The Impact of Accounting Internal Controls to Reduce Production Costs in the Jordanian Industrial Companies

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Abstract
This study aimed to identify the impact of the internal control elements of accounting in the reduction of production costs in the jordanian industrial companies, has reached the study population (69) industrial co. were excluded (14) company to a lack of cooperation, and reached number Questionnaires midwife for analysis (80) questionnaire. it was the use of descriptive and analytical approach to achieve the objectives of the study, researcher has used the most important methods of multiple statistical testing one way anova.The most important results have been there the impact of the accounting systems of internal control in the reduction of production costs in the Jordanian industrial companies of the study sample, and that this role is through the internal control system's ability to rationalize the industrial cost elements (materials, wages, industrial additional burdens). The most important recommendations were also working to adjust the elements of industrial production costs and special direct costs that have a larger role in the production of industrial products.

Introduction
The most important characteristic of industrial companies is the availability of multiple control systems working to adjust the direct and indirect costs of production, and works all companies, including industrial companies to use internal control systems in order to reduce production costs to the lowest possible level, while maintaining the production quality

The presence of recipes effectiveness and the ability to adjust the cost of production in the internal control systems in industrial companies may work to reduce the cost of production and thus reduce the cost of goods sold, which leading to increased company profits and achieve their goals planned.

The problem of the study
Industrial companies seek to adjust production costs in order to maintain the level of product prices and in order to maximize profits; presence internal control system strong and distinctive will achieve savings in production costs and thus improve the level of profits in the company, which framing the problem of the study by the following questions:
Question of the study: Is there an impact of accounting internal control systems to reduce production costs in the industrial companies at Amman Stock Exchange?
purposes of the study: This study aims to achieve the following purposes :
1.   To determine the effectiveness of the internal control systems accounting to control production costs in industrial companies which it listed on the Amman Stock Exchange .
2.   To determine the internal control system's accounting ability to rationalize production costs in order to reduce production costs in industrial companies which it listed on the Amman Stock Exchange.
-   **The importance of studying:**
The importance of the study it reducing the costs of production, especially industrial production costs, and therefore it is appropriate to look into ways to reduce production costs so as to materialize the aims of research, which is to achieve a competitive advantage for the company, which lead to increased rates and levels of sales and therefore work on maximizing the profitability and in order to achieve this, it is possible to search the extent of the internal control system's ability to achieve this.
-   **The study hypothesis:**
Through reflect on the problem of the study, it can be formulated the following hypotheses:
- The hypothesis of the study: There is no trace of the internal control systems accounting to reduce production costs in the companies which it listed at the Amman Stock Exchange industrial companies.
Previous studies:
1-   **Study (Abu Hammour 0.2016) entitled "The effect of the accounting systems of internal control in the reduction of production costs in the light of the accounting information systems."**
This study aimed to identify the level of the existence of accounting internal control systems in the Jordanian industrial companies and aimed as well to make sure whether there is a statistically significant effect of the accounting systems of internal control in the Jordanian industrial companies to reduce the actual cost of production in these companies. The researcher used the descriptive and analytical approach in order to achieve the objectives of the study which relied on secondary and primary sources in the data collection and analysis to achieve objectives of the study may be a study population of industrial

companies listed on the Amman Stock Exchange and number of 69 companies were selected 56 companies, including by (81 %) of the study population was distributed by the resolution (5) questionnaires for each company, and thus be a study sample consisting of 280 individuals, And recovered them (243) questionnaire, a rate (87%) of the number of distributed questionnaires to a sample study, this ratio is considered good, and after sorting were excluded (17) questionnaires were unsuitable for analysis of the lack of complete packaged, and thus be a number of questionnaires, which conducted the analysis due to achieve the conditions required to answer a questionnaire (226) questionnaire response rate (81%) of the total distributed questionnaires, The researcher adopted in data analysis and hypothesis testing Statistical Package for Social Sciences program Spss using several methods of statistical including test t-Test for a sample of individual as well One test Way Anova The study results showed that there is a high level of field adjusting production costs in light of the accounting information systems, where high importance came, according to the views of the sample, while the most important recommendations of the study that the departments of the Jordanian industrial companies activating more interesting and more effectively accounting information systems so that the effect on reducing production costs to the extent possible the process.

2- **Study (Azmi, 2015), entitled "" The impact of the application of the principles of corporate governance in improving internal controls in the Kuwaiti insurance companies. "**
This study aimed to identify the corporate governance principles issued by the Capital Markets Authority of the State of Kuwait and the level of application of the insurance companies listed on the Kuwaiti Stock Market, also aimed to identify the impact of the application of the principles of corporate governance in the improvement of the internal control in the insurance companies listed on the Kuwaiti Stock Market . To achieve the objectives of the study were a form of the questionnaire is designed and distributed to a sample of 54 employees of the internal auditors, financial managers and department heads working in the Kuwaiti insurance companies listed in the Kuwaiti capital market and through the theoretical framework for the study, data analysis, enabling researcher access to group from the results of the most important: there is the influence of the government accounting system used in the Kuwaiti Finance Ministry on the possibility of applying accrual basis and by (72.8%). And that there is the impact of accounting information systems used in the Kuwaiti Finance Ministry on the possibility of applying accrual basis and by (65.4%). In light of these results the study concluded to provide the most important recommendations which work on the development of government accounting system to keep pace with developments in the accounting and auditing fields and in accordance with international accounting standards in the public sector, the transition from the application of the cash basis to accrual basis.

3- **Study (Jabri 0.2014) entitled "Assessing the role of the internal auditor to improve the internal control system for accounting information systems in insurance companies operating in Yemen."**
This study aimed to assess the role of the internal auditor to improve the internal control system for accounting information systems in insurance companies operating in Yemen. "To achieve the objectives of the study, the study on the descriptive and analytical approach adopted has been to develop a questionnaire to measure the different fields of study were distributed (35) questionnaire on internal auditors in public administrations to insurance companies in the city of Sanaa, researcher has used many statistical methods to analyze the data and test hypotheses, including averages and standard deviations. The most important results of the study were that there was a significant effect of the role of the internal auditor to improve the system of internal control systems of accounting Information with insurance companies in Yemen, the study recommends giving the internal auditors the necessary powers to improve the effectiveness of internal control systems.

4- **Study (Bani Nasr 0.2013) entitled: "The extent to which the obligation evidenced governance Jordanian companies to improve the effectiveness of internal control in industrial companies listed on the ASE systems."**
This study aimed to identify the impact of the commitment evidenced by governance Jordanian companies to improve the effectiveness of internal control systems in the Jordanian industrial companies listed on the Amman Stock Exchange, has been a questionnaire prepared to collect and analyze data and extract the results design, were distributed (70) questionnaire to a sample study in industrial companies Jordan, were represented in the study sample accountants and financial managers and auditors, internal auditors, has been the use of statistical software packages (spss) to analyze the data and test hypotheses and reach conclusions of the study. The main results of the study, and no statistically significant relationship at the level of confidence ($\geq$ α0.05) between commitment evidenced governance Jordanian companies in the first four areas, and the improvement of the effectiveness of internal control in industrial companies listed on the ASE systems. This is due to the most important sub-results of which there is a statistically significant relationship at the level of

confidence (≥α0.05) between the commitment to the tasks and responsibilities of the Board of Directors and the improvement of the effectiveness of internal control in industrial companies listed on the ASE systems.

5- **Study (Stefan, 2013), entitled "Internal Control Disclosure and Agency Costs -" Evidence from Swiss listed non-financial Companies".**

It considers internal control system (ICS) as a tool to achieve the performance and profitability targets, and enhances the credibility of financial reports, and can be identified by the optional disclosure of internal control as a control function to reduce costs arising from the conflicting interests between management and shareholders. Therefore, this study examines the nature of the relationship between the optional disclosure in companies and its impact in controlling costs in the Swiss industrial companies This research explores the disclosures on internal control in a sample of 91 industrial companies listed on the Swiss capital market. The study methodology used by the researcher is descriptive and analytical approach through the use of annual reports for companies and develop indicators to measure the optional disclosure of internal key cost components, the study concluded that there is the effect of the internal control systems to reduce production costs in Swiss companies and that the cause of variation in the effect attributable economic characteristics of the company, and the results showed that the effectiveness of internal control systems that reduce production costs of materials, wages and industrial costs extra.

Data analysis and test hypotheses:

This chapter includes a tool to talk about the study and Tool's study tests, also includes trends and opinions of a sample study on areas of study individuals, and ends with a chapter test the hypothesis of the study.

First :

study tool The study tool contains two main axes (19 consist) question is divided as follows:

1. The first area: the internal control systems accounting and have been allocated (10) questions.
2. The second area: reducing the actual cost of production and the reduction of industrial production costs (materials, wages, the burden of extra work), and have been allocated (9) questions.

Second: a methodology of the study

This study track the descriptive and analytical approach in data collection and statistical analysis to arrive at the results of the study and achieve their goals, and has been relying on sources of information gathering through the following:

- Secondary sources: where were collected preliminary information from reference ,books, theses related to the subject of study and scientific research, has been utilized in the formulation of a questionnaire survey questions.

- Primary sources: it has been the development of a questionnaire dealing with the study on the internal control systems accounting, which constitute the independent variable and reduce the industrial companies actual cost of production in the study sample which make up the dependent variable.

The researcher used in the study tool measure consisted of five grades (1-5) of the answers, according to a Likert scale Quintet (Likert Scale), which is composed of five degrees to determine the degree of approval of the study sample on each paragraph of the study tool, and convert categorical scale to the amount of data that can be measured statistically, was given the relative weights shown in table (1).

Table (1)

Degrees Likert scale Quintet (Likert Scale) used in the study tool

The degree of the scale	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
The degree of approval	5	4	3	2	1
The relative weight	%100-81	%80-61	%60-41	%40-21	%20-0

As it has been the use of the Statistical Package for the program for the humanities and social sciences SPSS, in order to analyze the data and test hypotheses

- **Society and the study sample:** consists study population consisted of all industrial companies which it listed on the Amman Stock Exchange and number (69) company, it has been eliminated (14) for their unwillingness to help complete the search company, bringing the number of approved companies in research (55), were distributed (2) identification of each company where the answer by a specialist in the field of internal control in the company has been retrieving 90 questionnaire and then were excluded 10 questionnaires because they are invalid, and thus lost Statistical analysis was performed on 80 questionnaires.

Tool's study tests:

The study tool consists of 19 questions, including 10 questions measure the first area, a level provide the effectiveness of the internal control accounting systems and the ability of internal control systems accounting to rationalize production costs The second area is the reduction of production costs for

materials and wages and industrial burdens and additional allocated (9) questions.

1. **Alpha Cronbach test:** give this test explanation for the consistency of the questionnaire and thread paragraphs internally, and show the strength of the resolution and the interdependence of its clauses, so that if it returned, one of them answered the same questionnaire in the same conditions gave the same results, and if the ratio of Cronbach's alpha of 60% or more, this indicates the resolution and stability coherence and consistency internally well (molhatra, 2004, p268), the following table shows the Cronbach's alpha coefficient for fields of study individually and for the tool completely.

Table (2)

Internal consistency coefficient Cronbach's alpha for fields of study and the tool as a whole.

Field title	Questions number	Reliability coefficient
Internal control systems accounting .	10	86%
Reducing actual production costs.	9	73%
Total	19	77%

Seen from the above table that there is a large internal consistency between the paragraphs of the questionnaire individually and between full-resolution where the percentage of Cronbach's alpha 77% of the tool study in general, and this confirms the strength and coherence of the questionnaire and internal coherence and stability.

2. **Content Validity:** Honesty is intended to express the extent of the paragraphs of each area of study for the area to which it belongs, has focused attention on making sure that every area of study accurately representative of a group of paragraphs that belong to him, and that these paragraphs actually measure this area (Sekaran, 2003), was measured sincerity resolution content by measuring the relationship between each paragraph and the area to which it belongs by using the Pearson correlation coefficient Person coefficient of correlation, has adopted a correlation of more than (30%), The task of statistical significance at the significance level (0.05≥α) table (3) of these relations.

Table (3)

Special measuring the content of the paragraphs of the areas of study sincerity Pearson correlation coefficients.

field	Average paragraphs correlation coefficient	Number of paragraphs	The level of significance	
Internal control systems accounting	*0.454*	*10*	0.000*	First
Reducing actual production costs	*0.555*	9	0.000*	Second
Full resolution	*0.646*	19	*0.000*	

• statistically significant at the level of (0.05≥α)

The previous table shows the results of the Pearson correlation coefficient between the vertebrae and fields of study variables, and review the values of correlation coefficients and levels of significance and shows no statistically significant relationship at the significance level (0.05≥α) area between vertebrae, which indicates the presence of structural sincerity of these paragraphs

- The standard of materiality

The researchers With regard to the limits adopted by this study, when commenting on the arithmetic mean of the variables contained in the thesis, which was adopted on the following criteria:

Table (4)

Greater extent in Likert scale poses - a lesser extent in Likert scale	5-1= 4
Dividing the unit of analysis directions levels	3
Term	1.33

So it is the study sample low trends whether between (1-.2.33), and moderate (2.34- 3.66), and high (3.67- 5).

- Analysis of data on trends in the study sample about fields of study

- Discussing and analyzing the results of a sample survey about the impact of trends in the field of the internal control systems accounting to reduce the actual cost of production in the Jordanian industrial

companies.

The arithmetic mean, standard deviation and the relative importance of trends in the study sample in the field of the internal control systems accounting to reduce the actual cost of production in the Jordanian industrial companies.

Table (5)

Paragraph	N= 80		
	Arithmetic mean	standard deviation	Relative importance
there is capital expenditure for the development the internal control systems, particularly in the accounting company.	4.23	0.65	High
There in the company's accounting systems used by the company to address their financial operations.	4.16	0.43	High
There is an administrative structure clearly defines the duties and responsibilities of each employee.	4.08	0.65	High
There is an internal supervisory system used by the company in order to adjust the industrial costs.	4.02	0.66	High
There is accounting software monitors the performance of the company's warehouses.	3.92	0.65	High
It is used to the style of continuous inventory control silo.	3.90	0.47	High
There is in your company's internal control separate.	3.86	0.65	High
The level of errors which is extracted from regulatory accounting systems is very low	3.81	0.49	High
. the accounting internal control system Could discover cases of manipulation and fraud in the company.	3.78	0.59	High
The review of the internal control of accounting policies each end of the fiscal year.	3.72	0.56	High
Total	3.77	0.47	High

Seen from the above table that the study sample trends were elevated on all the paragraphs of the study where the average arithmetic answers the study sample is limited to between (3.72- 4.23), it has got the paragraph that reads "There is capital expenditure for the development of the internal control systems of accounting, particularly in the company." , where he received the highest degrees of acceptance with a mean (4.23), and a standard deviation (0.65), and the degree of importance relative high, this paragraph explains that the departments of industrial companies interested in next to the control of production costs through capital spending on equipment and the purchase accounting systems and on developing the supervisory work of the team in a decade to strengthen courses in addition to working the regulatory accounting.

As a result of the full field came with a mean (3.77), it is located within a degree of the high acceptance of this paragraph clarifies the importance of availability of modern accounting systems in the process of data entry, processing and extraction results are allowed audited and oversight is the best, work accuracy and efficiency in industrial companies Jordan, in the presence of systems accounting computerized lead to improved accounting internal control quality and thus activate the regulatory side, which leads to controlling costs and reducing waste and damaged in production and thus reduce the cost of production in general, the standard deviation of the full field has reached (0.47), and this shows a lack of dispersion in the study sample answers.

- Discussing and analyzing the results of a sample survey on trends in the reduction of production costs in industrial companies

Mean results and standard deviation and the relative importance of trends in the study sample on the field of accounting control system's ability to reduce industrial production costs.

Table (6)

Paragraph	N= 80		
	Arithmetic mean	standard deviation	Relative importance
It is relying on staff with the expertise to ensure medium wages and salaries less.	4.11	0.43	High
.Employees are assigned as needed and by declaring determined by the Board of Directors	4.08	0.99	High
It is determined a specific number of employees are not override it unless necessary	4.01	0.87	High
. It is output of raw materials to the production department as needed and be scrutinized in the output records from more than one party	3.98	0.67	High
. Industrial waste materials are kept in the remnants of industrial materials stores	3.92	0.55	High
It is matched input and output of the component materials with the production output of the component materials to make sure the efficiency of production.	3.88	0.56	High
It is determined and industrial inventory burdens and additional control.	3.82	0.72	High
The disbursement of industrial additional burdens as needed through her own control records	3.78	0.67	High
.It is checking on elements industrial additional burdens in each section individually and so plentiful	3.76	0.64	High
Total	3.71	0.78	High

Illustrated by the above table that the sample it high about reducing the cost of production trends, by the extent of the internal control system the ability of the company to provide waste and reducing the actual industrial production costs have averages for the answers to the study sample ranged from (3.76- 4.11), and more paragraphs acceptance was the paragraph which states that, "are relying on staff with medium expertise to ensure that the salaries and wages of less," where the mean was her (4:11), and standard deviation (0.43), and this shows that the process of rationalization of costs are within the framework of the system internal accounting controls, and this system works to adjust the salaries and wages by adjusting the appointments and not to exaggerate in employment, as there is rationalization of the process of exchange of raw materials for the production department and control of output, as well as there is a clear control over additional industrial cost elements and all emerged through the results of averages computational elevated.

As for the field in general, the arithmetic mean of the responses of the study sample was (3.71), and this shows that the departments of companies are clearly concerned with the process of rationalization (reduction) Industrial production costs through the rationalization of costs of raw materials, wages, industrial designs and burdens, additional, what helps departments of industrial companies in this case, is the internal control of accounting controls and other regulations system related adjusts expenses, costs, and thus the cost per unit of production will remain within the medium, which accepted the company and therefore, the competitive position of the company will be better, it has reached the standard deviation (0.78), indicating the lack of dispersion in the study sample answers.

Test study hypothesis:

This hypothesis states that "there is no trace of the internal control systems accounting to reduce production costs in the companies listed at the ASE industrial companies." To test this hypothesis was used simple regression analysis (Simple Regression), and the table shows the results obtained when testing this hypothesis.

Table (7)

Independent variable	T Tabulated	T Calculated	β_i Regression coefficient	The coefficient of determination (R^2)	Sig. The level of significance	Statistical decision
Internal accounting control systems in industrial companies the sample of study.	1.676	2.039	0.282	0.080	0.047	Rejection of the null hypothesis

It is clear from the above table that the value of (T) calculated totaled(2.039). While the Tabulated value (1.664), and comparing the values that have been reached in the test this hypothesis show that the calculated value is greater than the tabular value, so it is rejected the premise of nihilism, and the acceptance of the hypothesis alternative, which states that "there is the impact of the accounting systems of internal control to reduce production costs in the companies listed at the ASE industrial companies." This is confirmed by the level of significance (Sig) amounting to (0.047) which is lower than the level of significance (5%), and reached the level of influence (.282) and explains that the accounting internal control systems affect the reduction of industrial production costs in industrial companies of the study sample, the results indicate also it noted that the variation in the accounting systems of internal control, explains what rate (0.080) of the variation in reducing the Jordan Industrial production costs, and that there is (0.920) almost from the changes that occur in the reduction of industrial production costs caused by other variables.

Results of the study and its recommendations:
Results of the study:
1. There is a high level of interest in the elements and components of the internal control system in industrial companies listed on the Amman Stock Exchange
2. The industrial companies of the study sample planning costs and by identifying the elements of production costs accurately and to control all of these elements as inputs and as outputs
3. determine the amounts of materials that will be taken out of the stores, as well as to determine the numbers of staff and not to exaggerate the appointment as well as the identification of additional industrial cost elements accurately and control it well
4. The departments of industrial companies study sample develop internal control systems and private accounting and by increasing capital spending on equipment and equipment computerized accounting systems
5. there is A trace of the accounting systems of internal control in the reduction of production costs in the Jordanian industrial companies of the study sample, and that this role is through the internal control system's ability to rationalize the industrial cost elements (materials, wages, industrial additional burdens)

The recommendations of the study: The study recommended the following.
1. Work to control the elements of industrial production costs and special direct costs that have a larger role in the production of industrial products.
2. increase the capacity of the accounting internal control systems through the design of cost-programs that run on calculating the quantities of raw materials and calculation of the damaged and the loss is greater than some of the older systems accurately.
3. working to identify more factors that influence the reduction of industrial production costs, which constitute the financial side, not forgetting the qualitative side

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