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## Article

# Impact of enterprise resource planning system on realizing of competitive advantage and consumer satisfaction in Rajhi Steel Industries Co. Ltd

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# IMPACT OF ENTERPRISE RESOURCE PLANNING SYSTEM ON REALIZING OF COMPETITIVE ADVANTAGE AND CONSUMER SATISFACTION IN RAJHI STEEL INDUSTRIES CO. LTD

*BECHIR FRIDHI, SULTAN AL-OTAIBI, MENAHI AL-SUBAIE, HASSAN ASSIRI, ABDULMOHSEN AL-ODHAIB*

## Abstract:

The study aimed to identify the impact of the application of resource planning to achieve competitive advantage in consumer Al Rajhi Steel factory and pleasing system. As well as to identify the differences in consumer satisfaction according to the variable number of years dealing with the company. To achieve the goal of the study was the use of a quantitative descriptive approach. Where the study was applied on a simple random sample consisting of (111) customers and direct consumers of the company's products. A questionnaire was applied to achieve the objectives of the study. The results have resulted in the presence of a statistically significant effect of the application of ERP system in Al-Rajhi Steel Company in the Kingdom of Saudi Arabia on the competitive advantage of consumers and harms very much. It turns out that there are no statistically significant differences at the level of significance ( ) between the mean scores of the study sample to the impact of the application of resource planning system in Al-Rajhi Steel Company in the Kingdom of Saudi Arabia on the consumer and customer satisfaction estimates due to a variable number of years dealing with the company. One of the main recommendations of the study continue to develop resource planning and expansion of its database system to cover all sections of the companies that use partially; as well as training courses for companies operating resource planning system in order to raise the efficiency and sustainability of the follow-up entry updates on this system.

## Keywords:

Al-Rajhi Steel Company, Competitive Advantage, Resource Planning System,

**JEL Classification:** D12, L23

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## 1. Introduction

Recently there was a notable development in all fields, the most important one is information technology development with its complication in processes and change in work environment, therefore companies increasingly required developed information systems that meet their further needs and requirements of their clients and customers and to achieve competitive priorities (Al-Bardini, 2014).

Companies should determine way of competition in their services to satisfy direct and indirect consumer, in existence of great competitive circumstances faced by companies and organizations, where different types of companies desire to obtain complete confidence from customers and consumers, so companies must provide all methods of rest and reassurance for consumer, therefore this company must be a reliable source of product quality which should be delivered in time, also the price must be competitive to the other companies, this is which motivated the companies to apply efficient strategies and administrative systems in this field, perhaps the most important of these strategies and administrative systems are enterprise resource planning (ERP).

Recently, there was a remarkable turnout from some companies towards using of enterprise resource planning (ERP), because it is an administrative system which realizes cooperation between all the company's departments and provides a unified database that available for all, plus it can increase productive capacity and improvement of different jobs management, and to develop innovative solutions to achieve control on operations (Abu Dhaifallah, 2017).

Furthermore, application of enterprise resource planning (ERP) leads to accordance between the system and business procedures, this accordance significantly affects in extent that company can satisfy customers needs, it also helps the administration to determine the best business practices and to prepare the administration with intact information for decision-making which contribute in achievement of competitive goals of the company (Al-Haltah, 2013).

## 2. Problem of the Study

Many studies; such as (Abu Dhaifallah, 2017), (Al-Bardini, 2014), (Al-Haltah, 2013) and (Spathis & Constantinides, 2004), indicated that under increased interest of companies to develop themselves and to adopt administrative systems that attract consumer and realizing a competitive advantages among similar companies, so some companies depended on enterprise resource planning (ERP) which has rapid results in information exchange and raising the company efficiency and effectiveness, therefore realization of competitive advantage throughout satisfaction of customers requirements within high- quality specifications.

Many international companies generally applied this system due to its great advantages which were more than cost of this system, where (Hewlett-Packard's) Company for Computer Systems Manufacturing and Distribution in Europe, achieved many benefits that it improved its operations regarding decreasing delivery time to exceed 95% and decreasing time of productive circle with 80% associated with

decreasing of stock rate with 30%, it also decreased distribution cost with 70%, therefore it realized a great competitive advantage in its work field. (Al-Bardini, 2014). It is recently noticed that big Saudi companies were interested in application of enterprise resource planning (ERP), this study will try to answer the main questions of the study which is what is impact of enterprise resources planning (ERP) on realization of competitive advantage and consumer satisfaction in Rajhi Steel Industries Co. Ltd. in Kingdom of Saudi Arabia.

### **3. Questions of the Study**

The study will try to answer the following questions:

- 1- What is extent to realize competitive advantage from application of enterprise resource planning (ERP) in Rajhi Steel Industries Co. Ltd. in Kingdom of Saudi Arabia?
- 2- What is satisfaction extent of consumers and customers from application of enterprise resource planning (ERP) in Rajhi Steel Industries Co. Ltd. in Kingdom of Saudi Arabia for competitive advantage?
- 3- Are there any significant difference at ( $\alpha < 0.05$ ) between average of estimations degrees of the study sample regarding impact of enterprise resource planning in Rajhi Steel Industries Co. Ltd. in Kingdom of Saudi Arabia on satisfaction of consumers and customers which attributed to variable of number of years in dealing with the company?

### **4. Hypotheses of the Study**

Hypotheses of this study are as the following below:

- 1- As per view of customers, there is significant impact from application of enterprise resource planning (ERP) in Rajhi Steel Industries Co. Ltd. in Kingdom of Saudi Arabia on competitive advantage
- 2- There is significant impact from application of enterprise resource planning (ERP) in Rajhi Steel Industries Co. Ltd. in Kingdom of Saudi Arabia on satisfaction of consumers and customers.
- 3- There are no significant differences at ( $\alpha < 0.05$ ) between average of estimations degrees of the study sample regarding impact of enterprise resource planning in Rajhi Steel Industries Co. Ltd. in Kingdom of Saudi Arabia on satisfaction of consumers and customers which attributed to variable of number of years in dealing with the company.

### **5. Objectives of the Study**

Objectives of this study as the following:

- 1- To determine impact of using enterprise resource planning (ERP) by Rajhi Steel Industries Co. Ltd. on realization of competitive advantage.
- 2- To determine impact of using enterprise resource planning (ERP) by Rajhi Steel Industries Co. Ltd. on satisfaction of consumers and customers.

### **6. Importance of the Study**

Importance of the study of enterprise resource planning appears in its influence in realization of competitive advantage, because it is one of modern systems that

lacking to be studied in Arabic libraries, also for its great effect on the success of companies and distinction from other traditional ones.

Furthermore, it is expected that results of this study benefit other companies in Kingdom of Saudi Arabia which use traditional systems to seriously review and think to use enterprise resource planning (ERP).

## **7. Limitations of the Study**

- Temporal Limitations: they restrict the year 1441H – 2019.
- Spatial limitations: they restrict Rajhi Steel Industries Co. Ltd. in Kingdom of Saudi Arabia.
- Human Limitations: the study was applied on a sample of direct customers and consumers for products of Rajhi Steel Industries Co. Ltd.

## **8. Terminology of the Study**

### **8.1. Enterprise resource planning (ERP):**

it is an information system which designed to coordinate all required resources, information and activities to complete business operations; such as accounting, production, purchases....etc, where this system basically depends on common database and special programming design, the common database allows business departments to save and retrieve information during activity period, while programming design allows business management to choose the required forms and arranging and linking them with supplier forms and to add special new ones in order to improve performance . (Al-Haltah, 2013).

### **8.2. Competitive Advantage:**

Competitive advantage is identified that it has risen once the organization discovers new methods more effective than ones used by competitors, that it can model this discovery in the field, in other words, to occur innovation process in its wide concept. (Mansouri, 2012).

### **8.3. Rajhi Steel Industries Co. Ltd.:**

It is one of Mohammed Abdulaziz Al-Rajhi Companies, it consists of many factories which specialized in production of different types of steel products, the factories use the most modern technologies and equipments to produce high quality products and in accordance with local and international standards, the factories have a wide network of customers in local and gulf markets and great number of Arab countries.

## **9. Previous Studies:**

### **9.1. Study of (Spathis & Constantinides, 2004):**

This study aimed to identify impact of using enterprise resource planning (ERP) in enhancement of competitive capacity for number of business organizations in Greece, the study concluded that adaptation of enterprise resource planning extremely changed in business operations (especially accounting), and this led to provide a real opportunity for many companies (the research sample) to re-engineering their activities towards reform of their information systems from one side

and their business applications from other side. As per this study, enterprise resource planning (ERP software) became a basic tool to keep the competitive position of business organizations.

### **9.2. Study of (Barakat, 2011):**

This study aimed to identify if there is an actual application for enterprise resource planning in Saudi industrial companies, then to determine impact of this system on investment for industrial shareholding companies in Saudi Arabia, the researcher used the descriptive analytic method, the study tool was the questionnaire, results of the study showed that enterprise resource planning has impact on investment in industrial shareholding companies in Saudi Arabia.

### **9.3. Study of (Al-Faouri, 2012):**

This study aimed to detect the effective impact of enterprise resource planning on realization of distinctive institutional performance in Amman Great Governorate, the study sample included financial directorate in Amman Great Governorate who use enterprise resource planning, the study tool was the questionnaire, the study sample consisted of (100) enterprise resource planning users in Amman Great Governorate, results of the study indicated that there was a significant relation between effectiveness of enterprise resource planning (information quality, system quality, user satisfaction) and its unified influence on performance distinction of Amman Great Governorate.

### **9.4. Study of (Al-Haltah, 2013):**

This study aimed to identify influenced factors on success of enterprise resource planning, the research used the descriptive analytic method, the study tool was the questionnaire which was distributed into (71) averaged and small companies which use enterprise resource planning (ERP), the study concluded to many results; the most important that independent variables related to (efficiency of information technology department and support the suppliers of enterprise resource planning) have significant impact on information quality, also the independent variable (efficiency of information technology department) has significant impact on the system quality, and the independent variables related to (efficiency of information technology department support the suppliers of enterprise resource planning) have significant impact on service quality.

### **9.5. Study of (Al-Honaiti, 2016):**

This study aimed to identify impact of enterprise resource planning (ERP) on cost decreasing in Al-Hikma Pharmaceuticals Co. in Jordan, the researcher used the descriptive method, the study tool was the questionnaire, the study was applied on a sample of (190) employees of the company; included administrators, accountants and workers at department of manufacturing and sales, the results revealed that there was a significant impact for elements of enterprise resource planning (ERP) (manufacturing and sales and delivery and stock and requirements) on cost decreasing in Hikma Pharmaceuticals Co.

**9.6. Study of (Qasrawi, 2016):**

This study aimed to identify impact of competitive priorities on organizational performance, to test mediated role for using enterprise resource planning, adaptation of electronic business, field study for branches of Arab Bank in Amman city. To achieve objectives of this study, a questionnaire was designed to collect data from the study sample, the study population consisted of all branches directors, heads of departments in Arab Bank in Amman city. Due to small size of the study population, it decided to make a comprehensive survey for all the study population. The study sample consisted of (126) out of (128) distributed questionnaires, the study concluded many results, such as: there was a significant impact for priority of cost and quality, and flexibility in using of enterprise resource planning (ERP), but not for rapid delivery. There was a significant impact for priority of quality, rapid delivery in adaptation of electronic business technology, but for flexibility and the cost, there was a significant impact on using of enterprise resource planning (ERP) and adaptation of electronic business technology in organizational performance, there was no mediated role for using enterprise resource planning (ERP) at impact of competitive priorities on organizational performance. There was a partial mediated role to adopt electronic business technology, and integration between them and enterprise resource planning at impact of competitive priorities on organizational performance.

**9.7. Study of (Abu Dhaifallah, 2017):**

This study aimed to detect impact of enterprise resource planning represented in (integration, materials management, production planning, systems quality, and control) in performance of supply chain represented in (response and cooperation, economical cost, consumer satisfaction, relation with suppliers) in Pharmaceuticals Companies in Jordan, the researcher used the descriptive analytic method, he used the questionnaire which was distributed into (180) persons who use enterprise resource planning, results of the study indicated that application level of enterprise resource planning and level supply chain performance was high, and there was a significant impact at enterprise resource planning (ERP) represented in ((integration, materials management, production planning, systems quality, and control) in performance of supply chain represented in (response and cooperation, economical cost, consumer satisfaction, relation with suppliers).

**9.8. Study of (Hazhoudah, 2017):**

This study aimed to emerge impact of enterprise resource planning (ERP) as a type on improvement of economical foundations performance, throughout searching in relation between requirements of enterprise resource planning (ERP) and index of performance improvement, the study population was economical foundation in Algeria, whether Algerian or foreign, public or private, productive or services, big or averaged, then using of questionnaire as the study tool, the study sample consisted of (275) persons which represented in the study population, the results of the study concluded that requirements of enterprise resource planning differ as per difference between foundations of the study, and view of these foundations regarding improvement of performance varies as per its difference nature, also impact of integrated information system on performance improvement differs as per difference of foundations worked in Algeria.



## 10. Theoretical Framework

It is clear that all types of companies seek to have an accurate competition strategy, which in accordance with work circumstances, so companies that seek to achieve success and distinction have to determine their competitive priorities that use in response to requirements of labor market. (Qasrawi, 2016).

To achieve competitive force in product and performance, some companies tend to care of its administrative system throughout using modern administrative systems that have efficiency on level of competency realization in production and commitment of appointments and satisfaction of customers and consumers.

In this regards, enterprise resource planning (ERP) falls within a group of information systems that work to achieve integration between operations and information which considered as a base axis in applications of electronic business from one side and electronic commerce from other side, where enterprise resource planning (ERP) works to achieve integrated linking throughout providing a mechanism that participates in using available data system (regardless of professional field) and mechanism to update these data associated with display screens present characteristics of time and accuracy from other side. (Mohammed et al, 2016).

Enterprise resource planning aims to help the administration throughout determination of the best practices of business and providing with intact information that contribute in decisions-making in time, enterprise resource planning was designed to improve all aspects of main operations across posterior offices of the company, from planning to implementation plus management and control (Al-Hatlah, 2013).

### 10.1. Definition of Enterprise Resource Planning (ERP):

Although enterprise resource planning is a modern system, but some researchers did their best to develop a definition for this system, we will try to highlight on some of these definitions.

It was defined by (Willis, 2009) as an integrated system that allows organization to unify the information system to link its basic operations, it provides staff with required information for direction and control essential activities of the company on supply chain from production or exploitation to sale and even final delivery to the customer, employees enter information only one time, after that it will be available for organization systems (Atayatallah, 2016, P3).

It was defined by (O'Leary) as a package of software which enables the organization to achieve integration between different functions that distributed within the organization, it also provides the base for increasing electronic commerce process (Jaballah, 2015).

It was defined by (Al-Faouri, 2012, P11)) as interaction of elements that work each other to perform the objective, that it is parts, elements or divisions which connect each other with logical relationships, that means they integrate and interact for certain goals.

It was defined by (Mazhoudah) as a group of necessary mechanisms, methods and visions, that help business organizations to achieve correlation and coordination between different types of information systems, starting from unified database, which enables the organization to build an information system capable to go along with

surrounded changes, especially regarding control on data size, and providing stakeholders and different beneficiaries with high quality information, in less possible cost, which make it a leader in its activity field.

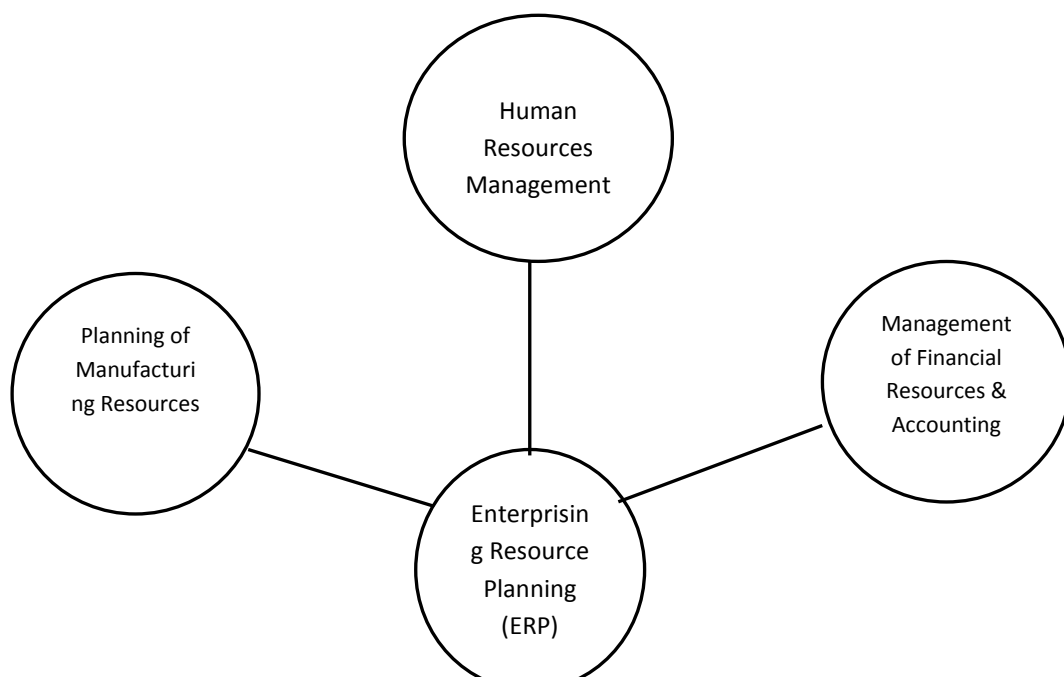
Researchers think that enterprise resource planning can be defined as an integrated information system that connects all units and branches of the company with one unified database, aiming to coordinate in performance between all units and branches of the company, in order to facilitate obtaining data to ease process of decision-making and instruction implementation.

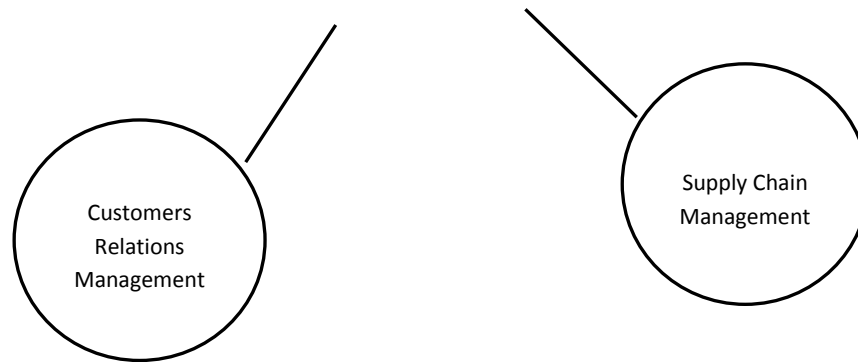
### 10.2. Elements of Enterprise Resource Planning (ERP):

Enterprise resource planning includes five basic elements (Al-Birdini, 2014) are the following:

- 1- Human resources management: it includes manpower planning, salaries and incentives, training and development, jobs description, employees scheduling and other functions of human resources management.
- 2- Management of financial resources and accounting: it includes general budget of the company, income statement, accounts of receivables and payables, assets management.
- 3- Management of supply chain: it aims to support the developed communications with the supplier, electronic commerce, required activities that need storage and efficient material distribution.
- 4- Management of customers relations: it helps in sales analysis, marketing, accessibility to customers from who the company can gain more profits, post-sale services.
- 5- Planning of manufacturing resources: it includes interest of production scheduling, storage management, materials lists, purchase orders.

**Figure (1): Elements of Enterprise Planning**





*Source: Al-Birdini, 2014, P16)*

### **10.3. Information Content of Enterprise Resource Planning (ERP):**

Understanding of information content of enterprise resource planning requires to understand working nature and mechanism of this system, it was summarized by (Mohammed et al, 2016) as the following:

#### **10.3.1. Data of Strategic Resources Planning:**

This group includes data related providing and presenting of new products, product pricing, material invoicing, planning of energy and long-term prediction, engineering of change management, accomplishment operations of this type of data involves on screens design that contain formats for each of the above-mentioned cases, work accomplishment system (WAS) is used in implementation and correspondence this type of information.

#### **10.3.2. Data of Operational Resources Planning:**

This group includes data related to processing of operational activities. For example directing, orders processing, suppliers management. Warehouses and storage management, short-term prediction, distribution management, scheduling and production management. It uses technology of electronic data interchange (EDI) in order to implement processing related to this type of data.

#### **10.3.3. Data of Strategic Resources Planning:**

This group includes data related to planning of artificial intelligence resources, human resources, quality management. Data accomplishment of this group is based on creation and using database technology.

#### **10.3.4. Data of Operational Resources Planning:**

This group includes data related to planning of appointment operations, salaries and wages, job planning and performance evaluation, costs and budgets, quality planning and control, resources of management information, management of fixed assets, engineering and scheduling of maintenance operations, it uses imaging technology in implementation of correspondence related to accomplishment regarding data of this group.

### **10.4. Advantages of Enterprise Resource Planning (ERP):**

Advantages of Enterprise Resource Planning are the following below: (Atayatalh, 2016):

- Gradual implementation of the project, because the program is implemented by one unit.

- Coordination between different application of the same company, that means data in the company has the same shape and can easily be exchanged.
- Ability of solutions adaptation.
- User can immediately retrieve data or save them.
- Updates in database can be done within actual time and published to rest of units.
- Coherence and consistency of information, that means there is a unified file database for all bodies.
- Integration and unification of information systems.
- Decreasing cost, there are no limitations between units and processing concurrence.
- It helps in control of assignment and terms of implementation.

#### **10.5. Success Factors of Enterprise Resource Planning (ERP):**

Success factors that contribute in enterprise resource planning can be summarized in the following: (Jaballah, 2015, P16)

- 1- Participation and support of both supreme administration and employees to the system and good communication between them.
- 2- Proper planning and system application management, plus experience and effectiveness of the director who responsible for the system application project.
- 3- Readiness of the company for required change of the system application with availability of required financial support for application.
- 4- To choose a good team with experience and high skill to manage the project of system implementation, beside enough and efficient training for operative users.
- 5- Availability of required performance measurements to evaluate administrative performance to ensure that there is a required organizational change in the system application.
- 6- Adequacy of systems to operate the system and quality of technological infrastructure.
- 7- Availability of system programs, beside existence of consultancy companies in field enterprising resource planning.

#### **11. Impact of enterprise resource planning (ERP) on competitive advantage and satisfaction of consumers and customers:**

Competitive priorities in quality, cost, flexibility and rapid delivery were classified, enterprise resource planning played an effective role in realization of competitive force and consumer satisfaction in these aspects, that study of (Qasrawi, 2015) concluded that application of enterprise resource planning (ERP) realizes competitive force in low cost, then rapid delivery, quality and flexibility.

Other studies, such as (Yen & Sheu, 2004) indicated that competitive priorities influence on practices of enterprise resource planning, it confirmed that there was significant impact at priorities of quality and rapid delivery in adaptation of electronic business technology, also study of (Huang, et al, 2010) indicated that there was a significant impact on application of enterprise resource planning in job performance and consumer satisfaction.

## 12. Method and Procedures of the Study:

### 12.1. Method of the Study:

The quantitative descriptive method was used in this study, throughout calculation of study sample responses on questionnaire that prepared by researchers.

### 12.2. Population and Sample of the Study:

Population of the study consisted of all direct customers and consumers of Rajhi Steel Industries Co. Ltd. products in Kingdom of Saudi Arabia during (1441H-2019), the study was applied on a simplified random sample consisted of (111) direct customers and consumers for the company products.

**The following below is the statistical description of the study sample:**

**First: classification of the study sample as per age variable:**

**Table (1): distribution of study sample as per age variable:**

Age	Number	Percentage (%)
Less than 30 years	32	28.8
From 30 to 40 years	42	37.8
More than 40 years	37	33.3
Total	11	100.0

Source: Authors

**Second: classification of the study sample as per variable of number of years in dealing with Rajhi Steel Co.**

**Table (2): distribution of study sample as per variable of number of years in dealing with Rajhi Steel Co.**

Age	Number	Percentage (%)
Less than 5 years	62	55.9
From 5 to 10 years	37	33.3
More than 10 years	12	10.8
Total	111	100.0

Source: Authors

**Third: classification of the study sample as per variable of educational level:**

**Table (3): distribution of study sample as per variable of educational level:**

Age	Number	Percentage (%)
Secondary and less	27	24.3
Diploma	21	18.9
Bachelor	43	38.7
Postgraduate Studies	20	18.0
Total	111	100.0

Source: Authors

### **13. Tool of the Study:**

To realize aim of the study which is to detect impact of enterprise resource planning on realization of competitive advantage and satisfaction of consumer in Rajh Steel Co., the following tool was used:

Questionnaire to measure impact of enterprise resource planning on realization of competitive advantage and satisfaction of consumer in Rajh Steel Co.

#### **13.1. Description of the study tool as the following:**

Questionnaire was made to identify impact of enterprise resource planning throughout referring to the previous studies related to this subject; such as study of (Al-Birdini, 2014), study of (Al-Hatlah, 2013), study of (Qasrawi, 2016), and study of (Atayataallah, 2016). After that, the questionnaire has been put in its first form where included (15) paragraph distributed into two axis, the first is impact of enterprise resource planning (ERP) on realization of competitive advantage and it included (5) paragraphs, and the second one is impact of enterprise resource planning (ERP) on consumer satisfaction and it included (10) paragraphs, be noted that each paragraphs had its own independent choices which be corrected as per (Likert Scale), the questionnaire also included personal data of direct customers and consumers for the company products, which are: age, number of years in dealing with the company, educational level.

To measure sincerity of the questionnaire and its validity for application, it was presented to a committee of (6) specialists, to obtain their opinions and making suitable modifications, some arbitrators indicated to rewrite and modify some paragraphs to become more obvious, and there was no indication to delete any paragraph from the questionnaire, therefore number of paragraphs became (15), also internal consistency sincerity of the questionnaire paragraphs was calculated after applying it on a random sample of (32) direct customers and consumer for the products of Rajh Steel Company and all of them are outside from framework of the study sample, but they had their same characteristics and all paragraphs of the study realized significant correlation with total degree of the questionnaire at (0.05 and 0.01), the questionnaire constancy was calculated in two methods: stability coefficient in mid-segmentation for total degree of the questionnaire (0.949) which was high value, and in (Gronbach Alpha) (0.921) which was high value, that assure researchers to validity of questionnaire to be applied on the total sample.

Therefore, the questionnaire in its final form consisted of (15) paragraphs distributed into two axis, the first is impact of enterprise resource planning (ERP) on realization of competitive advantage and it included (5) paragraphs, and the second one is impact of enterprise resource planning (ERP) on consumer satisfaction and it included (10) paragraphs.

#### **13.2. Procedures of the Study Tools Application:**

After finishing from all modifications, the questionnaire was applied on the study sample under adequate circumstances, so application was done and the questionnaire was distributed to the study sample, it can found at a link online and to be filled by direct customers and consumers for products of Rajhi Steel Company, then all answers were collected and to be corrected and analyzed.

Correction of the Study Tool:

After collection of answers, they were corrected as per (Likert Scale), response method for paragraphs of questionnaire related to enterprise resource planning was determined as the following:

**Table (4): correction method of questionnaire related to enterprise resource planning (ERP):**

<b>Strongly Accepted</b>	<b>Accepted</b>	<b>Neutral</b>	<b>Unaccepted</b>	<b>Strongly unaccepted</b>
5	4	3	2	1

Source: Authors

The score shown in the table is calculated, and the opposite should be used in the negative paragraphs.

### 13.3. The Approved Test in the Study Tool:

To determine the approved test in the study, cells were determined in (Likert Scale), throughout calculation the extent between scale score ( $5-1=4$ ), then to be divided into the biggest value in the scale to obtain height of the cell, that means ( $4/5=0.80$ ), after that this value to be added to the less one in the scale which is (one) to determine the maximum of this cell, thus height of the cell become as shown in the following table which explains impact levels of enterprise resource planning (ERP).

**Table (5): the approved test in the study (questionnaire)**

<b>Height of Cell</b>	<b>Estimation</b>
From 1 to 1.80	Very little
From 1.81 to 2.60	Little
From 2.61 to 3.40	Average
From 3.41 to 4.20	Big
From 4.21 to 5	Very big

Source: Authors

## 14. Statistical Processing:

Data were processed using Statistics Package for Social Science (SPSS), aiming to answer the study questions, check the study hypotheses by the following statistical methods:

- Frequency, arithmetic mean, standard deviation and percentage.
- Mono-variance analysis test (One-Way ANOVA), for two independent samples and above.

### 14.1. Results of the Study and Discussion:

After confirmation of the tool adequacy for measurement of enterprise resource planning (ERP) on realization of competitive advantage and consumer satisfaction in Rajhi Steel Company, and applying on the study sample, the researchers present a detailed display of the results with interpretation and discussion throughout answering the study questions and verification of its hypothesis.

### 14.2. Results Related to the Study Questions, Hypothesis and Interpretation:

#### First: Results Related to the First Question and Discussion:

The first question is: what extent of realization of competitive advantage on enterprise resource planning (ERP) in Rajhi Steel Company in Kingdom of Saudi Arabia?

To answer this question, the following zero hypothesis was formed: there was a significant impact from application of enterprise resource planning (ERP) in Rajhi Steel Company in Kingdom of Saudi Arabia on the competitive advantage as per view of customers.

To test this hypothesis, arithmetic means, standard deviations and classes of competitive advantage in the questionnaire were calculated, and all paragraph of this axis, this was shown in the following table:

**Table (6): arithmetic means and standard deviations for axis of enterprise resource planning (ERP) on realization of competitive advantage:**

No.	Paragraphs	Acceptance Degree					arithmetic mean		Standard deviation	Order
		Strongly accepted	Accepted	Neutral	Unaccepted	Strongly Unaccepted	Value	Acceptance Degree		
1	Administrative system followed in Rajh Steel Co. contributes to make the company product is more quality than other companies	59	28	13	10	1	4.21	Very big	1.028	4
		53.2%	25.2%	11.7%	9%	0.9%				
2	Administrative system followed in Rajh Steel Co. contributes in rapid delivery in time	51	38	15	7	0	4.20	Big	.903	5
		45.9%	34.2%	13.5%	6.3%	0%				
3	Administrative system followed in Rajh Steel Co. is a flexible one which increases demand size for the company products by consumers	53	38	12	7	1	4.22	Very big	.938	3
		47.7%	34.2%	10.8%	6.3%	0.9%				
4	Administrative system followed in Rajh Steel Co. contributes to attract customers due to good service provided to consumer	56	33	19	3	0	4.28	Very big	.844	1
		50.5%	29.7%	17.1%	2.7%	0.9%				
5	Administrative system followed in Rajh Steel Co. contributes in price competition with other companies	52	39	15	5	0	4.24	Very big	.855	2
			35.1%	13.5%	4.5%	0%				
	Total of Axis Paragraphs						4.229	Very big	.880	--

Source: Authors

From table (6), we notice that, there was a significant impact from application of enterprise resource planning (ERP) in Rajh Steel Company in Kingdom of Saudi Arabia on competitive advantage as per view of customers, where the arithmetic mean was (4.229) which was very big according to the applied scale in this research, the paragraph number (4) which stated: "Administrative system followed in Rajh Steel Co. contributes to attract customers due to good service provided to consumers", this paragraph has been awarded the first order and customers considered as in very good degree, and the arithmetic mean was (4.28); while the paragraph number (2) which stated: "Administrative system followed in Rajh Steel Co. contributes in rapid delivery in time" has been awarded the last order, but in a big degree, the arithmetic mean was (4.20). Researchers attributed this result to the



effective role of enterprise resource planning (ERP) in organizing of administrative and financial aspects, quality management, flexibility and decreasing of cost which leads to realization of competitive advantage for the company.

This result is in accordance with results of (Sapthis & Constantinides, 2004), it also agrees with study of (Qasrawi, 2016), and agrees also with study of (Al-Faouri, 2012).

### Second: Results Related to the Second Question and Discussion:

The second question is: what extent of satisfaction of consumers and customers from application of enterprise resource planning (ERP) in Rajhi Steel Company in Kingdom of Saudi Arabia for competitive advantage?

To answer this question, the following zero hypothesis was formed: there was a significant impact from application of enterprise resource planning (ERP) in Rajhi Steel Company in Kingdom of Saudi Arabia on satisfaction of consumers and customers.

To test this hypothesis, arithmetic means, standard deviations and classes of consumer satisfaction in the questionnaire were calculated, and all paragraph of this axis, this was shown in the following table:

**Table (7): arithmetic means and standard deviations for axis of enterprise resource planning (ERP) on consumer satisfaction:**

No.	Paragraphs	Acceptance Degree					arithmetic mean		Standard deviation	Order
		Strongly accepted	Accepted	Neutral	Unaccepted	Strongly Unaccepted	Value	Acceptance Degree		
1	Administrative system followed in Rajh Steel Co. help in providing consumer requirements easily	58	34	13	6	0	4.30	Very big	.880	4
		52.3%	30.6%	11.7%	5.4%	0%				
2	Administrative system followed in Rajh Steel Co. accelerates commercial operations between the company and consumers	51	35	20	3	2	4.17	Big	.943	10
		45.9%	31.5%	18%	2.7%	1.8%				
3	Administrative system followed in Rajh Steel Co. contributes to save time and effort for consumers and customers	52	39	11	9	0	4.21	Very big	.926	8
		46.8%	35.1%	9.9%	8.1%	0%				
4	Administrative system followed in Rajh Steel Co. improves shipping and receiving of products	53	42	12	4	0	4.30	Very big	.0804	3
		47.7%	37.8%	10.8%	3.6%	0%				
5	Administrative system followed in Rajh Steel Co. contributes in rapid communication between the company and customers and consumers	51	42	14	4	0	4.26	Very big	.0817	5
		45.9%	37.8%	12.6%	3.6%	0%				
6	Administrative system followed in Rajh Steel Co. contributes in rapid reply to customers complaints and follow-up	48	42	16	5	0	4.20	Big	.851	9
		43.2%	37.8%	14.4%	4.5%	0%				
7	Administrative system followed in Rajh Steel Co. contributes to provide good service for consumer after sale process	51	42	14	4	0	4.26	Very big	.817	6
		45.9%	37.8%	12.6%	3.6%	0%				
8	Administrative system followed in Rajh Steel Co. improves to obtain invoices and amount details quickly	53	45	11	2	0	4.34	Very big	.732	1
		47.7%	40.5%	9.9%	1.8%	0%				
9	Administrative system followed in Rajh Steel Co. helps in decrease errors between the company and consumers	50	44	11	5	1	4.23	Very big	.873	7
		45%	39.6%	9.9%	4.5%	0.9%				

10	Administrative system followed in Rajh Steel Co. is effective and useful for consumers satisfaction	55	37	17	2	0	4.31	Very big	.795	2
		49.5%	33.3%	15.3%	1.8%	0%				
	Total of Axis Paragraphs						4.258	Very big	.6935	---

Source: Authors

From table (7), we notice that, there was a significant impact from application of enterprise resource planning (ERP) in Rajhi Steel Company in Kingdom of Saudi Arabia on satisfaction of consumers and customers, where the arithmetic mean was (4.258) which was very big according to the applied scale in this research, the paragraph number (8) which stated: " Administrative system followed in Rajh Steel Co. improves to obtain invoices and amount details quickly ", this paragraph has been awarded the first order and customers considered as in very good degree, and the arithmetic mean was (4.34); while the paragraph number (2) which stated: "Administrative system followed in Rajhi Steel Co. accelerates commercial operations between the company and consumers" has been awarded the last order, but in a big degree, the arithmetic mean was (4.17). Researchers think that enterprise resource planning (ERP) significantly contributes in organizing of transactions between the company and consumers and customers, which leads to facilitate operations of sale and all types of commercial transactions and follow-up post-sale operations and accessibility of product in favor of customers and consumers satisfaction.

This result is in accordance with results of (Al-Faouri, 2012), it also agrees with study of (Al-Honaiti, 2016), and agrees also with study of (Qasrawi, 2016), it also agrees with study of (Abu Dhaifallh, 2017)

### Third: Results Related to the Third Question and Discussion:

The third question is: are there significant differences at ( $\alpha \leq 0.05$ ) between average degrees of the study sample for impact of enterprise resource planning (ERP) in Rajhi Steel Company in Kingdom of Saudi Arabia on satisfaction of consumers and customers which attributed to variable of number of years in dealing with the company?

To answer this question, the following zero hypothesis was formed: there was no a significant impact at ( $\alpha \leq 0.05$ ) between average degrees of the study sample for impact of enterprise resource planning (ERP) in Rajhi Steel Company in Kingdom of Saudi Arabia on satisfaction of consumers and customers which attributed to variable of number of years in dealing with the company.

To test this hypothesis, (One-Way ANOVA) was used for two independent samples in impact of enterprise resource planning (ERP) in Rajhi Steel Company in Kingdom of Saudi Arabia on satisfaction of consumers and customers which attributed to variable of number of years in dealing with the company, the results as are shown in table (8):

**Table (8): results of (One-Way ANOVA) to test differences in impact of enterprise resource planning (ERP) in Rajhi Steel Company in Kingdom of Saudi Arabia on satisfaction of consumers and customers which attributed to variable of number of years in dealing with the company.**

Axis	Difference Source	Total of Boxes	Freedom Degrees	Average of Boxes	(F) Value	Significance Level	Statistic significance
Consumer Satisfaction	Between Groups	.643	3	.321	.664	.517	Non-Statistic Significance
	Within Groups	52.268	108	.484			

Source: Authors

## 15. Conclusion and Recommendations :

In the light of results of the current study, the researcher recommend the following:

- 1- Companies which work in Kingdom of Saudi Arabia should use effective administrative systems, such as enterprise resource planning (ERP) due to its effective impact on competitive advantage and consumer satisfaction.
- 2- Continuance in development of enterprise resource planning (ERP) and to expand its work base to involve all departments of the company that partially used it.
- 3- The study advises researchers and readers to make intensive efforts to conduct further studies about enterprise resource planning (ERP) in Kingdom of Saudi Arabia, taking into account result of this study, and to apply these studies on other Saudi companies in order to generalize results of the study.
- 4- Continuance to control and follow-up technological developments on the level of administrative systems and to apply those might be useful and serve interest of companies.
- 5- To hold training courses for companies used enterprise resource planning (ERP) in order to elevate efficiency and continuous follow-up to enter updates to this system.

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