The Effect of Enterprise Resource Planning (ERP) Systems on the Correct Determination of the Cost for a Cement Plant Admitted to Tehran Stock Exchange

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ABSTRACT
Recent developments in the business environment businesses under various titles such as the removal of waste regulation, privatization and globalization have done with fueling conflicts, conversion of large commercial firms to large multinational corporations and provides has caused the company to survive and continue its success, more are seeking new solutions. Cost accounting provides information on programs and helps managers to choose between different policies. This study sought to examine the impact of enterprise resource planning systems on the true cost of a single commodity in the cement industry, adopted in Tehran Stock Exchange review. Enterprise resource planning system to determine whether the true cost of a single commodity in the cement industry is accepted in Tehran Stock Exchange? This study used a descriptive correlation. The results of this study tests the hypothesis that the true cost of the enterprise resource planning system is also in this study was a single product that enterprise resource planning system is the lower of cost of the goods.

INTRODUCTION
In today's high-speed conditions, with demand overtaking supply, along with the development of information and communication technology (ICT), competition in product and service development is enormous. not allowed to yet integrated information systems, such as enterprise resource planning system (ERP) is one of the most pressing needs of enterprises, institutions and organizations as managers we need to consider not only the small number of their systems. Good intelligence work and rest, even the simplest business planning and control systems are excluded. ERP is an integrated information system that supports the firm's core processes and activities, and planning and control of resources provides the. Although this circumstances systems and the cultural, on the design and implementation of the enterprise, some difficulties We are, however, experts believe that the ERP system is convenient and impressive achievements in the areas of strategic interest, technical, operational and economic income and the type of organization, institutions and agencies at all levels, including senior management levels, middle management and operational management of interest. . Given the above, many questions in the mind of the investigator the possibility of such accounting systems in the cement industry, the information needed for management decisions necessary to control operating costs, especially the cost of providing the products? Cost is calculated based on the proper products are used in cement? The technology can be applied to the cost of cement is involved? Finally, the deployment of ERP systems on the true cost of a single commodity in the cement industry has been affected in the Tehran Stock Exchange.

Theoretical principles and research background:
Resource management, including the concepts along "strategy while focusing on distributional" The aim of planning, resource allocation and evaluation form. In the past, many supply chain activities traditionally with paper, phone and fax were carried out, which is very inefficient, costly, and error-filled. Therefore, when it began using computers in business, many people were calling for automating supply chain processes. Philosophy of Enterprise Resource Planning systems ERP (to be in line with the demands and needs of people into account) because today, more than ever, organizations, and the increasing complexity of the incredible amount of information, using computer systems to automate the flow of information at all levels and layers of the organization, has inevitably; Today, traditional mechanisms and manual in any way, do not meet the requirements. So competitive organizations stay ahead and maintain its competitive advantage, to have new

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technologies to operate. ERP is one of the most advanced technologies and the impact on the process of managing and improving the performance and productivity of organizations, because, as we will see in the next line, he said, the nature of the software system, the dynamics of extensibility it, and to for analysts and designers of the system, provided that the requirements change over time to fit it to develop in such a way as to meet the requirement.) Planned economic system behind technologies such as MRP (Material Requirements Planning) MRPII (enterprise resource planning production), MRPIII (monetary Resource Planning), ERP systems and ERPII are experiencing. It increases product quality and creating competitive advantage to extract juice as an ERP system. In other words, its main role will relate to each other and integration of existing software in different parts of the organization. Performance may receive a customer order and the order is used to automate the process. When the system is responsible for providing customer service, an order is entered into the system, all the information needed to complete the order he placed. This information includes the customer's credit history, order (the financial sector), the company's inventory and scheduling order is shipped. ERP has so much to offer explanations. Production and Inventory Control Society of America defines ERP as follows: A method for effective planning and control of all resources required for production, post and respond to the needs of corporate customers in manufacturing, distribution and service.

ERP is a commercial software package that aims at the integration of data and information flow between all parts of the organization, including finance, accounting, human resources, supply chain management and customers.

ERP Systems, information systems changeable and regulatory agencies with information and information-based processes within and between organizational units have been integrated.

ERP, a database, an application and an integrated interface organization.

ERP, which are computer-based systems designed for the processing of transactions and aim to facilitate the planning, production and timely respond to customers in an integrated environment.

Thus, ERP, all aspects of an organization, including sales and distribution, production planning, procurement, materials management and enterprise resource planning and business management will take. Such as finance, personnel, and production is managed. The system makes all parts of a company's operations; they are collected in a computer system, so that the system is able to meet all the needs of the company's management. A definition of what is important in this regard and focusing more on the Enterprise ERP is the acronym for the longer term. Resource Planning and because the system is short of practice and beyond with a focus on enterprise resource planning, elements beyond the cover. On the other hand, what are the definitions of all the integration and standardization of ERP systems and other information systems of the two major aspects of the ERP integration distinguishes? ERP system into several sub-systems division, which include sales and marketing, planning and maternal origin, material requirements planning, capacity requirements planning, bills of materials, purchase, shop floor control, payments and account receivables, logistics, management Finance, Financial Accounting. Most of the existing ERP systems are so flexible that it can be some of the ERP software systems without the need for a whole series of launches.

General concepts of cost accounting:

It evaluates the performance of their organization, the more detailed accounting information need. The increasing need to provide the information needed to prepare financial reports for internal and external stakeholders of the business unit.

Cost Accounting:

The branch of accounting that measure, record and report information related to the item cost. Cost of each item as one of the company's resources. These items as cash withdrawal, obligation to pay future cash flows or the value of an asset impairment accounting system is created.

In summary, cost accounting and managerial accounting is that financial accounting is part of the cost of the product is concerned.

Thus, the main objectives of cost accounting are:

- Determine and identify the costs: in this case, the basic objective is to determine the cost of Cost Accounting. Costing techniques and different systems are used in different situations.
- Cost (Cost): cost control to improve efficiency and reduce costs through the control points. Because of the growing competition, everyday becomes more important.
- Policy guidance and control business unit aims to provide cost accounting management needs to run the business as efficiently as possible, so cost information, management policy for several decisions such as or the purchase of, the sale of lower of cost the use of unused plant capacity and introduction of new products and offers.
- Selling prices: cost accounting information, products or services offered as well as the cost for inventory valuation and pricing of products and services it provides.
• Assistance in economic decisions: cost accounting, business unit managers to the final decision to choose one solution among the existing solutions supports.

Cost reduction:
Cost reduction by the British Institute of Management Accountants, the real success of the business unit as a permanent reduction in the cost of the product or service, without detriment to the quality and suitability for their into use are defined. This definition includes the following properties:
• Cost reductions must be real, i.e., by increasing productivity;
• Cost reductions must be permanent, temporary reductions in the cost due to changes in tax rates, changes in market prices and similar cases are discussed;
• Cost reductions should the quality and suitability of the products or services provided for the expected harm.

Other methods, such as increased productivity, minimize waste, improve product design and other incentive programs can be effective in improving performance. Note that, due to the reduced cost seem that such advances in methodologies, in the form of cost immediately returned to its original place.

Cost control:
Cost reduction and cost control often one gets confused. Actually control the cost, maintenance cost is the limit. Society of Management Accountants of England as cost control, limit the regulator knows the cost of a detailed cost accounting system will help.

Compare Cost Reduction and Control:
Reduce and control cost effective tools for improving efficiency in cost management are considered. The main difference between the control and reduction of cost is as follows:
• Reduce the cost of real success in reducing the cost is a constant. While controlling cost and price targets to achieve success is predetermined.
• All work must meet the standards.
• Ways of using these two techniques are different. Cost control, preset prices, comparison with actual costs, analyze deviations and eventually move to correct these deals. While the goal of reducing cost, maintaining the actual performance is in accordance with pre-determined goals.
• A reduction in the cost of the reform. Why compete with the purposes set out in pursuit of improved performance and efficiency by reducing costs. While cost control in order to avoid the cost growth exceeds the targets are predetermined.
• Cost reduction through cost control is possible, i.e., starting cost reduction, cost control is at the bottom.
• Cost reduction, a dynamic approach in order to minimize waste and improve prices and the cost of control.

New approaches to cost accounting:
We analyze the dramatic changes in cost accounting. Development of computer systems has led to almost eliminate manual entry. Emphasis on cost control in hospitals, computer and automotive industries, airlines and other organizations that traditionally did not focus much on cost control, has increased. Cost management, particularly from the 90s onwards was a corporate priority.

Previously, the company had learned that one of the key factors to their success in the competition, according to the product quality and in the same direction, such as quality management, fell. Total Quality Management is the faith that focuses on improving all aspects of the organization, while the quality of the final judgment is left to the customer. Performance standards are set according to the preferences and tastes of our customers (may be the top priority of engineers, accountants and marketing staff are not identical). This client-oriented and customer-oriented work of the accountants interesting idea to measure and report the impact of performance pay.

Cost hierarchy:
Awareness of the cost required for various decisions, can contribute significantly to the cost of the analysis is to produce and supply products. Now we have a different cost associated with management decisions are classified into the following hierarchy.

♦ Cost at the plant level:
The costs of those resources that specifically refer to the separate units of product or service are required. These items can be sources of materials, parts and components required to imagine the product. These items may also include other items such as wages, electricity, provided that for each unit of product or service may be required.
Cost at group level:
The cost of making decisions in a group, or a group of similar products in this category is classified. Depending on the technology used in the manufacturing process, the receiver can handle the cost of materials, labor and equipment expertise is applicable to a class of products. Cost of the class, making those decisions directly related to the specific products and to give their traceability. The cost for each unit of product, are considered indirect.

A) Domestic research background:
Valipour, in research as implementation of enterprise resource planning (ERP) staff on internal control over Zob-e- Ahan in Isfahan did come to the conclusion that, in recent years the use of integrated systems on top programs and organizations that have been born. The most important tool of communication, enterprise resource planning system (ERP) is. Competitive business environment, the need for inter-organizational and inter-organizational integration and lack of internal controls of Enterprise Resource Planning systems are forming to make accurate decisions users of financial statements to be led.

Nadimi name and reputation (e.g., MIS systems integration companies, banks ... and ... and ...) benefits and efficacy have not been established. Problems in organizational processes and characteristics employers for many reasons and causes for this failure is that contractors are in place should be reviewed. The relevant organizations are largely resolved. It also increases the productivity and efficiency of the organization Fig. capital is returned after about three years.

Siouki's conceptual model for the adoption of enterprise resource planning systems (ERP) in small and medium enterprises (SMEs), Master's thesis, Faculty of Management and Economics, ERP systems are information systems is one of the types of organizations, particularly manufacturing firms has been widely used. ERP systems have many advantages in terms of rapid response to market needs, reduce time to design, manufacture, distribution and delivery, warehousing costs and better communication with clients. Since small and medium enterprises (SMEs) are excluded from effective use of such a system. In this study, for the first time, to investigate the factors affecting the adoption of ERP in SME manufacturing systems are discussed. Thus, three variable categories including environment variables, organizational and technological framework of four main hypotheses and sub-hypotheses have been seven.

B) Overseas research background:
Sprakman[1]
Based on the research on 71 December 2005 by Gary Sprakman [1] is a Canadian company, shows that more than 7/43% (31 companies) cases, ERP systems in various fields such as capital budgeting, forecasting measure of performance, detail and speed are reported. However, this study cannot be due to other unknown factors that determine the distribution of management accounting change. His building had benefited greatly. Finally, we can say that ERP systems are changing the practice of management accounting events and are based on a minimum sample of Canadian companies, ERP systems have led to the high standards and precise computer data. Obviously, in such an environment cannot be achieved using traditional tools of management accounting systems.

Dahl and Graham Baldwin:
Accounting information for external users of financial statements to start the process of its implementation has been done. However, due to lack of records in the database used in this study was 315, the number of firms in the sample tested may not have been realized.
- Implementation of ERP systems, accounting information increases.
- Implementation of ERP systems is inversely related to the reliability of accounting information.
- Development of implementation of ERP systems, accounting information has a direct relationship.

However, the third and fourth tests of hypotheses were not confirmed. In other words, according to research conducted at the population of the reasons that there is a significant relationship between ERP systems and the main features of the development of quality information, has been found.

Development of a conceptual model and hypotheses:
The research hypotheses are:
- Enterprise Resource Planning system determines the true cost of a single commodity in the cement industry is accepted in Tehran Stock Exchange.
- Enterprise resource planning system to accurately determine the cost of a single commodity in the cement industry has been affected in the Tehran Stock Exchange.
MATERIALS AND METHODS

Scientific research, and seriously trying to argue, perception and relative truth, so research on a topic or issue in each scientific branch all ways and rules that are used for research. Whenever a study to observe all regulations and procedures relating to academic and scientific relations with observation and experience is that it is scientifically valid research methods, correlational study - a description of the purpose of the application. This study was conducted to gather information on field sampling and questionnaires have been used. The validity of this questionnaire was approved by the faculty.

Table 1: Cronbach's alpha variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Number of Questions</th>
<th>Reliability Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Source planning system</td>
<td>25</td>
<td>0.87</td>
</tr>
<tr>
<td>Cost</td>
<td>25</td>
<td>0.65</td>
</tr>
<tr>
<td>Total reliability</td>
<td>0.7</td>
<td></td>
</tr>
</tbody>
</table>

Data analysis:

First hypothesis (H1):

Enterprise resource planning system to determine the true cost of a single commodity in the cement industry is accepted in Tehran Stock Exchange.

H0: \( \mu = 3 \)

H1: \( \mu > 3 \)

Table 2: Describing the data, the t-test for the first hypothesis

<table>
<thead>
<tr>
<th>Quantity</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>84</td>
<td>3.7024</td>
<td>0.693</td>
</tr>
</tbody>
</table>

Table 3: t-test for the first hypothesis

<table>
<thead>
<tr>
<th>Population mean (base)= 3</th>
<th>Degree of freedom</th>
<th>Significance level</th>
<th>Mean difference</th>
<th>95% confidence interval of the difference</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>83</td>
<td>0.000</td>
<td>0.70238</td>
<td>Lower 0.5520 Upper 0.8528</td>
</tr>
</tbody>
</table>

The results of the above table shows the average responses to the hypothesis that \( \frac{7}{3} \) is the average base (community) is equal to three, so we see that the average response of \( \frac{702}{0} \) higher than the average of the base.

Second hypothesis (H2):

Enterprise resource planning system to accurately determine the cost of a single commodity in the cement industry influence is accepted in Tehran Stock Exchange.

H0: enterprise resource planning system to accurately determine the cost of a single commodity in the cement industry influence is not accepted in Tehran Stock Exchange.

H1: enterprise resource planning system to accurately determine the cost of a single commodity in the cement industry has been affected in the Tehran Stock Exchange.

Table 4: Summary of the regression model.

<table>
<thead>
<tr>
<th>Correlation coefficient</th>
<th>Determination coefficient</th>
<th>Standard determination coefficient</th>
<th>Estimation error</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.473</td>
<td>0.224</td>
<td>0.215</td>
<td>0.60380</td>
</tr>
</tbody>
</table>

As seen in Table 4, the correlations obtained for the 473/0 and the coefficient of the independent variable in the model by 22 percent.

Table 5: ANOVA for the second hypothesis

<table>
<thead>
<tr>
<th>Sum of squares</th>
<th>Degree of freedom</th>
<th>Mean squares</th>
<th>F</th>
<th>Significance level a</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>8.631</td>
<td>1</td>
<td>8.631</td>
<td>23.675</td>
</tr>
<tr>
<td>Remains</td>
<td>21.895</td>
<td>82</td>
<td>0.365</td>
<td></td>
</tr>
<tr>
<td>Sum</td>
<td>30.526</td>
<td>83</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

As seen in Table 5, which is less than 1% significance level f test the linear relationship between two variables is confirmed.
Table 6: Regression coefficients

<table>
<thead>
<tr>
<th>Dependent variable</th>
<th>Independent variable</th>
<th>B</th>
<th>Standard deviation</th>
<th>Beta</th>
<th>t</th>
<th>Significance level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost</td>
<td>Fixed quantity</td>
<td>3.691</td>
<td>0.360</td>
<td>-0.465</td>
<td>10.249</td>
<td>0.00</td>
</tr>
<tr>
<td></td>
<td>Planning system</td>
<td>-0.465</td>
<td>0.096</td>
<td>-0.473</td>
<td>-4.866</td>
<td>0.00</td>
</tr>
</tbody>
</table>

In Table 6, it is observed that for a fixed value of t-test significance level of less than 1 percent of the company's constant in the equation can be. In addition, the significance level test planning system for variable t is less than one percent of the equation can be involved in and influence on the dependent variable or expression.

\[ Y = a + (b_1x_1) \]
(System Programming) \( 465/0 \cdot 69 \cdot 3 = \) Cost of goods sold

According to the above tables, it is observed that the relationship between the dependent and independent variables in an equation, the design is, therefore, a change in the planning system, changes in the cost of goods is the result:

Enterprise resource planning (ERP) system, to determine the true cost of a single commodity in the cement industry has been affected in the Tehran Stock Exchange.

Table 7: Average Rating Friedman test to identify the most important factors in ERP

<table>
<thead>
<tr>
<th>Questions</th>
<th>Mean ranks</th>
<th>Questions</th>
<th>Mean ranks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>6.32</td>
<td>7</td>
<td>6.99</td>
</tr>
<tr>
<td>2</td>
<td>8.93</td>
<td>8</td>
<td>7.96</td>
</tr>
<tr>
<td>3</td>
<td>6.46</td>
<td>9</td>
<td>8.49</td>
</tr>
<tr>
<td>4</td>
<td>6.12</td>
<td>10</td>
<td>7.30</td>
</tr>
<tr>
<td>5</td>
<td>7.03</td>
<td>11</td>
<td>6.51</td>
</tr>
<tr>
<td>6</td>
<td>6.21</td>
<td>12</td>
<td>5.64</td>
</tr>
</tbody>
</table>

Table 8: Friedman test to identify the most important factors of ERP

<table>
<thead>
<tr>
<th>Number</th>
<th>Chi-square (( \chi^2 ))</th>
<th>Degree of freedom</th>
<th>Significance level</th>
</tr>
</thead>
<tbody>
<tr>
<td>84</td>
<td>86.047</td>
<td>12</td>
<td>0.000</td>
</tr>
</tbody>
</table>

Conclusion:

In this study, two hypotheses were tested whose results will be discussed in detail.

The first hypothesis:

To test the hypothesis that states Enterprise resource planning (ERP) system to determine the true cost of a single commodity in the cement industry is accepted in the Tehran Stock Exchange. This test shows (Table 2 and 3) that the mean responses 7/3 is the same as average basis (3), and the tables it is observed that the mean responses given to this hypothesis, the value of 7/0 higher than the average baseline.

The second hypothesis:

Influences on the dependent variable according to the research sample.

- The cement industry executive enterprises offered in exchange for the proper evaluation of the cost of goods firm plans to use the system.
- Impact of ERP implementation on capital budgeting in Iran, it examined.
- In all of the research that is done, the limitations of the research are inseparable. The same restrictions that are new areas for future research are provided. This study was no exception.
- Not familiar enough with the application and Enterprise Resource Planning Systems in Iran;
- Study, a questionnaire and a questionnaire study, even in developed countries also has its own problems;
- Lack of appropriate use of new technology in accounting systems.

REFERENCES


[8] Brazel-Joseph, F., 2005. (North Carolina State University); Li, Dang (Oregon State University), "The Effect of ERP System Implementations on the Usefulness of Accounting Information",


[12] www.AIMS.ir
www.parstel.ir

**Appendix:** Questioned designed for the questionnaire

<table>
<thead>
<tr>
<th>ERP integration systems may cause</th>
<th>Options</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Quite disagree</td>
</tr>
<tr>
<td>1. Integration of all components, parts and resources</td>
<td></td>
</tr>
<tr>
<td>2. Process integration management and staff</td>
<td></td>
</tr>
<tr>
<td>3. Increase the efficiency and productivity of large parts of</td>
<td></td>
</tr>
<tr>
<td>4. Increase the transparency of administrative processes and processes with customer</td>
<td></td>
</tr>
<tr>
<td>5. Increase market share or entity organized for a huge increase in performance</td>
<td></td>
</tr>
<tr>
<td>6. Integrated management of all resources, including financial resources, human resources and manufacturing resources ...</td>
<td></td>
</tr>
<tr>
<td>7. Decrease transportation costs and conserve resources</td>
<td></td>
</tr>
<tr>
<td>8. A drastic reduction in maintenance costs and upgrade equipment</td>
<td></td>
</tr>
<tr>
<td>9. Reducing the cost of production, orders, and sales force</td>
<td></td>
</tr>
<tr>
<td>10. Remove the paper from the process life cycle and speed up the performance of various sectors</td>
<td></td>
</tr>
<tr>
<td>11. Increase in turnover and increase the number of customers, business customers and higher ROI</td>
<td></td>
</tr>
<tr>
<td>12. Very high flexibility in the development of software systems with a very low cost</td>
<td></td>
</tr>
<tr>
<td>13. Control data warehousing, accounting, human resources and distribution</td>
<td></td>
</tr>
<tr>
<td>• Factors affecting the cost of the goods:</td>
<td></td>
</tr>
<tr>
<td>1. How prorated drug</td>
<td></td>
</tr>
<tr>
<td>2. How prorated cost centers</td>
<td></td>
</tr>
<tr>
<td>3. Matrix function and production centers</td>
<td></td>
</tr>
<tr>
<td>4. Cost analysis and semi-manufactured products for the separation of materials, labor, overhead and ...</td>
<td></td>
</tr>
<tr>
<td>5. Report of linear and semi-manufactured products and the profit and loss</td>
<td></td>
</tr>
<tr>
<td>6. Roll storage products, raw materials and semi-manufactured</td>
<td></td>
</tr>
</tbody>
</table>