

# International Journal of Multidisciplinary Comprehensive Research

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## The effect of re-engineering administrative processes in achieving competitive advantage: An analytical study of the opinions of a sample of workers in the General Company for Iraqi Ports

**Raad Abduljabbar AL-Hameed**

Department of Business Management Technologies, Administrative Technology College, Sothern Technical University /Basra- Iraq

\* Corresponding Author: **Raad Abduljabbar AL-Hameed**

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### Article Info

**ISSN (online):** 2583-5289

**Volume:** 02

**Issue:** 04

**July-August** 2023

**Received:** 05-06-2023;

**Accepted:** 03-07-2023

**Page No:** 42-50

### Abstract

This study endeavors to ascertain the degree to which re-engineering of administrative operations contributes to the attainment of competitive advantage in the company under investigation. Additionally, this research proposes novel mechanisms to surmount the impediments that hinder the development of performance in the sample company and enhance its overall performance. It is noteworthy that re-engineering of administrative operations is a contemporary approach employed in this regard. The present study involved the implementation of organizational changes within a company located in Basra Governorate. The research community comprised the employees of the company, while the selected ports for the study included Al-Maqil, Abu Flus, Al-Faw, Khor Al-Zubair, and Umm Qasr. The study population comprised of a cohort of 200 individuals who were employed in the aforementioned ports. The study was founded on a robust framework aimed at uncovering the operational strategies of the surveyed departments with the objective of enhancing their efficiency and attaining a competitive edge. Several hypotheses concerning the interplay between the research variables of administrative operations re-engineering and competitive advantage were subjected to empirical testing, and the resulting data was analyzed using statistical techniques. The present study utilized the SPSS software to conduct statistical analysis on data obtained through a questionnaire designed for the purpose of investigating the relationship between re-engineering of administrative operations and competitive advantage dimensions in the selected ports. The findings revealed a significant impact of re-engineering dimensions on the competitive advantage dimensions within the research sample.

**DOI:** <https://doi.org/10.54660/IJMCR.2023.2.4.42-50>

**Keywords:** re-engineering of administrative operations, achieving competitive advantage General Company for Iraqi Ports

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### Introduction

Contemporary and innovative organizations strive to effectuate fundamental transformations and modernize their operational framework and information infrastructure to facilitate the decision-making process and remain attuned to the alterations transpiring in their external milieu, thereby enhancing their competitive edge and sustaining their position within the competitive landscape. In order to actualize its objectives and bolster its organizational ethos towards fulfilling its future vision and strategic blueprint, a range of contemporary administrative approaches have been employed to achieve such aims as total quality management and administrative process re-engineering. With the advent of significant technological advancements and the emergence of the Internet, the re-engineering of administrative processes has been increasingly adopted. The development process holds significant importance in numerous organizations including companies, factories, ministries, and universities. Its ability to minimize costs and time while enhancing quality has garnered the attention of officials and leaders, particularly those in senior management positions. As such, it is imperative that the development process remains continuous and present.

Organizations are crucial for adapting to new developments, remaining competitive in a dynamic environment, and serving as a testament to human creativity. These entities are a direct response to the needs of a developed society, serving as a widely and systematically utilized tool for achieving shared objectives within a given context. The study was structured around four distinct axes. The initial axis was dedicated to the research methodology. The second axis was comprised of two sections. The first section explored the concept of re-engineering administrative operations and its various dimensions. The second section delved into the concept of competitive advantage and its dimensions. The third axis was focused on the practical application of the study. Finally, the fourth axis encompassed the study's conclusions and recommendations.

## Methodology

### Research problem

The research problem is the central issue or question that a research study aims to address. It is the primary focus of the research and provides the advent of the twenty-first century witnessed the emergence of sustainable competition as a formidable challenge to markets and resources. This phenomenon transcended its regional character due to the rapid advancements in information systems and communication technology, coupled with the swift environmental changes. As a result, companies were compelled to delve into a more profound philosophy and adopt a broader vision to attain sustainable competitive advantage, which would enable them to maintain their prominence. The identification and diagnosis of administrative process re-engineering have emerged as a pressing need for companies operating in intensely competitive environments. The need for sustainable competitive advantage becomes increasingly pressing in the face of rapid environmental change, which renders it temporary. Consequently, it is imperative to cultivate sources of sustainable competitive advantage through the re-engineering of administrative operations. This involves a critical variable in sustaining a company's core capabilities, which entails the integration of tangible and intangible skills and resources to achieve sustainable competitive advantage. Given the circumstances, the research inquiry can be formulated with the aim of addressing the subsequent inquiries: -

What is the extent of administrative process re-engineering that is present within that company under-researched?

Can the organization be deemed to possess a sustainable competitive edge, and if so, what is the extent of its advantage?

Can a sustainable competitive advantage be achieved through the re-engineering of administrative processes? What is the degree of association between the entities in question?

Does a causal relationship exist between the re-engineering of administrative processes and the attainment of sustainable competitive advantage? What is the degree or extent of the relationship?

Does the size of administrative process re-engineering have an impact on improving competitive advantage?

## Objective of the study

### The significance of the study is demonstrated through the subsequent aspects

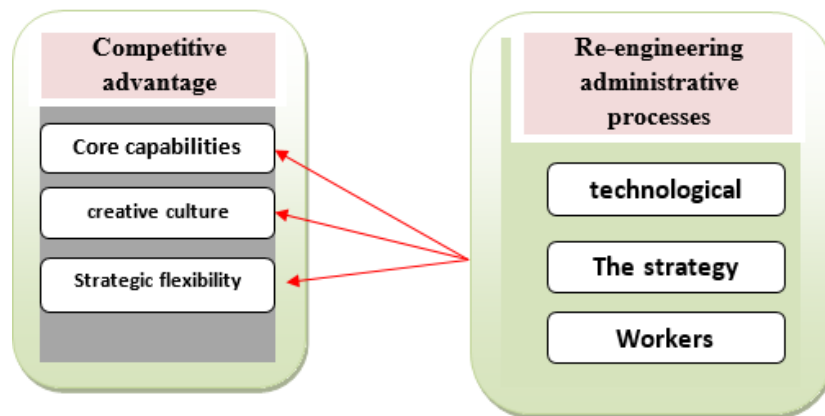
1. Assess the significance of the research variables, namely the re-engineering of administrative processes and the attainment of competitive advantage, within the context of the company under investigation.
2. The objective is to ascertain if a correlation exists between the re-engineering dimensions of administrative processes and the dimensions of competitive advantage within the company under investigation.
3. This study aims to provide proposals and recommendations to the surveyed banks with regard to mitigating the impact of administrative re-engineering and eliminating competitive advantage.

## Important of the study

The significance of the study was demonstrated through the variables under investigation, namely the re-engineering of administrative processes and the attainment of competitive advantage. These variables hold substantial importance within the economic sector, which serves as a crucial component of any country's economy. This is due to its pivotal role in facilitating financial transactions between fund owners and investors, particularly in the face of the rapid changes currently being experienced. The significance of investigating the impact of the global environment on the economic industry and the re-engineering of administrative processes cannot be overstated. This research is crucial in exploring both the theoretical and practical frameworks of this important topic in administrative work, with a focus on enhancing the competitive advantage of the company under study.

## Research hypothesis

The hypothesis diagram serves as a visual representation of the fundamental concept upon which the research is founded. Its purpose is to elucidate the dimensions of the research variables, the problem at hand, and the attainment of research objectives. The diagram aims to explicate the nature of the relationship between the research variables. The diagram comprises two primary variables: the independent variable (x), which pertains to re-engineering administrative processes, and the dependent variable (y). This represents a distinct advantage over competitors.



Source: prepared by the researcher

Fig 1: The hypothetical outline of the research

### Fifth: Research Hypotheses

#### The research is based on two main hypotheses

1. There is a statistically significant correlation between the re-engineering of administrative processes and the competitive advantage in the researched company.
2. There is a statistically significant effect of the re-engineering of administrative processes on the competitive advantage in the researched company.

#### The theoretical side

##### First: Re-engineering of administrative processes

##### First: the concept of re-engineering administrative processes

The global and local markets are experiencing significant expansion, prompted by insights garnered by companies indicating the necessity of modifying their operational procedures to enhance competitiveness. This is due to customers possessing ample information and knowledge regarding administrative services, thereby compelling companies to improve the quality of their customer service (Khan *et al.*, 2021). The implementation of changes in a company can be achieved through the utilisation of modern methods such as the re-engineering of administrative operations. This approach is recognised as a financial and administrative strategy that places great emphasis on the human and technical factor. Its main objective is to redesign fundamental operations with the aim of achieving a noteworthy enhancement in administrative standards and customer satisfaction (Novikov, 2016) <sup>[15]</sup>. Bertolini (2011) <sup>[4]</sup> characterised it as an all-encompassing overhaul of the process with the aim of acquiring facilities, technological products, and novel markets that cater to the evolving demands and anticipations of the consumer. This necessitates the continual design of the process in accordance with novel principles. According to Ottenbacher and Harrington (2009) <sup>[16]</sup>, in order to attain a robust advancement in performance metrics such as cost, quality, and prompt service, it is imperative for business practises and operations to be optimised.

##### Second: the dimensions of re-engineering administrative operations

##### Technology dimension

The incorporation of technology is a crucial component in any re-engineering initiative, as it serves as a significant contributor towards facilitating tasks and enabling the redesign of institutions, work methodologies, and the

attainment of remarkable advancements (FarajAllah, 2018) <sup>[7]</sup>. The emergence of digital financial technology has made a substantial contribution to the expansion of financial institutions and their operational efficiency. According to Mohsin (2023) <sup>[12]</sup>, information technology serves as a fundamental infrastructure that connects various aspects of an enterprise and is crucial for any re-engineering process. Additionally, it constitutes a fundamental basis for the competitive position of the enterprise. The various components of the organisation collaborate to facilitate the creative process, promote organisational integration, and foster cross-functional cooperation. According to Rosso (2014) <sup>[17]</sup>, the attainment of the creative process and quantitative outcomes is unattainable without viable technological remedies.

##### Strategic dimension

The strategic approach involves delineating the trajectory of the organization's future based on its available resources. This model encompasses the organization's overarching goals and objectives, as well as its philosophies, plans, and policies aimed at realising these goals. The organisation publicly declares these objectives to clarify its operational scope (Mohsin, 2022) <sup>[13]</sup>. The effectiveness of process re-engineering is contingent upon the level of alignment between the organisational goals and the re-engineering efforts. Hence, the crucial responsibility of senior management in guiding engineering operations through all significant procedures is of utmost importance, as stated by (Behie, 2023) <sup>[3]</sup>.

##### Workers Dimension

The term "employees" refers to the human resources that an organisation has at its disposal, encompassing all individuals who work for the organisation, regardless of their status as permanent or temporary staff, or their position within the organisational hierarchy. It is widely acknowledged that employees constitute the most crucial assets of organisations. Consequently, the productivity and efficacy of these entities are contingent upon the performance of this component. Numerous management professionals and practitioners contend that contemporary organisations cannot attain a competitive edge solely through the possession of physical or monetary resources. According to Sofyanty (2023) <sup>[18]</sup>, the effectiveness of the system is largely contingent upon its capacity to furnish specific individuals with the means to optimise the utilisation of other available resources.

Personnel: The implementation of re-engineering processes may not yield any benefits for the organisation if the human element is not adapted to the new requirements. A comprehensive review of staff prescriptions across various segments of the organisation is imperative. The process of re-engineering human resources within an organisation is referred to as the "re-engineering of human resources" due to its connection to the larger process of organisational re-engineering (Babii, 2023) <sup>[2]</sup>. The significance of human resources in an organisation lies in its capacity to mobilise and steer other resources towards the organization's objectives, thereby ensuring their optimal utilisation. The success or failure of an organisation is intricately tied to the calibre and conduct of its workforce, underscoring the criticality of effective recruitment and retention practises for organisational longevity. Hence, it is imperative for organisations to prioritise the employment of competent individuals to secure their continued existence. The topic under consideration pertains to individuals who possess a high level of proficiency and expertise, and the efficient administration of such individuals. The optimisation of human resource effectiveness is contingent upon the strategic placement of individuals who possess the requisite skills and qualifications to fulfil their designated responsibilities within the appropriate temporal framework (Chatwick, 2023) <sup>[5]</sup>.

### Competitive advantage

The notion of competitive advantage is a crucial concept as it represents a desired outcome that all organisations aim to attain. Organisations must exert effort to attain a competitive advantage that aligns with their resources and capabilities, as they are in perpetual competition with other organisations in their respective industries. It is imperative that organisations maintain and enhance this advantage, given the current era's emphasis on development and competition. Organisations engage in an ongoing process aimed at attaining a competitive position in the market. This involves identifying opportunities that can confer a competitive advantage and undertaking efforts to implement them. The notion of competitive advantage pertains to an organization's capacity to generate economic value that surpasses that of its rivals in the market, particularly in terms of procuring goods and services (Lieberman, 2023) <sup>[11]</sup>.

### Dimensions of competitive advantage

#### Core capabilities

The term refers to the capacity of an organisation to establish fundamental value that is manifested in proficiencies and competencies that are shared across its diverse production lines or business units. This enables the organisation to leverage its distinctive capabilities to attain enduring competitive advantages within its respective industry. The aforementioned contributing phenomenon results in a competitive advantage for the organisation by means of organisational processes that facilitate superior coordination in functional activities. The resource-based theory is a crucial foundation and origin of an organization's competitive advantage, which is rooted in the internal resources of the company, as well as the significance of the environment and achieving superior levels of customer satisfaction relative to competitors (Muneeb *et al.*, 2023) <sup>[14]</sup>. One of the fundamental competencies that holds significant value is the productive resources, encompassing a multifaceted bundle of external skill-based contributions. The attainment of a

competitive advantage is contingent upon the possession of exclusive resources and distinctive capabilities by the organisation. According to Hsu (2023) <sup>[8]</sup>, proponents of the resource-based perspective posit that certain resources possessed and managed by an organisation hold the potential to confer a competitive edge and ultimately enhance the firm's performance.

### Creative culture

This refers to a system of principles and convictions that motivate individuals to generate novel concepts and approaches, or to enhance existing ones, which are operationalized in the course of conducting business to influence the conduct of individuals and establish a culture that they engage with while carrying out their professional duties. Therefore, the culture of creativity shapes our beliefs and approach towards our work. In both intra-organizational and inter-organizational contexts, the modus operandi is centred around the notion that a fundamental belief in the attainment of innovative and practical outcomes is a necessary condition for fostering creativity. This perspective contrasts with the views of certain scholars who have posited alternative explanations. According to Wahyuningtyas *et al.* (2023) <sup>[19]</sup>, the development of an innovative culture that results in a competitive advantage is contingent upon the ability of individuals to collaborate in the provision of services, marketing, and manufacturing. As such, the organisational culture can serve as a valuable asset that cannot be replicated by competitors, thereby enabling the establishment of a sustainable competitive advantage.

### Strategic Flexibility

According to Daradkeh and Mansoor (2023) <sup>[6]</sup>, strategic flexibility is a crucial aspect for companies as it emphasises the flexible utilisation of resources, re-arrangement of operations, and showcases dynamic capabilities that enable companies to attain a competitive advantage in turbulent markets. Additionally, it creates an environment within the company that facilitates improvement of conditions and the absorption of new information. The proposed approach involves devising and executing proficient protocols, as well as delivering inventive resolutions within the occupational domain that cater to all clients and surpass their anticipations, while concurrently diminishing the likelihood of risk (Ismail, 2023) <sup>[9]</sup>.

### Practical Side

Abuhamda *et al.* (2021) <sup>[1]</sup> stated that, (Quantitative and qualitative methods are the engine behind evidence-based outcomes). The researcher addressed the procedures of the field study by formulating a study questionnaire that delineated the study population and its sample, as well as the statistical techniques employed in data analysis. The survey instrument was devised to gather data from the personnel of the organisation and was crafted in a comprehensible and uncomplicated format to ensure the precision of responses.

The document comprised two primary sections:

- The first part comprised the individual-specific information of the sample, encompassing gender, age, educational attainment, and professional tenure.
- The second part pertains to the evaluation of the influence of re-engineering administrative operations on the competitive edge of Iraqi ports.

The study sample's responses were measured using a five-point scale, which was also utilised as a reference point for evaluating the overall level of each axis in the study. The study focused on all commercial ports in Iraq, namely Al-Maqal Port, Abu Flus Port, Al-Faw Port, Khor Al-Zubair Port, and Umm Qasr Port. However, due to limited access to information, oil ports were excluded from the research. The

sample size consisted of individuals working in the aforementioned ports, with 200 questionnaires distributed. Responses were obtained from 70 department and division managers, while 75 questionnaires were returned unanswered and 55 were discarded. Table 1 displays the search locations and corresponding sample sizes for each location.

**Table 1:** Research sample

No.	Port	Code	Number of individuals surveyed
1	Al-Ma'akel port	Port1	13
2	Abu Flus port	Port2	20
3	Al-Faw port	Port3	15
4	Khor Al Zubair Port	Port4	12
5	Umm Qasr Port	Port5	10
	Total		70

**Description of the research sample**

Most of the members of the research sample are males, as their percentage reached 74%, while the percentage of females was 26%. As for the ages of the research sample, it varied between 30 years and less to 60 years and more, and this is contrary to the general retirement law for the year

2014, considering the year 60 years of the employee's age as the current age To retirement, the reason is due to the fact that some people exceed this age due to special privileges, such as political prisoners and families of martyrs. Table (2) explains this:

**Table 2:** Distribution of the study sample according to gender, age, educational attainment and experience

Samples	Number of questionnaires	Percentage	Description of the sample
Sex	52	%74	Male
	18	%26	Feminine
Age	8	.4 %11	Less than 30 years old
	12	.1 %17	31-40 years old
	15	.4 %21	41-50 years old
	18	%26	51-60 years old
	17	.1 %24	60 years and over
Educational attainment	18	26 %	Below middle school
	10	14 %	Diploma
	26	37 %	Bachelor's
	11	16 %	Master's
	5	7 %	Ph.D
Years of Experience	20	28.5 %	Less than 5 years
	30	43%	5-10 years
	20	28.5 %	10 years and over

**Study variables**

It is possible to know whether there is a direct relationship with the hypotheses formulated in the theoretical aspect or not by using multiple linear regression because it is the most appropriate in analyzing the hypothesis, so:

**Dependent variable = fixed limit + regression coefficient (independent variable) + regression coefficient (dependent variables) + random error**

As for the parameters of the regression model, the equation is as follows:

The linear equation in multiple linear regression is:

$$Y = a + b1X1 + b2X2 + ..... + e$$

Where Y = the dependent variable and represents the competitive advantage of the ports (C-Competitive)

a = Constant or Intercept value

b1 = slope of the y regression on the first independent variable

b2 = slope of y regression on the second independent variable

1X = first independent variable (technology)

2X = second independent variable (strategy)

X3 = third independent variable (workers)

**Multiple linear regression can be used if the following conditions are met**

1. The relationship should be linear between the independent variables and the dependent variable.
2. The data should be normally distributed for the independent variables and the dependent variable.
3. The values of the dependent variable must be at least ordinal.

Measurement of the dependent variable (competitive advantage)

The five-point scale was used to encode the answers of the research sample, and they were as follows:

Mark for the answer (strongly disagree)

Two marks for the answer (Not agreeing)

Three degrees for the answer (neutral)

Four marks for the answer (OK)

Five marks for the answer (strongly agree)



The following table (3) shows the dimensions chosen for this variable (dependent)

**Table 3:** Dimensions of the competitive advantage of the dependent variable

Code	Dimensions of the competitive advantage of ports (dependent variable)
	Core capabilities
C-y1	The port management seeks to provide services at competitive prices with other ports
C-y2	The port administration provides services in line with the needs of customers
C-y3	Existence of studies interested in determining the costs of services provided to customers
C-y4	There are serious efforts to improve the services provided to customers
	creative culture
C-y5	Applying modern and advanced methods of managing business in the port
C-y6	Customer acceptance of the services provided by the port administration
C-y7	Rapid provision of services by the port administration to be accepted by the customer
C-y8	There is a real keenness to manage the port in providing distinguished service to the customer
	Strategic flexibility
C-y9	The existence of a new strategy for the port management to win customers over other ports
C-y10	Changing the old port management strategies with regard to the costs collected
C-y11	Adopting applied strategies in solid international ports
C-y12	Compatibility of the port management strategy with the aspirations of customers
C-y13	Customer participation in preparing port management strategies
C-y14	The presence of claims from customers to change the port's business strategy

Table (4) shows the dimensions of the independent variable (re-engineering administrative processes) To find out the possibility of re-engineering administrative processes and

their impact on the competitive advantage of Iraqi port administrations, and in order to explore their views, the following dimensions were adopted:

**Table 4:** Shows the dimensions of the independent variable

Code	Dimensions of re-engineering the administrative operations of the ports (independent variable)
	technology
C-x1	Port management uses digital technology to satisfy customers' needs
C-x2	Technology helps increase the competitive advantage of port management
C-x3	Port management is able to control the risks arising from the use of technology
C-x4	Technology helps in doing business quickly and accurately
	The strategy
C-x5	There is a role for the strategy used in strengthening core capabilities
C-x6	An effective strategy contributes to increasing the creative culture of the port workers
C-x7	The business re-engineering strategy contributes to increasing the flexibility of the port management strategy
	Workers
C-x8	Employees have a role in business re-engineering that helps increase competitive advantage
C-x9	Employees' response to business change from traditional to electronic
C-x10	The culture of employees is in harmony with the change in the port management strategy

#### Statistical analysis of the data

The data was analyzed through the SPSS program, as well as the answers contained in the questionnaire in terms of tabulation.

#### Cronbach's Alpha Test for Validity and Reliability

Table (5) shows the results of the Cronbach's Alpha test for

validity and reliability (Cronbach's Alpha) for the elements of the study variables, so we find that the value of Cronbach's Alpha ranges between (0.660 and 0.675) and for all variables, which is a high value and greater than (0.6), and this indicates a strong correlation between the answers.

**Table 5:** Cronbach's Alpha Test for Validity and Reliability (Cronbach's Alpha)

Axis	Content	Number of vertebrae	Cronbach's alpha
1	Competitive advantage	<b>14</b>	0.660
2	Re-engineering of administrative processes	<b>10</b>	0.675

#### Analyze the results of the factor analysis variables of the study

Correlations Matrix Analysis: The factorial analysis begins with the correlation matrix and its suitability for analysis, according to pre-determined criteria. Therefore, we find that the value of:

The KMO value ranges between (0.791 and 0.560) for all study variables, which is greater than (0.5). This indicates the

suitability of the correlation matrix according to the CARES criterion.

The value of Bartlett test for circularity (sig=.000), which is less than (0.05), where the null hypothesis is rejected and the alternative hypothesis is accepted, meaning that the correlation matrix is not a singular matrix.

Table (6) shows the Bartlett test for circularity and the KMO scale for the variables of the study

**Table 6:** KMO index and Bartlett test for study variables

Dependent Variables		
Competitive advantage		
Measurement accuracy of KMO samples		0.609
Bartlett's circular test	Chi approx	532.688
	(df) degrees of freedom	<b>91</b>
	(sig) Significance	0.000

Cont..

Independent variables		
Re-engineering of administrative processes		
Measurement accuracy of KMO samples		0.602
Bartlett's circular test	Chi approx	219.999
	(df) degrees of freedom	45
	(sig) Significance	0.000

From here, we find the quality of the representation of the elements of the impact of re-engineering administrative processes variable and the value of the element's correlation

in each paragraph of technology, strategy and personnel, according to Table No. (7) as follows:

**Table 7:** Correlation value for each element of the independent variable

Code	Link icon
C-x1	0.583
C-x2	0.575
C-x3	0.593
C-x4	0.774
C-x5	0.703
C-x6	0.588
C-x7	0.810
C-x8	0.842
C-x9	0.705
C-x10	0.685

**Analysis of the main components of the variable re-engineering of administrative processes**

We note from the following table the eigenvalue corresponding to each factorial axis, so we will rely in the factor analysis on the value 0.4, the percentage of acceptance of the variable's association with the interpretation clauses,

so we find that 47% of the phenomenon under study is a high percentage and acceptable as an explanatory factor. Table (8) shows the total variance explained by process reengineering Administrative through operations Analysis of the basic components of the administrative process re-engineering variable.

**Table 8:** The total variance explained by the re-engineering of administrative processes

Statement	Initial value			The sum of the squared factors			
	Total %	Variance %	Accumulation %	Total %	Variance %	Accumulation %	
<b>Factor</b>	<b>1</b>	4.740	47.402	47.402	4.740	47.402	47.402
	<b>2</b>	2.374	23.742	71.144			
	<b>3</b>	0.740	7.397	78.541			
	<b>4</b>	0.565	5.652	84.193			
	<b>5</b>	0.525	5.250	89.443			
	<b>6</b>	0.340	3.398	92.841			
	<b>7</b>	0.265	2.650	95.491			
	<b>8</b>	0.217	2.167	97.659			
	<b>9</b>	0.129	1.288	98.947			
	<b>10</b>	0.105	1.053	100.00			

The matrix is characterized by the possibility of observing the variables associated with each of the extracted factors, which depend on the methods of description and reason.

**Analysis of the main components of the competitive advantage variable**

The same exploratory factor analysis method used in analyzing the main components of the competitive advantage variable will be adopted, as shown in Table (9):

**Table 9:** Analysis of the main components of the competitive advantage variable

Statement	Initial value			The sum of the squared factors			
	Total %	Variance %	Accumulation %	Total %	Variance %	Accumulation %	
Factor	1	3.913	47.952	47.952	3.913	47.952	47.952
	2	2.907	10.761	58.713			
	3	1.950	3.927	62.641			
	4	1.203	8.594	71.235			
	5	0.952	6.801	78.035			
	6	0.710	5.073	83.109			
	7	0.568	4.058	87.167			
	8	0.423	3.021	90.187			
	9	0.398	2.845	93.033			
	10	0.336	2.401	95.434			
	11	0.272	1.945	97.379			
	12	0.156	1.112	98.491			
	13	0.131	0.934	99.425			
	14	0.080	0.575	100.00			

By observing the above table, it was found that the worker's weight was high, and that all values exceeded the acceptable minimum, which is (0.5), as it indicates the possibility of relying on these measures, in addition to the high value of the variation amounting to (47%), which is a good percentage compared to the acceptable percentage of 60%.

#### Test the study hypothesis

Multiple linear regression was used as an appropriate method for analyzing hypotheses. Regression analysis is used to find the relationship between a dependent variable and a variable or group of independent variables. But if the sign of the constant is negative, the relationship will be inverse, that is, an increase in the independent variable will lead to a decrease in the dependent variable. As for determining the significance of the relationship between the dependent variable and the independent variable, a t-test is performed. If the calculated value of t is greater than the value of t or less than the value of - Tabular t with a specific degree of freedom and a significant level, then the relationship between the independent variable and the dependent variable is significant, but if the value of -t, t is tabular, then the relationship between the two variables is not significant.

It is possible to find out the contribution of the independent variable in explaining the dependent variable by finding the value of the coefficient of determination 0% if the independent variables did not contribute to explaining the

changes in the dependent variable and 100% if the independent variables contributed to explaining all the changes in the dependent variable, and to know the suitability of the regression model in studying the relationship between Variables The F test is used to find out the appropriateness or inappropriateness of interpreting the relationship between the two variables, that is, when the calculated value of F is greater than the tabular value, it indicates that the relationship between the variables is appropriate.

To find out the overall significance of the model, the simple correlation coefficient R is used, which measures the strength of the relationship between two or more variables. As for R<sup>2</sup>, it is called the coefficient of determination, which is used to know the explanatory power of the estimated model in the case of simple linear regression. In order to know the independence of the explanatory variables, Pearson Correlation coefficient was used, which It shows if there is a strong linear correlation between the values of the explanatory variables of the regression model to be estimated, and the following table shows that there is a weak correlation between all the variables because the values of the obtained correlation coefficients did not exceed 50% except for two variables in which the correlation coefficient was high 75%, from that we conclude that all The obtained correlation coefficients did not reach the limit that leads to the occurrence of the problem of collinearity because they did not exceed 50% as in Table No. (10).

**Table 10:** Pearson test results

	Re-engineering of administrative processes	Gender	Age	Educational Attainment	Years of Experience
Re-engineering of administrative processes	<i>I</i>	.073	-.132	.057	.078
Gender		<i>I</i>	-.107	.057	-.041
Age			<i>I</i>	.149	.107
Academic achievement				<i>I</i>	.061
Years of Experience					<i>I</i>

#### Results of the main hypothesis analysis:

The main hypothesis states that there is a statistically significant relationship between the re-Indianization of administrative operations in Iraqi ports and the competitive advantage of Iraqi ports.

Through the results of the study, it was observed that the regression constant was significant and was positive, which indicates the existence of a direct relationship between the re-

engineering of administrative operations in the ports and the improvement of the competitive advantage in the ports. = 6.997, B = 0.630), which indicates a positive direct relationship.

From this we conclude that the main factor of the independent variable (strategy) has a positive and significant effect in terms of moral significance, and this is what leads to accepting the hypothesis.



### Conclusions and Recommendations

Information technology plays a vital and major role in re-engineering administrative processes through internal communication networks, and provides a database for all units that helps in accuracy and speed of obtaining information and achieves integration and coherence between parts of a single work within the organization. The re-engineering of administrative processes also contributes to good communication for the exchange of service-related information between employees and customers in an easy and simple manner by providing the required forms and filling them out, which are easy to understand by customers with the provision of identification booklets. There has been a prominent role for the methods used in the re-engineering of administrative processes in the impact Enhancing cohesion and stability in implementing the important role and achieving the company's strategic goals. As the statistical results showed that the independent variable, re-engineering of administrative processes, played an important role in bringing about major changes, by introducing new systems in its work that help speed up work through the use of modern technology that leads to profit. Finally, the dimensions of the re-engineering of administrative operations represented by (technology, strategy, employees) contribute to influencing the dimensions of competitive advantage represented by (core capabilities, creative culture, strategic flexibility). The recommendations that we can conclude from this study are that the re-engineering of administrative processes is necessary in a constantly changing world. It is necessary to keep pace with these changes and take advantage of the techniques used that increase the coherence of efforts towards achieving the previously planned goals. The training programs provided to the workers must be intensified, and they must be provided with all the required information that will develop the efficiency of the workers, and the use of modern technical methods in the practice of the training process, and this is not done without the management's emphasis on modern technical methods in the practice of the training process. It is necessary to take care of the human cadres within the researched company and develop their skills and capabilities in performing their work.

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