

# Studying of the Attitudes for the Industrial Companies towards the Implementation of Business Process Re-Engineering (A Field Study)<sup>(1)</sup>

Dr. Mohyedin Hamza\*

Associate Professor, Department of Accounting, Faculty of Economics and Administrative Sciences, Zarqa University, P.O. Box 132222, Zarqa 13132, Jordan

\*E-mail of the corresponding author: [mohy.hamza@yahoo.com](mailto:mohy.hamza@yahoo.com)

## Abstract

This study aims to know the attitudes of the industrial companies towards the implementation of business process re-engineering. It recognizes the efforts of the response and support of companies about this concept, the availability requirements needed by companies to apply this concept, and the impact of the implementation of concept in the performance of companies. In order to achieve this primary objective, the researcher studied the intellectual frame and scientific rooting for the business process re-engineering. The researcher designed a questionnaire aimed to execute of the study problem variables in order to test hypotheses. Study population consisted of a group of industrial companies working in the Syrian Arab Republic. Through the study, the researcher suggested the following results: The application of re-engineering lead to many benefits for organizations that are applied. Which it could represented in improving the competitive position, increasing market share, increasing production efficiency, and reducing cost. A field study has shown the following results. There are a statistically significant relationship in the attitudes of the study sample towards the response and support of industrial companies to the business process re-engineering, the availability requirements of the application of the business process re-engineering in industrial companies, and the impact of the application of this concept in the performance of industrial companies. Finally, the study recommended that necessity of the operating industrial companies in Syria, whether in the public sector or the private sector to apply the implementation of re-engineering.

**Keywords:** Business Process Re-engineering (BPR).

## 1. Introduction

The cost systems and traditional management accounting have been faced many of the criticisms, which focused on the inability of these systems on the appropriateness of basic features for modern manufacturing environment. Therefore, it was necessary to bring about the need for fundamental changes in the accounting systems and administrative costs in order to fit in with those features. It results to search for tools or means to develop the systems cost and management accounting in order to correspond with the attributes of modern manufacturing environment. That showed the modern methods of management, including: the entrance to the continuous improvement (KAIZEN), the entrance to the costs of activities Activity Based Costing, the entrance to the exact timing Just In Time, entrance TQM, theory of Constraints, and the concept of re-engineering business.

This study will highlight the important role that could play by the concept of re-engineering business in the life cycle of the organization. Thus it constitutes the concept of a real revolution in the world of business is to provide innovative ideas and innovative work of the organization lead to radical changes integrated and fast in all operations of the organization.

### 1.1 Research problem

According to the importance that have proved for accounting methods of modern management in recent times. This includes re-engineering of business, that will give how be depend on this concept of the process of changing radically and integrated into the organization's operations. It aims to strengthen the competitive position of her; the researcher can formulate the problem of the study in the following question: What are the trends industrial companies towards the application of the concept of re-engineering the business?

### 1.2 Research Importance

The importance of this research the following:

- Lack of research (Applied and filed study) according to the knowledge of the researcher, which dealt with the search process in the concept of re-engineering in the Syrian industrial work environment.
- Shed light on the concept of re-engineering the business and highlight the importance of its role in the

---

(1)"This research is funded by the Deanship of Research in Zarqa University /Jordan"

life cycle of the organization.

### *1.3 Research objectives*

It aims to study the response and support industrial companies to the concept of business re-engineering. As well as, the availability requirements of the application. The role of application in the performance of industrial companies, in addition to providing a set of proposals and recommendations realistic and practical based on the results of this research to decision-makers in these companies, which contribute to the enhance the ability of these companies to keep pace with the rapid developments in the successive and business environment surrounding it.

### *1.4 Previous studies*

Study of Ranjanathan, Dhaliwal, 2001 entitled "The survey practices process re-engineering in Singapore." This study aimed to survey the practices of re-engineering in Singapore. The study sample consisted of (64) Singaporean company. The study explained the findings, that 50% of companies in Singapore have re-engineered its operations and about (37%) of the companies that have not re-engineered its operations. This have a faith that the re-engineering of its operations in the next few years. The most important problems facing companies in Singapore are lack of financial and human resources in addition to the lack of internal experts in information systems, in addition to poor infrastructure for information technology, as well as the addition to the lack of awareness of the importance of re-engineering efforts.

Study of Mahmoud, (2007) entitled "The impact of re-engineering to achieve competitive advantage." This study has applied in Wasit Company for Textile Industries as one of the Iraqi industrial sector organizations. The study, aimed to identify the importance of re-design functions and processes, and improve performance levels and lower levels of oversight and improve communication systems, also aimed also to determine the impact of the redesign of jobs, processes and improve performance levels and lower levels of oversight and improve communication systems in achieving competitive advantage for the organization in Iraq. The study found several results including: The administrative leadership of the Organization of Iraqi suffering from a lack of cognitive awareness of the importance of the subject of re-engineering, as shown by the results of the statistical analysis of the data and sample survey of re-engineering the following:

- 1- The re-design of jobs leads to provide fast service to customers, creativity and innovation through integrated performance for all employees in the company and Wasit for textile industries.
- 2- The re-design processes leads to improved performance, and achieve speed in response to the request of the customer and encourage innovation, creativity and innovation in the management functions and processes.
- 3- Improving communication system creates a flow of information quickly, which reduces the time allotted for the delivery of orders and increases the ability to create and innovate.

Study of Alaleaoui (2013) entitled "Re-engineering the requirements of industrial processes and the possibility of their application in the company withstand General Steel Industries in Baghdad." The study aimed to develop a methodology for application of the entrance process re-engineering. It is one of the entrances of modern development of business organizations. This is, in order to enable them to raise their efficiency and effectiveness and capacity. To adapt to the ongoing changes, in the environment of internal and external through change management processes, productivity, and the statement of requirements engineering, organizational and human. In order to bring about the required change from a range of concepts of change which submitted to the administrative arena of theoretical and applied appropriate for the work environment in Iraq. The results of the study confirmed the importance and the applicability of the approach to re-engineering the study sample. The study also, found that the entrance process re-engineering approach provides a recent appropriately and effectively to bring about a radical change. Comprehensive and essential in business organizations (produced by management scholars and researchers in the light of the outcome variables that have occurred and continue to occur in the business world) in order to address its problems and achieve results radically big in performance standards modern of quality, cost and time and flexibility.

Study of Damanhour (2013) entitled "Factors Affecting the Application Process Reengineering - An Empirical Study in Saudi Arabian Airlines." This study aimed to examine the relationship between the application of process re-engineering and some of the factors affecting the application in the Saudi Arabian Airlines: the commitment of senior management programs, re-engineering, organizational change, and organizational culture. The study found several of the most important results: the existence of a correlation between a positive and significant application re-engineering and among all the factors affecting the application under study. Significant differences between many of the independent variables of the factors affecting the application re-engineering under study and between Saudi Arabian Airlines managed to achieve the commitment of senior management, and the work of organizational changes, and the creation of organizational culture appropriate and effective for the success of the application of re-engineering.

Study of Yahya (2002) entitled "The re-engineering of business: Mufahim- Alospab- impact." This study aimed to define the concept of re-engineering, and to identify the reasons that call for its application, and determine the impact of the application of this concept. The study found that there is a belief among some people that the application re-engineering is the glory. This belief was the result of more than (70%) of the companies failed to apply re-engineering, and that some of them believe that the application of total quality management or any other tool of management system quality is better and stronger than the application re-engineering. The study also found that in order to get the best performance; the re-engineering methodology is wonderful and integrated to achieve this performance.

Study of Kassahun (2012) entitled "The impact of the application of business re-engineering in the performance of public sector organizations (in the context of economic growth)".

It aimed to study the relationship between the re-engineering and performance of the organization, as well as to develop a conceptual framework linking the re-engineering and performance of public sector organizations and pilot testing of this framework. The study found that public sector organizations can improve their performance through:

- 1- Building re-engineering associated with human resources, administrative, technical and operating successfully mitigate the effects of problems in the application of re-engineering.
- 2- A radical change in business processes to get to achieve dramatic improvements in these processes.
- 3- Development process after the re-engineering to include the formation of integrated packages include skills, systems and techniques are working on translating the gains of process performance to rank higher than the gains in the performance of the organization.

Study of Dennis & others (2003) entitled "Breaking the new rules of success and failure in senior management support for business process reengineering." This study aimed to examine the successes and failures of senior management in support of re-engineering processes in four organizations, where the re-engineering process was successful in two of these organizations and is successful in the two organizations. The results of this study: that the organizations which has the support of senior management to re-engineer their operations, the senior management allows that performed the tasks faster and adds develop a structural process re-engineering in a great location, and facilitate the participation of the largest segment of workers in the process. The results showed that the main difference in the success or lack of success in the process of re-engineering organizations is how and when to support the senior management of the process.

Through a review of previous studies, different theme, we find that this study converge with previous studies in that many companies have found that it may be the concept of re-engineering the business has an important role in achieving a competitive edge. While this study differs from previous studies in being will look at several aspects related to the application of the concept of re-engineering business in industrial companies.

## 2. Research Hypotheses

The study hypotheses were as follows:

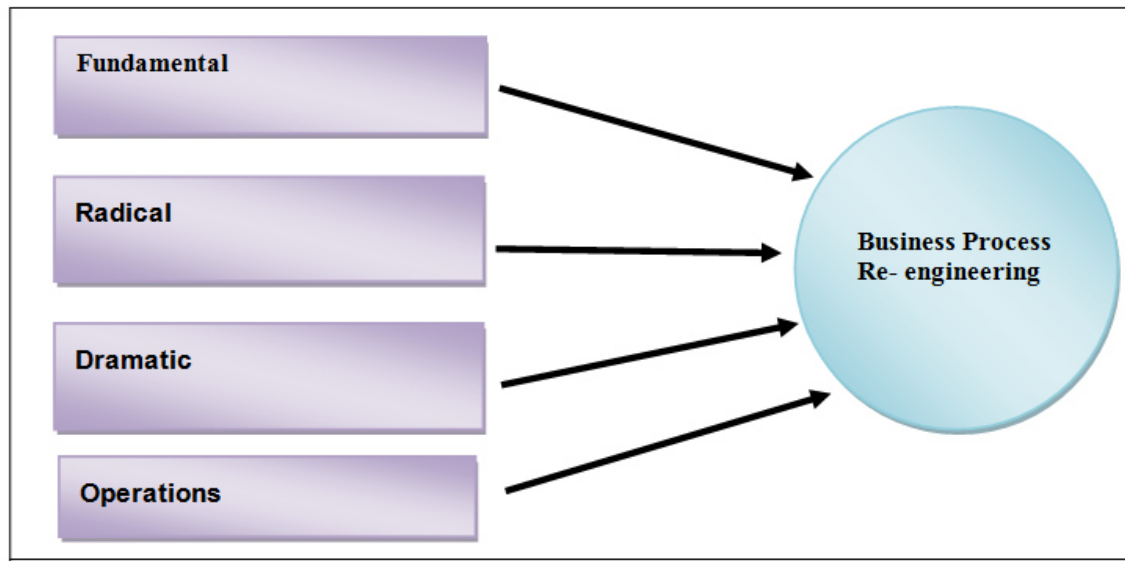
Ho<sub>1</sub>: There are no statistically significant relationship trends in the study sample towards the response and support industrial companies of the concept of re-engineering business.

Ho<sub>2</sub>: There are no statistically significant relationship trends in the study sample about the availability of the application of the requirements of the concept of re-engineering business in industrial companies.

Ho<sub>3</sub>: There are no statistically significant relationship trends in the study sample about the impact of the application of the concept of re-engineering the business performance in industrial companies.

## 2.1 Study Model

The model of the study is below:



## 3. Research Methodology

The researcher in order to achieve the objectives depend and testing of hypotheses on the deductive approach, as will the researcher access to the literature and research and previous studies that are relevant to the subject of the study, in order to configure the theoretical framework of the research, and form the basis of intellectual and theoretical subject under study. The researcher will conduct the field study through a questionnaire will be distributed to a sample of the population of the study and will test the hypotheses and analyze the results using the Computer Using statistical package of social sciences (SPSS).

## 4. Literature review

### 4.1 The concept of re-engineering of business

The concept of re-engineering has known in the early nineties of the last century, specifically in the year (1993). The first authors have been written on it are (Michael Hammer and James Shambe) in their book, (re-engineering structure statement about a revolution in the business world). Since the launch of this concept has expanded, many organizations applied to take advantage of it. Thus, because it represents a dynamic process and a radical integrated in various activities, procedures and processes of the organization, as part of their quest to continue, compete, and achieve their goals.

The researchers adopted in their introducing to the re-engineering on the definition by both (Hummer and Shambe, 1993, p 1). Their definition was "reconsideration and re-design the overall administrative processes to achieve radical improvements rather marginal in performance measures crucial that include cost, quality, service and speed".

Kelada, (2004, p 131), has defined it as "a revolutionary change in the organization's way of thinking, and thus the performance of things, which is synonymous with innovation". Short & Venkatraman defined it as "the work of the organization necessary to restructure their internal operations. In order to improve the distribution of the product and improve the performance of delivery to the customer, as mentioned by Rifai, (2006, p 8). Manjanila and Klein, (1995, p 1), they reported that redesign the rapid and radical administrative processes strategic and value-added (core) as well as the systems, policies and organizational structures in order to maximize support workflows and increase productivity in the organization are uncanny.

Through what has given of related definitions to re-engineering, it can be defined as follows: **(a dynamic process and the goal of an integrated radical change radically and rapidly in full activities, procedures and functions of the organization, ultimately leading to substantial improvements in the performance standards).**

### 4.2 The characteristics of the concept of re-engineering of business

Angus et.al, have selected a number of characteristics that distinguish the most important business re-engineering (Qasimi, 2009, p 2):

- 1- Radical redesign of administrative processes
- 2- Essential use of information and communication technology as assistant evaluation in re-engineering project.

### 3- Focus on achieving strategic objectives and results.

#### *4.3 The basic elements of the concept of re-engineering business*

Select of the (Hummer and Shambe) through defined for re-engineering the basic elements of this concept, which is (Ahlam, 2012, p 156):

- 1- Fundamental: any re-engineering that starting from scratch, without any assumptions or constants established prior focusing on what should be and what is neglect.
- 2- Radical: any change from the roots and not superficial or cosmetic change or apparent to the status quo, to get rid of any old situation once and find new and modern methods to perform the work, any sense of innovation and not an amendment.
- 3- Dramatic: any re-engineering that aims to achieve a huge results in rates and superior performance.
- 4- Operations: any set of activities that include inputs that produce outputs that have value for customers, and this is what distinguishes re-engineering as the focus on the systems work or what is known as the main operations of the organizations.

#### *4.4 The requirements of the application of the concept of re-engineering of business*

The process of applying the concept of re-engineering in organizations require from these organizations work to create the conditions necessary and appropriate in order to achieve satisfactory results and effective, and therefore has to be for these organizations to provide a set of requirements that interact with each other in order to apply this concept successfully in it. These requirements include the following (Alaleaoi, 2013, pp102-103):

- 1- A comprehensive assessment of the organization's environment and internal and external identification of opportunities and threats.
- 2- Customizing the executive director of the re-engineering and work teams from within the organization.
- 3- To be available and pledged the commitment and support Unlimited by senior management of the organization to embrace the concept of re-engineering to bring about the desired change and development.
- 4- Clarity of vision, and the overall strategy of the organization and business strategy.
- 5- Goal performance setting ambitious business re-engineering.
- 6- Direct re-engineering, starting from the top of the organization.
- 7- Full integration of human resources and information technology.
- 8- Do not neglect the prevailing organizational culture and adapted to the culture of re-engineering of the organization.
- 9- Determine the length of time to carry out the re-engineering and abide by them
- 10- Involve all employees in the organization process re-engineering and work on their training.
- 11- To serve the process of re-engineering objectives and strategic plans of the organization.
- 12- It is the best to be the organization has implemented total quality management as a prerequisite for the application of re-engineering.
- 13- That there will be an urgent need and convinced by management to business re-engineering, when failure to achieve breakthroughs in performance through the adoption of quality management becomes there is an urgent need for business re-engineering.
- 14- It is need to focus on processes rather than departments, because what matters is the type of service the customer or item not produced the relevant departments.
- 15- It is focus on the quality and composition of the working groups that are performance and give it a high degree of independence and flexibility.
- 16- Attempt to reduce employee's resistance by raising awareness of the importance of this concept and the benefits that accrue to them.
- 17- Focus on innovation and creativity as an approach in organizational processes,
- 18- Need for scientific planning for the successful application of re-engineering and the study of the regulatory environment to get to know all the variables.

From the perspective of the researcher considers the process of providing the above requirements is essential to start the process of applying the concept of re-engineering, and in order to ensure the successful implementation of him.

#### *4.5 The importance of applying the concept of re-engineering of business:*

The importance of applying the concept of re-engineering nay highlight through the following (Baghdadi et al, 2008, p 126):

- 1- Is a re-engineering approach to improve fast and essential aspects of performance stages and includes reducing the time and cost of operations and increase revenue or added value, as well as competitive pricing structure based on the cost of acceptable and rational.
- 2- Is re-engineering tools to deal with three types of organizations are:

- A) Organizations with the deteriorating situation to save it by re-engineering its operations.
  - B) Organizations that expect to reach the gradient Organizational management in the near time by re-engineering its business can keep pace with future developments.
  - C) Organizations that have reached the summit of excellence and success through re-engineering operations and innovative working methods more successful than ever able to achieve additional successes as compared to its competitors.
- 3- Constitute a re-engineering strategy to cope with environmental variables for each organization are looking for efficiency, effectiveness and maintain survive.

#### *4.6 The objectives of the application of the concept of re-engineering of business:*

Aqhili mentioned that re-engineering designed to achieve the following (Digni, 2013, p 325):

- 1- To get rid of the old routine and rigid style of work and the transition to freedom and flexibility.
- 2- Reduce the cost of performance.
- 3- Conversion work of individuals from the control and supervision exercised them closely, to work where they have powers and responsibilities to bear.
- 4- High quality in performance.
- 5- Quick service and excellence
- 6- Make integration and interdependence between the components of a single transaction.

(Digni, 2013, p 325) adds other targets achieved by the process of re-engineering including:

- 1- Achieve specialized in employee performance, which adds a qualitative performance and excellence in service provided.
- 2- Documenting the processes within the flow of the image with clear work procedures in an easy and clear enable everyone to work according to the system specific and clear.
- 3- Minimize overlap and repetition of performance tasks, through the integration of processes similar in the various departments.

Rifai, (2006, pp18-20) shows that the objectives of the re-engineering, will vary from one organization to another. According to the circumstances of each organization and the state of the business, which it also vary. These goals in a single organization from time to time, and in accordance with the extent of their exposure to the crisis of certain work or in the event the organization was working to develop systems permanently, and finds that the objectives of re-engineering processes in most cases are:

- Cost reduction.
- Reduce the time.
- The quality of the output.
- The quality of work / learning.

The benefits of the application of the concept of re-engineering of business :

There are many advantages can achieve by applying the concept of re-engineering for organizations, we mention the most important (Alaleaoi, 2013, pp58-59):

- 1- Improve the performance of the organization in the short and long term by improving productivity and improve customer service and diversification of products or services.
- 2- Degree increase customer satisfaction on products and services higher than achieved by products and services for the competitors.
- 3- Underweight time delivery of products and services and reduce the response time to market requirements and reduce cycle time developing and manufacturing products.
- 4- Improve the ratio of knowledge and use of the organization.
- 5- To obtain an accurate description of the substantive operations necessary to achieve the business strategy.
- 6- The fact that the creation of customer value is a guide business activity.
- 7- reduce costs and raise the quality of products,
- 8- Changing the culture of the organization.
- 9- To avoid unnecessary activities that do not add value to the customer.
- 10- Underweight duplication of effort and investment through the promotion of all types of partnership between the organization, customers and suppliers.

Whilst (Al-Lozi) mentioned that re-engineering can achieve the following benefits (Digni, 2013, pp330-331):

- 1- To merge functions competent in one job, and here to be a business combination with one disciplines in one place. This may lead to saving time, reducing costs, and coordinating the business and organization.
- 2- To turns the business of simple tasks to work vehicle, so that entails a shared responsibility between team members.
- 3- To increase the independence of individuals in the performance of tasks, where individuals are able to run the initiative and establish business rules and creativity, and innovation.

- 4- To encourage education in addition to training. To develop the skills and abilities of individuals and expand their knowledge.
- 5- Individuals are rewarded, and the division of the product of their work on basis of results, and masse.
- 6- Re-engineering work on changing the organizational culture mainstream, where it becomes a good performance and customer care is a priority for workers.
- 7- Helps employees to make decisions instead of depending on this process of managers.
- 8- Implement steps of the work according to their nature, and this leads to the completion of several steps at one time, in addition to reducing the time between the action steps.

## 5. Study Instrument

After completion of the study to determine problems, and hypotheses, the researcher prepared a questionnaire study. That covers all variables model study, which included a questionnaire study in its final form to the following parts:

### 5.1 Sampling

The researcher was selected sample study of a group of industrial companies operating in the Syrian Arab Republic (3 companies in pharmaceutical industry, 2 companies in manufacturers of food, 2 companies in a concrete industry). The researcher was distribute of the questionnaire for each of the (Executive Director, quality manager, quality control, production manager, chief financial officer and accounting costs for each company).

### 5.2 Data collection

At this stage, the researcher adopted a questionnaire as a means to gather information that will help in achieving the objectives of the research, the questionnaire has divided the list into two parts (see Appendix No. 1) in the following form:

The first part includes the study objectives and scope, as well as data related to general information about the research sample companies, as well as private information concerning individual's sample (see Table 2).

Section II includes a set of questions related to the knowledge of the views of the industrial economic units under study about the availability requirements that companies need to apply this concept, and to identify the views of these units about the impact of the application of this concept in corporate profitability.

### 5.3 Study Instrument scale

Five points Likert scale has been selected, for being one of the most metrics used to measure the opinions and responses, due to its ease of understanding , indicates where the study sample under test for the extent of their agreement for each paragraph of the questionnaire as follows:

Strongly Agree	Agree	Not sure	Disagree	Strongly Disagree
5	4	3	2	1

The study population consists of (7) companies. The study sample of general managers and directors of administrative units and financial managers, internal audit exclusively, totaling (42) questionnaires, but what was not subjected to statistical analysis only (29) because of the lack of returned or completion of the respondents, it was (69.04%). To achieve the objectives of the study were used scale (Likert) as mentioned above.

The averages were determined for the purposes of the study as follows: (4.25-5) indicate a very high degree, (3.50-4.24), indicating a high degree, (2.75-3.49) indicates a medium degree, (2-2.74) indicate the degree low (less than 2) show a very low degree.

### 5.4 Statistical Techniques

The researcher from the process of collecting data on variables model study entered the data for Computer -program for extracting statistical results needed. It was drawing on some statistical methods available in software packages Statistical Social Sciences (SPSS), in order to process the data that have obtained through the study field of the surveyed sample; specifically the researcher used statistical methods the following:

- 1- Cronbach's alpha coefficient:** it used to test the reliability tool to study under which the data are collected. In other words, it used to test internal consistency of the paragraphs of the questionnaire.
- 2- Frequencies and percentages:** they used to identify the characteristics of the study sample of accountants and auditors in industrial companies operating in the Syrian Arab Republic.
- 3- Mean:** it used to identify the level of severity of the answer to the sample of the study in industrial corporations operating in the Syrian Arab Republic.
- 4- Standard deviation:** it used to determine the dispersion of the study sample answers from the values of the arithmetic average.
- 5- T Test:** To judge the ability to accept or reject the research hypotheses by comparing (T) calculated with a

significance level (0.05), taking into account that the number of sample did not exceed (29) respondent.

**6- Correlation test:** to determine relationships between variables of the study questionnaire, and mutual influences between them.

**6. Display and analyze the results and test hypotheses :**

Test of Cronbach-Alpha: it cares about this test to determine the credibility of the list of the questionnaire and the contents, according to this test whenever approached value (alpha) of one right. The homogeneity and thus credibility, the closer the value (alpha) of zero indicates that the lack of homogeneity and thus lack credibility, and the reality of program outputs SPSS show the value of the test (alpha) as follows:

Table (1) result of the test Cronbach's alpha coefficient

No of Items	Alpha
23	.885

Thus, it shows us the value of alpha (88.5%), which indicates the homogeneity and increased credibility.

Table (2) Describe the characteristics of the study sample of managers

DESCRIPTIVE	DISTIRBUTION	
Sex	Male	75.9%
	Female	24.1%
Scientific specialization	Secondary or less	3.4%
	University degree	82.6%
	Postgraduate	13.8%
No. of Employee	Less than 50	17.2%
	50-300	58.6%
	More than 300	24.2%
Years of Experience	Less than 3 years	0%
	3-6	17.2%
	More than 6	82.8%

**6.1 Results of the test First hypothesis:**

Deals with evaluating the response and support for the concept of industrial companies re-engineer the business, and consists of variables affecting the hypothesis of: X1, X2, X3, X4, X5, X6, and X7

Table (3) the results of the test (T-Test) variables associated with the imposition of the first hypothesis

Variables code	Mean	Std. Deviation	T Value	(df)	Significant
X1	4.52	0.634	37.967	28	0.000
X2	4.41	0.568	41.37	28	0.000
X3	4.38	0.622	37.491	28	0.000
X4	3.79	0.559	36.041	28	0.000
X5	4.1	0.86	25.394	28	0.000
X6	4.14	0.693	31.765	28	0.000
X7	3.52	0.986	18.93	28	0.000
<b>General Mean</b>	<b>4.123</b>	<b>0.703</b>	<b>32.708</b>	<b>28</b>	<b>0.000</b>

It notes that the arithmetic averages of the year for the first hypothesis is (4.123) of five points. This indicates that, the response and support industrial companies of the concept of re-engineering the business was a high degree. It shows the results of the test (T) above it, it must reject the hypothesis of nowhere and accept the alternative hypothesis, where each variables of the study appear when the level of significance is less than (0.05). This is to accept the alternative hypothesis, which is; **there is a statistically significant relationship trends in the study sample toward response and support industrial companies of the concept of re-engineering business.**



6.2 Test the correlation coefficients between the studies variables associated with the first hypothesis:

Table (4) the results of the analysis of the link between some of the variables associated with the first hypothesis

Variable Code	X2	X3	X5	X6	X7
X2		.753(**)			
X3	.753(**)				
X5				.395(*)	.609(**)
X6			.395(*)		
X7			.609(**)		

\* Correlation at the level of significance ( $\alpha \leq 0.05$ ).

\*\*Correlation at the level of significance ( $\alpha \leq 0.01$ ).

The results of the previous table show the strength and direction of the correlation coefficients between variables. This indicates that the proportional relationship between the variables, as well as the strength of correlation coefficients between variables is medium when the level of significance (0.05) and the level of significance (0.01).

6.3 Results of the test second hypothesis:

Deals with the judgment on the availability of the application requirements of the concept of re-engineering business in industrial companies, consisting of variables affecting the hypothesis of: X8, X9, X10, X11, X12, X13, and X14.

Table (5) the results of the test (T-Test) variables associated with the imposition of the second hypothesis

Variables code	Mean	Std. Deviation	T Value	(df)	Significant
X8	3.66	1.01	19.226	28	0.000
X9	4	0.707	30.082	28	0.000
X10	4.21	0.726	30.834	28	0.000
X11	3.93	0.651	32.11	28	0.000
X12	4.48	0.574	41.551	28	0.000
X13	4.24	0.636	35.514	28	0.000
X14	4.24	0.739	30.524	28	0.000
<b>General Mean</b>	4.109	0.720	31.406	28	0.000

It notes that the arithmetic average of the year for the second hypothesis is (4.109) of five points. This indicates that availability requirements of the application of the concept of re-engineering business in industrial companies was a high degree, and show the results of the test (T) above it must reject the hypothesis of nowhere and accept the alternative hypothesis, where that all the variables of the study appear when the level of significance is less than (0.05). This is to accept the alternative hypothesis, which is; **there is a statistically significant relationship trends in the study sample about the availability requirements of the application of the concept of re-engineering business in industrial companies.**

6.4 Test the correlation coefficients between the studies variables associated with the second hypothesis:

Table (6) the results of the analysis of the link between some of the variables associated with the second hypothesis

Variable Code	X8	X9	X10	X11	X12	X13	X14
X8			.393(*)	.506(**)	.420(*)		
X9						.397(*)	
X10	.393(*)						
X11	.506(**)						
X12	.420(*)						.388(*)
X13		.397(*)					
X14					.388(*)		

\* Correlation at the level of significance ( $\alpha \leq 0.05$ ).

\*\*Correlation at the level of significance ( $\alpha \leq 0.01$ ).

The results of the previous table show the strength and direction of the correlation coefficients between variables. This indicates that the proportional relationship between the variables, as well as the strength of correlation coefficients between variables is medium when the level of significance (0.05) and the level of significance (0.01).

### 6.5 Results of the test third hypothesis:

To determine the impact of the application of the concept of re-engineering business in the performance of industrial companies, consisting of variables affecting the imposition of: X15, X16, X17, X18, X19, X20, X21, X22, and X23,

Table (7) the results of the test (T-Test) variables associated with the imposition of the third hypothesis

Variable code	Mean	Std. Deviation	T Value	(df)	Significant
X15	4.14	0.875	25.153	28	0.000
X16	3.76	0.739	27.008	28	0.000
X17	3.17	0.711	23.663	28	0.000
X18	3.34	0.614	28.903	28	0.000
X19	3.79	0.774	26.055	28	0.000
X20	3.34	0.614	28.903	28	0.000
X21	3.9	0.673	30.77	28	0.000
X22	4.28	0.649	35.065	28	0.000
X23	4.14	0.789	27.887	28	0.000
<b>General Mean</b>	3.762	0.715	28.156	28	0.000

It notes that the arithmetic average, of the year for the third hypothesis is (3.762) of five points. Which indicates the presence of a trace of the application of the concept of re-engineering business in the performance of industrial companies with a high degree. It show the results of the test (T) above it must reject the hypothesis of nowhere and accept the alternative hypothesis, where the all the variables of the study appear when the level of significance is less than (0.05). This is to accept the alternative hypothesis, which is; **there is a statistically significant relationship trends in the study sample about the impact of the application of the concept of re-engineering the business performance in industrial companies.**

### 6.6 Test the correlation coefficients between the studies variables associated with the third hypothesis:

Table (8) the results of the analysis of the link between some of the variables associated with the third hypothesis

Variables code	X15	X16	X17	X18	X19	X20	X21	X22	X23
X15		.384(*)	.535(**)	.507(**)	.413(*)	.374(*)		.371(*)	.592(**)
X16	.384(*)			.426(*)	.721(**)	.583(**)	.522(**)	.516(**)	
X17	.535(**)					.432(*)			
X18	.507(**)	.426(*)			.456(*)	.431(*)			
X19	.413(*)	.721(**)		.456(*)			.575(**)		
X20	.374(*)	.583(**)	.432(*)	.431(*)				.380(*)	
X21		.522(**)			.575(**)				
X22	.371(*)	.516(**)				.380(*)			.411(*)
X23	.592(**)							.411(*)	

\* Correlation at the level of significance ( $\alpha \leq 0.05$ ).

\*\*Correlation at the level of significance ( $\alpha \leq 0.01$ ).

The results of the previous table show the strength and direction of the correlation coefficients between variables. This indicates that the proportional relationship between the variables, as well as the strength of correlation coefficients between variables is medium when the level of significance (0.05) and the level of significance (0.01).

## 7. Conclusions and recommendations:

### 7.1 Conclusions:

Through the study, the researcher reached the following conclusions:

1. The application of the concept of re-engineering that would lead to many benefits for organizations applied to it, which represented by the strengthening of the competitive position, increase market share, increase production efficiency, and reduce cost.
2. The filed study reversed a result that the existence of a statistically significant relationship in the attitudes of the study sample towards the response and support industrial companies of the concept of re-engineering business. Also the availability requirements of the application of the concept of re-engineering business in industrial companies, and the impact of the application of the concept of re-engineering business in the performance of industrial companies.

### 7.2 Recommendations:

In light of the results of the study, the researcher suggests the following recommendations:

1. There is a need to seek industrial companies operating in Syria, whether in the public sector or the private sector towards the implementation of the concept of re-engineering.
2. Study of the obstacles that hinder the application of the concept of re-engineering of business establishments in the industrial sector, public or private.

### References

- 1) Alaleaoi, Satar Mejbel Talea. "Re-engineering the requirements of industrial processes and the possibility of their application in the Alswmod Company the General Steel Industries in Baghdad." (*Unpublished MA Thesis*), Faculty of Management and Economics, Arab Academy, Denmark, 2013 .
- 2) Ahlam, Khan. "Re-engineering processes as input for Excellence in Human Resources Management," *Journal of the University of Mohamed KHIDER Biskrh- Algeria, Economic Research and Administrative*, Issue (2), 2012, pp 153-179 .
- 3) Al-Baghdadi and others. "The impact of knowledge management re-engineering operations organization Aloamal- practical study in a lab frames Babylon," *Iraq, Journal of Economic Sciences*, Volume (5), number (21), 2008, pp113-148 .
- 4) Damanhour, Amal Mohammed Sheikh Hussein. "Factors Affecting the Application Process Reengineering - An Empirical Study in Saudi Arabian Airlines," *Journal of Al Quds Open University for Research and Studies*, Volume (2), number (31) .2013, pp41-86.
- 5) Digni, Eyad Ali. "Suggested Model for Business Process Reengineering and computerization in higher education institutions", Syria, *Damascus University Journal*, Volume 29, Issue (1), 2013, pp 317-355.
- 6) Dennis, Alan R. & Carte, Traci A. & Kelly, Gigi G. "Breaking the rules: success and failure in groupware-supported business process reengineering", *Decision Support Systems journal*, Vol. 36, No.1, (2003), pp31-47.
- 7) Hammer, Michael and Shambe, James. "Re-engineering Anizat- statement about a revolution in the business world," *the magazine wrote summaries of the manager and businessman*, the Arab Company for Scientific Information (Shuaa), Cairo, Egypt, number (20), 1993.
- 8) Kassahun, Asmaremerie. " The Effect Of Business Process Reengineering On Public Sector Organization Performance (A Developing Economy Context), (Doctoral Thesis Of Philosophy), 2012.
- 9) Kelada, Joseph, "Integration with the re-engineering of total quality management". (Translation by Srou Ali Ibrahim Srou), Riyadh: Dar AlMareh, 2004 .
- 10) Mahmood, Mehdi Dejla. "The impact of re-engineering to achieve competitive advantages," *Iraq, Technical Journal*, Volume 20, Issue 2, 2007, pp1-24
- 11) .Manjanila, and Raymond Klein, Mark. "Practical Guide to re-engineering", *the magazine wrote summaries of the manager and businessman*, the Arab Company for Scientific Information (Shuaa), Cairo, Egypt, Issue (6), 1995 .
- 12) Qasimi, Mohammed Mustafa. "Activation functions of re-engineering the business from the perspective of information and communication technology entrance integrative", Paper presented to the *Conference of the management of business organizations: the challenges of contemporary global / Applied Science Private University / Jordan*, 2009 .
- 13) Ranjanathan, C. Dhaliwal, Jasbir S. "A Survey of Business process Re-Engineering practices in Singapore", *information & management journal*, No.39, 2001.
- 14) Rifai, Mamdouh Abdel Aziz. *Process Re-engineering*, Faculty of Commerce, Ain Shams University, Cairo, Egypt, 2006 .
- 15) Yahya, Bernardo Nugroho. "Business Process Reengineering: Concepts, Causes and Effect", *Journal Technique Industry*, Vol. 4, No. 2, 2002, Pp102 – 110.

**Appendix 1  
 Questionnaire**

Dear Respondent:  
 Greetings:

The researcher prepared a paper entitled "Attitudes toward industrial companies apply the concept of re-engineering the business."  
 The aim of the researcher to identify trends in your views on companies towards the application of the concept of re-engineering the business, in terms of response efforts to identify and support companies towards this concept, the availability requirements that companies need to apply this concept, and the impact of the application of this concept in the performance of companies....

In order that the researcher developed a questionnaire containing a set of questions to answer:

**Strongly Agree 5      Agree 4      Not sure 3      Disagree 2      Strongly Disagree 1**

Therefore, you can benefit from the practical side in support of the theoretical side.  
 The researcher estimated fruitful cooperation to answer the questions contained in the questionnaire-attached list, and this confirms that the questionnaire designed for scientific research purposes only, and your answers will be the subject of strict confidentiality.  
 In addition, to you my sincere thanks and appreciation...

**The researcher**

**Section I: personal information and functional:**

Please kindly put signal (X) at the appropriate choice in the table below:

- 1- Gender: Male Female
- 2- Scientific specialization: Accounting Business Administration Financial and other banking
- 3- Qualification: Diploma Bachelor Masters Doctorate
- 4- Job title: General manager - Managing Director - Financial Director - Internal Audit Manager
- 5- Years of Experience: As in table below
- 6- Professional Certificate: As in table below

DESCRIPTIVE	DISTIRBUTION	
FIELD OF THE COMPANY'S BUSINESS.....		
Professional Certificate		
Sex	Male	
	Female	
Scientific specialization	Secondary or less	
	University degree	
	Postgraduate	
No. of Employee	Less than 50	
	50-300	
	More than 300	
Years of Experience	Less3 years	
	3-6	
	More than 6	

**Section II:**

There is in this part set of questions that related to the applied aspect of the study. Please answer these questions put signal (×) in front of what you see fit:

Paragraphs		Code				
<b>The responsiveness and support of industrial companies to re-engineer the business concept:</b>		5	4	3	2	1
X1	The need to have a commitment to and understanding of the application of the concept of management by re-engineering business.					
X2	Work to avoid unnecessary activities that do not add value to the customer.					
X3	Identify problems that hinder the good performance of the operations for processing and choose the best way to solve it.					
X4	Clearly focus on the needs of the market in which it operates Organization.					
X5	Forming work teams able to solve the problems of productivity and address the constraints and bottlenecks.					
X6	Encouraging teamwork is an important factor in the success of the application of the concept of re-engineering business.					
X7	The existence of effective programs for the training and education of staff in order to perform the functions to the fullest, and this in turn contributes to reduce workplace accidents, reduce errors, and increase the effectiveness of operations.					

Paragraphs		Code				
<b>Availability requirements needed by industrial companies to apply the concept of re-engineering of business:</b>		5	4	3	2	1
X8	Availability of support from senior management of organization to support the concept of re-engineering business.					
X9	The existence of effective leadership capable of leading business process re-engineering and work teams.					
X10	Creating an appropriate environment for application of the concept of re-engineering business, through a comprehensive assessment of internal and external environment and identify opportunities and threats, and determine the length of time necessary to carry out the re-engineering and commitment by them.					
X11	Careful to spread awareness to the concept of business re-engineering staff.					
X12	The need to focus on processes rather than departments. In addition, what matters is the type of service to customer or item do not produced relevant departments.					
X13	Available to the management of the company wanting to get rid of the old routine and rigid style of work and the transition to freedom and flexibility.					
X14	Focus on innovation and creativity as an approach in organizational processes.					

Paragraphs		Code				
<b>The impact of the application of the concept of re-engineering business in the performance of industrial companies:</b>		5	4	3	2	1
X15	The adoption of the application of the concept of re-engineering lead to a business combination with one disciplines in one place is the consequent save time, reduce costs, and to coordinate and organize the business.					
X16	The application of the concept of re-engineering the business to raise production efficiency, which in turn leads to the achievement of the benefits and savings in costs and timelines production processes.					
X17	It aims to apply the concept of re-engineering to increase the speed and flexibility of the core operations.					
X18	The application of the concept of re-engineering to reduce overlap and repeat the performance of tasks by combining similar operations in different departments.					
X19	The concept of re-engineering seeks to increase the degree of customer satisfaction for products and services are higher than achieved by products and services for the competitors.					
X20	The use of the concept of re-engineering helps to provide products or services in a quick and distinct, and this in turn works to enhance the competitive position of the company.					
X21	Works on the concept of re-engineering a clear focus on the needs of the market in which it operates organization, thereby achieving outstanding performance leads to increased market share for the organization.					
X22	Investigating the use of the concept of re-engineering and a clear improvement in the performance of the organization in the short and long term by improving productivity and improve customer service and diversification of products or services.					
X23	The adoption of the concept of re-engineering leads to increase the speed of response to market demands and reduce product development cycle time.					

The IISTE is a pioneer in the Open-Access hosting service and academic event management. The aim of the firm is Accelerating Global Knowledge Sharing.

More information about the firm can be found on the homepage:

<http://www.iiste.org>

### CALL FOR JOURNAL PAPERS

There are more than 30 peer-reviewed academic journals hosted under the hosting platform.

**Prospective authors of journals can find the submission instruction on the following page:** <http://www.iiste.org/journals/> All the journals articles are available online to the readers all over the world without financial, legal, or technical barriers other than those inseparable from gaining access to the internet itself. Paper version of the journals is also available upon request of readers and authors.

### MORE RESOURCES

Book publication information: <http://www.iiste.org/book/>

Academic conference: <http://www.iiste.org/conference/upcoming-conferences-call-for-paper/>

### IISTE Knowledge Sharing Partners

EBSCO, Index Copernicus, Ulrich's Periodicals Directory, JournalTOCS, PKP Open Archives Harvester, Bielefeld Academic Search Engine, Elektronische Zeitschriftenbibliothek EZB, Open J-Gate, OCLC WorldCat, Universe Digital Library, NewJour, Google Scholar

