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Use The Enterprise Resource Planning System To Support The Implementation Of Cost Rationalization and Achieve Effective Management Applied Research In Wasit Textile and Knitting Factory

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Abstract.*Technology has become one of the important pillars on which organizations that want to succeed in their work depend, as well as those that seek to achieve a leading competitive advantage in their field of work. As they develop, institutions face decisions that require correct information, and the appropriate time for decision-making aims to analyze costs and explain the mechanisms used in the industrial sector in Iraq and the impact of implementing the enterprise resource planning system on the economy. And to display unit costs. Therefore, the complexity of business requires complex information systems that help make good management decisions effectively and efficiently and have a positive impact on financial and non-financial systems.*

Keywords*: Enterprise resource planning system, Cost rationalization, Effective management.*

1. INTRODUCTION

The technical approach to management requires the availability of information from all operational processes to ensure their integration Provide accurate and comprehensive performance indicators, facilitate work and ensure quality. Therefore, the ERP system is the information system of the entire organization because it facilitates the flow of information within the organization and coordinates all resources and activities within the organization. The availability of information about all the organization's activities, as well as financial and non-financial operations, helps support management or decision makers and their interaction and follow-up of developments in the business environment. The research aims to analyze the cost, explain the measurement mechanism used in the industrial sector in Iraq, and shows the impact of implementing an Enterprise Resource Planning system on economic unit costs.

The first axis

a. First: the research problem

The complexity and complexity of organizations require advanced information systems to make informed, efficient and effective management decisions and have a positive impact on financial and non-financial systems. Some sectors are looking for alternative solutions that can help strengthen economic unity and it is recommended to resort to enterprise resource planning systems to solve larger As the world turns to automation to solve complex problems such as:

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Increase production and reduce costs. Improve efficiency through enterprise resource planning systems.

b. Second: Research objectives

1. A description of the cost analysis and measurement mechanisms used in the Iraqi industrial sector.
2. Describe the impact of implementing an enterprise resource planning system on economic unit costs.
3. Providing an integrated cost system whose results can influence the administrative decisions of the economic entity.

Third: The importance of research

1. The importance of the enterprise resource planning system in management accounting as it is an effective and independent management method that supports modern trends in cost management.
2. The importance of the research as it focuses on computerized accounting systems represented by enterprise resource planning systems in order to achieve cost rationalization, choose the appropriate method for managing costs, and determine the possibility of applying them effectively.
3. Study the implications of using an enterprise resource planning system to support cost rationalization in a way that provides appropriate information at the right time to make rational and informed decisions during the cost management process.

c. Fourth: Research hypothesis

Using the enterprise resource planning system to support the implementation of cost rationalization, which in turn contributes to the effective management of economic unit costs.

d. Fifth: Previous studies

1. Ignatiadis 2007: ERP use, control and deviation: An institutional perspective. PhD thesis, University of Bath. The aim of this study was to demonstrate the impact of the implementation of the system on organizational control in organizations and the extent to which organizations deviate from an enterprise resource planning system.
2. Research (Sangster, et al., 2009): ERP Implementation and Its Impact on Management Accountants. The purpose of the study is to show the impact of the application of Enterprise Resource Planning systems on the role of management accountants in general management accounting and business operations. This is against the backdrop of the tremendous success of implementing Enterprise Resource Planning systems. Enterprise Resource Planning systems.

3. Research (Galani , 2010) ERP Advantages and Business Performance in Greece. The purpose of the study is to demonstrate the importance of ERP systems in the Greek business environment. ERP systems have become an indispensable tool for businesses to remain competitive and survive. The systems are praised for their ability to increase productivity, competitive advantage, and customer satisfaction.
4. Al-Fawaz 2012 study: A review of the introduction and implementation of Enterprise Resource Planning in service sector organisations. This PhD thesis at Brunel University London aims to explain the factors that influence the decision-making process for the adoption and implementation of an Enterprise Resource Planning system. The focus is on the importance of factors that influence the adoption and implementation of ERP systems, as well as assessing the various stages of the system life cycle and identifying the success factors for the implementation of ERP systems at different stages of the system cycle.
5. Damlin & Sundquist (2013) study: Cost Rationalization and Value Creation in Product Development at Ericsson BNET. The Master's thesis in Supply Chain Management aims to analyze how design for cost and requirements in product development and procurement processes can be used to create value and reduce costs for all existing and new products.

The Second Axis

a. First: Material requirements planning (MRP).

The MRP system appears to help plan the manufacturing process because the MRP system defines an information system used to calculate the required amount of components to produce the final product. These components have a property called dependent demand (Greasley, 2008:81). Manufacturing refers to the specific flow of raw materials from supplier to factory to customer, as well as the flow of information to all concerned about what is planned and what should happen. Effective planning helps reduce difficulties in controlling the manufacturing process.(Ptak, 2011:20).

b. Second: Manufacturing Resource Planning System (MRP II).

The MRP-II system is an idea extended to the MRP-I system to include other departments in the organization, for example the marketing and accounting department, where the common database contains information about the structure of the product, which can and may change due to design changes. It includes a financial element such as inventory cost that can be used by the accounting department. (Greasley, 2012: 82). The material requirements system was introduced in the early 1980s and focused on improving manufacturing processes by balancing materials and production requirements (Rashid, 2002: 16). The production

requirements planning system is one of the important foundations of the enterprise resource planning system because the success achieved with the system led companies to turn to the systems and invest more in them to solve problems, which led to the emergence of the enterprise resource planning system. Resource-led planning system. (Stockton, 2004: 320)

c. Third: Enterprise resource planning

An Enterprise Resource Planning (ERP) system is a strategic tool that integrates, synchronizes and simplifies an organization's various processes along with its data into a single system to increase the effective performance of the company and achieve competitive advantage in an uncertain business environment (Madanhire, 2016:226). The enterprise resource planning system has many connotations because the enterprise resource planning system affects the organization in which it is applied in many ways, including the culture of the organization in general and the organization of the organization itself. The application of the system can change the nature of the organization within the organization, which helps management through the availability of information. in real time (Lima, 2000: 13).

d. Fourth: Enterprise Resource Planning System

Due to the increasing demand for ERP systems and the growing need to connect systems with devices, equipment and electronic data processing, the need has emerged for a system that can emulate other electronic systems. It is a development of an enterprise resource planning system with the same characteristics, but with the possibility of obtaining the system's programming code in order to link it with other systems for this purpose. The system has important characteristics such as flexibility, maturity, support, and continuity, and this is what led to the emergence of the open source ERP system (Herzog, 2006: 18). Costs in an ERP system are straightforward and transparent from the linking and integration process. While closed source ERP providers tend to hide costs in order to gain maximum benefit, as with most organizations, an ERP system has additional costs that have ballooned over time. It can reach twice its original price (Valyi, 2008:6).

e. Fifth: Definition of the enterprise resource planning system

ERP system is known to many researchers including Davenport etc. as a business software package that handles the seamless flow of information within a company by integrating supply chain, customer information, finance, accounting and human resources. (Davenport et ta, 1998:2) As defined by Burrell etc., it is an information systems package that can be configured by integrating information-based processes within and across the functional areas of an organization. (Burrell et ta,2000:1) Marshall defined it as a segmented system, that is, it is capable of meeting the needs of private companies, facilitating the flow of information

between various functions of the organization, and managing communication with external stakeholders. (Marshall et ta.,2018:35)

f. Sixth: The importance of the enterprise resource planning system

The importance of an enterprise resource planning system can be summarized in a number of points. The most important of them are:

1- The ERP system contributes to improving productivity, flexibility, and responsiveness to customers, as processes are integrated into an application that helps the organization and contributes to increasing the level of efficiency within the organization (Al-Housh, 2016: 20).

2- The enterprise resource planning system reduces time and effort through the availability of data, reduces the process of repetitive data entry, and helps direct effort towards analyzing data instead of entering it (Al-Housh, 2016: 21).

3- Implementing a business planning system helps reduce costs by reducing the number of employees and reducing routine and repetitive work (Monk, 2015: 37).

4- Implementing the system brings great benefits to the organization as it helps in the transformation from the separate traditional management system to an integrated system that is interconnected in its parts (Sumner, 2014:5).

5- Implementing an enterprise resource planning system helps improve administrative performance by improving communication with customers through constant communication with customers and providing offers based on artificial intelligence within the system (Sadrzadehrafiei, 2013:223).

6- Using an enterprise resource planning system, direct results can be achieved such as: b. Strengthening the company's organizational processes by simplifying internal processes and monitoring processes of great importance such as (sales, purchasing, marketing, accounting, etc.). (Tambovcevs, 2013: 68).

7- The enterprise resource planning system supports the administrative process mediated by supply chain management, as the system supports complex correspondence with suppliers and e-commerce, and these processes are important for increasing the efficiency of logistical transportation operations (Heizer, 2011: 597).

g. Seventh: Definition of cost rationalization

Wiley defined it as a sustainable reduction along the value chain that helps reduce costs for the end customer and thus achieve a competitive advantage. (Weele, 2010:30) As Muwish defined it, it is a way to prevent the depletion of resources in organizations by using modern methods and techniques to reduce costs. (Muwish, 2017: 33). “The two researchers believe that

cost rationalization is a set of logical and rational actions applied by management along the value chain that help provide a final product of the highest quality and lowest possible cost, thus achieving competitive advantage."

h. Eighth: The importance of rationalizing costs

The importance of cost rationalization stems from the importance of ensuring the continuity of institutions in their work. Therefore, cost rationalization through optimal consumption and resource conservation is a basic need for every organization, given the scarcity of material and financial resources. https://www.marketing91.com/rationalisation /

Rationalizing costs through the use of modern systems and machinery technologies that help the company improve control, especially after developing the IOT Internet of Things system that sends information to management in real time through the dashboard, which helps to quickly identify errors. (Glenn, 2005:212). Getting rid of unnecessary departments or products by applying the concept of rationalization aims to permanently eliminate the pressures created by products or departments that cause losses to the organization or do not contribute to generating profits (Weele: 2010: 32).

i. Ninth: Cost rationalization mechanisms

Some cost rationalization mechanisms:

1- **Rationalizing costs by focusing on costs from design to cost realization:**
   By the time the product design is completed, only 8% of the product budget has been spent. At this stage, 80% of the costs of the production process are determined, as the process of designing a manufacturable product is considered one of the most important steps in the value chain (Tambovcevs, 2013: 6).

2- **Rationalization of costs starting from what the costs should be:**
   Emphasis is placed on the organization's resource cost structure before purchasing resources from suppliers by allocating manufacturing and purchasing costs so that the organization can obtain the product at a reasonable cost. Therefore, the market is studied to determine component prices and manufacturing costs, and then know the transportation and storage costs and create a cost structure to obtain the product with an integrated objective plan (Damlin, 2013:12).

3- **Rationalizing costs through benchmarking:**
   Benchmarking is the process of constantly comparing an organization's performance level with the actual best performance level of competing organizations or the organization's best performance level for the previous year (Horngren, 2018: 289).

4- Rationalizing costs through on-time production:

This production technology requires close cooperation with suppliers and the establishment of sustainable investment relationships in order to obtain essential products without interruption. (Matz et ta., 1988:216).

Ordering in this type of manufacturing causes the production process to purchase materials according to the needs of the production process. Therefore, suppliers must work hard to fulfill their commitments on time, as any delay or drop in quality puts the organization at risk, resulting in lost order or delayed production (Horngren et ta., 2018:711).

5- Rationalize costs through standard costs and analysis of deviations:

Standard cost is still a control tool that can be used to control costs, especially since we live in the era of the Fourth Industrial Revolution (the technological revolution), which helped implement previous cost control for all products and according to the distribution of costs based on elements (material costs, wages, indirect costs, administrative costs, and marketing). (Stock, 2016:536-541). The world is currently moving towards electronic control of machines, their maintenance, and control of their production processes. Therefore, product specifications should consist of a list of materials and the number of production hours per unit so that processes can be automated (Peruzzini, 2017: 436-442).

6- Rationalizing costs by using the enterprise resource planning system:

Costs are rationalized through restructuring work and redesigning processes in accordance with the desired results of applying the enterprise resource planning system in redesigning the operations of the entire organization, which leads to organizational changes that contribute to rationalizing costs. (E. Lawler et al. 2001). The enterprise resource planning system also supports the management process through supply chain management, as the system supports complex communication with suppliers and e-commerce. These processes are important for increasing the efficiency of logistical transportation and warehousing operations within the MRP system for enterprise resource planning. The system thus records material requirements and links with purchasing departments to request materials. . (Heizer, 2011: 597) Implementing a business planning system also helps reduce costs by reducing the number of employees and reducing routine and repetitive work (Monk, 2015: 37).

The researchers concluded that costs can be rationalized by reorganizing processes within the organization by implementing an enterprise resource planning system, and this is exactly what the practical aspect of this research aims to achieve.

The third axis

The applied aspect of research

In this study, the enterprise resource planning system was used with the aim of solving the problems of the accounting system and the flow of information and providing it for timely decision-making and reducing costs, effort and time, in addition to achieving effective management by comparing work requirements in the economic entity and for the purpose of providing the necessary data on the research sample by referring to the trial balances. Financial statements, journal entries, and account analysis, as well as personal interviews conducted by the researchers with department and section officials to obtain suggestions for improving some cost element operations, while presenting practical cases of using the enterprise resource planning system to support the implementation of cost rationalization to achieve effective management.

a. First: An introductory overview of Wasit Textile and Knitting Factory:

The company (formerly the factory) was established in 1971 by merging the textile and knitting factories due to their participation in technical services, their proximity to the site, and the similarity of their final production. It was named (Wasit General Company). Textile Industry) in 2001. On January 1, 2016, the company was transformed into a factory (Wasit Knitting Textile Factory) and merged with other companies working in the textile industry, and the General Company for Textile and Leather Industries was established.

The factory currently consists of two main factories:

A. Cotton Spinning and Weaving Factory, which includes, in addition to the control and construction departments and associated laboratories, also machinery and equipment for the spinning, weaving, finishing, and ginning departments and their services. The factory was opened in 1970.
B. Knitting and sock factory, which includes machines and equipment for knitting socks, knitted outer and inner clothing, knitted fabrics, perlon fabrics, and a hat production department. The factory opened in 1966.

b. Second: The main interface of the proposed program for the laboratory:

The software includes a number of systems that represent components of the laboratory's ERP system. It also includes subsystems that depend on data processing cycles (sales cycle, purchasing cycle, production cycle, employee cycle), in addition to a number of documents and documentation for each cycle (daily restrictions, purchase orders, sales orders, supplier list, customer name, inventory evaluation etc.).

c. Third: Components of the enterprise resource planning system in the factory:

The enterprise resource planning system consists of a group of systems as follows:

1. Factory management: General management of the factory and setting factory policy.
2. Planning and Tracking Department: Follow up on technical matters and control storage, planning and tracking.
3. Sewing Department: Direct technical and administrative supervision of all factory affairs.
4. Textile Management: Direct technical and administrative supervision of all factory affairs.
5. Financial management: accounts for salaries, expenses, revenues, and all financial matters.
6. Projects Department: Following up on the investment plan and everything related to the factory projects.
7. Commercial Section: - Announcing offers, supervising the conclusion of import contracts, and managing commercial affairs.
8. Factory Management Department: It is concerned with organizing employee affairs, providing data related to them, managing various administrative services, and administrative supervision of the factory departments.
9. Internal Control Department: - Auditing financial and administrative transactions.
10. Quality Control Department: Conduct laboratory tests and inspect production to ensure its compliance with approved specifications.
11. Legal Department: Carrying out legal tasks.
12. Quality Management Department: - The Product Quality Supervision Certificate (ISO) was obtained on August 20, 2014 to manage the knitting factory and factories.
13. Marketing Department: Supervising the marketing of the factory's products.
14. Research and Development Department: It is responsible for preparing research work, studies, and special courses according to the factory's needs.
15. Technical Inspection Department: - Carrying out technical and industrial safety inspections.
16. Information and Accounts Center Department: It specializes in following up on technical and administrative reports and information systems in the factory, as well as coordinating with the company's headquarters in this field.
17. Media Department: - Follow up on everything related to the factory in the media.

The factory does not currently suffer from skills gaps or deficiencies, but if these gaps exist, they can be filled or avoided through continuous development and training of the factory's cadres, thus improving their efficiency and activating their role in the production process, which also saves money. The company runs a training program for its cadres throughout the year. In the Training Department, as well as training through... Participation in training courses in the Training and Qualification Department of the Ministry of Modern Industry. The factory has sufficient flexibility to deploy or deploy cadres in other fields, especially engineers and technicians, if necessary.

d. Fourth: Sales system

This system includes a series of activities and processes between Wasit Textile and Textile Factory and customers that constitute the sales process of the factory's products. It has been divided into sections and divisions as follows:

1. Marketing Department: This department carries out the process of selling the factory's products to customers, as the marketing department in the factory is one of the marketing departments in the factory, in addition to the presence of several quality sales points in the governorate. Among the work carried out by this department are:
    a. Receiving amounts from customers, depositing them in the bank, and receiving deposit receipts for the purpose of registering with the accounting department.
    b. Verify the quantity of product available in the factory warehouses based on the daily production report from the production department.
    c. The submission of a delivery order corresponds to a receipt for the quantity to be supplied to the customer.
    d. Create a daily statement of account containing the customer's details and the amounts received.
2. Production Management Department: This department issues orders and documents to ensure that the packaging process is carried out correctly, as follows:
    a) Prepare a product quantity posting card to control the product posting balance for each customer.
    b) Submitting delivery requests and sending them to the marketing department to fulfill the quantity specified in the order.
    c) Informing the Accounting Department and the Production and Marketing Department about the daily marketing situation.
    d) Daily preparation of delivery schedules and coordination with the delivery department to reconcile the prepared products.

3. Sales Division (Accounts): The sales system inputs in the sales department consist of the following:
    a) The Marketing Department provides the Sales Department with documents (processing requests, receipt book entry form, payment receipts, receipt form, etc.).
    b) The Packaging Department submits the following documents to the Sales Department (preparation notices, marketing position, daily preparation plans).
4. The impact of the electronic distribution system in reducing costs and achieving effective management: The enterprise resource planning system provides multiple functions, capabilities and software solutions to address factory problems by reducing the time, effort and cost of transferring data and information in the sales cycle, which includes related transactions between the factory and the customer on the one hand and between departments. On the other hand, the difference in the factory is that implementing the system requires only two employees in each department related to the sales process. Thus, the number of employees in the sales system is (6) out of (74) employees, and Table (1) shows this.

Table 1 Number of employees working in the marketing system

Section (Division)	Current number	Number according to the ERP system	Savings
Marketing department	25	2	23
production management	28	2	26
the accounts	21	2	19
Total	74	6	68

Source: Prepared by researchers based on data from the departments mentioned above.

Table (1) above shows that working with the resource planning system in the sales system provides (68) employees with different salaries, and the average salary for each of them has been approved as (600,000) dinars, so the total savings achieved by this system is (40,800,000). One dinar per month, i.e. h. Equivalent to (489,600,000) dinars annually. The ERP system also reduces the time and effort required to complete a sales transaction, as well as the accuracy of its processing, by relying on electronic applications and reducing errors as much as possible. This means that participants receive all data and information quickly and reliably.

e. fifth: The system of purchases and cash payments:

The procurement system at Wasit Textile and Knitting Factory includes a series of repetitive activities whenever they are related to processing data related to purchase payments for raw materials, goods and services, which can be summarized as follows:

1- Requesting raw materials and services: One of the things that affects this process is the inventory control method used, as one of the most important decisions in this process is determining what to buy, when, and how much will be purchased. Gaps in inventory controls can affect the occurrence... There are several problems in this process and inaccurate records can lead to stock outs and not purchasing the required materials on time, which requires the presence of a supplier inventory control system using an enterprise resource planning system, one of whose components is the material requirements planning system.

   a) Material Requirements Planning System: Inventory is controlled using the (MRP) system, which aims to reduce the inventory of raw materials by improving the forecasting process to obtain the best purchasing planning to meet production requirements without delay, while (MRP) processes production plans to meet expected sales and create inventory. Available for sale. The MRP system is also more suitable for products with predictable demand, such as: b. Wasit Textile and Knitting Factory products also work to reduce costs, improve efficiency, and provide appropriate and reliable information.

   b) Request: The purchasing process begins with the request submitted by the concerned department after confirming the need and inability to provide the required material with the approval of the warehouse keeper using the enterprise resource planning system. The warehouse systems begin submitting requests automatically. If the quantity is less than the reorder level.

   c) Purchase order: After the approval of the production manager, the request is transferred to the financial department to approve the purchase of materials to ensure the availability of the materials required for purchase. The request is then transferred to the Purchasing Committee, where this committee announces a tender to purchase the required materials according to the required quantities, specifications, and other conditions.

2- Receiving and storing raw materials: This department is responsible for storing the materials and delivering them to the production departments in the required form after receiving them from the Purchasing Committee and verifying the required quantities and specifications so that the inventory records are updated accurately. One of the most important documents for this process is the goods receipt report, as it documents the date of receipt of the material, the order, the type of material, the specifications, and the unit of measurement.

3- Payment for raw materials, supplies and services: Approval of supplier invoices. After receiving the raw materials, goods and services, the order must be verified and the confirmed materials are received by the Accounting Department and sent to the Audit and Internal Control Department. A payment receipt will then be generated to pay for the purchased items.
4- The impact of the electronic procurement system in reducing costs and achieving effective management: The electronic procurement system helps reduce costs by saving employee effort in printing and sending books and documents to each section of the factory as shown below:
5- Number of factory departments * monthly salary rate * 12 months = annual cost reduction amount

14 * 712,560 * 12 months = 119,710,080 dinars annually

Implementing an electronic purchasing system also helps speed up purchasing processes and reduce time, as shown in Table (2):

Table 2 The time required to complete a purchase under MRP

Activity	Current time spent (minute)	Time required according to MRP (minute)	Time savings (minute)
Submit a purchase order	20	6	14
Purchase Order	20	8	12
Receipt report	30	15	15
Authentication of invoices	25	10	15
Update suppliers file	35	0	35
Mail between departments	260	40	220
Total	390	79	311

Source: Based on personal interviews with department officials

For the reasons mentioned above, implementing the electronic procurement system as one of the components of the enterprise resource planning system has an impact in reducing costs, achieving effective management, providing appropriate information to decision makers, accelerating the process of purchasing materials and completing the production process, thus achieving and maintaining customer requirements, in addition to the presence in the factory database of suppliers who are characterized by quality. And reliability. Low price to provide the necessary materials for production with high quality and low cost.

f. sixth: The production system:

The production system in the Wasit Textile and Weaving Factory includes several production stages according to the activity of each factory. When using an ERP system, the data is examined at each production plant as follows:

1- Spinning and Weaving Factory: The cotton spinning and weaving factory, which includes, in addition to the monitoring and construction departments and laboratories attached to it, also machines and equipment for the spinning, weaving, finishing, and ginning departments and their services. It was opened in 1970.

Cotton hair is delivered from the raw material warehouse in the form of bales to the spinning mill, where it is processed in packages into ribbons, which are then transported to the final spinning department to be converted into different yarns, and then sent to the warp department to be converted into pleats, and then to the starch department. To strengthen it with starch to increase the durability of the threads, then to the textile department to transform it into different fabrics (baza/summer/raw), then to the finishing department, in which the fabric goes through the shortening and drying stage, then the printing and fixing stage, then the washing and passivation stage, then the fabric preparation stage in the form Sheets and bales then finishing warehouse.

2- Sewing factory:- guaranteed

A - Surface Knitting Department: Acrylic yarn is received and knitted to make men's sweaters / women's sweaters / children's sweaters. The woven pieces are then sent to the sewing department for stitching, after which they are checked by quality control, then processed and sent to the warehouses.

a) Internal Circular Knitting Department: Cotton threads are received and sewn to make jersey fabric. They are then sent to the finishing department and then shortened and prepared for the sewing department, where they are sewn in the form of men’s shirts. Men’s shirts. Pants and underwear in different sizes are then inspected by quality control and prepared. For storage.

b) External and textile knitting department: Cotton/polyester/perlon yarns are accepted for the production of fabrics made from polyester, perlon, and cotton, then sent for finishing and dyeing, subject to quality control, prepared in lengths, and sent to shipping warehouses.

c) Socks Department: Where cotton, acrylic and wool threads are processed to manufacture men’s, boys’ and children’s socks. It is then sent to the finishing factory for dyeing, quality control and prepared for storage.

d) Al-Bireh Department: There, the wool threads are received and woven into the shape of a military hat, then they are formulated and sewn in the same department, then they are inspected by quality control and prepared for the warehouses.

3- The impact of the electronic production system in reducing costs and achieving effective management: The electronic production system helps by providing cost data and information about the factory products and thus using it in pricing decisions as well as in calculating the inventory value of each factory product for each time based on the daily reports prepared by the production department. Determine the quantities required for each of the raw materials involved in the production process and the possibility of detecting deviations in the raw materials involved in production by comparing the quantities with the standard quantities used.

The electronic system also helps save the time needed to prepare reports and send them to users in a timely manner, which helps in making administrative and operational decisions regarding the quantities of production available for sale, and thus reducing costs, by dispensing with the employee responsible for printing and sending books and documents to all departments related to the production process. .

For the above reasons, the use of electronic production systems is one of the most important components of the enterprise resource planning system, which affects cost reduction, provides an effective tool and provides timely information.

g. Seventh: Human Resources Management System:

The payroll system in the Wasit Textile and Knitting Factory depends on two electronic programs, one of which is for electronic salaries, through which salaries are prepared and distributed via electronic payment. The factory works according to this program and the other program is for electronic salaries, employee registration, prepared by the National Pensions Authority/Retirement Fund/Department of Information Technology, which Includes approval of employee registration and deduction of retirement contributions. This program includes the establishment of a database for all state departments with the aim of controlling deductions from retirement contributions, in addition to providing information on all administrative and financial employees on a monthly basis. A specialized employee from human resources and another employee from the financial affairs department are authorized to enter and update employee data periodically by granting them Login access via password.

1- Electronic payroll program: There are four main sources of access to the factory's payroll system:

a) Personnel Management Section: This section contains information about new and retired employees, promotions and rewards for employees, rewards that are granted in accordance with applicable laws, regulations and instructions, and the academic performance of employees.
b) Employees: The system provides monthly changes and discounts in addition to family allowances (wife and children).
c) The various departments provide data on actual working hours, but the factory operates on a fixed wage system and not on the basis of working hours.
d) Government agencies: These are government banks (loans and monthly installments), the Tax Authority (tax rates), and the National Retirement Authority (retirement contributions).

2- Electronic employee registration program:
a) Employee registration: Here, the authorized employee enters the employee's data based on the job file stored in the Human Resources Management Department. This data constitutes personal data (full name, date of birth, educational status, marital status, etc.), such as employment data (employment date, Job title, job level...etc.) in addition to the financial data (nominal salary, total allowances...etc.) and the continuation of work after entering all employees. This activity applies only to the new entry (new appointment).
b) Employee update: After entering all employees, their data will be updated monthly if there are any changes that require updating their data (change in marital status, promotion and reward, addition of services, etc.). This activity can also be used as a database to search for employees in the factory.
c) Expenditure export system: This program electronically records data and lists of outputs in Excel format, which, in addition to the percentage of retirement contributions (25%), contains the names and data of all employees registered in the program. (10%) is deducted from the employee's contribution and (15%) from the company's retirement contribution.

3- The impact of the electronic human resources system in rationalizing costs and achieving effective management: This electronic system provides correct data and information about all workers in the factory at all times, in addition to calculating retirement contributions electronically, as an application of this system in the textile and knitting factory Wasit indicates that in addition to Salaries There is also a decrease in the number of employees in the Human Resources Department, as shown in Table (3):

Table 3. Number of employees according to the human resources management system in Wasit Textile and Weaving Factory

Division	Number of current employees	Number of employees according to the ERP system	Savings
Personnel Management Division	30	6	24
Files Division	8	2	6
Retirement Division	10	2	8
Payroll Division	12	2	10
Total	50	12	38

Source: Based on data from the Administrative and Financial Affairs Department

From the above table, the amount of employee wage reduction included in the product cost can be calculated as follows:

Number of surplus employees * monthly salary rate * 12 months = annual cost reduction
38 employees * 717,132 dinars * 12 months = 327,012,192 dinars

This reduces the cost of the various products produced by the factory throughout the year. This system also helps save the time and effort needed to prepare salaries and calculate various deductions correctly and accurately, as shown in Table (4):

Table 4.Time to prepare salaries and deductions in the factory according to the ERP system

Activity	For the necessary time according to the traditional system (minute	The time required according to the ERP system (minute)	Savings (minute)
Data Entry	15	15	0
Updating data	450	400	50
Calculating deductions	4374	0	4374
Preparing salaries	4374	30	4344
Preparing reports and statements	45	10	35
Issuing reports and statements	45	10	35
Total	9,703	465	9238

Source: Based on interviews with the Payroll Division official

Table (4) shows us that implementing the electronic personnel affairs system, in addition to preparing monthly reports for internal and external users, saves (9238) minutes per month for preparing and distributing salaries and deductions for each employee regarding changes in the administrative and financial aspects of work.

From the above, the application of the electronic personnel management system is one of the components of the enterprise resource planning system, the application of which

contributes to reducing costs and achieving effective management by providing sufficient and timely information to make rational decisions.

After presenting the applied aspect, it becomes clear to us that cost rationalization is achieved through the correct application of advanced electronic systems such as the enterprise resource planning system, which works to evaluate and improve the factory's accounting information systems by combining financial and non-financial data that provides relevant information. Providing timely financial accounting information for decision-making, helping management to solve and deal with problems that arise repeatedly and eliminating activities that do not add value and incur additional costs for the factory, which proves the foundations and validity of the basic hypothesis and the results of the research which state that the use of a planning system Enterprise resources support the implementation of cost rationalization which in turn contributes to the effective management of unit costs.

2. CONCLUSIONS

1. Using ERP systems to support cost rationalization implementation helps improve the interconnection, forecasting, control, logistics and decision-making of supply chain activities.
2. Enterprise resource planning displays time data for all activities of the Wasit Textile and Weaving Factory according to theoretical and practical capabilities for the purpose of monitoring and controlling the costs spent in the factory.
3. Weak inventory control, which leads to high storage costs and the purchase of surplus materials, in addition to delays in implementing procedures and wasting time in completing administrative and financial operations, while at the same time increasing the number of routine transaction procedures.
4. Weak human resources management skills in the organization make it difficult to move from the traditional system to the enterprise resource planning system.
5. The lack of human resources training in the textile industry has contributed to the poor development of the textile industry in general.

3. RECOMMENDATIONS

1. The necessity of automating accounting information systems using a unified and independent database for all company activity data to facilitate the work of important enterprise resource planning (ERP) applications.
2. Increased interest in applying the enterprise resource planning system, as it is a modern application system to keep pace with technological developments, save time in providing information to its users, and link this system with cost systems in order to achieve optimal use of available resources and benefit from them in inventory control to avoid depleting them or creating surplus materials.
3. The necessity of activating modern technologies in the electronic field, which is considered one of the basic elements for rationalizing costs, time and effort, and flexibility in modernization to keep pace with changes and customer requirements.
4. Providing human resources with courses and study opportunities, especially for advanced cadres in the company, to help improve the quality of work through the use of modern technologies.
5. Activating the effectiveness of the marketing department by increasing investments in modern marketing processes using the website application of the enterprise resource planning system.

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