The Influence of Enterprise Resource Planning (ERP) systems on Apparel Factories

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Abstract
Enterprise Resource Planning (ERP) system provides comprehensive benefits and facilities to the entire organization. ERP system helps the enterprise to exchange and transfer data and information across all departments inside and outside the organization. Exchanging data and information between the departments assists in many aspects that aims to achieve different objectives and success. Cloud computing is the model of computing that occurs over the internet and provides extensibility, reliability, accurate data, availability and low cost of computer reassurance. Implementing and operating ERP system over the cloud offers great advantages and benefits, despite its many difficulties and challenges. This analytical study analyses how the key defines the attributes of enterprise systems environment integration, process optimization, and best practices that affecting performance. Instead of an ERP system enabled business environment, deficiencies in implementation and weak process of improvement before the implementation of ERP that restrict the process speed. A case study of a large and successful ERP implementation is presented and discussed in terms of key factors. By conducting a case study for 8 factories using the ERP system, and follow up how the system is applied, what the benefits are of applying the system, and what problems of the institution are faced during implementation by using questionnaire form that had been filled from the users and senior management department. There are several other Objectives of conducting this research as knowing the ability of the system to absorb the business strategy of the company, whether positive or negative, knowing the rate of the problems in applying these programs in Egyptian clothing factories, and knowing the influence of the organization size and its allocation level on the other factors. Increasing the total productivity of the company is considered one of the most important benefits that resulted from the application of the ERP system in companies and factories specialized in the garment industry. One of the motives behind the implementation of the enterprise resource planning system was "cost savings". The main technical problems faced by these companies are "integration with other applications" and "data migration". The results confirmed that all garment manufacturers focused their attention on the application of the system in their "financial statements" and then followed in terms of application intensity "sales and marketing". The critical success factors of the ERP implementation were: "Redesigning business processes to fit the software", "Clearly indicate the scope of the project", "Training and refinement skills" and "Management recognize the need for change".

ملخص البحث: –

يوفر نظام تخطيط موارد المؤسسات (ERP) فوائد ومميزات عديدة للمنظمة بأكملها. كما يساعد نظام تخطيط موارد المؤسسات على تبادل ونقل البيانات والمعلومات عبر جميع الإدارات داخل وخارج المنظمة. يساعد تبادل البيانات والمعلومات بين الإدارات في تحقيق العديد من الجوانب التي تهدف إلى أهداف مختلفة. الحوسبة السحابية Cloud computing هي نموذج للحوسبة التي تحدث عبر الإنترنت وتوفر القابلية للتوسع، وإمكانية الاعتماد عليه، والبيانات الدقيقة، والإتاحة طول الوقت، والتكلفة المنخفضة من الاطمئنان على أجهزة الكمبيوتر. تنفيذ وتشغيل نظام تخطيط موارد المؤسسات ERP خلال الحوسبة السحابية يوفر مزايا وفوائد كبيرة، وذلك على الرغم من العديد من الصعوبات والتحديات التي قد تواجه المؤسسة. وتشير هذه الدراسة التحليلية إلى سمات التكامل داخل بيئة أنظمة المؤسسة، وتحسين العملية، وأفضل الممارسات التي تؤثر على الأداء. بدلاً من تمكين نظام تخطيط موارد المؤسسات ERP داخل بيئة الأعمال من تحديد أوجه القصور في التنفيذ وضعف عملية التحسين قبل تنفيذ نظام تخطيط موارد المؤسسات التي تقيد سرعة العملية. وتقدم هذه الدراسة حالات كبيرة وناجحة في تنفيذ نظام تخطيط موارد المؤسسات ومناقشتها من حيث العوامل الرئيسية التي ساعدتها في التطبيق، وذلك من خلال إجراء دراسة حالة لعدد 8 مصانع باستخدام نظام تخطيط موارد المؤسسات ERP ومتابعة كيفية تطبيق النظام، وما هي فوائد تطبيق النظام، وما هي مشاكل المؤسسة التي تواجهها أثناء التنفيذ باستخدام استمارة استبيان تم ملؤها من المستخدمين والإدارة العليا. هناك العديد من الأهداف الأخرى من إجراء هذا البحث كمعرفة قدرة النظام على استيعاب استراتيجية عمل الشركة سواء كانت إيجابية أو سلبية، ومعرفة معدل مواجهة المشاكل في تطبيق هذه البرامج في مصانع الملابس المصرية ومعرفة تأثير وحجم المنظمة ومستوى تخصيصها على العوامل الأخرى. وتعتبر زيادة إنتاجية الشركة من أهم الفوائد التي تنتج عن تطبيق نظام تخطيط موارد المؤسسات ERP في الشركات والمصانع المتخصصة في صناعة الملابس. وكان أحد دوافع تنفيذ نظام تخطيط الموارد في المؤسسة هو "انخفاض التكاليف". والمشاكل التقنية الرئيسية التي تواجهها مصانع الملابس الجاهزة هي "التكامل مع التطبيقات الأخرى" و "ترحيل البيانات". وأكدت النتائج أن جميع مصنعي الملابس ركزوا اهتمامهم على تطبيق النظام في إدارة "البيانات المالية"، وبعد ذلك جاءت من حيث التطبيق في إدارة "المبيعات والتسويق". وكانت عوامل النجاح الحاسمة لتنفيذ نظام تخطيط موارد المؤسسات ERP هي: "إعادة تصميم العمليات التجارية لتناسب البرنامج"، "تشير بوضوح إلى نطاق المشروع"، "التدريب وصقل المهارات" و "اعتراف الإدارة بالحاجة إلى التغيير".

1. Introduction:

An Enterprise Resource Planning system (ERP) is a suite of integrated software applications used to manage transactions through company-wide business processes, by using a common database, standard procedures and data sharing between and within functional areas. However, installing an enterprise system is not just a computer project, but an investment is expensive and risky, which affects the core operations and support processes in the company, its organizational structure, existing procedures and systems, and the roles of individuals and tasks. Much of the costs associated with the hidden, its benefits are intangible, and has wide-ranging effects, cross-functional, difficult to isolate and 'long term' on resources and competences. One explanation advanced for the high rate of ERP project failure is that

managers do not take prudent measures to assess and manage the risks involved in these projects.

The organization is currently investing in various aspects; the expected Return on Investment (ROI) can be in the form of cost reducing, maximize profits and help decision-making support. Combines ERP system, records, integrates, manages, provides data and information across all functional units of the organization. It helps integration between information in production, planning, materials, engineering, finance, inventory, sales, marketing, human resources, operation and all other departments in the enterprise. The result of ERP implementation can be in the form of higher quality, reduced time-to-market, improved communications, support decision-making, shorten lead times, increase productivity and reduce costs. Lowered costs can help the enterprise to improve customer service and increase sales and market share as well as profits. Modern ERP systems are designed for using over the internet. It has been enhanced by the capabilities with e-commerce and the ability to integrate and collaborate with suppliers, partners, customer portals, and promote tracking of incoming row material and final products are outgoing to expand visibility and control inside and outside the enterprise. Many enterprises estimate the cost of an ERP project as only the cost of the software license. Practically there are many issues to consider the budget of ERP system implementation, for example, license fees of software, hardware, services implementation and maintenance fees and training fees. The ERP implementation is a costly process, which increases with the enterprise size.

Problem statement:
1- Needs to be familiar with the requirements of modern technology used in ERP systems.
2- Obstacles face the owners of clothing factories in the supply chain management of their institutions in traditional ways in the era of technology.

Objectives:
1- What is the influence of Enterprise Resource Planning (ERP) system on apparel factories?
2- Know the ability of the system to absorb the business strategy of the company, whether positive or negative.
3- Know the rate of the problems in applying these programs in Egyptian clothing factories.
4- Know the influence of the organization size and its allocation level on the other factors. (Application recommendations).

Methodology
Descriptive method (analytical)

Research importance:
1- The main objective of the research is increasing the effectiveness of the ERP system implementation in the medium and large industrial companies to reduce the risks associated with a failure of the ERP system implementation.
2- Highlight on the implementation of ERP systems and its programs in garment factories.
3- Research may help managers and garment manufacturers in achieving the best level of application planning systems, organization management within the enterprise, and achieving competitive advantages.

4- Studying the opportunities and challenges facing garment factories during the application of such these technological systems.

2. Literature review
2.1. Overview of the research on ERP implementation success factors

ERP system implementation is a very complex process, with a large number of circumstances and potential factors affect on the implementation. These circumstances can have a positive impact on the ERP project results, while their absence can generate problems during implementation. The results of some major research on the success factors of the ERP implementation have been described below.

2.1.1. Holland and Light (1999) presented a number of potential success factors in the implementation of ERP system and suggested dividing them into strategic and tactical factors. The model was demonstrated on a sample of two projects to implement the ERP system. Among 12 factors, the authors highlighted the critical impact of older systems on the implementation process and the importance of selecting an appropriate ERP strategy. However, they did not formulate conclusions on the order of factors.

2.1.2. Esteves and Pastor (2000) suggested a unified ERP implementation critical success factors model. This model is based on a major research analysis on the success factors of implementation. The authors pointed out that factors should be classified into a strategic and tactical factors from organizational and technological perspectives.

2.1.3. In other research, **Parr et al. (1999)** turned to experts involved in several implementation projects. The research sample consisted of ten experts who had participated in a set of 42 ERP implementation projects, mainly as project managers. Based on interviews with the experts, ten key factors were identified for successful implementation of ERP systems. These factors have been broken down into relevant groups with management, staff, programs and projects. These ten candidate factors, three things are very important. They support project team management and implementation process, a project team who has an appropriate business balance, technical skills, and commitment to change by all the stakeholders.

Results of the above researches on the success factors of ERP implementation illustrate the complexity of the problem and the variety of approaches. Potential success factors and research results of differ significantly from each other. Except for general agreement regard to the need for administrative support for implementation, it is fairly difficult to compare the research results.

2.2. What is ERP?

ERP is a software system designed to integrate all functional modules of the enterprise in cooperative way. It may also extend to include outside parties of the enterprise such as suppliers and customers to involve them in the integration process as shown in fig. 1. ERP is an element key of an infrastructure that delivers a solution to the business. ERP defined as a comprehensive packaged software that seeks to integrate the full range of a business's

processes and functions in order to provide a comprehensive view of the business of single information and information technology.

Over the time, ERP systems faced many upgrade sophistications to enhance their functions and increase the integration capabilities. The vendors of ERP like Oracle, SAP, PeopleSoft, J.D Edward developed different modules to cover and support all functional units of the enterprise. Traditional ERP systems are classified into two categorizes on premise ERP and hosted ERP. On-premise the ERP system will load and run over the enterprise infrastructure such as servers, network, platforms, computers, etc. Running cost, operational cost and maintenance cost are covered by the enterprise as well as scourge recovery. Hosted ERP can be defined as a service provided to the organization by a provider that hosts the actual servers and run this service elsewhere. The service is frequently provided through a direct network connection that may work over the internet.
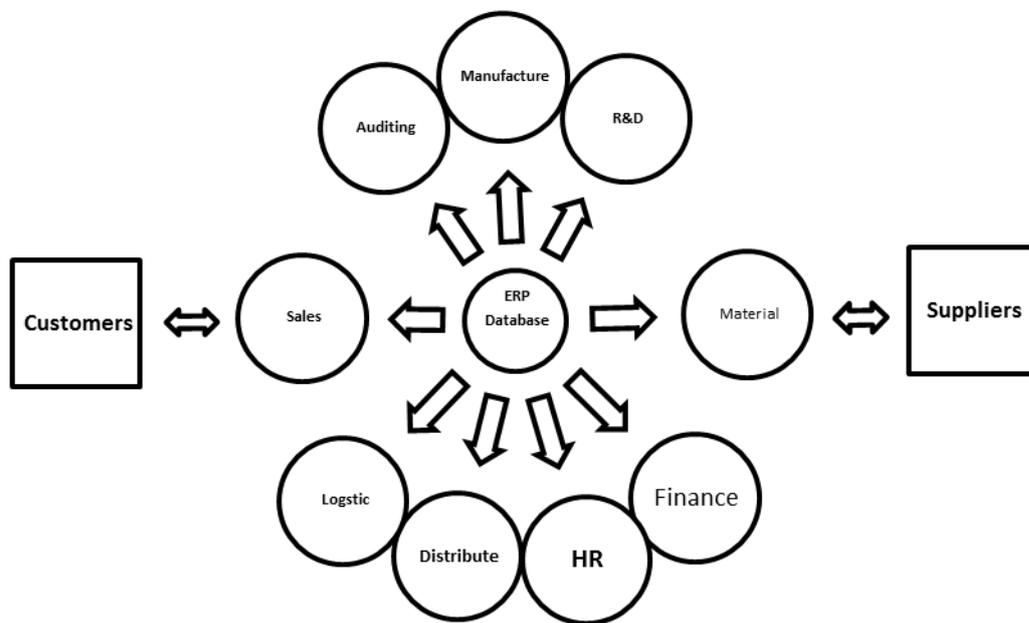

Fig.1. ERP system overview

2.3.   Need for an ERP system

In the absence of an ERP system, large organizations cannot communicate or interact effectively with each other. (See fig.2)

An ERP system helps the business processes to transfer more easily and improve the efficiency of the interpolation process. Eventually, it decreases the total business cost. Generally, an ERP system is an industrial term for a wide range of supported activities by a multi-unit application software which helps manufacturers or other business in managing their organizations well, including product planning, parts purchasing, maintenance of inventory, interacting with suppliers, providing customer service, and following orders. Typically, an ERP system is used to integrate with a relational database system.

In fact, an ERP system does not live up to its acronym. It does not do much planning or resource planning.

Remember the word "E" for enterprise. This is the true ambition of the Enterprise Resource Planning system. It attempts to merge all departments and functions across a company into a single computer system that can serve all those departments that have particular needs. The integration simplifies internal business processes and improves company productivity.

2.4. Cloud computing

Cloud computing is a very powerful approach of computing which left the interest in the academic research as well as in the software industry. Cloud computing is a computing environment that provides availability, scalability, and flexibility of a computer rest assured a respectable level of abstraction with low running cost. Cloud computing can be defined as a means of computing method to provide computing as a tool to meet the daily needs of the public business community. Cloud computing refers to the applications, the hardware and software delivered as online services.
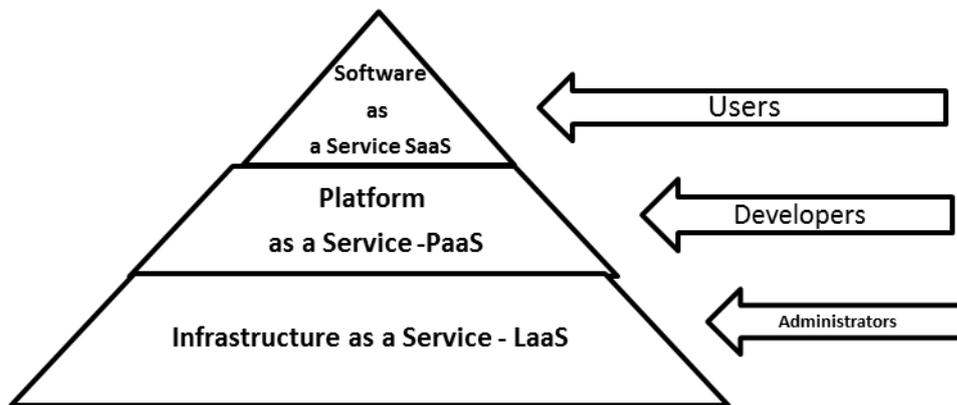

Fig.2. cloud service models

2.4. Cloud ERP

Cloud ERP solutions are provided across the program as a service model. ERP system is considered as a cloud-based when the attribute of cloud computing is affected. The cloud based ERP system to be accessed via the user's online browser without installing or configuring the system at the user side. One of the most famous cloud ERP in the software market is SAP Business.

2.5. Benefits and efficiency of ERP for apparel factories

The textile industry generally focuses on clothes designing or manufacturing as well as the task of distributing and using the manufactured products. The industry of the textile and apparel has changed continuously in the last few years. This is a demand for a resource planning and preservation for appropriate data.

2.5.1. Lower initial costs: This is due to the computing recourses separation from the enterprise location, the enterprise does not need to pay the building cost of the computing environment, it just pays to access the environment via the internet.

2.5.2. Lower operating costs: The cloud service providers (CSP) are responsible for running and providing the cloud services that would lead to the isolation of operations from the organization as well as the operation costs.

2.5.3. Rapid implementation: CSP offers wide range of ERP solutions; these solutions can satisfy most of the organization needs. Choosing between different products solutions and happening according to the needs of the business enterprise. The process implementation accelerated as a result of this process selection.

2.5.4. Scalability: Cloud services are high flexibility; the enterprises can expand or reduce the resources used to meet their current needs.

2.5.5. Focus on core competencies: Cloud ERP systems help the organizations to manage their business more efficiently and give them an opportunity to focus on other concerns related to their core activities.

2.5.6. Using advanced technology: Working over the cloud enables the company to access and use specialized technology and advanced computing resources that available through the cloud.

2.5.7. Rapid updates and upgrades: Updating or upgrading cloud solutions accomplished faster than traditional ERP application. The CSPs perform all upgrade operations according to the organization's requests.

2.5.8. Improved accessibility, mobility, and ease of use: Applications across the cloud work in an open environment, increasing accessibility options. The increases accessibility, in turn, increases the usability of the cloud ERP inside and outside the enterprise.

2.5.9. Easier integration with cloud services: There are a huge number of cloud applications offered to meet the needs of the enterprise. Due to the nature of ERP systems that connect different parties within and outside the enterprise, the integration with other services becomes easier in the cloud.

2.5.10. Improved system availability and disaster recovery: CSPs provide well-defined policies and plans for backup, restore, recovery and all other functions related to availability and disaster recovery.

2.5.11. Cost transparency: payment for use or subscription forms according to enterprise plan. The enterprises pay only for what they use; there is no need to pay for what they do not use or what doesn't cover the needs of the enterprise.

2.5.12. Sales automation: Due to the geographical separation between customers and CSPs, the sales issues can be automatically achieved via the cloud.

2.5.13. Using security criteria: Some of CSPs implement encryption and decryption standards, that leads to the mobilization of security issues and effort from customers to CSPs.

2.6. Challenges of cloud ERP

2.6.1. Subscription fees: To use cloud ERP the enterprises should subscript for the used services, the subscription fee is paid periodically as long as the organization uses the services.

2.6.2. Security risks: Due to the high availability of cloud services across the cloud, security risks are also increasing. Dealing with the security issues of cloud ERP is difficult and complex process.

2.6.3. Performance risks: Over the cloud, customers and CSPs are geographically separated from each other and connected to each other over an internet connection. Network failures and many other communication problems could occur over the cloud. That will be directly reflected in the cloud ERP performance.

2.6.4. Customization and integration limitations: CSPs offer ERP solutions in packages with customization options and limited integration. There are no such limitations in traditional ERP systems.

2.6.5. Strategic risks: The enterprises have strategic risks to rely on the CSPs and should comply with their policies.

2.6.6. Compliance risks: Compliance with data, energy and environmental standards are other difficulties faced by cloud-based ERP and there are insufficient regulations to deal with these difficulties.

2.6.7. Loss of IT competencies: In order to move to cloud ERP many activities will be transferred from IT department to the cloud ERP provider. As a result of this moving could be IT competencies as well as facing the IT department's resistance.

2.6.8. Functional limitations: Over the time traditional ERP systems gain more stability and become more mature and achieve advanced maturity. To achieve this stability and maturity of cloud ERP, time is needed.

2.6.9. SLA issues: Defining Service Level Agreements (SLAs) is a very difficult and complex process of cloud ERP; all aspects of the provided services including the integration and customization should be considered.

2.6.10. Information sensitivity: Many organizations consider their data and information to be private and can't be stored outside the enterprise.

2.6.11. Loss of technical knowledge: When cloud ERP systems are implemented, an IT staff members may lose technical understanding of the service over time.

2.6.12. Need for ERP as service standards: Cloud ERP market is still new. There are no clear regulations and criteria for managing it between cloud ERP providers and customers.

2.6.13. Knowledge about the cloud: Usually its customers are afraid of the new technologies and the effect of implementation of this new technology on their business. Cloud ERP providers should give enough attention to describe the cloud ERP services and facilities and to make it more visible to customers.

2.6.14. Startup support: To facilitate the transition from traditional ERP to cloud ERP customers need support from the cloud ERP provider to facilitate this movement.

2.6.15. Organizational challenges: process of implementation cloud ERP systems may face organizational challenges rather than technical challenges, for example, senior management participation in and poor communications across jobs.

2.6.16. Choosing between cloud ERP systems: Many cloud ERP systems are available at the market today, these ERP systems are developed by various vendors. Choosing between these systems is a difficult process. Choose individuals who will participate in the assessment and choose the appropriate cloud ERP system is a challenge as well.

## 2.7. ERP system modules for the apparel sector

All ERP systems that are operated by the fashion and apparel industries have the following modules/components or extensions in the ERP system.

Components/modules:

• Transaction

• Distribution

• Product lifecycle management

• Advanced applications

• Purchasing

• Distribution

• Warehouse management system

• **Manufacturing:** engineering, bills of material, work orders, scheduling, capacity, workflow management, quality control, cost management, manufacturing process, and manufacturing flow.

• **Supply chain management**: order to cash, inventory, order entry, purchasing, product configurator, supply chain planning, supplier scheduling, inspection of goods, claim processing, and commission account.

• **Financials:** general ledger, cash management, accounts payable, accounts receivable, fixed assets.

• **Project management:** costing, billing, time and expense, performance units, activity management.

• **Human resources**: human resources, payroll, training, time and attendance, benefits.

• **CRM:** sales and marketing, commissions, service, customer contact, call-center support

• **Data services:** various "self-service" interfaces for customers, suppliers, and/or employees

• **Access control:** management of user privileges for various processes.

• **DSS:** forecasting, planning, and reducing overall cost by optimization.

These modules can exist in a system or utilized in an ad-hoc fashion.
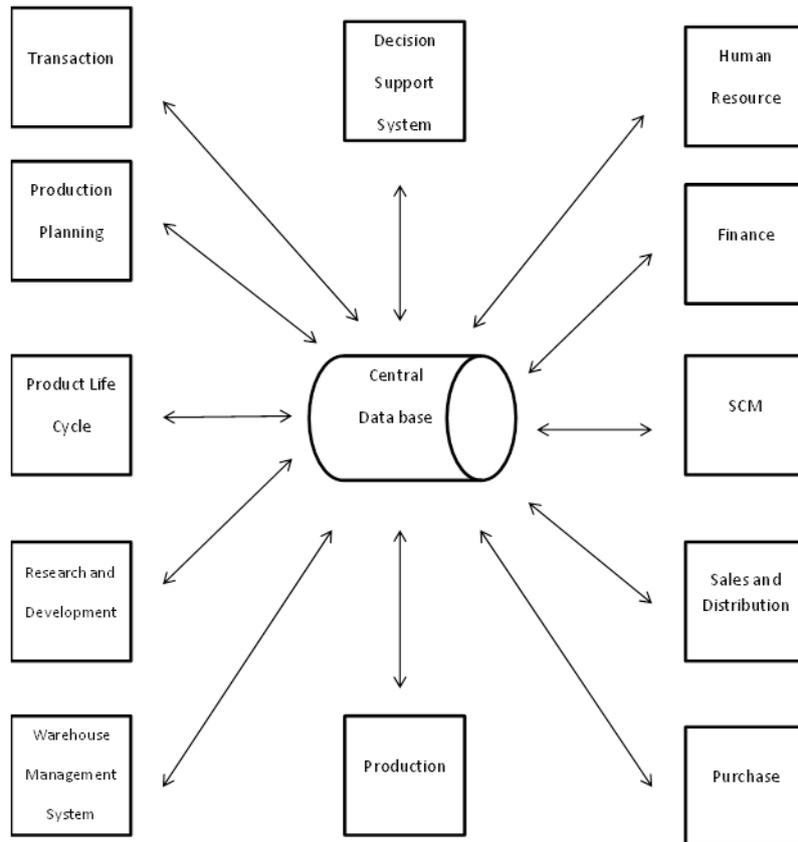
Fig.3. ERP system with all modules linked with a single database.

2.8. ERP Implementation

Many enterprises do not have enough sufficient internal skills to implement an ERP project. This leads to many organizations that provide consulting services for implementation. Typically, consultants is responsible for implementing the entire ERP system. ERP system plays an important role in the fashion apparel industry. There are many cases of global implementation. There are also many cases where implementation is a major challenge for apparel companies.

For best business practices and successful business results, the ERP system must be fully implemented in all departments. The implementation of ERP system will have a great impact on the operations of the organization, the business management, the culture of the organization, and the employees. ERP system implementation is a difficult, and hard task. Most of the implementation exceeds the schedule execution, costs overrun budgets, business expectations, and lower business value. It involves huge financial implications, a lot of human

resource at different levels with different frequencies, and it requires a lot of technical expertise and a dedicated approach, which makes it more difficult for smooth implementation. Generally, the implementation of ERP system in an existing industry is a transformation process. Any transformation in the industry must go through rough patches of resistance, conflict, setbacks, bottlenecks, and time delays. This also leads to a significant delay in the implementation, which are most often treated as a failure to deliver in time. The apparel industry operates with strict time frames and involves many technical processes. As the product life cycle becomes shorter with less delivery time, the industry moves in to automate its operations with state-of-the-art technology. Automation of the industrial processes through the implementing of ERP application will be one of the major initiatives taken by the organization to keep up with the pace of the growth of the industry.

3. Experimental work

3.1. Procedures:-
As for the data collected by the researcher from the factories under study, it was as follows:-
1 - By conducting a case study for 4 factories using the ERP system, and follow up how the system is applied and how to connect it to the departments together, what the benefits are of applying the system, and what problems of the institution are faced during implementation.
2- Some factories refused to host the researcher to follow the application of the system inside the factory to maintain its privacy, and just filled out the questionnaire for only 4 cases.
3- The system was fully applied in all the departments of the factory in 4 cases study, and is applied in some departments of the factory in 4 cases of the samples under study.

3.2. Questionnaire:
The questionnaire was distributed to the factories through field visits for each of them, and made personal interviews with those responsible for the use of the system, It was noted to the questionnaire model was used in the appendix.

3.3. Description of the data in the sample under study:

3.3.1. In terms of the organization size:'
Large-scale enterprises represented the largest proportion of the sample at an estimated 63%. As shown in the following diagram
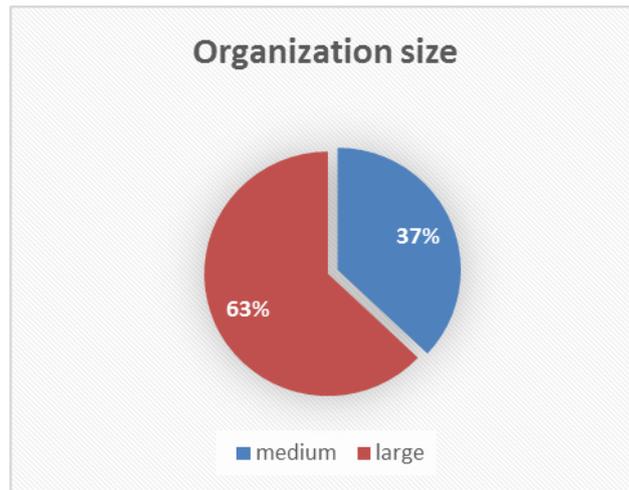
Fig.4. the organization size

3.3.2. Study the extent of ERP system application:

Field interviews were conducted with users who are based on companies and factories that already implement the ERP system, (SAP) system has been at the forefront of enterprise resource planning (ERP) systems in companies that specialized in the manufacturing of ready-made garments as it represents 50% of the total sample size, as shown in the following diagram:
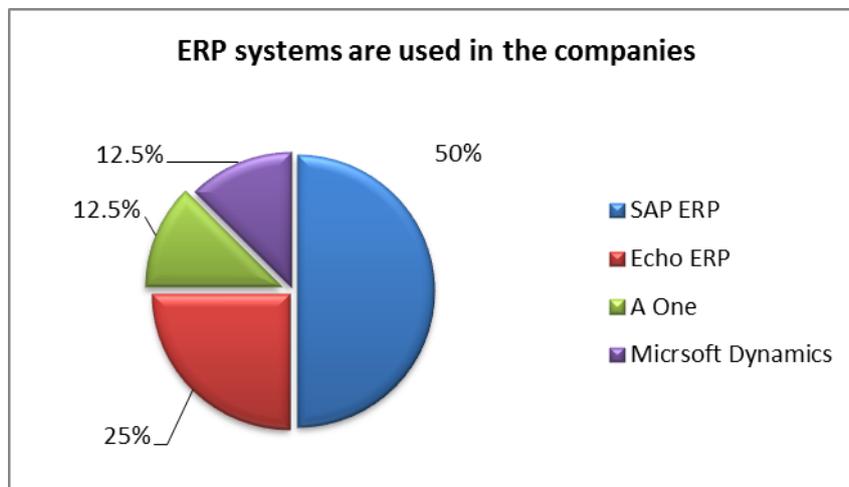

Fig.5. ERP systems are used in the companies under study

3.3.3. study the motives behind the ERP implementation in the companies:
The results of the field study showed that the most important motivation behind the ERP implementation is "cost saving" with 88% of the total sample, as shown in the diagram below.
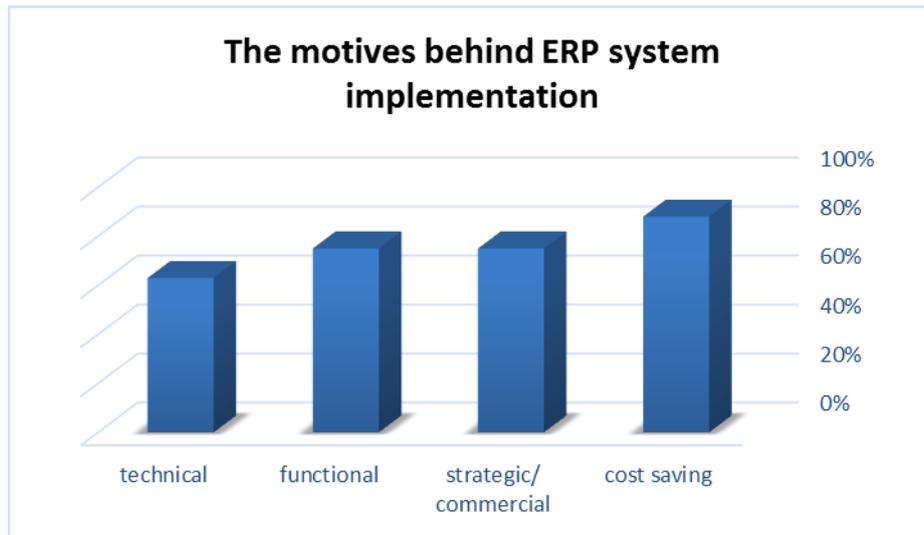
Fig.6. motives behind the ERP implementation in the companies under study

3.3.4. study the benefits of ERP systems in the companies under study:

About 88% of the total sample size indicated that the most important benefits of implementing the ERP system for them is "increasing the total productivity of the company" as shown in the following diagram:
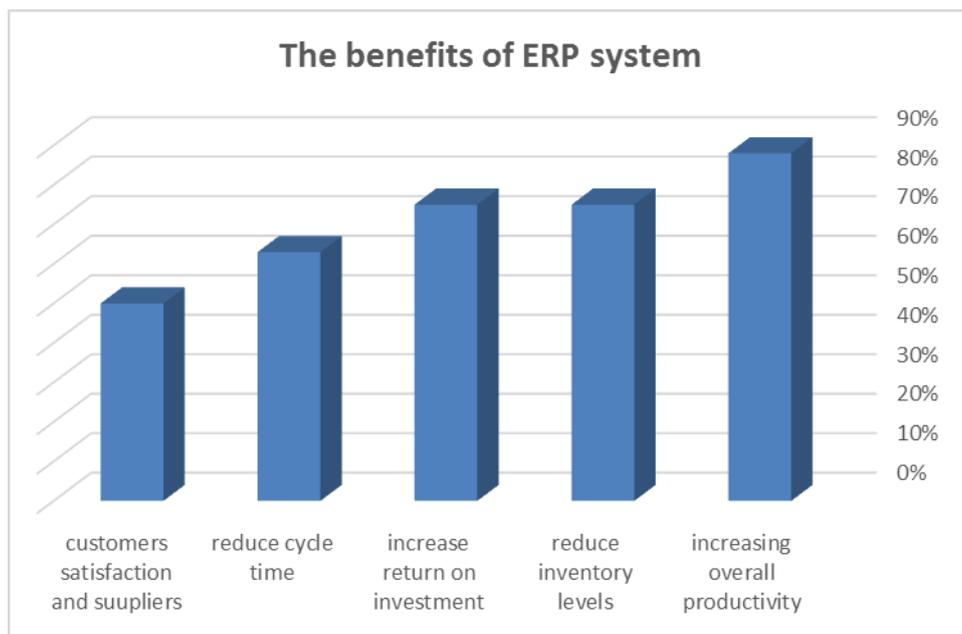

Fig.7. the benefits of ERP system in the apparel factories

3.3.5. The most important administrative problems are faced by enterprises during or after the implementation of the ERP system:

The results showed that the most common administrative problems faced by enterprises during or after the implementation of the ERP system is "increasing the cost of the project" by 88% of the total surveyed sample, as shown in the following diagram
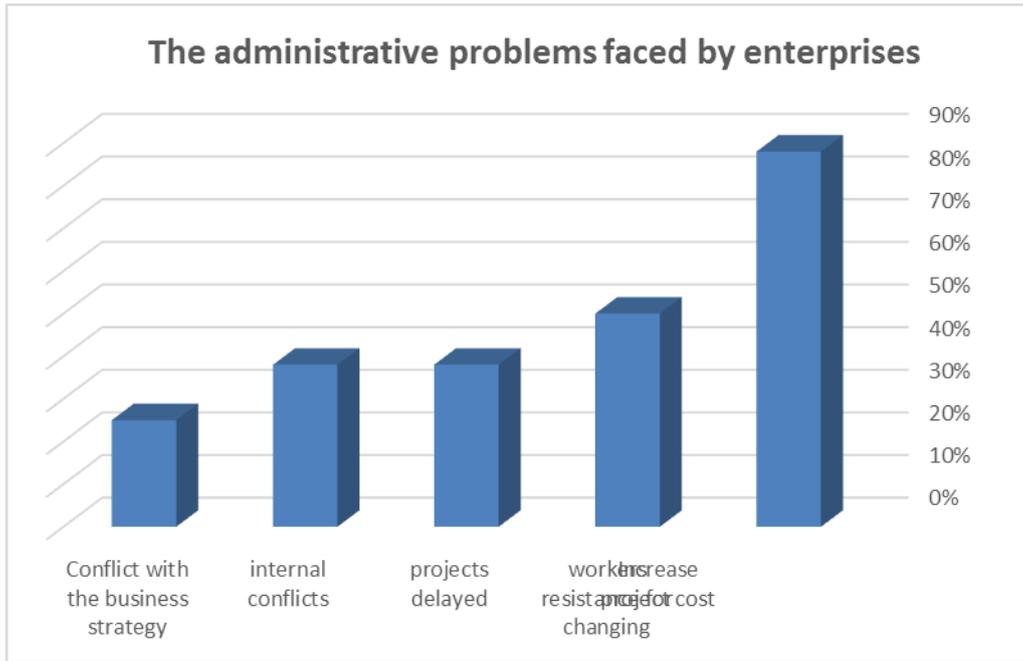
Fig.8. the administrative problems are faced by enterprise under study

3.3.6. The ability of ERP system to understand the company's business strategy:

The ERP system's business strategy has reached to 65% as a minimum and 100% as a maximum with an average absorption rate as 79% as shown in the following diagram:
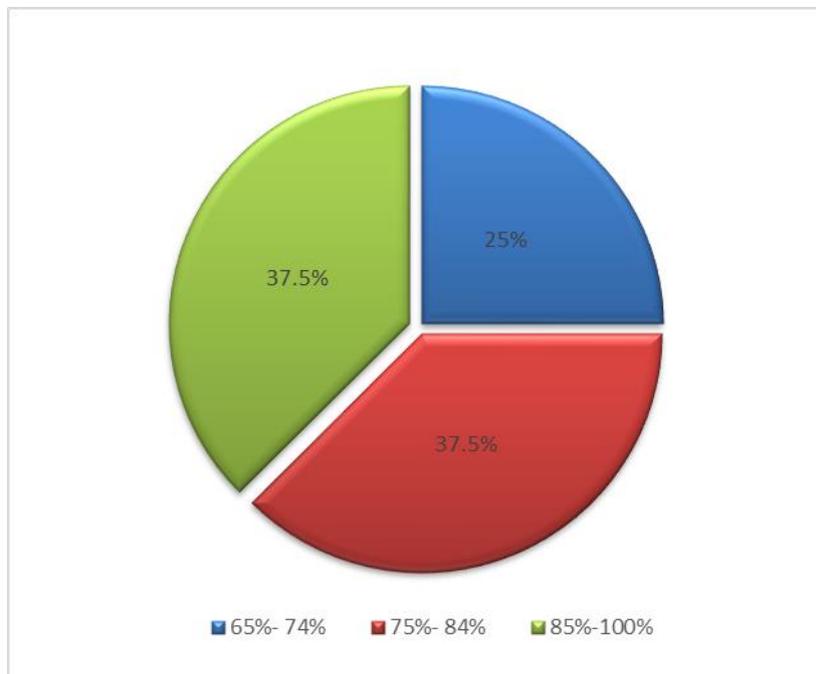

Fig.9. the ability of ERP system to understand the company's business strategy

3.3.7. The most critical organizational success factors of the ERP system implementation:

Several critical organizational success factors of the ERP implementation were led by both "redesigning business processes to fit software" And "clearly indicating the scope of the project" by 75%, as shown in the following diagram:

Fig.10. the critical organizational success factors of ERP system implementation

3.3.8. The most critical functional success factors of ERP implementation:

As for the critical success factors for the functional implementation of the ERP system, it came in the forefront of both "training and refinement of skills" and "recognition of the need for management change" as 75% of the total sample, as shown in the following diagram:

Fig.11.the critical functional success factors of ERP implementation

3.3.9. The allocation levels of the system in the clothing factories under study:

Regarding the allocation levels of the system for the clothing factories under study, about 88% stated that the system is implemented in their companies is a system "specialized in some departments" as shown in the diagram:
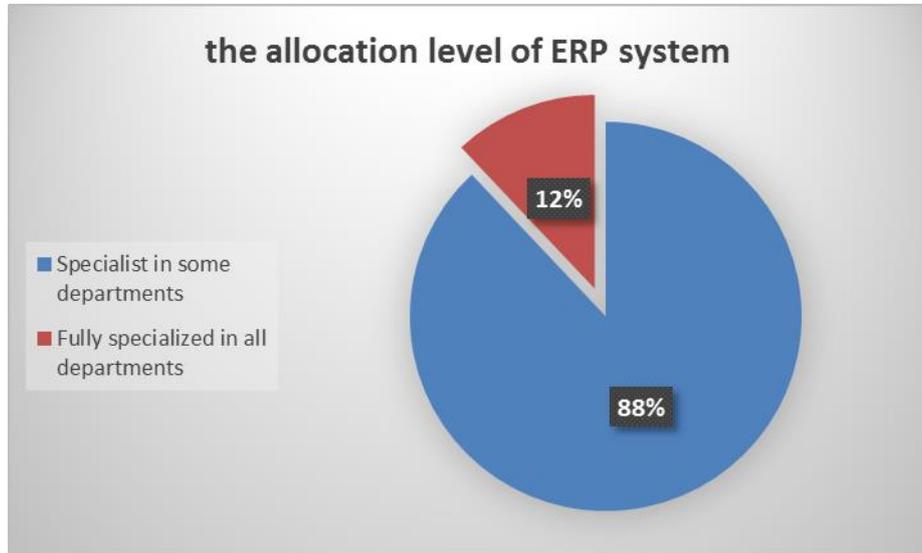

Fig.12. the allocation level of the ERP system in the companies under study

3.3.10. The most important regulatory criteria that influenced in the choice of the implementation strategy:

The organization size was at the top of the organizational standards that influenced in the selection of the institution strategy by 75% of the total surveyed sample size, as shown in the following diagram:

Fig.13. the important regulatory criteria influenced in the choice of the implementation strategy

3.3.11. Approximate training cost of ERP system

About 38% of the total sample of the survey sample indicated that it was ranked between 16% and 20% of the system budget, with an average of 16.3% of the total ERP budget, as shown in the following diagram:
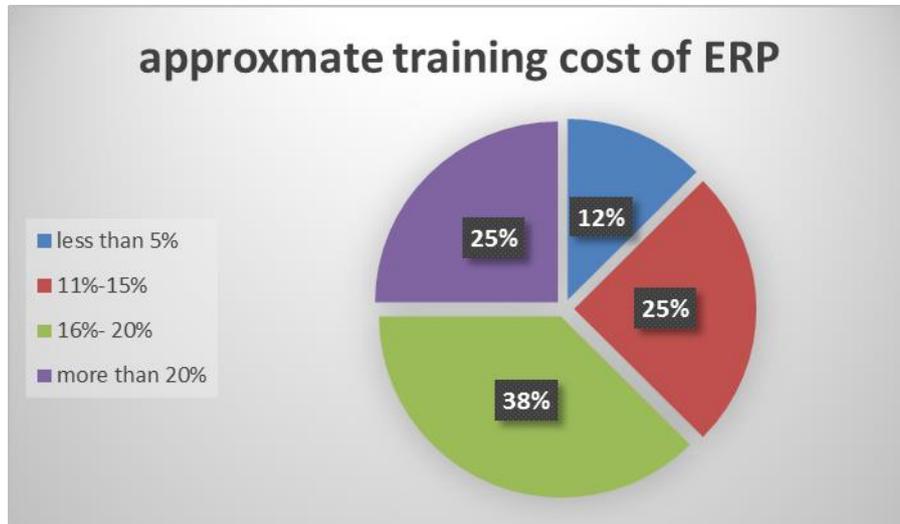

Fig.14. approximate training cost of ERP system

3.3.12. The effectiveness of the ERP system in the development of the application management strategy:

About 50% of the total sample indicated that the system was "very effective" and "moderately effective" in the same proportion of productivity control through information obtained from the development of the application management strategy as shown in the following diagram:
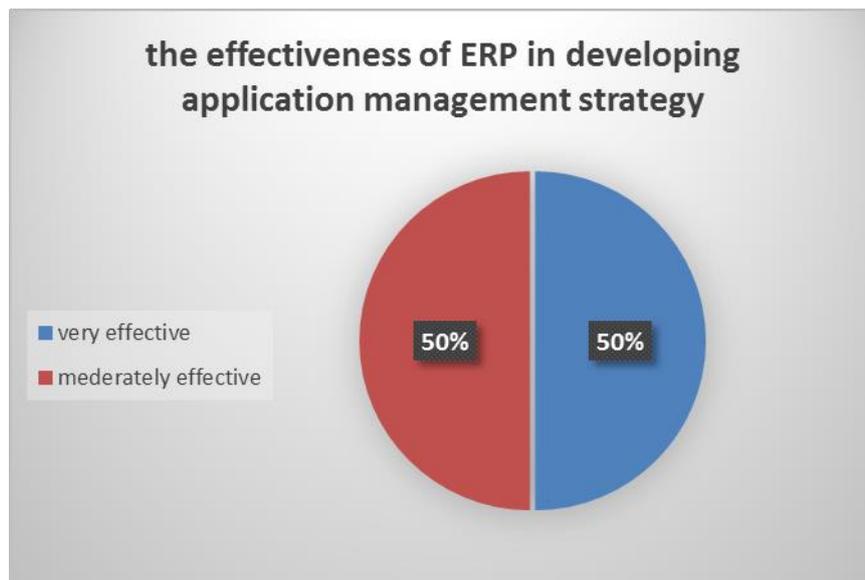

Fig.15. the effectiveness of the ERP system

3.4. Statistical analyses:-

Spearman correlation coefficient will be used to study the statistical hypotheses that were previously set by the researcher and to reveal in advance whether or not were achieved. It is used to determine the strength and direction of the relationship between two or more variables as follows:

- The study of the correlation force as it determines whether it is: forces- average- weak.
- Studying the direction of the relationship as it determines whether it is: reverse- positive.
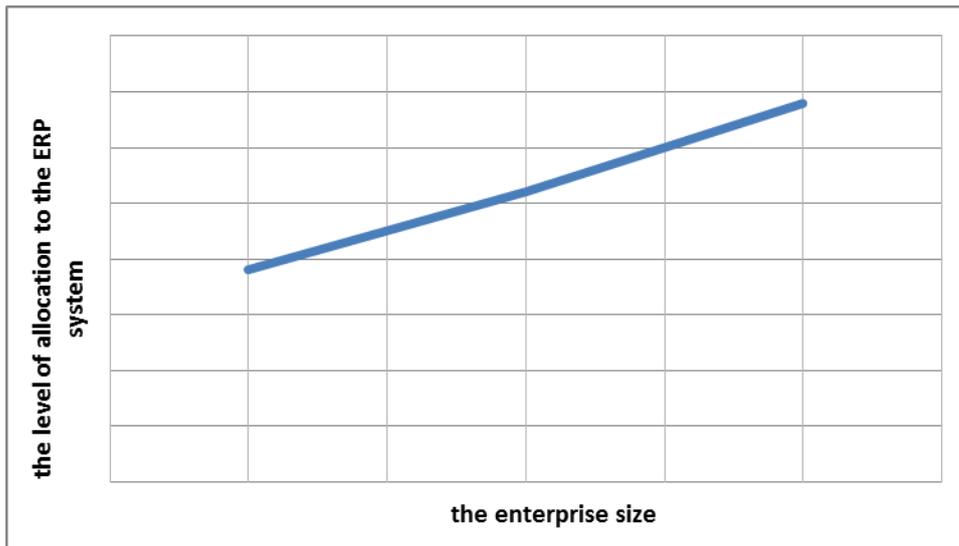
3.5. Hypothesis and results:-

3.5.1. There is a correlation between the size of the enterprise and the level of allocation of the ERP system in which it operates

The correlation between the size of the organization and the level of allocation in the ERP system is shown by the correlation coefficient (P-value = 0.04 <0.05, r = 0.293), which means a positive relationship between the size of the institution and the level of allocation that available in the ERP system at a significant level 5%, that the increase in the size of the institution necessarily necessitates an increase in the level of allocation in the management within the institution, and thus prove the validity of the hypothesis.

Table (1) analysis the correlation between the size of the enterprise and the level of allocation to the ERP system

|			the size of the enterprise	the level of allocation to the ERP system
Spearman's rho	the size of the enterprise	Correlation Coefficient	1.000	0.293
		Sig. (2-tailed)		0.04
		N	8	8
	the level of allocation to the ERP system	Correlation Coefficient	0.293	1.000
		Sig. (2-tailed)	0.04	
		N	8	8

Fig.16. the correlation between the size of the enterprise and the level of allocation to the ERP system

3.5.2. There is a correlation between the allocation level of the ERP system and the approximate training cost in terms of the system evaluation budget

The results indicate that there is a correlation between the ERP allocation level and the approximate training cost of the system evaluation budget, where (p-value = 0.12> 0.10, r = - 0.599), although this relationship is not significant, There is an inverse relationship between the level of allocation and the estimated cost of training from the total evaluation budget of the ERP system. That is, the higher level of allocation, the lower expenditure and the training costs as a percentage of the ERP system evaluation budget. In other words, the allocation of the system in all departments make the organization spend less expenditure than the systems that operate one program for all or that are specialized in some departments.

Table (2) analysis the correlation between the allocation level of the ERP system and the approximate training cost

			the allocation level of the ERP	the approximate training cost
Spearman's rho	the allocation level	Correlation Coefficient	1.000	-0.599
		Sig. (2-tailed)		0.116
		N	8	8
	the approximate training cost	Correlation Coefficient	-0.599	1.000
		Sig. (2-tailed)	0.116	
		N	8	8
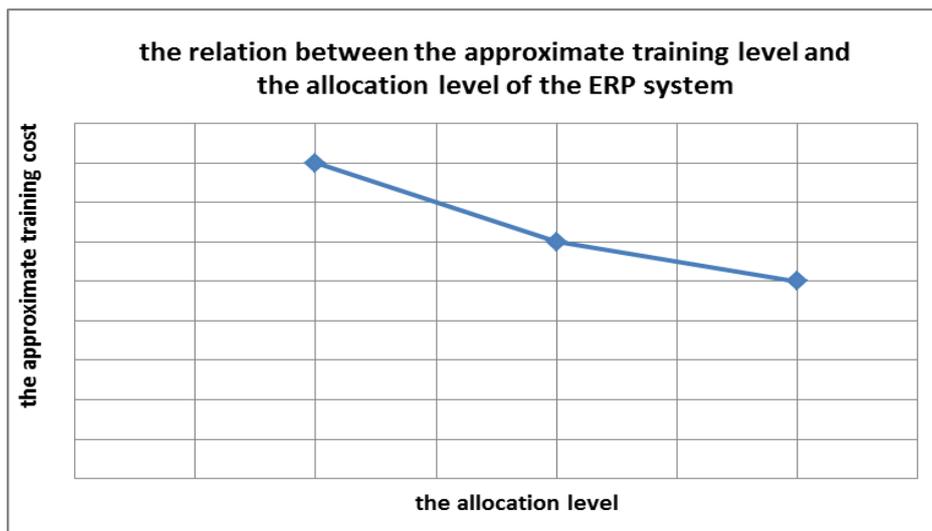
Fig.17. The relation between the approximate training level and the allocation level of the ERP system

3.5.3. There is a correlation between the size of the organization and the ability of the system to absorb the business strategy of the company

The results show that there is a correlation between the size of the organization and the ability of the ERP system to understand its business strategy (p = value = 0.017 <0.05, r = 0.54). This means that the size of the organization is directly related to the extent of the system's ability to absorb business strategy. The greater the size of the organization, the greater the ability of the system to meet the business strategy of the company, and thus the validity of the hypothesis is proved.

Table (3) analysis the correlation between the size of the organization and the ability of the system to absorb the business strategy of the company

			The enterprise size	the ability of the system to absorb the business strategy of the company
Spearman's rho	The enterprise size	Correlation Coefficient	1.000	0.537
		Sig. (2-tailed)		0.017
		N	8	8
	the ability of the system to absorb the business strategy of the company	Correlation Coefficient	0.537	1.000
		Sig. (2-tailed)	0.017	
		N	8	8

As a result of this hypothesis, we recommend that large-scale enterprises should turn to the system to manage and plan their resources, which will benefit them and drive them towards achieving their desired strategy.
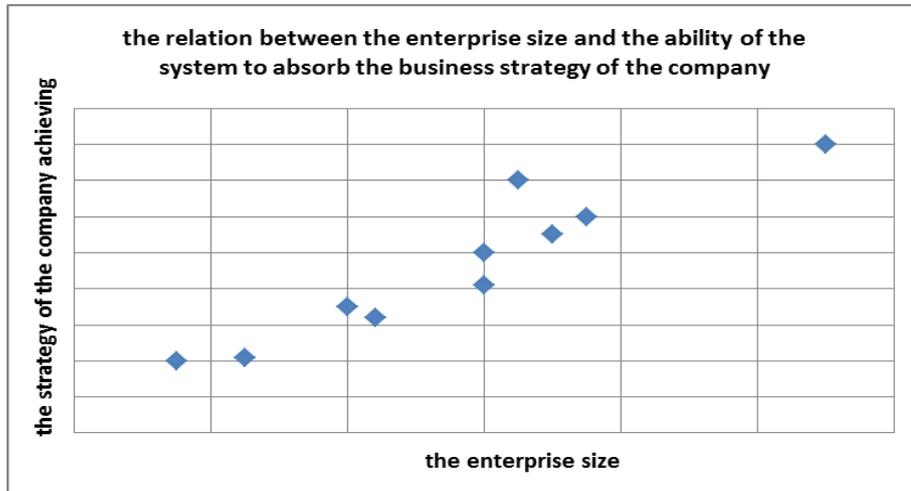

Fig.18. the relation between the size of the organization and the ability of the system to absorb the business strategy of the company

3.5.4. There is a correlation between the size of the organization and the rate of encountering problems with application interfaces

The results indicate that there is a relationship between the size of institutions and the rate as the users of the ERP system face problems with the application interfaces where (p-value = $0.377 < 0.05$, r = - 0.36), although this result is insignificant but has an important meaning to be explained. The size of the organization and the rate of its encounter problems with the interfaces of the ERP application that operates in the sense that the larger the size of the organization, the less problems it faces in the system.

Table (4) analysis the correlation between the size of the organization and the rate of encountering problems with application interfaces

			the size of the organization	the rate of encountering problems with application interfaces
Spearman's rho	the size of the organization	Correlation Coefficient	1.000	-0.363
		Sig. (2-tailed)		0.377
		N	8	8
	the rate of encountering problems with application interfaces	Correlation Coefficient	-0.363	1.000
		Sig. (2-tailed)	0.377	
		N	8	8

This result indicates that the system is very effective in large enterprises and avoids any problems or impediments that may be encountered during the normal course of work.
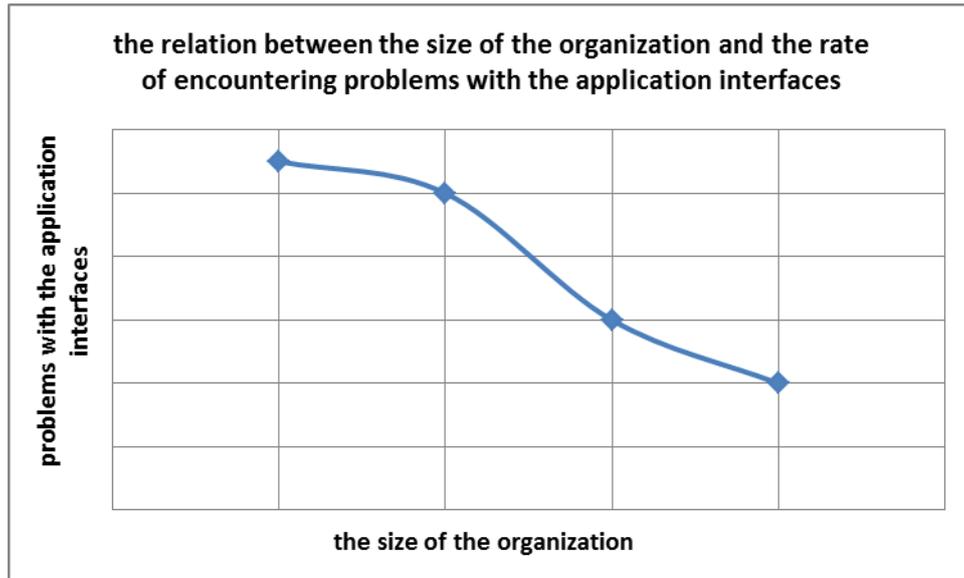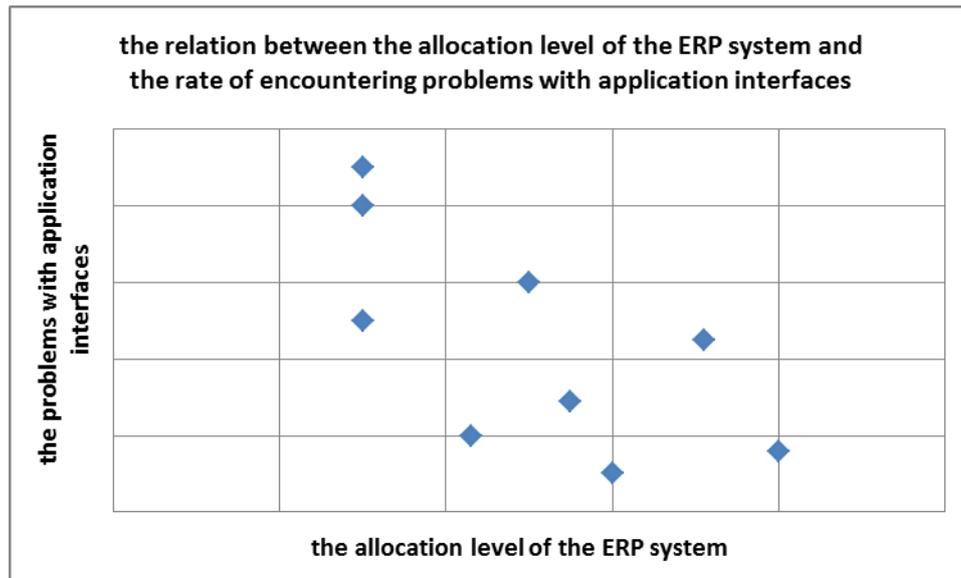
Fig.19. the relation between the size of the organization and the rate of encountering problems with application interfaces

3.5.5. There is a correlation between the allocation level of the ERP system and the rate of encountering problems with application interfaces

The results showed that there is a correlation between the level of allocation followed by the ERP system and the rate of employee encounter problems with the application interfaces, where (p-value = 0.10 = <0.10, r = -0.62) which means that there is an inverse relationship between them. The more level of customization, the less problems facing the institutions. And this is because the limit of each department or interface management system, or their interface will avoid them many of the problems you might encounter if they use one system for each and are not managed in particular, and thus verify the validity of this hypothesis.

Table (5) analysis correlation between the allocation level of the ERP system and the rate of encountering problems with application interfaces

			The allocation level of the ERP system	the rate of encountering problems with application interfaces
Spearman's rho	The allocation level of the ERP system	Correlation Coefficient Sig. (2-tailed) N	1.000 8	-0.619 0.10 8
	the rate of encountering problems with application **interfaces**	Correlation Coefficient Sig. (2-tailed) N	-0.619 0.10 8	1.000 8

Fig.20. The relation between the allocation level of the ERP system and the rate of encountering problems with application interfaces

Conclusions:

The main findings of the study are as follows:

- Many of the motives behind the implementation of the enterprise resource planning system ERP was "cost savings" as it was the most important and the most compelling motives that made these companies going to work with this system.

- Increasing the total productivity of the company is considered one of the most important benefits that resulted from the application of the ERP system in companies and factories specialized in the garment industry.

- The ERP system did not disturb the administrative problems and difficulties faced by the companies in which they operate. The problem of "increasing the cost of the project", which may be a burden on the company or the factory.

- The main technical problems faced by these companies are "integration with other applications" and "data migration"

- The results confirmed that all garment manufacturers focused their attention on the application of the system in their "financial statements" and then followed in terms of application intensity "sales and marketing"

- The ERP system of the business strategy in the companies and factories specialized in ready-made garments reached to 79%, which indicates the feasibility of applying the system and the importance of working in all companies specialized in the same field.

- The critical success factors of the ERP implementation were: "Redesigning business processes to fit the software", "Clearly indicate the scope of the project", "Training and refinement skills" and "Management recognize the need for change".

- "Gradual approach" is one of the best and most successful strategies for ready-made garment companies, which operates under the most successful ERP strategies.

- "The nature of requirements and needs" is the most important functional criteria that influenced in the choice of implementation strategy used in companies and factories that operate ERP system.

- The organizational criteria that influenced in the selection of the institutions strategy that operated in the garment industry when applying the system was the "size of the institution"

- There is a positive relationship between the size of the institution and the allocation level of the ERP system to be applied. In other words, the greater the size of the organization, the greater the level of customization.
- There is an inverse relationship between ERP allocation level and the ease of learning system tools, as the greater level of customization, the more easy to handle the system tools.
- The higher the level of allocation the lower the expenditure and the training costs as a proportion of the ERP system evaluation budget, Which means that the systems that have an allocation in all departments bear the institution costs less than the systems that operate one program for all or be specialized in some departments.

Appendices:-
Appendix A. Questionnaire about implementation of Enterprise Resource Planning (ERP) in apparel factories

1- What is the size of your enterprise?
a- small   b- Medium
c- Large

2- Which ERP systems are implemented in your organization or are in the process of being implemented?

3- What are the motives behind the implementation of ERP system in your organization?

-Technical   - Commercial / Strategic
- Functional   - cost saving
- All of the above   - Other, and mention it

4- What are the benefits of an ERP system for you?
-Leads to customer satisfaction and suppliers   - Increase overall productivity
- Reduce cycle time   - reduce inventory levels
- Increase return on investment   - all of that
- Otherwise, and mention it

5- What are the administrative problems, if any, faced by the institution during or after the implementation of the ERP system? (Can specify more than one point)
- Increase cost of project   - projects delayed
- Conflict with the business strategy   - workers resistance for changing
- Conflict with consultants   - internal conflicts
  - Conflict with sellers   - all the above
-Otherwise, and mention it

6- How can ERP systems meet the company's business strategy?
- 85% -100%   - 75% -84%
  - 65% -74%   - 50% - 64%
  - Less than 50%

7- What technical problems, if any, were encountered during or after the implementation of the ERP system? (Can specify more than one point)
- Integration with existing systems   - Integration with other applications
- Integration with a new work program   - Data migration
- Customization   - Security
- Other, and mention it

8- What are the critical success factors for organizational implementation of the ERP system? (Can specify more than one point)
Redesign business processes to fit software.
-Organizational commitment to change.
-Integration with other programs.
- Sufficient internal experience.
Suitable mix of internal and external human resources.
-Unified and sufficient discipline.
-Avoid technical obstacles.
- Assignment of responsibilities to functional areas.
-Clearly refers to the project schedule.
-Avoid conflict with business strategy.
- All of the above.
-Otherwise, and mention it

9- What are the critical success factors for the functional implementation of the ERP system (through your experience)?
- First analysis of business.
- Proportionality between software and business processes.
-Reconciling between project objectives with strategic business objectives.
- Training and refinement of skills.   - Recognition of the need for change.
- Obtain permanent commitment from users.
- Dealing with organizational resistance.   - Effective communication
- Clear definition of the project and its objectives   - Other, and mention it

10- What is the allocation level of ERP system for your organization?
- Non-specialist and takes a general approach
Specialist in some departments-
- Fully specialized in all departments

11- What are the regulatory standards that have affected the choice of implementation strategy?
- the size of the enterprise.   - The complexity of the system in the institution
- The extent of training and refinement of skills for users.
-Total number of users.   - Available resources.
- Extent of users' conviction of the system.   - Level of commitment of senior management.
- Commitment level of users.   - Need to redesign and standardize business processes.

12- Approximate training cost in terms of ERP system evaluation budget:
More than 20%   - from 16-20%-
- From 11-15%   - from 6-10%
- Less than 5%

13- How effective is the information in developing your application management strategy?
The application does not monitor productivity.   - Very effective.
 Moderately effective.   - Mostly ineffective.
  - Has no effectiveness.

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