table 18: The results of the second-order confirmatory factor analysis of the regulation improvement variable

result	significant number (t)	coefficient of the path	components	variable
confirmation	69/12	86/0	Improvement of directives	Improve regulations
confirmation	55/14	91/0	Amendment of the rules	

Table 19: Identified factors in the case of significant coefficients

result	significant number (t)	coefficient of the path	components	variable
confirmation	57/12	84/0	Support and processes	financial reengineering
confirmation	96/11	78/0	Team participation	
confirmation	73/14	97/0	Financial conditions	
confirmation	25/13	80/0	Improve regulations	

Conclusion

A company that cannot change its view on technology will not be able to re-engineer its business, nor will it be the case of companies that consider information technology to be the same as working itself, or that first seek to recognize the problem and then find the necessary technology to solve it. are also the same. Using information technology as an assistant and facilitator is one of the basic needs of reengineering. Objective thinking, which means defining the problem and then finding one or more solutions, is easy for most senior managers, but using information technology in the reengineering process requires deductive thinking; It means to find a strong and constructive factor first and then look for problems that the mentioned factor has the ability to solve. The big mistake most companies make is to look at technology through the lens of their existing process. They ask themselves: How can we use the capabilities of a new technology to advance, enhance and improve what we do now? While they should raise such a question that how can we use technology to do what we cannot do now? Reengineering is following innovation; This process wants to achieve completely new goals by achieving the latest technological findings. One of the most difficult parts of reengineering is recognizing new and unprecedented capabilities of technology instead of exploiting its known capabilities. Buying existing technology is not a very prominent thing, but the hidden aspects and new creations should be discovered and used. Modern databases have made it possible for all employees to access information that was previously reserved for management; Access to information along with analysis and modeling tools that are designed to be very easy to work with provide employees with extensive decision-making capabilities. In re-engineering, it should be known that relying on technology alone is not enough and it is necessary to rush from the known to the unknown.

Experts consider reengineering as a lifeline for organizations that are being destroyed and drowned, but really why reengineering? By making improvements in the processes, it is possible to save the organization in the short term and create an acceptable position for the organization, but if the organization has long-term goals, it should reach the world class position, and this will not be achieved except through financial re-engineering. By observing the increasing level of competition in global markets, the need for innovation in the organization becomes more tangible so that the organization can produce services or products with global and competitive standards. Therefore, increasing knowledge as well as coordination between organizational processes is one of the biggest challenges of today's organizations. Reengineering can be used as a tool to dramatically improve performance. The growth of information technology is also considered as another factor in choosing reengineering of organizations. Today, almost every task in the organization deals with information technology in some way. The increasing growth of information technology is such that it can be a facilitating factor for the development of a new form of organization and its architecture. Rapid changes in information technology forces organizations to be up-to-date and communicate faster and more efficiently. Variable and unpredictable conditions in the market environment, social life, technical and organizational affairs, economic changes, new regulations and rules are other factors of re-engineering by organizations. Internal factors can also be considered as reasons for choosing reengineering for organizations. A change in the organization's strategies can be a factor to stimulate organizations in choosing reengineering to continue the path. Changes in the organizational structure may also make the need to make changes in the processes more tangible. Another example of internal factors is the need to simplify things. Simplification can be used in cases such as better performance levels, highlighting

inefficiencies and reducing complexity. The desired changes in processes, methods, skills and behaviors can also be considered as internal factors in the choice of reengineering. People who work in process groups see their work differently from the jobs they are used to. Reengineering eliminates redundant work. Most of the work related to inspection, waiting, resolution of discrepancies, follow-up and monitoring, i.e. non-productive work that exists due to the existing boundaries in the organization and in order to compensate for the division of the process, is eliminated through re-engineering; This means that people spend more time on real work. After reengineering, work becomes more satisfying because workers get a greater sense of accomplishment from their work. In the presented model, organizations should take the first step in order to re-engineer and during its implementation, by creating the background of innovation, in the direction of employees' creativity, that is, organizations should create a creative environment, teach creativity techniques (problem solving) and Also, delegating authority and creating work groups to provide creativity and innovation for creative employees. Employees with such a background and the effects of the organization's internal and external environment on them will be divided into three categories:

a. Employees who are smart and creative and have the power to take risks and are not afraid to face changes. Faced with existing problems and issues, these employees personally try to solve them and creatively participate in the design of new processes. This group of employees with established backgrounds will present new ideas to the organization and will be a new soul and blood in the body of the organization, and they are considered the main capital that Peter Drucker called educated employees.

b. Employees who have the necessary awareness and insight towards changes and have potential creative ability in them, but their risk power is very low and they are afraid of facing changes. Usually, this category of employees will be encouraged to be creative and innovative after seeing the results of the first category, and the support of the organization's leaders for changes can encourage them to join the first category of employees (creative employees). This group will have the ability to survive and continue working in the organization, provided that when they face issues and problems, leaders and managers encourage them to provide solutions by supporting them and participating in briefing sessions and designing processes.

c. Employees who do not have the ability to change themselves and the organization will resist any change and stop working when faced with issues and problems and wait for the authorities to solve the issues and problems. Obviously, this group of people will not have a place in process organizations, and the organization should remove them from the processes in order to prevent the slowness and smoothness of the processes. When faced with issues and problems, the first and second category employees can present their creative ideas and take action by benefiting from creativity and problem solving techniques and participating in group meetings and brainstorming with experts in the design of management processes and systems. To innovate in processes. What should be considered in the relationship between re-engineering and innovation is the innovative design of new processes in such a way that this new design creates a competitive advantage in doing things compared to other organizations. Process-oriented organizations should also provide the necessary background in their employees to provide the basis for the creativity and innovation of employees in order to maintain the results of re-engineering and always seek the gradual improvement of processes, because with the passage of time and increasing changes. environment, the new processes will soon become obsolete and the flourishing mind of the employees should try to redesign the processes. If employees participate in the innovation process, all organizational levels will change and be directly or indirectly affected. What is certain is that organizations have a basic need for creativity and innovation both during re-engineering and after, that is, in process-oriented organizations, and it can be acknowledged that re-engineering projects will have no meaning without innovation.

Practical suggestions and recommendations

It is suggested that the managers of the Ilam province Cement company help the success of these projects by creating motivation in the employees through revision of the reward system and the possibility of upgrading the organizational position for the establishment of financial re-engineering.

To implement financial reengineering, it is necessary to be creative in financial reengineering. Therefore, it is suggested to Ilam province Cement company to try to attract and retain innovative, expert and creative experts. Also, strive to create a suitable environment for the creativity of employees.

In order to increase the success rate of financial reengineering projects, the participation of the organization's employees in the implementation of the project prevents their resistance. Therefore, it is recommended to reduce the resistance of employees to changes as much as possible, to involve them in this matter. Also, due to the fact that one of the important and vital requirements in the implementation of the financial reengineering project is managerial stability, it is suggested that before, during and after the

implementation of the financial reengineering project, efforts should be made to stabilize the management of the organization in order to show the successful effects of the project.

Delegating authority to the team is appropriate to avoid prejudices and political work in the organization and to facilitate the implementation of the financial reengineering project. Also, in order to implement the financial reengineering project from the beginning in a completely scientific and operational way, sufficient and appropriate budget should be considered for it.

One of the influencing factors on financial reengineering is cooperation in the work environment, so it is recommended to increase the synergy in the implementation of the financial reengineering project by increasing the teamwork spirit in the employees and the implementation team.

For the successful implementation of financial reengineering, it is recommended that employees' ideas are valued during work, and up-to-date information technology should be used to facilitate the implementation of financial reengineering. Organizations should pay attention to their beliefs in order to gain the support of managers and employees in the implementation of the financial reengineering project, and this is possible through the connection of the organizational culture and the belief in their values.

References

Adegbie, F. F., & Olaore, O. O. (2020). Financial re-engineering and growth in performance of small and medium enterprises (SMEs) in Nigeria. The Journal of Social Sciences Research, 6 (7), 670–690. https://doi.org/10.32861/jssr.67.670.690

Crowe Thomas J., Fong Pekying Meghan, Bauman Todd A., Zayas-Castro JoseÂ L., (2002). Quantitative risk level estimation of business process reengineering efforts, Business Process Management Journal, Vol. 8(5), pp. 490-511.

Dada, Samuel Olajide , Akintoye, Ishola Rufus and Alawode, Olufemi Peter, 2023, Financial Re-Engineering and Financial Performance of Poultry Business in Nigeria, European Journal of Accounting, Auditing and Finance Research, Vol.11, No. 4, pp.60-86, 2023

Datla Anand and Sivakumar, N. 1997, Reengineering financial processes - an imperative in today's business environment, December 1997, Conference: National Convention of IIIEAt: Mumbai

Esokomi, E., & Otuya, W. (2020). Financial Re-Engineering And Financial Performance Of SACCOS. International Journal of Accounting and Finance (IJAF), 5 (1), 19–31

Gilaninia, Shahram. (1390). The impact of lean thinking in improving process reengineering, Management Knowledge Quarterly, year 19, number 74, pp. 110-91.

Grover, V. and Malhotra, M. (1997). Business process reengineering: A tutorial on the concept, evolution, method, technology and application. Journal of Operations Management, 1(5): 193-213.

Kermanshahi, Ali, Sepehri, Mehran. (2011). Re-engineering strategy in organizational transformation, Industrial Management Quarterly, No. 14, pp. 31-48.

Madhoshi Mehrdad, Agha Rafiei Ali. The success levers of process reengineering with an emphasis on information technology. Management knowledge 2013; . 133-156: 67

Mahmoudi Jafar, Musikhani, Mohammad, Biriyai Hanieh Sadat. Providing a framework for evaluating the maturity of enterprise architecture. Journal of Information Technology Management 2018

Nadeem, M. and Ahmad, R. (2016). Impact of business process re-engineering on the performance of banks in Pakistan. Business and Economics Journal, 7(2): 25-45.

Orogbu, O. L., Onyeizugbe, C. U. and Onuzulike, N. F. (2015). Business process reengineering and organizational performance of selected automobile firms in southeast of Nigeria. European Journal of Business, Economics and Accountancy, 3(5): 2056-6018.

Revathy, S. and Santhi, V. (2012). A study on financial re-engineering with particular reference of state bank of India, Dindigul. Journal of Business Management and Social SciencesResearch, 1(3): 2319-5614.

Saedi Mehdi, Yazdani Hamidreza. Presenting a process model for the implementation of knowledge management based on organizational learning in Iran Khodro: a theory based on data. Journal of Information Technology Management spring and summer 2018 - number 2

Thakkar, F. M. (2017). Financial engineering: Factors leading to its growth in Indian financial market. National Journal of Multidisciplinary Research and Development, 2(3): 38-41.

Ugochukwu, C. N. and Patrick, M. (2015). Business process reengineering and performance of courier service organizations in Anambra State, Nigeria. American Journal of Social and Management Sciences, 10(5): 2151-1559

Zairi Mohamed, Al-Mashari Majed, (1999). ‘’BPR implementation process: an analysis of key success and failure factors’’, Business Process Management Journal, Vol. 5(1).