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THE ROLE OF ENTERPRISE RESOURCES PLANNING (ERP) IN REDUCING ENTERPRISE COST AND IMPROVING THE QUALITY
"AN APPLIED STUDY ON THE SYRIAN FOOD COMPANIES"

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Abstract

Depending on the descriptive and analytical approach to address the issue, through the review and analysis of scientific references and periodicals related to it. We try by this study to know the effect between acquaintance of Enterprise Resources Planning (ERP) and the enterprise cost and quality , through delivering the questionnaire , unloading, analysis and interpretation of results. by the end of study we found the items of sample have good acquaintance in ERP concept , also theire realization of ERP reflects on cost & quality in good level . in addition to There is a direct impact for cquaintance in ERP concept on quality & cost axis .

To achieve the research goal we designed questionnaire according to the research variables, and was distributed to the (111) food companies in Syria. Using the method of multiple regression of a package of statistical programs (SPSS.18.0).

Key words: ERP(Enterprise Resources Planning) –Improving- Cost-TQM.

Paper type: Research paper

1. Introduction

 Information technology (IT) coupled with enterprise systems and electronic commerce (EC) have supported large-scale business transformations, and forced firms to change their structures and functionality as well as their business strategies. According to Davenport (1998) the most important development in the corporate use of IT has been the introduction of enterprise resource planning (ERP) systems. These systems allow a company to share common data and practices across the enterprise and produce and access information in a real-time environment. These systems are designed to solve the fragmentation of information in large business organizations, and integrate all information flows within a company.

The enterprise resource planning (ERP) system is an integrated set of programs that provides support for core organizational activities such as manufacturing and logistics, finance and accounting, sales and marketing, and

human resources. An ERP system helps the different parts of the organization share data and knowledge, reduce costs, and improve management of business processes.

The purpose of this article is to provide a high-level conceptual framework that will assist in understanding what ERP is and how to go about implementing it, and Readiness of Organizations To Applicate Enterprise Resources Planning, Applied to Food Companies in SYRIA.

2. The Importance of Research

The research derives its importance from the following:

2/1. The scientific importance:: the importance of research stems from it being an important subject did not find sufficient attention by researchers in the Arab world, where the scarcity of studies on this subject.

2/2. The practical importance: it comes from the research results can help to create future view for company readiness to apply ERP system . In addition to the knowledge of ERP role in reducing enterprise cost and improving process quality.

3. The Research Objectives

3/1 – Identify ERP role in reducing enterprise cost.
3/2 – Identify ERP role in improving enterprise quality.
3/3 – Identify ERP role in improving enterprise control process.
3/4 – Highlight ERP concept and overview some food companies applied this system to know the importance of ERP and its role in the enterprise
3/5 – Ability to supply a base or integrated network that has the information in current time in punctual way for all departments whatever they far away or different their jobs .

4. The Search Problem
We can determine the search problem through answering the
following questions :
4/1 – how much is the acquaintance of Enterprise Resources Planning (ERP) in the companies in the research sample?.
4/2 – what is the level of quality and cost in the companies In the research sample? .
4/3 – what is the effect of acquaintance of Enterprise Resources Planning (ERP) in reducing the Enterprise cost for companies in research sample ?
4/4 – what is the effect of acquaintance of Enterprise ResourcesPlanning (ERP) in improving level of enterprise quality for the companies in research sample ?

5. Research Hypothesis

5/1 – the acquaintance of Enterprise Resources Planning (ERP)doesn't affect significantly in reducing the enterprise cost .
5/2 – the acquaintance of Enterprise Resources Planning (ERP) doesn't affect significantly in improving the quality level in the enterprise .
5/3 – the perception level of employee did not differ in the companies in research sample for Enterprise Resources Planning (ERP) concept by differ their following personal characteristics : (sex , age , degree , experience).

6. The Research Society and Sample

The research society included the food organizations in Syria. while the research sample was 60 food organization, which have been selected depending on the method of random facilitated sample.

7. Method of Collecting Data

By purpose of collecting the necessary data for this research, we designed a questionnaireand delivered 111 survey to employee and managers that is important to survey their view point in order to complete the research.
we have been using Likert scale consisting of five levels with all questions concerning the research variables, as follows:

     ○   ○   ○   ○   ○

Strongly agree - Agree – neutral- disagree – strongly disagree

8. Method of Data Analysis

The data were analyzed and the hypotheses were tested based on a set of statistical methods using the program (SPSS.18.0), like:
    1- Alpha cronbach's coefficient
    2- sample items distribution by number and percentage
    3- Descriptive statistics (Average , deviation).
    4- Method of simple Regression analysis
    5 – Method of one - Variation analysis One - Way ANOVA.

9. Research Methodology

The research combine between theoretical study and practical study:

1.The theoretical study :Depending on the descriptive and analytical approach to address the issue, through the review and analysis of scientific references and periodicals related to it.

2.The practical study: it aim to know the effect between acquaintance of Enterprise Resources Planning (ERP) and the enterprise cost and quality ,

through delivering the questionnaire ,unloading, analysis and interpretation of results.

10 . The Search Model and Variables

Shown in Figure (1) below the search model and variables

Dependent Variables   **Independent Variable**
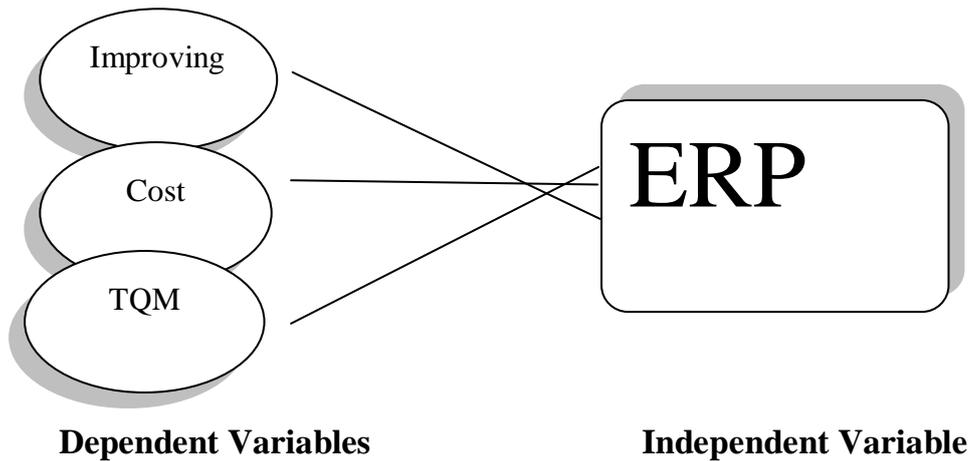
1 . The Independent Variables

Enterprise Resources Planning (ERP) Enterprise resource planning software, or ERP, doesn't live up to its acronym. Forget about planning—it doesn't do much of that—and forget about resource, a throwaway term. But remember the enterprisepart. This is ERP's true ambition. It attempts to integrate all departments and functions across a company onto a single computer system that can serve all those different departments' particular needs . That is a tall order, building a single software program that serves the needs of people in finance as well as it does the people in human resources and in the warehouse. Each of those departments typically has its own computer system optimized for the particular ways that the department does its work. But ERP combines them all together into a single, integrated software program that runs off a single database sothat the various departments can more easily share
    information and communicate with each other That integrated approach can
  have a tremendous payback if companies install the software orrectly.
Take a customer order, for example. Typically, when a customer places an order, that order begins a mostly paper-based journey from in-basket to in-basket around the company, often being keyed and rekeyed into different departments' computer systems along the way. All that lounging around in baskets causes delays and lost orders, and all the keying into different computer systems invites errors.

Meanwhile, no one in the company truly knows what the status of the order is at any given point because there is no way for the finance department, for example, to get into the warehouse's computer system to see whether the item has been shipped. "You'll have to call the warehouse" is the familiar refrain heard by frustrated customers . ERP vanquishes the old standalone computer systems in finance, HR, manufacturing and the warehouse, and replaces them with a single unified software program divided into software modules that roughly approximate the old standalone systems. Finance, manufacturing and the warehouse all still get their own software, except now the software is linked together so that someone in finance can look intothe warehouse software to see if an order has been shipped. Most vendors' ERP software is flexible enough that you can install some modules without buying the whole package. Many companies, for example, will just install an ERP finance or HR module and leave the rest of the functions for another day.

Enterprise Resource Planning (ERP) is not a new concept to organizations. The functions performed by ERP systems are essentially the same basic business functions that organizations have performed for decades. However, with advances in computerization and networking, computer-based ERP systems have only emerged in the last two decades. The use of computer-based ERP systems by companies of all sizes and functions contributes to their productivity (Glasgow 2002).

2. The Dependent Variables

IMPROVING: It means To raise to a more desirable or more excellent quality or condition; make better, to increase the productivity or value of asset and put to good use; use profitably . In addition to make beneficial additions or changes.

COST: It means An amount paid or required in payment for a purchase; a price ,the expenditure of something, such as time or labor, necessary for the attainment of a goal . In economic term it means the price paid or required for acquiring, producing, or maintaining something, usually measured in money, time, or energy; expense or expenditure; outlay and in trade it means the amount paid for a commodity by its seller . also it means what is paid for an activity in terms of effort or money or the time of delivery.

TQM: Total quality management or TQM is an integrative philosophy of management for continuously improving the quality of products and processes. It is used around the world.

TQM functions on the premise that the quality of products and processes is the responsibility of everyone who is involved with the creation or consumption of the products or services offered by an organization. In other words, TQM capitalizes on the involvement of management, workforce, suppliers, and even customers, in order to meet or exceed customer expectations. Considering the practices of TQM as discussed in six empirical studies,

identified the nine common TQM practices as cross-functional product design, process management, supplier quality management, customer involvement, information and feedback, committed leadership, strategic planning, cross-functional training, and employee involvement.

11. Literature Review

Many of literature about this subject Included several broad definitions of Enterprise Resources planning.

1-Enterprise Resources planning:

Many books and articles included many vast definitions from outer resources including :

1. ERP role in integrating process in enterprise wherein integration between high level administration and other sub-departments , also integration between sub-departments (marketing , human resources , production , finance , management information system) and other integration type .

2. ERP role in improving control process in enterprise through identifying the problems and feedback process then correcting mistakes and suggesting the alternatives so generating regular periodical reports for this goal .

3. ERP role in adjusting enterprise cost wherein working on cutting the job cost and involved resources cost , also working on reducing the process time cost so reducing effort.

4. ERP role in control

5. ERP role in improving total quality level so ERP system help to place quality standards so measuring the quality level then generating periodic reports about the company for different periods and working on supplying better service (for the agent – employee – other departments) .

An enterprise resource planning (ERP) system is an attempt to create an integrated product that manages the majority of operations in a company.
It is defined by Scott (2002) as: "a suite of integrated corporate wide software applications that drives manufacturing, financial, distribution, HR, and other business functions in a real time environment".
And Bidgoli, Hossein, (2004) defined as : " Enterprise resource planning (ERP) integrates internal and external management information across an entire organization, embracing finance/accounting, manufacturing, sales and service, customer relationship management, etc. E¬RP systems automate this activity with an integrated software application. Its purpose is to facilitate the flow of information between all business functions inside the boundaries of the organization and manage the connections to outside stakeholders"

Derek Slater(1999) introduced ERP as a software system that aims to serve as a backbone for your whole business.
It integrates key business and management processes to provide a sky level view of much of whats going on in your organization. ERP tracks company financials, human resources data and if applicable all the manufacturing information such as where you put your inventory and when it needs to be taken from the parts warehouse to the shop floor.

Kumar and van hillegersberg (2000) define ERP system as configurable information system packages that integrate information and information-based process within and across corporate financial area .

Thomas Wailgum (2011) considered ERP It attempts to integrate all departments and functions across a company onto a single computer system that can serve all those different departments' particular needs.

Dr. Bruce Zhang (2005) define ERP as "the acronym of Enterprise Resource Planning. ERP utilizes ERP software applications to improve the performance of organizations' resource planning, management control and operational control. ERP software is multi-module application software that integrates activities across functional departments, from product planning, parts purchasing, inventory control, product distribution, to order tracking. ERP software may include application modules for the finance, accounting and human resources aspects of a business."

PC magazine encyclopedia defined ERP as "An integrated information system that serves all departments within an enterprise. Evolving out of the manufacturing industry, ERP implies the use of packaged software rather than proprietary software written by or for one customer. ERP modules may be able to interface with an organization's own software with varying degrees of effort, and, depending on the software, ERP modules may be alterable via the vendor's proprietary tools as well as proprietary or standard programming languages."

2- Cost :

The cost of new ERP systems could range from $50 million to $500 million or more, depending on the size of the organization and the ERP systems selected (Davenport 1998).
On the other hand Owens-Corning, as a result of installing an ERP system, was expected to avoid an annual expense of $35 million dollars in information system maintenance (White et al. 1997). Johnson (1998) stated that General Motors (GM) Corporation estimated savings of $400 million a year after its information system was integrated. This included elimination.
Of 70% of the 1800 local information systems in GM's finance department alone.

Most companies using ERP systems calculate their ROI as a result of expected savings in inventory and other costs compared with the total cost of implementation.
ERP systems that performed effectively reduced the cost of production and shipping,
resulting in an average saving of $1.5 million per year (Stedman 1999).
The cost savings included the fact that most companies that sought an ERP system had a need to replace some parts of their existing systems. Thus, some costs and conversion time (included in the calculations of ROI) would be incurred regardless of the fact that these companies choose to implement an ERP system or not Joachim (2002).

The ERP training costs are difficult to measure. None of the literature reviewed offered a method of estimating the employee training costs. This was partially because the amount of training required would be specific to the ERP system being used and the users' previous experience.

ERP employee training is without a doubt a necessity. In cases where a company must utilize consultants for the ERP system—whether for training employees or actually operating the ERP system—the company should expect to pay $150–225 per hour for a consultant (Wheatley 2000). Therefore, training employees to perform tasks in order to reduce the need for a consultant is a must.
companies used their ERP systems to eliminate redundant data entry functions performed by their employees. enterprise could not quantify the amount of savings in human power that resulted from its ERP system, since it did not have a prior ERP system. But qualitatively speaking, it was believed that the ERP system for enterprise saved a great deal of labor time It also prevented extra and redundant work and made many tasks more efficient. other enterprise believed that the savings were definitely present in the departments that were fully utilizing the ERP system. Projections for this enterprise included a savings of approximately 30 hour of human power per week.

Adel M. Aladwani (2001)The cost minimization strategy should be developed in such a way that it affects both individual workers and influential groups. On the individual level, the ERP system has to minimize the perceived cost for each employee in order to create a positive adoption attitude.

3- Improving :

Ettlie (2000) focused research on the question of how we account for the differences in outcomes of adoption of new process technologies that are intended to improve organizational coordination and integration.
ERP systems could assist companies in many ways. For example, in a manufacturing setting, they produce reports to order supplies, to construct work schedules that improve the flow of products along the assembly line, and to record a precise bill of materials for products. These are only a few

applications of ERP in the manufacturing area within the broad context of the ERP systems which are applicable to many different industries and settings.

Companies identified significant benefits of their ERP system, along with improvements in efficiency compared with not using the system. The overall effectiveness of ERP systems however, were largely dependent upon how effectively and how completely the functions and activities were integrated, and how effectively and widely used the various ERP applications and features were.
Improvement strategies, such as ERP implementation, commonly involve change. Hence, responsiveness to internal customers is critical for an organization to avoid the difficulties associated with this change (Al-Mashari and Zairi, 2000; Aladwani, 1999; Aladwani, 1998).

Data quality :

A typical source of data quality problems is that the same data are stored and maintained in different systems. Vayghanet al. (2007) argue that normally large enterprises manage data at a local level (e.g. department or location), which results in the creation of "information silos" in where data are redundantly stored, managed, and processed. Thus, inconsistency often occurs. Mohania and Bhide (2008) claim that the information integration problem has become the biggest pain point for enterprises today.

According to Mohania and Bhide, the growth of organizations invariably leads to the creation of multiple isolated data sources that are disconnected from each other, leading to reduced efficiency. In this context, enterprise resource planning (ERP) systems have been promoted as a panacea for dealing with lack of data integration by replacing inadequately coordinated legacy systems (Davenport, 1998; Knolmayer and Ro̎thlin, 2006).

However implementing an ERP system into an organization is often a difficult task, and often such projects do not produce the expected benefits (Davenport, 2000; Ragowsky Umble and Somers 2002 et al., 2003; Liang et al., 2007). In this context, it has often been argued that the quality of data/information is a major determinant of ERP success (Vosburg and Kumar 2001 et al., 2004; Huang et al., 2004; Zhang et al., 2005; Gattiker and Goodhue, 2005). Yusuf
In fact, it has been suggested that data problems get intensified when ERP systems are used, because the ERP modules are intricately linked to each other, for which reason poor quality data input in one module may negatively affect the functioning of other modules (Park and Kusiak, 2005; Lall and Teyarachakul, 2006).

Since it is essential for the success of an ERP project that the data required can be found in the ERP system and that these data are of adequate quality, there is a need for continuously evaluating the ERP data, both during implementation and when using the ERP system. However, in relevant literature there is no agreement on the relevant data quality dimensions, for

which reason the basis for conducting data quality evaluations is unclear. To provide some clarification of this topic, this paper answers the two important questions:

1-What are the most relevant dimensions for assessing ERP data quality?

2-What are the causal relationships between these data quality dimensions?
To answer the questions in focus, the paper proposes a classification model for ERP system data quality and analyses the relationships between the defined categories of data quality dimensions. The validity of the classification model and the relationships between categories of data quality dimensions are investigated in three case studies.

Besides being relevant in an ERP system context, the contribution of this paper may also be applicable for the evaluation of data quality in other types of information systems.

However, to avoid additional complexity this discussion is not included in the paper The remainder of the paper is structured as follows: in Section 2, the characteristics of ERP data and concepts of data quality are investigated. Next, in Section 3, based on a discussion of relevant literature, a classification model of ERP system data is proposed. In Section 4, three case studies are presented and subjected to the proposed classification model. The paper ends with conclusions in Section 5.

12. Previous Studies

12.1. Study (2005, Kees Boersma and Sytze Kingma)

ERP is an enterprise system that offers, to a certain extent, standard business solutions.
This standardization is reinforced by two processes: ERP systems are generally implemented by intermediary IT organizations, mediating between the development of ERP-standard software
packages and specific business domains of application; and ERP systems integrate complex networks of production divisions, suppliers and customers.

ERP itself is presented as problematic, laying heavy burdens on organizations – ERP is a demanding technology. While in some cases recognizing the mutual shaping of technology and organization, research into ERP mainly addresses the economic-technological rationality of ERP (i.e. matters of effectiveness and efficiency). We want to supplement and complement this perspective with a cultural approach. How do individuals in organizations define and experience ERP-standards? How and to what extent are management and working positions redefined in the process of developing and implementing ERP? In the paper, we highlight three perspectives from which ERP systems can be experienced, defined and analyzed. These perspectives

are specified as the "constitution" of ERP, ERP as a "condition" of organizations, and the (unintended) "consequences" of ERP.

in defining ERP from the actor's point of view, three different but mutually related perspectives should be taken into account. These perspectives include the constitution of ERP (stressing processes of signification and the redefinition of work), ERP as a condition of organizations (stressing the virtualization of organizations and normative prescriptions of ERP) and the intended as well as unintended consequences of ERP (stressing the globalization of organizations and power relations). In the interaction between these three dimensions of ERP we may find the cultural forces shaping this technology

12.2. Study (2004 , Ching-Chow Yang , Wen-Tsaan Lin, Ming-Yi Lin and Jui-Tang Huang)

A complete set of ERP countermeasures and a performance analysis model are required for the high-level management to comply during the process of implementing ERP. The high-level management needs to be active in dominating the whole project and holds review meetings on a regular basis to increase the overall efficiency of the plan.

Consulting companies play an important part in introducing ERP. The enterprise and the consulting company ought to make a flow plan at the beginning of introduction. After that, both parties should discuss the problems encountered regularly to improve or solve the potential difficulties during the process.
Customization of the module provided by the system supplier is required to cope with the demand of the enterprise, enhance the practicability of the system and to reduce the costs required for resources to be invested.

Organization flow reengineering in an enterprise has to be based on the management capability, objectives and philosophy of the enterprise in addition to the suggestions provided by the consulting company. If a system is introduced without any justifiable reason, it is counted as a waste without any operational effect.

After ERP is put into practice, the objective should not be merely confined to a computerized operation flow. Instead, the overall effects of ERP ought to be fully developed and applied to the operation.

12.3. Study (2007 , Amany R. Elbanna)

The study argues that the institutionalized marginalization of some business units within the organization created a highly political and largely dis-integrated social context for the ERP implementation, which contrasts with the system logic of integration, transparency, and coordination.

It reveals that this organizational practice of dis-integration can be reproduced and inscribed in the implemented ERP system, thereby hindering the realization of its integration capability.

The study introduces a novel critical framework based on ANT and the concept of organizational othering. In doing so, it responds to the call to broaden the critical information systems research agenda beyond the traditional critical discourse based on Habermas . The incorporation of non-humans (such as buildings, consulting reports, systems configuration) as actors in the organizational politics and the revealing of their role in the conflict and its resolution adds a new dimension to the research on the political aspects of information systems. This contributes to and enriches the ongoing discussion on the politics of IS implementation .

The findings of the study suggests that implementing an integrated packaged software requires achieving some sort of social integration in order to keep all actors involved committed to the implementation. This social integration could be achieved through delicate transitional translation processes of the involved social actors and managerial acceptance that this might not lead to achieving the package-prescribed integration, but rather to a version of the enterprise integration that is socially acceptable and supported by the ERP system.

12.4. Study (2010 , Andrejs Tambovcevs)

The objective of the study is to investigate, analyze and systematize the factors that influence implementation of the ERP system in the construction company in Latvia and benefits and barriers of ERP system implementation.

The study argues that ERP systems are an increasingly important source of organizational change with major implications for the organization and management of work. Potential benefits include drastic declines in inventory, reduction in working capital, abundant information about what customer wants and needs, along with the ability to view and manage the extended enterprise of customers, suppliers, and alliances as an integrated whole. Common problems associated with cost over-runs, technical problems and inadequate training and documentation are well known. Less well known are the longer term and more profound
implication for the organization work, the size and shape of the organization, the dynamic of power and control in the organization and the skills used by employees and needed by the organization post-ERP.

Analyzing the difficulties reported by the responding personnel, this study categorizes the problems into economic, technical, organizational, and social issues.
In particular, this study suggests that the most significant difficulties experienced by the organizations are as follows:

• social problems connected with the knowledge, education, and attitudes of all stakeholders involved in the ERP system project within the company.
• high costs connected with ERP system implementation.
• organizational problems connected with planning activities of ERP system implementation, such as goal setting and the assessment of a company's condition.
On the basis of this study's results, we can formulate some reccomendations for ERP system adopters.
First ,the implementers should pay special attention to the organizational and initial phase of the ERP system project . At this stage, the implementers should assess organizational readiness for the ERP system project and the availability of sufficient financial resources for the project. Furthermore, once the decision about the project is made, the adopters ought to ensure that the ERP system project is a business-driven

initiative, which should be reflected in the definition of appropriate project goals. The assessment of the project feasibility should also consider the human resources needed for the ERP system implementation. The organization must assess the capabilities of the available people, their knowledge, and education. This case study only describes some aspects of factors that influenced ERP implementation in the construction enterprise in Latvia.

13. The Results of Statistical Analysis and Hypothesis Testing

1- Trustworthy and stability of measurements test:

Table No (1) Alpha cronbach's modules for study variables

Number number of phrases	Alpha cronbach's modules	Variable
9	.943	acquaintance of Enterprise Resources Planning (ERP)
4	.690	Cost
8	.753	Quality

The questionnaire veracious verified by arbitration. The standard were formed by many former researchers view point and it presented to specialized arbiters in business administration. The questionnaire stability verified by using internal harmony modulus Alpha Cronbach's, in order to be stable, the measurement should be no less than the low level for the value of the modulus in this test about (.60) . the results presented below in the table NO (1) shows the alpha cronbach's modules bigger than (.60) , so we can say that all modules used in the research is internal stable for it's phrases.

2- Describing sample characteristics:

Table NO (2) distribution of sample items by demographic variables

Percentage %	frequency	detail	Variable
79.3	88	Male	Sex
20.7	23	Female	
×××	×××	Less 20 year	Age
53.2	59	From 20 to less 30	
36.9	41	From 31 to less 40	
7.2	8	From 41 to less 50	
2.7	3	51 year and more	
10.8	12	Secondary and less	Degree
19.8	22	institute	
45.0	50	University certificate	
24.3	27	Master	
×××	×××	doctorate	
35.1	39	1-3 year	Experience years
37.8	42	4-7 year	
12.6	14	8-11 year	
7.2	8	12 – 15 year	
7.2	8	16 year and more	
100	111	Total sums for sample items	

3- Descriptive Statistics for The Search Variables:

1- Acquaintance of Enterprise Resources Planning (ERP)

Table No (3) The average and deviation for acquaintance of Enterprise Resources Planning

Deviation	Average	Phrase	NO
.706	4.25	ERP based on experience (technical and administration)	1
.709	4.26	ERP save the time	2
.697	4.11	ERP contribute in control the process in enterprise	3
.689	4.08	ERP make doing process easier in enterprise	4
.658	4.05	ERP system improve the quality level in the enterprise	5
.759	4.07	The ERP is method to solve the problems that faced the enterprise	6
.752	4.08	ERP work on making easy for taking decisions in enterprise	7
.697	4.11	ERP system help to collect the data quickly and punctually	8
.706	4.13	The ERP is method to support the planning in the enterprise	9
.586	4.13	Total Measurement for acquaintance of Enterprise Resources Planning (ERP)	⌧

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We can recognize from table NO (3) that shows the average and deviation for each item for acquaintance of Enterprise Resources Planning measurement (from number 1 to 9) measures sample items recognition from acquaintance of Enterprise Resources Planning axis . we can notice the companies have knowledge of Enterprise Resources Planning , the average for total companies acquaintance of Enterprise Resources Planning measurement in the sample is (4.13) with deviation (.586) that's mean there is good knowledge of Enterprise Resources Planning system .

2- Enterprise cost and quality

Table No (4) The average and deviation for (cost& quality) axis

Deviation	Average	phrase	Item NO
.466	4.68	ERP help to cut the work cost	1
.533	4.43	ERP help to reduce the involved resources cost	2
.583	4.36	ERP help to reduce the process duration	3
1.01	4.01	ERP help to reduce the effort	4
.4917	**4.375**	**Total Measurement for cost**	
.569	4.48	ERP help to establish quality standards	5
.504	4.50	ERP help to measure quality level	6
.496	4.41	ERP help to generate periodicity reports about quality level	7
.597	4.44	ERP help to generate periodicity reports about the company for different periods	8
.749	4.29	ERP help to generate periodicity reports about similar or competitive companies	9
.599	4.51	ERP help to deliver better service for the client – employee – other departments	10
.669	4.20	ERP help to compare the quality level with international standards	11
.687	4.18	ERP help to compare the quality level with local standards	12
.3720	**4.382**	**Total measurement for quality**	
.3567	**4.379**	**Total measurement for (cost & quality)**	

The previous table shows:
1- The phrases (1 to 4) measures sample items realizing the cost axis , the average for total measurement of ERP reflection on cost is (4.375) and deviation (.4917) , that's mean there is a good perception for ERP reflection on cost axis .
2- The phrases (5 to 12) measures sample item realizing the quality axis , , the average for total measurement of ERP reflection on quality is (4.382) and deviation (.3720) , that's mean there is a good perception for ERP reflection on quality axis .
3-The employee in the sample companies realizing the ERP reflection on cost & quality is exceed the good degree , the average for total measurement of both is (4.379) and deviation (.3567)

4 - Hypothesis Testing
Testing first Hypothesis:
The acquaintance of ERP did not effect significantly on decreasing Enterprise cost.

Table No (5) Coefficient of determination and correlation

Standard error for estimation	Modified Coefficient of determination	Coefficient of determination	Multi correlation coefficient	Sig. level	F value
.46142	.119	.135	.367	.005	8.730

The table No (5) shows :

-Validity of module used to test the effect relationship between ERP acquaintance as independent variable and the cost axis as Dependent variable. the F value (8.730) with sig. (.005) and it's less of (.05) , that's mean this module with independent variable is valid to predict the dependent variable value .
- The correlation Coefficient between independent variable and dependent variable equal (.367) that's mean the relation between acquaintance of ERP and cost axis is weak direct relationship
- TheCoefficient of determination R2 equal (.135) , that's mean the independent variable (acquaintance of ERP) explain about (13.5 %) of dependent variable (cost) change and it's weak explaining power . and the percentage (86.5 %) come back to other variables isn't studied in addition to random errors comes from sample choose punctual and measurement units etc..
- Table No (6) shows simple regression model for independent variable on dependent variable.

Table No (6) regression model of the impact of independent variable in the dependent variable

Statistical significance	.sig level	Calculated T	Std .Coefficient regression Beta	Std. Error	Regression Coefficient B	independent variable
	.030	2.228		.845	1.883	fixed
significant	.005	2.955	.367	.187	.553	acquaintance of ERP

Table No (6) shows acquaintance of ERP impact directly in cost axis as dependent variable , so the regression model explain (13.5 %) from the differences in cost axis as dependent variable

According to last statistical analysis results :
We refuse the first Hypothesis about there is no significant effect of acquaintance of ERP on decreasing the enterprise cost . and we accept the alternative hypothesis that says there is a significant effect for acquaintance of ERP on decreasing the enterprise cost.

<u>Testing Second Hypothesis:</u>
Acquaintance of ERP did not impact significantly on improving quality level and cost for enterprise

Table No (7) correlation and determination Coefficient

Std. error for estimation	Modified determination Coefficient	determination Coefficient	Multi correlation Coefficient	.sig level	F Value
.33240	.265	.278	.527	.000	21.553

Table No (7) shows :

-The validity of used module in testing impact relationship between acquaintance of ERP as independent variable and quality axis as dependent variable . F value equal (8.730) with significant level (.000) is less than (.05) , that's mean this module with it's independent variable valid to predict the dependent variable values .
-The correlation between independent variable and dependent variable equal (.527) that's mean the relationship between acquaintance of ERP and quality axis is medium direct relationship .
-The determination Coefficient R2 equals (.278) that's mean the independent variable (acquaintance of ERP) explain about (27.8%) of change in dependent variable (quality) and it's accepted explanation power . and the percentage (72.2%) come back to other variables isn't studied in addition to random errors resulted from punctual choosing of sample and measurement unit punctual etc.

Table No (8) shows the impact of simple regression for independent variable on dependent variable

Table No (8) regression model of the impact of independent variable in the dependent variable

Statistical significance	.sig level	Calculated T	Std .Coefficient regression Beta	Std.Error	Regression Coefficient B	independent variable
	.014	2.548		.609	1.552	fixed
significant	.000	4.642	.527	.135	.626	acquaintance of ERP

-The Table No (8) shows the acquaintance of ERP impact directly on quality axis as dependent variable . that explain regression module (27.8 %) from the differences in quality axis as dependent variable.

According to last statistical analysis results: We refuse the second Hypothesis about there is not significant effect foracquaintance of ERP in improving enterprise quality level , and we accept the alternative hypothesis that says there is a significant impact for acquaintance of ERP on improving the enterprise quality level .

Testing third Hypothesis:
The employee in sample realizing degree did not differ by differ their personal characteristic (sex , age , degree , experience) To test this hypothesis we use single variation analysis one – way ANOVA as in table No (9)

Table No (9) ANOVA analysis for ERP concept according to demographic variables

Statistical significance	Significantly	F value	Demographic variable
Not significant	.215	1.555	SEX
Not significant	.335	1.144	Age
significant	.000	7.625	Degree
Not significant	.246	1.379	Experience

The previous table No (9) shows:

1- There is not basic difference in employee realization for ERP concept in companies in sample according to following variables : (sex, age, experience)

2- There is basic difference in employee realization for ERP concept in companies in sample according to degree only.

Therefore: We partly accept third hypothesis which related about nonexistence basic differences in employee realization for ERP concept in companies in sample according to following variables : (sex, age, experience)
We partly refuse third hypothesis about there is basic difference in employee realization for ERP concept in companies in sample according to degree only.

14. Research Findings

1- The employees in companies in sample have good acquaintance in ERP concept
2- The employees in companies in sample realization of ERP reflects on cost axis is very good .
3- The employees in companies in sample realization of ERP reflects on quality axis is very good .

4-The employees in companies in sample realization of ERP reflects on cost & quality axis is very good.

5- There is a direct impact for acquaintance in ERP concept on cost axis wherein explain about (13,5 %) of differences in cost axis.

6- There is a direct impact for acquaintance in ERP concept on quality axis wherein explain about (27,8 %) of differences in quality axis.

7- There is not differences in employee in companies in sample realization for ERP concept according to following variables : (sex, age, experience).

8- There is basic differences in employee in companies in sample realization for ERP concept according to degree only.

15. Research Recommendations

The researcher introduce group of recommendations according to previous study that boost ERP practice level in companies and promote integration and control role for process in enterprise .

1- Utilization of foreign companies experiments in implementation ERP

2- Educating decision makers and enterprise business men of importance of implementation ERP to achieve expected results in the work.

3- Searching in other factors that effected by ERP such as integration and control because of the ERP role in integrating enterprise activities also the control role that performed and ability to supply a base or integrated network has the information in real time and punctual for all parts whatever faraway their places and different their jobs .

4- Encouraging local companies to apply ERP solution to get benefits in cutting costs and improving the overall quality and data flow through the organization

5- Clear the huge advantages of implementing ERP and confirming that advantages will show up in middle and long term not in very short period.

6- ERP system helps enterprise to cut costs without bad effects on other important activities

7- ERP system helps enterprise to Improve operational efficiency and productivity within and beyond enterprise.

8- Use enterprise services architecture to improve process standardization, efficiency, and adaptability.

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