

Impact of Applying ISA 11 Construction Contracts on The profitability in Jordanian Contracting Companies

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Abstract

The study aims at identifying accounting measurement problems that affect the profitability of contracting companies in the Hashemite Kingdom of Jordan. It is also to identify the impact of the commitment to apply the requirements of International Accounting Standards (IAS 11) Construction Contracts on the profitability of contracting companies in The Hashemite Kingdom of Jordan. In addition, the study aims to identify the most significant problems the contracting companies Face in applying and using ISA 11 Construction Contracts while preparing financial accounts. In order to achieve the purposes of the study, the researcher has used descriptive analytical method for studying IAS 11 Construction Contracts. A questionnaire has been designed and distributed to a study sample of constructing companies in Jordan in order to measure to which extent they are committed to apply the requirements of IAS 11 Construction Contracts and to figure out the impact of this standard on the profitability of these companies. The study has concluded that the commitment of contracting companies in Jordan to apply the requirements of IAS 11 Construction Contracts affects highly their profitability. It also found that Jordanian contacting companies face various difficulties in applying and using IAS 11 Construction Contracts while preparing financial accounts; these difficulties include a lack of scientific knowledge and vocational experience of IAS 11 and a lack of accounting system of the costs of accounting records and books which contribute to determine constructions' costs and apply IAS 11 in contracting companies. In addition, laws governing construction sector in Jordan are not obliged to apply IAS 11 Construction Contracts in contracting companies. The study has recommended that organizing legislative and legal environment which governs the work of contracting companies is a necessity; these companies shall be obliged to adopt international accounting standards; the awareness of applying and using IAS 11 Construction Contracts shall be raised among the departments of contracting companies which preparing financial statements; in addition, training courses on the importance of accounting of construction contracts using IAS 11 Construction Contracts shall be held for the employees working in construction section.

Keywords , IAS 11, accounting of construction contracts

1. Introduction

Contracting companies play a prominent role in supporting economic development plans in various countries, particularly in Jordan where construction sector has recently witnessed a huge growth and development. Due to the importance of the success of economic institutes which are the main pillar of achieving sustainable development and the specificity of construction sector in term of the time period of implementing the projects which may extend many years, construction contract can be considered a center of cost or profitability where the cost of each contract is calculated. Here, contracting companies face a difficulty of determining the profits at the end of time period which affects the profitability of contracting companies. Here, the importance of guidance and commitment of international accounting standard, particularly IAS 11 Construction Contracts, emerges because such standards provide the accountants in contracting companies with a description of accounting treatment of revenues and costs pertaining to construction contracts and suitable discourses. This study provides an evaluation identifying to which extent Jordanian contracting companies are committed to apply IAS 11 Construction Contracts; it also illustrates its impact on the profitability of contracting companies. Moreover, the study outlines the most significant difficulties of the commitment to apply IAS 11 Construction Contract in Jordanian construction sector.

1.1 The problem of the Study

The problem of the study lies in answering the following questions:

- Do contracting companies in the Hashemite Kingdom Of Jordan face difficulties in applying and using IAS 11 Construction Contracts while preparing financial accounts?
- Do contracting companies in the Hashemite Kingdom of Jordan face problems on accounting measurement of construction contracts?

- Are contracting companies in the Hashemite Kingdom of Jordan committed to apply the accounting policies and procedures of construction contracts according to IAS 11?
- Are contracting companies in The Hashemite kingdom of Jordan committed to the requirements of the disclosure pertaining to construction contracts according to the requirements of IAS 11?
- Are contracting companies in the Hashemite Kingdom of Jordan committed to estimate unrealized profits and losses – with providing emergency reserves of potential losses – according to the requirements of IAS?

1.2 The Purposes of The study

The study aims at:

- Identifying the most significant accounting measurement problems contracting companies in the Hashemite Kingdom of Jordan face.
- Identifying to which extent contracting companies in the Hashemite Kingdom of Jordan are committed to apply the requirements of IAS 11 Construction Contract.
- Identifying the most significant difficulties in applying and using IAS 11 Construction Contracts contracting companies in the Hashemite Kingdom of Jordan face while preparing financial accounts.

1.3 The Importance of the study

Due to the importance of construction section in Jordan which becomes one of the most vital sectors of national economy attracting various investments that contribute to achieve economic development, this study is considered important. It contributes to figure out the role of accounting for construction contracts according to IAS 11 in providing suitable information in order to making right decisions, thereby activating the role of accounting in improving company performance and capability of decision-making and giving the data and financial statements trust and credibility.

1.4 The Hypotheses of the study

This study seeks to test the main following hypotheses:

- Contracting companies in the Hashemite Kingdom of Jordan do not face problems of accounting measurement of construction contracts.
- Contracting companies in the Hashemite Kingdom of Jordan do not face difficulties in applying and using IAS 11 Construction Contracts while preparing financial accounts.
- There is no statistically significant effect of the extent to which contracting companies in the Hashemite Kingdom of Jordan apply IAS 11 Construction Contracts on the profitability of these companies.

This hypothesis branches into following sub-hypotheses:

- 3/1. There is no statistically significant effect of the commitment of contracting companies to apply accounting policies and procedures of construction contracts according to the requirements of IAS 11 on the profitability of these companies.
- 3/2. There is no statistically significant effect of the commitment of contracting companies to estimate unrealized profits and losses – with providing emergency reserves of potential losses – according to the requirements of IAS 11 on the profitability of these companies.
- 3/3. There is no statistically significant effect of the commitment of contracting companies to the requirements of disclosure pertaining to construction contracts according to the requirements of IAS 11 on the profitability of these companies.

2-Previous Studies and Theoretical Framework

2.1 Previous Studies

The following are the most significant studies which have touched upon the subject of accounting for construction contracts:

- (Al-Tamimi, Al-dabbag, 2002) entitled "**Revenue Realization in Construction Activity and Accounting Measurement Problems in the Light of Iraqi and International Standards**"

The study aimed at identifying accounting measurement problems in construction contracts according to Iraqi and international standards; it also was to figure out the impact of these problems on revenue realization. The researcher used descriptive method through studying IAS Construction Contracts and Iraqi accounting standard. The study concluded that construction activity faces various problems related to time

periods of performance which may span over more than one accounting time period. Here, the accountant is guided by the bases and rules governing the timing of recognition of the realized revenue.

- **Khsharmeh Study, 2003 entitled " Role of Accounting In Making Administrative Decisions in Construction Section in Jordan – A field Study."** The study was to identify to which extent accounting standards and system in addition to accounting decision contribute to make administrative decisions. Thus, the projects performed by construction sector succeed because their costs are determined. A questionnaire was designed and distributed to research sample; statistical descriptive method in order to analyze the results. Most importantly, the study concluded that in order to build a successful contracting company, cooperation and participation in studying project offer, preparing implementation timetable and dividing it into main parts shall be created among all technicians and cost accountants in particular.
- **Jarbu' study, 2004 entitled " The Role of Accounting in Making Administrative Decisions In Construction Sector According to International Accounting Standards"** The study aimed at identifying the importance and role of accounting in controlling the capability of implementing construction contracts through studying control elements, technical standards, performance measurement and estimated budgets. The researcher used descriptive analytical method. The study concluded that original construction contracts shall include the revenues related to amendments, requirements and incentives provided that the probability of realizing revenue is high. The study recommended that estimated budgets shall be prepared; and they shall include typical and guided goals in order to measure actual and acceptable performance.

2.2 Theoretical Framework

The section touches upon the subjects related to the study and they include accounting measurement problems the contracting companies face while preparing financial statements and identifying work outcomes. In addition, it shows and analyze ISA 11 Construction Contracts. The following is a discussion of these subjects :

First: Accounting Measurement problems the contracting companies face:

Accounting measurement problems the contracting companies face in identifying the outcomes of company works related to the projects implemented during the financial time period (Ateyyah and AbdRabuh, 2000, p.12) are as follows:

- Evaluating the works done at the end of fiscal year and separating between the value of the whole contract according to the testimony of engineer, the costs of the whole works compared with the value of these works in order to measure implementation profits and losses, and the costs of works which the engineer does not approve.
- Measuring the profits of projects under implementation: solving this problem depends on the accounting method followed in the process of measuring profits. However, the nature of construction activity imposes special accounting rules that can be applied in project processing.
- Allocating and distributing contract costs: the costs of construction contracts are divided into direct costs linked directly to the contract and indirect costs which do not directly linked to the contract. More than one method is used to distribute undirected costs such as the ratio of total value of the contracts, the number of employees working in each project, the ratio of the value of material spent in each project or the wages of the works paid for each project yearly.

Second: Showing and analyzing ISA 11 Construction Contracts

ISA 11 Construction Contract was issued in March 1979 and amended on 1993 and 1995. This standard has aimed at identifying the accounting processing appropriate for revenues and costs of construction contracts. Due to the nature of contracting works, start and end dates of contract implementation span usually over various fiscal years. Thus, a key point of accounting for construction contracts is to identify the method which can be used for distributing contract revenues and costs over the years of the contracts. This standard uses the bases of realizing revenues as they are stated in the framework of preparing and showing financial statements in order to determine the timing of recognition of contract's revenues and expenses in income statement. In addition, the standard provides practical instruction and guidance illustrating how to apply these bases.

-The concept of construction contract and relevant concepts as stated in ISA 11 Construction Contract:

ISA 11 construction contracts provides a definition of construction contract and relevant concepts; it includes the following concepts:

Construction Contract: It is a contract in which a negotiation is conducted for constructing an asset or a group of assets characterized by interrelated and overlapping relationships in terms of design, technology, function, final purpose and use; construction contract may include the construction of a certain asset as a building, bridge, dam, pipeline, road, ship or tunnel. In addition, construction contract may include the construction of a number

of assets –such as the construction of refineries and the provision of the required equipment which are closely related in term of design, technology, function, final purpose or use. According to ISA 11 construction contract, the concept of construction contract illustrates two types of contracts in term of contract value.

- Fixed-Price Contract is a type of contract where the contractor accepts to implement the contract in exchange for a fixed price per each produced unit. Sometimes, the contract may include amendment clause in the light of the actual cost.
- Cost –plus Commission Contract, also termed addition contract, is a contract where the contractor returns back the permitted or determined costs in addition to a percent of these costs or a fixed charge (A fixed commission).

Some construction contracts may include the properties of two previous contracts. For example, cost –plus commission contract may include a clause stipulating that the price does not exceed a certain maximum. In such cases, contracting companies shall take into account all relevant conditions stated in the International Standard clauses while determining the timing of revenue and expense recognition.

The researcher believes that ISA 11 has contributed to provide a comprehensive concept of construction contracts which plays a role in preparing accounting data and providing a suitable and objective disclosure of fixed – price contract or cost plus commission contracts.

Financial Claims are the amounts which the contractor seeks to collect from the customer or any other party in order to compensate the costs which are not included in the base price of the contract. For example, financial claims may emerge due to project implementation delay resulted by customer's errors, design or specification errors or a lack of agreement on some amendments of work turnover.

Incentives are additional amounts paid to the contractor if he perform the works according to the specifications agreed upon.

Construction Activities (Assembling and dividing the constructions)

The requirements of this standard usually apply on each construction contract. However, in some cases it may be necessary to apply the standard on certain and separated parts of the contract or a set of contracts in a manner that reflects the substance of the contract or a set of contracts. ISA 11 has outlined the conditions of applying ISA 11 Construction contract and assembling the contracts as follows:

- If one of the contracts includes the construction of a number of assets (such as buildings, bridges or roads), each asset shall be treated alone as an independent contract in case a separated offer is made for each asset, and each asset shall be a subject of negotiation between the contractor and customer, and both parties have a right to accept or refuse that section of the contract which links to any asset, and the costs and revenues of each asset can be determined.
- If the contractor is given an option of constructing an additional asset; or if the contract is amended in order to cover the construction of an additional asset, the construction of an additional asset shall be treated as a separated contract when one of the following condition is available:
 - The additional asset is substantially different from the assets stipulated by the original contract in design, technology, or function.
 - The price of the additional asset is negotiated without considering the value of the original contract.
- A set of contracts – whether with one client or more -shall be treated as one contract, if the following conditions are available:
 - A set of contracts is negotiated as one unit.
 - There is a clear interrelated relationship between the contracts so that they are actually considered one project which has a gross profit margin.
 - The contracts are implemented at one time or in a continuous succession.

Accounting Treatment of Construction Contracts' Cost and Revenues According to ISA 11 Construction Contracts

ISA 11 Construction Contracts has outlined the concepts pertaining to construction contract's costs and revenues. This study illustrates relevant accounting treatment as stated in ISA 11.

First: Construction Contract's Revenues as outlined in ISA 11 Construction Contract

International standard showed that the contract shall include the original value of revenue agreed upon in the

contract, any amendments to the works agreed upon, financial claims or incentives provided a reasonable degree of certainty shall be available in order to ensure the revenues and measure objectively these values. Contract revenue is measured at the fair value of the consideration received (or receivable). The measurement of contract revenue is influenced by the factors of uncertainty which depend on the outcome of a set of future events; estimates often changes whenever some events happen and some factors of uncertainty appear. Accordingly, the amount of contract revenue may increase or decrease from time to time.

For example, (1) the contractor and client may agree to amend the contract. As a result, contract revenues increase or decrease at a time period subsequent to the time period when the initial contract has been conducted; (2) contract revenue shall increase if the price of the contract is fixed and the contract includes the condition of increasing contract value in case of increasing the costs, (3) contract revenue may be reduced due to the penalties of delaying of contract implementation; (4) If there is a fixed price for each produced unit (output), contract revenue increases in case of increasing the number of units of output; (5) under the contract, changes over framework of contract agreed upon may be requested, as a result, contract revenues may increase or decrease; these changes may include an amendment of specifications or design of asset and contract duration. Based on these changes, contract revenue is amended if it is expected that client accepts the changes plus the revenue resulted and if the amount of revenue can reliably be measured; and (6) if the contractor has financial claims, the amounts of these claims depend on the result of negotiations held between the contractor and client. These claims are considered a part of contract revenues if the following conditions are available:

- Negotiations between the contractor and client have reached an advanced stage in which it can be judged that the client accepts the financial claim.
- The value of financial claim can be objectively measured.

(7) Incentives are considered a part of contract revenue if a level of contract implementation is progressed; thus, it can predict that the standard specifications will be achieved and the expected amounts the client may accept can be objectively measured.

The researcher believes that the revenues of construction contracts are influenced by the increase of revenues resulting by amendments, financial claims or incentives.

Second: The Costs of Contract in IAS 11

Construction contract include contract costs which divide into:

- Direct costs: they include employee wages including supervision wages, the costs of raw materials used in the contract and consumption of equipment and tools used in the contract, the cost of transporting equipment, tools and materials used in the contract. In addition, they includes the costs of design and technical assistance plus the estimated costs of repairing, evaluating, ensuring the works implemented in addition to the expected costs of guarantee or any other financial claims made by other parties.
- The costs of contract activity in general: they can be allocated to construction contract; they include the costs which can be distributed to a set of contracts of insurance, design, technical assistances which are not directly related to a certain contract plus the additional costs of constructions. These costs are distributed by using appropriate and logical methods which must be consistently and logically applied to all costs, having the same properties. Charge back costs shall be made according to normal capacity of constructional activities. Additional costs of constructions of some contract items include the costs of preparing and disbursing salaries of workers at contract site. In general, contract costs which can be distributed to certain contracts include loan costs.
- Other costs which shall be charged back to the client according to the contract. For example, these costs, which can be charged back to the client pursuant to the contract, include general administrative costs plus development costs; the contract stipulates that the contractor has a right to return them back; costs which are not directly linked to contract activities or specific contract shall not be charged back to the contract such as:
 - General administrative costs where the contract stipulates that the contractor has no a right to return them back.
 - Selling costs
 - Research and development costs where the contract stipulates that the contractor has a right to return

them back

- Consumption of a number of idle machines which are not used in a certain contract.

The standard showed that contract costs include all costs which can be allocated to the contract from start date to end date of the contract. However, the costs of certain contract, which emerge in the stage of negotiation, can be charged back to the contract if they are independently determined and objectively measured and if there is a reasonable degree of certainty assuring that the contractor approves the contract. In addition, if the costs of negotiation are treated as expense in time period when they emerged, these costs may not be considered a part of contract costs in case of obtaining the contract in a subsequent time period.

- **Accounting for the costs before the tender is awarded to the contractor.** International standard showed that the costs paid for the tender such as tender fees and insurance can be charged back; these costs are considered a part of contract cost if they are reliably measured and a reasonable degree of certainty of obtaining the contract is available. Otherwise, these costs can be considered as time period expenses. Moreover, international standard indicated that if these costs are included in time period expenses, they cannot be included in contract cost.
- **Costs of Future Activity of the Contract:** these costs paid by the contractor and linked to future activity of the contract are treated as an asset as long as they can be covered; if these costs are receivable due on the client, they shall be considered as works under implementation.

Third: Revenue and Expense Realization of the contract In IAS 11:

- **Accounting Treatment For Revenue of Construction Contracts**

Revenues of construction contract are not considered final and certain unless work is completed and engineer testimony is adopted. There are two ways to determine the profits of construction companies; choosing between two methods depends on the importance of uncertain elements submitted by the contractor and are linked to estimates of costs and revenues. These two methods are as following: (Institute of certified public accountants, International Accounting Standards, 2011)

- **Percentage of Completion Method:** The profits of the contract are calculated under this method if the projects are still under implementation and the profits are included in a list of work outcome. Applying this method requires that a large part of project is implemented so that unfinished parts do not clearly affect the outcome of company works; and the company has an ability to accurately and correctly estimate the total costs of project because they will be used as a basis of extracting the profit or loss of uncomplete project. However, if the results of estimating the total costs of project indicate that there is a loss, a reserve shall be created in response to the loss. In case of calculating the profits of incomplete projects, contracting companies take care of any change in the future such as increase of material prices and wages rates or non-conformity of project specifications, or delay in delivery. These possibilities affect the final outcome of each project. Thus, a part of profits of incomplete projects is included in a list of work outcome and the remaining profits are included in emergency reserve and its percentage is determined on the basis of type, conditions and specifications of the project.
- **Completed - Contract Method:** This method is based on the calculation of the profits of construction projects after they have been completed or they have become almost complete. Whereas incomplete projects do not affect the list of work outcome with the exception of the allocation of expected loss of the projects. Upon a completion of the project, the costs of material and works plus indirect costs are compared with contract value; and the results of project- either profits or losses -are determined.

Revenue and Expense Realization of The Contract

Revenues and expenses of construction contract are realized according to IAS 11 Construction Contract as follows:

- If the outcome of the project is objectively determined, contract revenues and expenses of the contract for the fiscal period are determined according to the level of completion of contract activities in budget date. In case of expecting losses of one of the contracts, these losses shall be recognized immediately.
- In case of fixed-price contracts, the result of contract can be objectively determined if the following conditions are available: (1) the possibility of measuring contract revenues, (2) providing a high degree of certainty ensuring that economic benefits of contract will transfer to the contractor, (3) the possibility of measuring the and the costs required for completing the contract, (4) determining the

degree of project completion at the date of preparing objectively the list of financial center and (5) the possibility of measuring and determining objectively the costs of the contract so that comparisons between the actual costs of the contract and pre-determined costs can be conducted.

- In case of cost –plus commission, the result the result of contract can be objectively determined if there is a high degree of certainty ensuring that economic benefits of contract will transfer to the contractor and if the costs of contract -whether recoverable or not – are objectively measured.
- In case of impossibility of determining objectively the result of the contract, revenues must be recognized within the limits of actual costs of the contract which are likely recovered. In addition, the costs of the contract must be recognized as expenses of the time period in which they emerged. In a case of expecting losses of the contract, these losses shall be immediately recognized as expenses.

Recognition of Expected Losses:

- It is expected that the total costs of contract exceed its revenues, the expected losses shall be immediately recognized as expenses.
- The amount of these losses are determined regardless of whether the implementation of contract has begun or do not, or the stage of completion of contract activities and the amounts of expected profits of other contract have not treated as one contract.

3.The Methodology of the Study

3.1Data collection Methods

In order to achieve the purposes of the study, a descriptive analytical approach was used for collecting, analyzing and explain the main elements of the study. This aimed at building the theoretical framework of the study based on the studies of accounting for construction which touched upon the subject of accounting for construction and international accounting standards, in general and international Accounting standard 11 (IAS 11) Construction Contract, in specific. In addition, a questionnaire was designed in order to evaluate the commitment of Jordanian contracting companies to apply the requirements of IAS Construction Contracts. For testing the hypotheses of the study, Likert 5- point scale was used for responding questionnaire questions; the categories of responses have been coded numerically; these numerical values have been defined as follows: (5) very high, (4) high, (3) medium, (2) low, and (1) very low. In order to explain the results, the range of (1 – 1.79) means that the commitment of the requirements of IAS 11 in contracting companies do not affect the profitability; (1.8 – 2.59) indicates that the commitment of the requirements of IAS 11 in contracting companies affects the profitability at low degree; (2.60 – 3.39) indicates that the commitment of the requirements of ISA 11 in contracting companies affects the profitability at a medium degree; (3.40 – 4.19) means that the commitment of the requirements of IAS 11 in contracting companies affects the profitability at a high degree; (4.20 -5) indicates that the commitment of the requirements of IAS 11in contracting companies affects the profitability at a very high degree. Statistical package for the social science (SPSS) was used in order to analyze the data using the calculation of percentages, arithmetic mean and T-test.

3.2 Population and Sample of the study

The population of the study consists of contracting companies in the Hashemite Kingdom of Jordan. A random sample composed of 55 contracting companies has been selected and questionnaires have been distributed to them. 50 questionnaires have been retrieved and 5 questionnaire have been excluded from the analysis because the responses were not serious. Accordingly, 50 questionnaires have been analyzed.

3.3Reliability of Study Tool

To ensure the tool of the study, internal consistency coefficient Cronbach'a alpha ranged from (0.98 to 0.97) has been used. Table 1 outlines these coefficients; these percentages were appropriate for the purposes of the study.

Table 1
 Internal Consistency Coefficient Cronbach'a alpha

Internal Consistency	Field
0.98	Problems of accounting measurements of construction contracts and their impact on the profitability of contracting companies
0.97	Difficulties in applying IAS 11 Construction Contracts
0.97	Impact of commitment of applying accounting policies and procedures of construction contracts according to IAS 11 on the profitability
0.97	Impact of the commitment of the requirements of disclosure of construction contracts according to IAS 11 on the profitability
0.98	Impact of commitment of Jordanian contracting companies to apply the requirements of disclosure of construction contracts according to IAS 11 on the profitability

3.4 Properties of Sample Study

In order to figure out the properties of sample study, a set of questions which represents general information about the sample study has been included in questionnaire list; first section outlines general information about contracting companies; second section touches upon information about questionnaire respondents. The following are the results of statistical analysis:

First section: General Information About Contracting Companies

Table 2 outlines data that relates to contract

Table 2 Frequencies and Percentages According to Study Variables

Frequency	Percentage	Category	
22	44.0	From 1999 until before 2005	Establishment Year
19	38.0	From 200 until the end of 2010	
9	18.0	After 2010	
50	100.0	Total	
7	14.0	First class	Company classification
17	34.0	Second class	
19	38.0	Third class	
7	14.0	Fourth class	
50	100.0	Total	
44	88.0	Jordanian	Company Nationality
6	12.0	Foreign	
50	100.0	Total	
1	2.0	Sole	Company type
17	34.0	General	
32	64.0	Joint stock	
50	100.0	Total	
6	12.0	Less than million	
12	24.0	From million to less than 3 millions	
5	10.0	From 3 millions to less than 6 millions	
20	40.0	From 6 millions to 10 millions	
4	14.0	More than 10 millions	
50	100.0	Total	

Table 2 outlines the distribution of sample study according to study variables as follows:

Establishment year: table 2 shows that 18% of contracting companies have been established after year of 2010-; it indicates that construction section has grown and flourished during the period before the year of 2010; 83% of contracting companies have been established before the year of 2010; 44% of contracting companies have been established before the year of 2005. These results have indicated that majority of companies have experience; however they need to prepare the data according to scientific basis.

Company Classification: Contracting companies in the Hashemite Kingdom of Jordan are classified according to contractor classification instructions of 2007 under Article No. 32 of government working law; pursuant to this law, contractors are classified as following: (1) First class, (2) second class, (3) third class, (4) four class, (5) five class and (6) six class. Each of first five classes is considered a top one. It is noted that all companies responded have a classification within first five classes. Accordingly, this result supports study's responses because the classification of contracting companies within first top classes requires contractors registered in Ministry of Industry and Trade plus company controller. Thus, the company has accounting system and records; and it prepares financial statements. Consequently, questionnaire's questions are objectively responded; Companies classified within first, second or third classes have to have books duly organized according to approved accounting principles and a certified legal auditor. Contractor name must be included in classification application; he/she shall submit to governmental tender department general budget which includes a list of assets and liabilities; these show works the company implemented during the last year in order to submit classification application plus works which are under implementation; these works have to be approved by legal auditor. Moreover, a financial report, which illustrates contractor's financial status in order to implement the project committed to implement, shall be submitted to a committee; in addition, such report provides the committee with additional information about his/her financial status which can be documented by concerned authorities. Based on the results, percentage of contracting companies classified within third or four classes is 62% of study population.

Company Nationality: Diversity of the nationalities of companies responded contributes to enrich the study; presence of foreign companies foster the competition between the companies in preparing financial statements; the percentage of Jordanian companies amounts 88%; it is appropriate for representing the extent of the commitment of Jordanian companies to apply IAS 11 construction contracts.

Company Type: The percentage of Joint stock companies of study sample is 64%. It is considered suitable for responding objectively questionnaire's questions because joint stock companies are obliged to keep books, prepare financial statements and publish them in official newspaper.

Capital: the percentage of contracting companies whose capitals are more than six millions and less than ten millions is 40% of companies, study sample. It refers that work size of these companies requires an adequate capital.

Second: Information About The Respondents:

Table 3 show information about the respondent sample:

Table 3 Frequencies and Percentages According to Study Variables

Percentage	Frequency	Category	
34	17	Less than year	Experience
36	18	1 year – less than 5 years	
30	15	More than 5 years	
100	50	Total	
48	24	Cost accountant	Designation
46	23	Accounting Department Manager	
6	3	Financial and Administrative Manager	
100	50	Total	
78.0	39	Bachelor	Education
22.0	11	Master	
100.0	50	Total	

Table 3 outlines the structural properties of respondents as follows:

Experience: Most respondents have experience ranging from one year to less than five years; they represent 36 % of sample study. Accordingly, respondents are able to respond objectively and efficiently questionnaire questions.

Designation: Table 3 indicates that 48 % of respondents are cost accountants. Consequently, respondents are able to respond objectively and accurately questionnaire questions.

Education: Based on table 3, percentage of respondents holding bachelor degree is 39%. As a result, respondents are able to respond objectively questionnaire questions. In addition, they can use and apply IAS 11 Construction contracts; they are also aware of the importance and role of IAS 11 construction contracts in

preparing financial statements.

Hypotheses Testing

First hypothesis Testing :

It states that Contracting companies in the Hashemite Kingdom of Jordan do not face problems of accounting measurement of construction contracts.

To validate this hypothesis, arithmetic means, standard deviations have been extracted for responses of sample study regarding the paragraphs of the first hypothesis. Table 4 figures out the results as follows:

Table 4 Arithmetic means and standard deviations of responses of sample study regarding the paragraphs of first hypothesis related the problems of accounting measurements in Jordanian contracting companies

Standard Deviation	Arithmetic Means	Jordanian contracting companies face problems of accounting measurement and they affect company's profitability as follows:	No.
1.443	3.40	Evaluating complete works at the end of time period and separate between the complete and incomplete works of construction contracts	1
1.263	3.58	Separating between the costs of complete works and comparing them with their revenues in order to measure the profits and losses of implementation process	2
1.488	3.30	Measuring the profits of projects under implementation at the end of accounting time period	3
1.292	3.62	Allocating and distributing the costs of projects	4
1.437	3.34	Evaluating the works which are not approved by an engineer	5
1.487	3.46	Difficulty in treating the revenues of long-term projects	6
1.529	3.30	Difficulty in treating the costs of long-term projects	7
1.540	3.42	Varying the methods followed in treating the projects	8
1.365	3.43	Total of arithmetic means and standard deviation of the paragraphs related to the problems of accounting measurement in Jordanian contracting companies	

Table 4 shows arithmetic means and standard deviations of the paragraphs which forms the first hypothesis. Arithmetic means are ranging from (3.30 to 3.58); paragraph 2 stating that "separating between the costs of complete works and comparing them with their revenues in order to measure the profits and losses of implementation process" has been at first rank and its arithmetic mean has reached (3.58); Paragraph 3 stating that " Measuring the profits of projects under implementation at the end of accounting time period" and paragraph 7 stating " Difficulty in treating the costs of long-term projects" have been at last rank and their arithmetic means are (3.30). Arithmetic mean of the paragraphs related to the problems of accounting measurement in Jordanian contracting companies is 3.43 as a whole.

Furthermore, arithmetic mean of the paragraphs, constituting the first hypothesis, has been compared with standard mark (3) – acceptance standard of the hypothesis – by using t-test as shown in Table 5.

Table 5

Arithmetic means and standard deviations and t-test of the paragraphs, constituting the first hypothesis in comparison with standard mark (3)

Significance level	Degrees of freedom	T value	Standard deviation	Arithmetic mean	No.	Problems of accounting measurement of construction contracts the contracting companies in The Hashemite Kingdom of Jordan face
.031	49	2.215	1.365	3.43	50	

Table 5 shows that there is statistical significance at a level of (=0.05) between arithmetic mean and standard mark (3); t-value and significance level have reached 2.215 and .031, respectively. This indicates that the hypothesis is refuted and the alternative hypothesis, stating that" contracting companies in the Hashemite Kingdom of Jordan face problems of accounting measurement of construction contracts is accepted.

Second Hypothesis Testing

It stipulates that "contracting companies in the Hashemite Kingdom of Jordan do not face difficulties in applying and using IAS 11 Construction Contracts while preparing financial accounts."

To validate this hypothesis, arithmetic means, standard deviations have been extracted for responses of sample study regarding the paragraphs of second hypothesis. Table 6 figures out the results as follows:

Table 6
Arithmetic means and standard deviations of responses of sample study regarding the paragraphs of second hypothesis related to the difficulties which Jordanian contracting companies face in applying IAS 11

Standard Deviation	Arithmetic Means	Paragraph	No.
1.515	3.48	Lack of scientific knowledge of IAS for construction contracts	1
1.163	3.44	Lack of vocational experience of IAS for construction contracts	2
1.367	3.64	Lack of accounting cost system of accounting books which helps to determine construction costs and apply IAS 11 Construction contracts	3
.969	3.60	Lack of commitment of laws in Jordan to apply IAS 11 in contracting companies	4
1.474	3.54	Lack of interest of management in financial statements and applying international standards	5
1.163	3.44	Difficulty in treating the revenues of the projects under implementation while preparing financial statements	6
1.515	3.48	Problem of determining the profit for tax purposes while preparing financial statements	7
1.432	3.48	Unwillingness of management of applying IAS because the management is unaware of the importance of applying IAS	8
1.432	3.48	Lack of employee training on requirements of IAS Construction contracts in accounting department	9
1.224	3.52	Total	

Table 6 shows arithmetic means and standard deviations of the paragraphs which forms second hypothesis. Arithmetic means are ranging from (3.36 to 3.64); paragraph 3 stating that " Lack of accounting cost system of accounting books which helps to determine construction costs and apply IAS 11 Construction contracts" has been at first rank and its arithmetic mean has reached (3.58); Paragraph 8 stating that " Unwillingness of management of applying IAS because the management is unaware of the importance of applying IAS" has been at last rank and its arithmetic means is (3.30). Arithmetic mean of the paragraphs related to the difficulties in applying IAS 11 Construction Contracts is (3.52) as a whole.

Furthermore, arithmetic mean of the paragraphs, constituting second hypothesis, has been compared with standard mark (3) – acceptance standard of the hypothesis – by using t-test as shown in Table 7.

Table 7
Arithmetic means and standard deviations and t-test of the paragraphs, constituting second hypothesis in comparison with standard mark (3)

Significance level	Degrees of freedom	T value	Standard deviation	Arithmetic mean	No.	Difficulties in applying ISA Construction contracts
.004	49	3.023	1.224	3.52	50	

Table 7 shows that there is statistical significance at a level of ($\alpha=0.05$) between arithmetic mean and standard mark (3); t-value and significance level have reached 3.023 and 0.004, respectively. This indicates that the hypothesis is refuted and the alternative hypothesis, stating that " contracting companies in the Hashemite Kingdom of Jordan face Difficulties in applying and using IAS 11 Construction contracts while preparing financial accounts is accepted.

Third Hypothesis Testing

Third main hypothesis stipulates that " there is statistically significant effect of the extent to which contracting companies in the Hashemite Kingdom of Jordan apply IAS 11 Construction Contracts on the profitability of these companies."

First sub-hypothesis stipulates that "there is no statistically significant effect of the commitment of contracting companies to apply accounting policies and procedures of construction contracts according to the requirements of IAS 11 on the profitability of these companies"

To validate this hypothesis, arithmetic means, standard deviations have been extracted for responses of sample study regarding the paragraphs of third hypothesis. Table 8 figures out the results as follows:

Table 8

Arithmetic means and standard deviations of responses of sample study regarding the paragraphs of third hypothesis related to the application of accounting policies and procedures of construction contracts according to the requirements of IAS 11

Impact Factor	Standard Deviation	Arithmetic Means	Paragraph	No.
Very high	1.216	3.52	Commitment of company to recognize revenue realization at the end of the project under the requirements of IAS 11 Construction contracts affects the profitability	1
Very high	1.421	3.68	Commitment of company to include all costs paid at the end of financial period in final accounts affects the profitability	2
Very high	1.062	3.66	Commitment of company to include revenues at the end of financial period affects the profitability	3
Very high	1.562	3.64	Expenses of obtaining the contract treated by Jordanian contracting companies as costs of project affect the profitability	4
Very high	1.281	3.54	If the company charges back all machine depreciation to fiscal year, the profitability will be affected	5
Very high	1.555	3.48	The commitment of company to keep accounting records of construction contracts until the end of contract contributes to account contract's profitability	6
Very high	1.266	3.48	Using percentage of completion method by the company affects the profitability	7
Very high	1.431	3.56	Using completed - contract method by the company affect the profitability	8
Very high	1.514	3.45	Using the two method by the company affects the profitability	9
Very high	1.313	3.54	Using the percentages of completion and including all costs paid until the date of preparing the financial statements affect the profitability of contracting company	10
Very high	1.668	3.44	Using the percentages of completion and including all costs paid and expected until the date of preparing the financial statements affect the profitability of contracting company	11
Very high	1.729	3.48	Using the percentages of completion and excluding the costs until the end of the project affect the profitability of contracting company	12
Very high	1.400	3.40	Using the percentages of completion and treating project accountings by using cost method affect the profitability	13
Very high	.938	3.52	Using the percentages of completion and treating project accountings by using engineer testimony affect the profitability	14
Very high	.938	3.52	Total	

Table 8 shows arithmetic means and standard deviations of the paragraphs which forms sub hypothesis related to accounting policies of construction contracts. Table 8 outlines that "the commitment to the requirements of standard of accounting policies affects highly the profitability of Jordanian contracting companies". Arithmetic means are ranging from (3.40 to 3.68); paragraph 2 stating that "Commitment of company to include all costs paid at the end of financial period in final accounts affects the profitability" has been at first rank and its arithmetic mean has reached (3.68); Paragraph 13 stating that "Using the percentages of completion and treating project accountings by using cost method affect the profitability" has been at last rank and its arithmetic mean is (3.40). Arithmetic mean of the paragraphs related to the application of accounting policies and procedures of construction contracts according to the requirements of IAS 11 is (3.52) as a whole and the impact fact is very

high.

Furthermore, arithmetic mean of the paragraphs, constituting the hypothesis, has been compared with standard mark (3) – acceptance standard of the hypothesis – by using t-test as shown in Table 9.

Table 9
Arithmetic means and standard deviations and t-test of the paragraphs, constituting the hypothesis in comparison with standard mark (3)

Significance level	Degrees of freedom	T value	Standard deviation	Arithmetic mean	No.	The commitment to apply accounting policies and procedures of construction contracts according to IAS 11 Construction contracts
.002	49	3.235	1.282	3.52	50	

Table 9 shows that there is statistical significance at a level of ($\alpha = 0.05$) between arithmetic mean and standard mark (3); t-value and significance level have reached 3.235 and 0.002, respectively. This indicates that the hypothesis stating that "contracting companies in the Hashemite Kingdom of Jordan do not commit to apply accounting policies and procedures of construction contracts according to the requirements of IAS 11", is refuted and the alternative hypothesis, stating that "there is statistically significant effect of the commitment of contracting companies to apply accounting policies and procedures of construction contracts according to the requirements of IAS 11 on the profitability of these companies, is accepted.

Second Sub – Hypothesis Testing

There is no statistically significant effect of the commitment of contracting companies to estimate unrealized profits and losses – with providing emergency reserves of potential losses – according to the requirements of IAS 11 on the profitability of these companies.

To validate this hypothesis, arithmetic means, standard deviations have been extracted for responses of sample study regarding the paragraphs of third hypothesis. Table 8 figures out the results as follows:

Table 10
Arithmetic means and standard deviations of responses of sample study regarding the paragraphs of the hypothesis related to the estimation of unrealized profits and losses – with providing emergency reserves of potential losses- according to the requirements of IAS 11

Commitment degree	Standard Deviation	Arithmetic Means	Paragraph	No.
High	1.431	3.44	Providing an emergency reserve of potential losses of projects which are being implemented affects the profitability of contracting companies	1
High	1.403	3.50	Providing an emergency reserve in case of existing profit affects the profitability of contracting companies	2
Middle	1.495	3.36	Providing an emergency reserve in case of existing loss affects the profitability of contracting companies	3
High	1.403	3.52	In case of expecting the loss for one of projects which are being implemented, Jordanian contracting companies recognize these losses in the final accounts and these losses affect the profitability.	4
middle	1.509	3.36	If the expected profits of the projects under the implementation cover the potential loss of the projects, the loss shall be recognized and it affects the profitability.	5
High	1.266	3.48	Applying the policy of allowance method for potential losses of the part implemented according to IAS affects the profitability	6
High	1.403	3.52	Applying the policy of allowance method for potential losses of the remaining part implemented according to IAS affects the profitability	7

High	1.762	3.42	Applying the policy of allowance method for the potential losses for the value of whole contract affects the profitability	8
High	1.618	3.56	Lack of applying allowance method for the potential losses of the value of the contract affects the profitability.	9
High	1.380	3.44	Total	

Table 10 shows arithmetic means and standard deviations of the commitment to the paragraphs which forms second sub hypothesis related to estimate unrealized profits and losses- with providing emergency reserves of potential losses- according to the requirements of IAS 11.

Table 10 indicates that total commitment of Jordanian contracting companies to estimate unrealized profits and losses is high. Arithmetic means are ranging from (3.36 to 3.56); paragraph 9 stating that " In case of expecting the loss for one of projects which are being implemented, Jordanian contracting companies recognize these losses in the final accounts and these losses affect the profitability. " has been at first rank and its arithmetic mean has reached (3.65); Paragraph 3 stating that " Providing an emergency reserve in case of existing loss affects the profitability of contracting companies " and paragraph 5 stating that " If the expected profits of the projects under the implementation cover the potential loss of the projects, the loss shall be recognized and it affects the profitability. " have been at last rank; their arithmetic means are the same, (3.36); commitment degree is middle. Arithmetic mean of the paragraphs related to estimate unrealized profits and losses – with providing emergency reserve of potential losses- according to IAS 11 is (3.44) as a whole. Furthermore, arithmetic mean of the paragraphs, constituting the hypothesis, has been compared with standard mark (3) – acceptance standard of the hypothesis – by using t-test as shown in Table 9.

Table 11
Arithmetic means and standard deviations and t-test of the paragraphs, constituting the hypothesis in comparison with standard mark (3)

Significance level	Degrees of freedom	T value	Standard deviation	Arithmetic mean	No.	Estimating unrealized profits and losses – with providing emergency reserves of potential losses- according to the requirements of IAS 11
.002	49	3.223	1.380	3.44	50	

Table 11 shows that there is statistical significance at a level of ($\alpha = 0.05$) between arithmetic mean and standard mark (3); t-value and significance level have reached 3.223 and 0.002, respectively. This indicates that this hypothesis is refuted and the alternative hypothesis, stating that "there is statistically significant effect of the commitment of contracting companies to estimate unrealized profits and losses – with providing emergency reserves of potential losses – according to the requirements of IAS 11 on the profitability of these companies ", is accepted.

Third sub hypothesis

It stipulates that there is no statistically significant effect of the commitment of contracting companies to the requirements of disclosure pertaining to construction contracts according to the requirements of IAS 11 on the profitability of these companies.

To validate this hypothesis, arithmetic means, standard deviations have been extracted for responses of sample study regarding the paragraphs of third hypothesis. Table 8 figures out the results as follows:

Table 12

Arithmetic means and standard deviations of responses of sample study regarding the paragraphs of the hypothesis related to the commitment of contracting companies to the requirements of disclosure pertaining to construction contracts according to the requirements of IAS 11

Degree of Impact of Commitment	Standard Deviation	Arithmetic Means	Paragraph	No.
High	1.568	3.50	Applying the requirements of disclosure according to the standard and disclosure for the works under implementation gives a better image of profitability of contracting companies	1
High	1.198	3.44	Applying the requirements of disclosure according to the standard and disclosure for the works implemented gives a better image of profitability of contracting companies	2
High	1.555	3.50	Applying the requirements of disclosure according to the standard and disclosure for the additions or discounts gives a better image of profitability of contracting companies	3
High	1.229	3.60	Applying the requirements of disclosure according to the standard and disclosure for the financial claims pertaining to the contracts gives a better image of profitability of contracting companies	4
High	1.542	3.48	Applying the requirements of disclosure according to the standard and disclosure for the payments gives a better image of profitability of contracting companies	5
Middle	1.469	3.38	Applying the requirements of disclosure according to the standard and disclosure for down payments and insurances paid gives a better image of profitability of contracting companies	6
High	1.617	3.42	Applying the requirements of disclosure according to the standard and disclosure for emergency losses, fines and attachments gives a better image of profitability of contracting companies	7
High	1.377	3.48	Total	

Table 13 shows arithmetic means and standard deviations plus the degree of impact of the commitment of the paragraphs which forms third sub hypothesis related to the commitment of Jordanian contracting companies to the requirements of disclosure pertaining to construction contracts according to the requirements of IAS 11. Arithmetic means are ranging from (3.38 to 3.60); paragraph 4 stating that " applying the requirements of disclosure according to the standard and disclosure for the financial claims pertaining to the contracts gives a better image of profitability of contracting companies " has been at first rank and its arithmetic mean has reached (3.60); Paragraph 5 stating that " Applying the requirements of disclosure according to the standard and disclosure for the payments gives a better image of profitability of contracting companies "has been at last rank; its arithmetic mean is (3.38); Arithmetic mean of the paragraphs related to the commitment of Jordanian contracting companies to the requirements of disclosure pertaining to construction contracts according to the requirements of IAS 11 is (3.48) as a whole. In addition, table 13 indicates that the total degree of impact of commitment for all paragraphs is high.

Furthermore, arithmetic mean of the paragraphs, constituting the hypothesis, has been compared with standard mark (3) – acceptance standard of the hypothesis – by using t-test as shown in Table 14.

Table 14
Arithmetic means and standard deviations and t-test of the paragraphs, constituting the hypothesis in comparison with standard mark (3)

Significance level	Degrees of freedom	T value	Standard deviation	Arithmetic mean	No.	Impact of commitment of Jordanian contracting companies to the requirements of disclosure pertaining to construction contracts according to the requirements of IAS 11 on the profitability
.017	49	2.482	1.377	3.48	50	

Table 14 shows that there is statistical significance at a level of ($\alpha = 0.05$) between arithmetic mean and standard mark (3); t-value and significance level have reached 2.482 and 0.017, respectively. This indicates that this hypothesis is refuted and the alternative hypothesis, stating that "there is statistically significant effect of the commitment of contracting companies to the requirements of disclosure pertaining to construction contracts according to the requirements of IAS 11 on the profitability of these companies", is accepted.

Third Main Hypothesis Testing

Third main hypothesis stipulates that "there is statistically significant effect of the extent to which contracting companies in the Hashemite Kingdom of Jordan apply IAS 11 Construction Contracts on the profitability of these companies."

To validate this hypothesis, arithmetic means, standard deviations have been extracted for responses of sample study regarding the paragraphs of sub hypotheses. Table 15 figures out the results as follows:

Table 15
Arithmetic means and standard deviations of responses of sample study regarding the paragraphs of the hypothesis related to the commitment of accounting requirements of construction contracts according to the requirements of IAS 11

Degree of Impact of Commitment	Standard Deviation	Arithmetic Means	Paragraph	No.
High	.938	3.52	Applying accounting policies and procedures of construction contracts according to the requirements of IAS 11 affects the profitability of contracting companies	1
High	1.014	3.46	The commitment of contracting companies to the requirements of disclosure regarding construction contracts according to IAS 11 affects the profitability of these companies	2
High	1.405	3.47	The commitment of contracting companies to estimate unrealized profits and losses – with providing emergency reserves of the potential losses of construction contracts according to the requirements of IAS 11 affects the profitability of these companies	3
High	.938	3.52	Total	

Table 15 shows arithmetic means and standard deviations plus the degree of impact of the commitment of sub hypotheses which forms main hypothesis related to the impact of the commitment of Jordanian contracting companies to the requirements of IAS 11 on the profitability; it indicates that the commitment of the requirements of IAS 11 affects highly the profitability of the contracting companies.

Furthermore, arithmetic mean of the paragraphs, constituting the hypothesis, has been compared with standard mark (3) – acceptance standard of the hypothesis – by using t-test as shown in Table 16.

Table 16
Arithmetic means and standard deviations and t-test of the paragraphs, constituting the hypothesis in comparison with standard mark (3)

Significance level	Degrees of freedom	T value	Standard deviation	Arithmetic mean	No.	Impact of commitment of Jordanian contracting companies to the requirements of IAS 11 on the profitability
.017	49	2.482	1.377	3.48	50	

Table 16 shows that there is statistical significance at a level of ($\alpha=0.05$) between arithmetic mean and standard mark (3); t-value has reached 2.482 and it is less than hypothetical mean; and significance level is 0.017. This indicates that the hypothesis is refuted and the alternative hypothesis, stating that "there is statistically significant effect of the extent to which contracting companies in the Hashemite Kingdom of Jordan apply IAS 11 Construction Contracts on the profitability of these companies", is accepted.

4-The Results

The study has concluded the following results:

- Contracting companies in the Hashemite Kingdom of Jordan face problems of accounting measurement of construction contracts; these problems affect the profitability of these companies; these problems are represented by the following:
 - Evaluating the complete works at the end of time period;
 - Separating between complete and incomplete works;
 - Separating between the costs of complete works and compare them with the revenues in order to measure the profits and losses of implementation process;
 - Measuring the profits of projects under implementation;
 - Allocating and distributing the costs of projects;
 - Evaluating the works which are not approved by the engineer;
 - Difficulty in treating the revenues of long-term projects;
 - Difficulty in treating the costs of long-term projects; and
 - Varying the method followed in treating the projects.
- The commitment of applying the accounting policies and procedures of construction contracts according to IAS 11 affects highly the profitability of contracting companies in the Hashemite Kingdom of Jordan.
- The commitment of the requirements of disclosure pertaining to construction contracts according to IAS 11 affects highly the profitability of contracting companies in the Hashemite Kingdom of Jordan.
- The commitment of estimating unrealized – with providing emergency reserves of potential losses- according to IAS 11 affects highly the profitability of contracting companies in the Hashemite Kingdom of Jordan.
- Contracting companies in the Hashemite Kingdom of Jordan face difficulties in applying and using IAS 11 Construction Contracts while preparing financial accounts; these difficulties includes the following:
 - Lack of scientific knowledge and vocational experience of ISA Construction Contracts;
 - Lack of accounting cost system of accounting books which helps to determine construction costs and apply IAS 11 Construction contracts;
 - Lack of accounting cost system of accounting books which helps to determine construction costs and apply IAS 11 Construction contracts;
 - Lack of commitment of laws in Jordan to apply IAS 11 in contracting companies;
 - Lack of interest of management in financial statements and applying international standards;

- Difficulty in treating the revenues of the projects under implementation while preparing financial statements;
- Problem of determining the profit for tax purposes while preparing financial statements;
- Unwillingness of management of applying IAS because the management is unaware of the importance of applying IAS; and
- Lack of employee training on requirements of IAS Construction contracts in accounting department.

5- The recommendations

The study has recommended the following:

- Legislative and legal environment shall be organized in a manner that contracting companies are obliged to adopt international accounting standards.
- Accounting curricula in Jordanian universities shall be developed in order to teach accounting for construction contracts.
- Departments of contracting companies shall be aware of preparing financial statements using IAS 11 Construction Contracts.
- Training courses on the importance of accounting for construction contracts using IAS 11 Construction Contracts shall be held for the employees working in construction sector.

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