

The Importance Of Using Modern Management Accounting Systems: An Exploratory Study In The Industrial Companies Listed In The Iraqi Stock Exchange

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Abstract:

Purpose: The study aims at highlighting the possibility of applying modern management accounting systems in the industrial companies listed in the Iraqi Stock Exchange to improve the performance of these companies, achieve competitive advantage, and to identify the most common systems and areas of their usages.

Design/Methodology/Approach: As for the statistical model, the researchers utilized five point Likert Scale to analyze the supporting and rejecting responses of the study sample's responses to the questionnaires items given. A total number of 115 questionnaires was retrieved from distributed questionnaires.

Findings: The results of the study indicate that most of the industrial companies listed in the Iraqi Stock Exchange use modern accounting methods in a good manner. Moreover, most of these companies have departments and sections responsible for the application of modern management accounting.

Practical Implications: The results of the study have revealed the desire of the senior management of these companies and the decision makers to apply the modern management accounting methods in order to achieve the desired goals, improve performance, maintain the market share, and to achieve competitive advantage to meet the changes that may happen in the future.

Originality/Value: The study has reached to some conclusions, the most important of which is that there is need for the managers of companies to make comparisons through the numbers and financial ratios between the actual performance and planned performance figures in order to assess the real performance in the industrial joint stock companies in order to achieve the objectives and excellence.

Keywords: Target cost (TC), Balanced scorecard (BS), Total quality management (TQM).

JEL codes: M21.

Paper type: Research article.

1. Introduction

Institutions in modern times face a number of pressures and challenges, mainly due to rapid fundamental changes in all fields, especially with the great technological advances and the progress made in the means of communication and information technology. Therefore, the institutions seek to provide the best and most accurate, appropriate and flexible information. This basically also requires more experience and high skills in management by the availability of effective techniques and systems that help officials and managers make sound management decisions that are compatible with keeping up with the times and changing their strategy. On this basis, any institution aims to create new opportunities and avoid threats and gaps so as to achieve its goal of control and survival and to impose its presence within the market, making them better centers for other institutions by meeting the needs of customers with high quality, lowest cost possible, and a timely manner. Therefore, the success of the institution depends on the extent of its discovery of the modern and efficient methods which enhance the institutions to achieve the competitive advantage with a high efficiency. Based on what has been just mentioned, management accounting has emerged as an effective tool aimed at providing financial information to various levels of management and thus serving the objectives of management to carry out its various functions. Therefore, management accounting has adopted modern techniques and methods that enable the institution to achieve competitive advantages in various fields.

2. Theoretical background

Emily et al (2007) conducted a study entitled "*An exploratory study of management accounting practices in manufacturing companies in Barbados*" which aimed to provide the necessary data and information to increase and develop the use of management accounting and increase competition between companies in the Caribbean. The study found that most companies use traditional managerial accounting methods rather than modern managerial accounting method, and most of the companies do not have a clear definition of management accounting. Therefore, these companies do not have independent departments or departments or persons responsible for applying management accounting methods. This study is the first to examine the methods and uses of management accounting in the Caribbean.

Sumkaew et al (2012) conducted a study entitled "*Management accounting practices in Thailand*" which aimed at exploring the practice of traditional and modern management accounting in companies listed in Thailand Stock Exchange in 2012 by using a field survey and also comparing the results of the survey with the results of four previous studies. The preliminary results of this study showed that the confidence of companies in traditional management accounting methods has not changed since the financial crisis in 1997 and the managers of these companies still get their knowledge of the practice of traditional management accounting methods avoiding the practice of modern management accounting methods due to lack of experience on the one hand and follow the centralization of

management and try to avoid the practice of accounting. The study reached a proposal to conduct comparative studies showing the use of modern accounting methods of companies in other countries with different cultures and the modern management methods used in Thai companies.

Lachmann et al (2013) entitled "Strategic management accounting practices in hospitals: Empirical evidence on their dissemination under competitive market environments" which aimed to provide an overview of the use of strategic management accounting practices in German hospitals. The study community consisted of a number of German hospitals. The questionnaire included 161 public hospitals in Germany. After conducting statistical analysis, the study reached a number of results, the most prominent of which is that the practice of strategic management accounting is applied continuously in these hospitals and is constantly adjusted in accordance with the nature of the work of those hospitals, but the strategic management accounting practices were not widely used.

Management accounting has several characteristics. It relies on known accounting procedures to collect, record, tabulate, summarize, display and interpret data either through the accounting system or through special analysis methods such as financial analysis. (Darwish, 2017). Management accounting relies on known accounting procedures to collect, record, tabulate, summarize, display and interpret data either through the accounting system or through special analysis methods such as financial analysis. It serves management and helps it to perform its various functions to the fullest extent possible. It also provides information to internal entities in the organization. Cost reduction and management are necessary to be carried out at all stages of product design and development, as reflected in cost reduction for the entire product life cycle. Atkinson et al. (2012) argue that the concept of TC is the method that reduces cost in the early stages of the product life cycle. Horngren et al. (2012) describe the TC as a long-term estimate of the cost of a product or service unit that strengthens the company to achieve the unit's target operating income at the target price, determined by subtracting the unit's operating income from the TC.

Balanced Scorecard (BS) is one of the most important models of performance measurement which has become one of the best and most widely used in the world. It is a balanced and integrated performance measurement system and a performance to translate strategies into operational goals and scientific indicators that achieve the vision and mission of financial institutions. Which focuses on financial indicators that achieve the interests of shareholders, and began to deal with non-financial indicators that achieve the interests of all parties related to financial institutions (employees, customers, suppliers, etc.). Horngren et al. (2012).

Quality is an administrative philosophy that contains a set of explanatory signs on which the institution is based to create a continuous company in improving its performance. It is a responsibility of all companies within the organizational structure. TQM is based on the

use of holistic methods and human capabilities to improve the delivery of the service or product to the latter beneficiary, based on various improvement methods that are integrated systems (Bahar and Abdulhaleem, 2017). As Kaplan et al (2012) view the overall quality management process as a continuous improvement of quality focusing heavily on the improvement and development of the relevant inbound and outbound processes, and the internal organs of the company (workforce, managers) for a product or service, and customers). This view is also supported by Edmonds et al (2012) in their definition of TQM as the continuous improvement of quality through continuity of employees in the company to do their best to reduce defects, remove damage, response speed, simplify product design, and facilitate the delivery of products and services to customers.

3. Methodology and Data

The sample consists of financial managers, their assistants and accountants who work in the financial departments of these companies, in addition to a number of financial experts working in the Iraqi Stock Exchange (ISX). A total of (115) questionnaires were retrieved with a recovery rate of (90%). Seven questionnaires were excluded due to lack of validity for the analysis. The remaining (115) were analyzed and processed. The five-point Likert Scale method was used to measure the responses of the study sample to the questionnaire items prepared for measuring the degree of sample approval on the questionnaire items as follows:

Table 1 : Five-Point Likert Scale Levels					
Response	Strongly Disagree	Disagree	Moderate	Agree	Strongly Agree
Level	1	2	3	4	5

The statistical averages were used to identify the trends of the study sample on the paragraphs that measure the degree of approval of the variables, while the standard deviations were used to show the extent of dispersion or convergence of the sample responses

Table 2: Distribution Of The Study Sample By The Occupation Level		
Statement	Frequency	Percentage
Financial Manager	19	16.5%
Financial Manager Assistant	21	18.3%
Head of Department	24	20.8%
Financial Accountant	35	30.4%
Financial Expert	16	14%
Overall	115	100%

Table (2) shows that the respondents who answered questionnaire items are sorted by the occupational level. A percentage of (16.5%) of the study sample were at the level of

financial manager, (18.3%) at the level of assistant financial manager. The largest proportion was the share of employees as financial accountants in the industrial joint stock companies by the percentage of (30.4%). The remaining percentages were distributed between the head of department working for industrial companies and a financial expert working for ISX

Statement	Frequency	Percentage
Accounting	64	55.7%
Business Management	38	33%
Economy	13	11.3%
Total	115	100%

Table (3) clearly shows that most of the study sample members who were involved in responding to the questionnaire items are majored in accounting as shown by the frequency of 64 with a percentage of (55.7%). Additionally, the respondents who are majored in business management occupied the frequency of 38 with a percentage of (33%) out of the total respondents involved. This means that the members working as financial accountants in the industrial joint stock companies listed in the ISX are professional and competent and their responses are accurate and convenient.

Years of Experience	Frequency	Percentage
From 1-5 years	9	7.8%
From 6-10	16	13.9%
From 11-15	25	21.7%
From 16-20	35	30.4%
From 21-25	30	26%
Total	115	100%

Table (4) shows that the highest category is repetition (35) and 30.4% for employees whose years of service in these companies are between (16-20) years, followed by the second category (5) and the recurrence (30) 26%) of the employees have a service ranging from (21-25) years. However, most of the sample of the study have sufficient experience to answer the questionnaire items of the questionnaire objectively and professionally high, noting that most members of the study sample were working ISX.

Scientific Qualification	Frequency	Percentage
Higher Studies	30	26%
Bachelors	66	57.4%
Higher Diploma	19	16.5%
Total	115	100%

Table (5) simply illustrates that the most of the employees of the industrial companies listed in ISX are holders of bachelor's degree. This is indicated by the frequency of (66) with a percentage of 57.4% out of the total number of the employees. Next, the employees with the high degrees occupy the second position with a frequency of (3) and a percentage of 26%. The remaining employees hold a higher diploma as shown by the frequency of 19 and a percentage of 16.5%.

4. Empirical Results

Analysis of the Axes of the Questionnaire and Testing Hypotheses

After collecting sorting the data, they were converted into numeric data expressing quantitative values. Excel program was adopted to process the data to reach the arithmetic mean and the standard deviation of the study axes items presented to the sample members.

First Axis of the Study : First Hypothesis (H1)

Item	Agreement Degree					Mean	SD	Agreement Level
	Strongly Agree	Agree	Moderate	Disagree	Strongly Disagree			
The concept of cost-based accounting system (ABC) is a well-defined concept for responsible managerial levels in the company. Does this system apply in the company?	32	48	13	10	12	3.669	1.254	Agreement
	27.8	41.7	11.3	8.7	10.4			
The ABC system is capable of providing information for decision making	30	49	14	11	11	3.660	1.234	Agreement
	26	42.6	12.1	9.5	9.5			
The proper management structure of the company helps greatly to implement the ABC system effectively and efficiently.	36	44	12	13	13	3.721	1.260	Agreement
	31.3	38.2	10.4	11.3	11.3			
The presence of the appropriate documentary cycle contributes to increasing the efficiency of the cost accounting system based on the activities (ABC).	36	47	9	12	11	3.739	1.271	Agreement
	31.3	40.8	7.8	10.4	9.5			
The application of the ABC system helps greatly enhance the performance of the company, increasing its competitive value in the market.	36	39	14	14	12	3.608	1.322	Agreement
	31.3	33.9	12.1	12.1	10.4			
ABC system helps management to provide accurate and timely information to clients.	37	40	12	13	13	3.652	1.337	Agreement
	32.1	34.7	10.4	11.3	11.3			
The political and economic conditions prevailing in Iraq help to apply modern management accounting systems in industrial establishments.	38	41	11	12	13	3.686	1.333	Agreement
	33	35.6	9.5	10.4	11.3			
The arithmetical mean and the standard deviation of the first axis						3.677	00.42	Agreement

Table (6) shows that there is general agreement by the sample members of the study using modern management accounting methods in some industrial joint stock companies listed in ISX, including ABC system, with a total arithmetic mean of (3.677) and a standard deviation of (0.042) indicating that the dispersion of the responses was

weak. This clearly validates the and objectivity of the answers to the first axis (the first hypotheses).

Table 7: FIRST AXIS OF THE STUDY

Item	Agreement Degree					Mean	SD	Agreement Level
	Strongly Agree	Agree	Moderate	Disagree	Strongly Disagree			
The company's management relies on cost data provided by the TC system in the decision-making process when launching a new product.	36	46	13	10	10	3.765	1.230	Agreement
	31.3	40	11.3	8.7	8.7			
The concept of TC is a concept well known by the management of the company and the executive bodies of the company.	37	46	12	10	10	3.782	1.233	Agreement
	32.1	40	10.4	8.7	8.7			
The use of the TC system in the company enhances the performance of the company and achieve the goals	37	44	13	11	10	3.756	1.246	Agreement
	32.1	38.2	11.3	9.5	8.7			
The application of the concept of TC works to develop the spirit of cooperation between individuals and different departments.	40	40	16	10	9	3.8	1.229	Agreement
	34.7	34.7	13.9	8.7	7.8			
The use of the TC system helps to distribute resources efficiently and according to the need for activities. It also enhances the company's ability to eliminate activities that do not add value to the company	39	41	14	10	11	3.756	1.274	Agreement
	33.9	35.6	12.1	8.7	9.5			
The management of the company and the employees of the sub-departments have sufficient knowledge of TC system.	39	44	13	12	7	3.834	1.184	Agreement
	33.9	38.2	11.3	10.4	6			
The prevailing political and economic conditions in Iraq help to apply the modern management accounting systems in the industrial joint-stock enterprises.	33	48	12	12	10	3.713	1.233	Agreement
	28.7	41.7	10.4	10.4	8.7			
The arithmetic mean and the total standard deviation of the second axis						3.772	0.026	Agreement

Table (7) shows that there is general agreement by the members of the sample of the study using the modern management accounting methods in some industrial joint stock companies listed in ISX, including TC system, with a total arithmetic mean of (3.772) for the first axis of the study with a standard deviation (0.026). This means that the dispersion of the responses was very weak, indicating the sincerity and objectivity of the answers to the first axis (the second item of the axis).

Table 8: THE STUDY SAMPLE RESPONSES ON THE USE BS

Item	Agreement Degree					Mean	SD	Agreement Level
	Strongly Agree	Agree	Moderate	Disagree	Strongly Disagree			
The concept of BS system is a relatively modern concept for managing a company.	40	44	11	10	10	3.808	1.262	Agreement
	34.7	38.2	9.5	8.7	8.7			
Management and employees have the necessary knowledge to implement the balanced performance card system and the expected benefits outweigh the costs resulting from its application.	37	45	13	12	8	3.791	1.203	Agreement
	32.1	39.1	11.3	10.4	6.9			
The implementation of the BS system helps management to effectively control and make good decisions.	35	40	15	12	13	3.626	1.320	Agreement
	30.4	34.7	13	10.4	11.3			
BS application helps improve performance and achieve company goals.	36	44	12	13	10	3.834	1.123	Agreement
	31.3	38.2	10.4	11.3	8.7			
The application of the TC system helps to implement BS performance and the appropriate accounting procedures and systems to implement the BS system	38	44	11	12	10	3.773	1.249	Agreement
	38	44	11	12	10			
The political and economic conditions prevailing in Iraq help to apply modern management accounting systems in industrial establishments.	38	48	9	12	8	3.834	1.198	Agreement
	33	41.7	7.8	10.4	6.9			
The arithmetic mean and the total standard deviation of the first axis						3.776	0.044	Agreement

Table (8) shows that there is general agreement by the members of the sample of the study using the modern management accounting methods in some industrial joint stock companies listed in ISX, including BS system, with a total arithmetic mean of (3.776) for the first axis of the study with a standard deviation (0.026). This means that the dispersion of the responses was very weak, indicating the sincerity and objectivity of the answers to the first axis of the study (the third item of the axis).

Table 9: THE RESPONSES OF THE STUDY SAMPLE ON THE USE OF TQM

Item	Agreement Degree					Mean	SD	Agreement Level
	Strongly Agree	Agree	Moderate	Disagree	Strongly Disagree			
The management of the company has a complete knowledge of the TQM and adopts the method of continuous performance improvement of the company to achieve the goals.	40	44	12	10	9	3.713	1.219	Agreement
	34.7	38.2	10.4	8.7	7.8			
The company's management sets standards to ensure customers'satisfactionwith the quality of their products and services.	35	43	14	13	10	3.713	1.275	Agreement
	30.4	37.4	12.1	11.3	8.7			
TQM is concerned with teamwork and employee participation in the process of making good management decisions.	42	49	10	8	6	3.686	1.252	Agreement
	36.5	42.6	8.7	6.9	5.2			
The objective of applying TQM is to continuously improve the performance of the company and maintain its position in the market.	43	47	10	8	7	3.8	1.229	Agreement
	37.4	40.8	8.7		6			
TQM needs to combine efforts and work in a team spirit to achieve the goals set.	43	46	11	9	6	3.739	1.271	Agreement
	37.4	40	9.5	7.8	5.2			
The implementation of TQM in the company reflects an administrative approach to achieve long-term success while satisfying the beneficiaries and employees.	44	49	10	6	6	3.834	1.184	Agreement
	38.2	42.6	8.7	5.2	5.2			
The political and economic conditions prevailing in Iraq help to apply modern management accounting systems in industrial establishments.	40	40	15	12	8	3.713	1.212	Agreement
	34.7	34.7	17.2	10.4	6.9			
The arithmetic mean and the total standard deviation of the first axis						3.74	0.033	Agreement

Table (9) shows that there is general agreement by the members of the sample of the study using the modern management accounting methods in some industrial joint stock companies listed in ISX, including BS system, with a total arithmetic mean of (3.742) for the first axis of the study with a standard deviation (0.033). This means that the dispersion of the responses was very weak, indicating the sincerity and objectivity of the answers to the first axis of the study (the fourth item of the axis).

Second Axis of the Study: Second Hypothesis (H2)

The data analysis shows that there is general agreement by the sample members of the study using the various modern management accounting methods in some industrial joint stock companies listed in ISX in order to achieve competitive advantage and maintain the market share of the company and develop it for the best. A total of (3.733) axis and a standard deviation of (0.031) were reached to. This means that the dispersion of the responses was weak, indicating the validity and objectivity of the answers to the second axis of the study.

Third Axis of the Study: Third Hypothesis (H3)

Table (11) below clearly shows that there is a general rejection by the sample members of the study of the existence of difficulties and obstacles that prevent the use of modern managerial accounting methods in some of the industrial joint stock companies listed in ISX to achieve competitive advantage and maintain the market share of the company. The mean arithmetic mean of the axis (2.049) was a negative answer according to the Likert standard. The total standard deviation of the axis was (0.031). This means that the dispersion of the responses was weak, which indicates the sincerity and objectivity of the answers to the third axis. The responses of the study sample in this axis complement the

previous axes that companies use modern management accounting methods and also the absence of difficulties and obstacles that helps these companies to keep abreast of new developments and stay in the market and maintain market share and attract investors to develop their economic capacity.

Table 11: DIFFICULTIES AND IMPEDIMENTS TO THE APPLICATION OF MODERN MANAGEMENT ACCOUNTING METHODS

Item	Agreement Degree					Mean	SD	Agreement Level
	Strongly Agree	Agree	Moderate	Disagree	Strongly Disagree			
The administration's unwillingness to change existing traditional systems is convinced and satisfied with the information provided.	8	13	14	43	37	2.254	1.216	Disagreement
	6.9	11.3	12.1	37.4	32.1			
Lack of scientific and practical expertise and competencies capable of applying modern management accounting methods.	-	15	16	38	36	2.017	0.921	Disagreement
	00	13	13.0	33	31.3			
The political and economic conditions prevailing in the country constitute an obstacle to the application of modern management accounting methods.	-	15	16	38	36	2.017	0.921	Disagreement
	00	13	13.0	33	31.3			
Lack of sufficient support and encouragement from the relevant authorities to apply modern management accounting methods.	-	17	14	46	43	1.956	0.958	Disagreement
	00	10.4	12.1	40	37.4			
Lack of sufficient detailed information to apply modern management accounting methods.	-	9	12	44	50	1.830	0.9105	Disagreement
	00	7.8	10.4	38.2	43.4			
The absence of an approved organizational structure that governs the various management relations in the company and reduces the conflicts of interest of the employees of the company.	16	11	18	19	42	2.2	1.271	Disagreement
	8.7	9.3	11.3	33.9	36.3			
The high costs of replacing modern managerial accounting with the expected benefits.	8	7	11	48	45	2.084	1.160	Disagreement
	6.9	6	8.5	38.2	38.1			
Lack of interest of the management of the company to hold training courses for staff in modern management techniques.	3	14	14	44	40	2.085	1.082	Disagreement
	2.6	12.1	12.1	38.2	34.7			
Lack of trained personnel in modern managerial accounting methods and low production volume than previously.	6	10	14	44	41	2.085	1.131	Disagreement
	5.2	8.7	12.1	38.2	35.6			
The company's products do not face stiff competition due to the high cost of the product according to prevailing market prices (materials and wages) compared to imported products.	6	10	14	44	41	2.085	1.131	Disagreement
	5.2	8.7	12.1	38.2	35.6			
Accounting systems are characterized by complexity and inflexibility, which does not help to apply modern administrative accounting methods.	5	11	10	46	43	2.078	1.093	Disagreement
	4.3	9.5	8.7	40	37.6			
The system of incentives and promotions for the employees of the company is influenced by personal relations in a clear and well known way.	5	10	14	45	41	2.078	1.119	Disagreement
	4.3	8.7	12.1	38.2	35.6			
The arithmetical average and the standard deviation of the third axis						2.049	1.087	Disagreement

5. Conclusion

The aim of the study was to identify the extent of applying modern accounting by the industrial companies listed in ISX. Below are some of the most important conclusions reached for the sector of industrial companies listed in ISX:

- There is a desire by the senior management of these companies and decision makers to apply the modern management accounting methods in order to achieve the goals and improve performance, and maintain the market share and achieve competitive advantage to meet the changes that may happen in the future.
- The need for the administration to provide accurate and more detailed information to investors to increase their ability in the market, especially in the presence of strong competition as a result of the use of modern technologies and accuracy in production and services, prompting them to use modern management accounting methods.
- It was found that a number of companies apply ABC, TC, BS, and TQM which all are modern management accounting methods. This means that the sample of the study companies have well-trained team with efficient scientific and professional capabilities.
- The absence of any difficulties that prevent the use of modern administrative accounting methods to provide possibilities. And through inquiries directed at some of those working in these companies that there are influential bodies and senior officials in the state are

behind these companies and thus they provide the political and economic environment for continuity and development.

Recommendations

- Increasing the training programs for the employees of the industrial companies to introduce them to the advantages of accounting management methods as very effective strategies for improving the continuous performance and achieving excellence in general.
- The need to attract the trained cadres with the high technical expertise to apply modern management accounting methods away from the courtesy and personal relations that would harm the interest of the industrial companies listed in ISX.
- The need to maintain a fair system of incentives in the company to increase the attention of employees working in companies because they are the key to the success of these companies. The incentive system should be linked to the performance because that will basically instigate and encourage the employees to dedicate more efficient performances contributing to success of the company.
- The need for managers of companies listed in ISX to make comparisons through the figures and ratios between the actual performance and the planned performance figures to assess the real performance in industrial companies so as to achieve the objectives and excellence.

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