



The Effect of Managerial Accounting on the Quality of Decision-Making

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Abstract

This study aimed to know the impact of managerial accounting on the quality of decision-making, including the actual impact on the strength of competition with companies, The study also aimed to clarify the importance of the decision-making process and clarify the factors affecting it, whether internal or external, and to indicate the existence of information that helps in decision-making processes in circumstances of uncertainty and clarify the effect of using the management accounting information necessary to analyze the data and conditions accompanying the decision-making process and explain the importance of the information Accounting that helps the organization and consistent with its circumstances and capabilities so that it reflects on the facility profits and its financial position positively, It also aims to identify the extent to which industrial companies use management accounting methods, and to achieve these descriptive goals analysis and inductive analysis approach that followed for specialized industrial companies. The study sample included (40) companies, and the study concluded a number of results, most notably: that the decision-making process is the fundamental essence of the success of management operations in industrial companies, where the decision is based on practical experience and on scientific knowledge and essential studied within an organized framework, and that the decision-making process in industrial companies is affected by internal and external factors.

Keywords: System; Decision making; Organization; Planning; Management accounting; Quality decision.



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1. Introduction

The decision is an integral part of our life, some consideration that is related to easy topics or difficult topics, so any matter that we define in our lives is a decision, some of which are taken quickly, and some of which need deep thinking before making any decision on it.

Management accounting was exposed at the beginning of its inception to severe criticism in terms of the inadequacy of the practices and methods used by managerial accounting and thus the inadequacy of the information it produces to make managerial decisions and accounting research has become about developing the role of accounting information produced by management accounting by developing managerial accounting methods that are no longer Appropriate in light of the changing environment, advanced technology, and increasing competition intensity, and here the need has emerged to develop accounting information, and data and the necessity of providing them in a form appropriate to the management needs to meet Its growing problems and in the manner that allows it to take the appropriate decisions at the appropriate time.

And therefore the accounting function is no longer limited to providing the information necessary to judge the result of the activity and the statement of the financial position, but the management accounting function has become to provide information that covers the needs of the internal users of accounting information, and they are intended for all workers at different managerial levels in the facility in order to assist the management planning Operations in the short and long term, controlling the results of operations and making-decisions, and management accounting also plays a role in the field of preparing external financial reports as the management has a responsibility to prepare those reports, which contribute to There is management accounting in one way or another (Juma, 2003).

Recent studies and experiments have proven that the accounting information system is the best system that management can rely on and its outputs, as rich and useful inputs to the decision-making process (Attia and Hashem, 2000)

The research problem is the following questions:

What do we mean by the quality of decision-making process and what are the factors affecting it?

Is there information that helps in the quality of decisions under conditions of uncertainty and does it have conditions?

Does the non-use of management accounting affect the weakening of the enterprise's competitive strength?

Do industrial companies adopt management accounting methods in order to reach what called quality decision?

1.1. Research Objectives

Through the importance of management accounting as it is an information system like any other accounting branch, and where this information received from the management accounting department is a good basis for making managerial decisions because this information has importance for management decision-makers in referring to it in cases of uncertainty and differentiation cases and others including It has a real impact on the quality of decisions and the competitive strength of companies. This research aimed to:

- 1- Explain the importance of the decision-making process and clarify the factors affecting it, whether internal or external.
- 2- Explain the existence of information that helps in decision-making processes in circumstances of uncertainty, and clarify the effect of using managerial accounting information necessary to analyze the data and conditions accompanying the decision-making process.
- 3- Explaining the importance of following the accounting information that helps the establishment and is in line with its circumstances and capabilities, so that it reflects on the profits of the facility and its positive financial position.
- 4- Knowing the extent to which industrial companies use managerial accounting methods in order to reach what called a quality decision.

1.2. Research Methodology and Hypotheses

The study sample included a number of specialized industrial companies, which numbered 40 companies. Questionnaires distributed to these companies, as 30 questionnaires retrieved.

H₁: The decision-making process, as the fundamental essence of the success of the management process, influenced by external and internal factors, Which divides into two sub- Hypotheses :

- 1- **H_{1.1}**: The decision-making process, as the fundamental essence of the success of the management process, influenced by internal factors.
- 2- **H_{1.2}**: The decision-making process, as the fundamental essence of the success of the management process, influenced by external factors.

H₂: There are conditions for information that help in making decisions under conditions of uncertainty.

H₃: Failure to use managerial accounting will weaken the organization's competitive strength.

H₄: Industrial companies adopt management accounting methods in order to reach what called a quality decision.

2. Theoretical Framework and Previous Studies

The importance of making decisions considered the bulk and axis of the managerial work. He takes a decision when he signs a letter or agrees to authorize an employee, answers his inquiries or asks one of his employees to do something, or it creates a committee, or appoints a department head ... etc, and so on. Decision-making is one of the basic tasks of the manager or president, and many management writers and thinkers consider that the decision-making process is the most important element in the work and life of organizations, and it is the beating heart of management that achieves the organization's survival, growth and prosperity and in support of the foregoing, the importance of making sound, sound decisions is clearly evident.

The decisions made by the manager greatly affect his guest position and introduction, and also affect the group he supervises and has an impact on the work of the organization in general [Harem \(1998\)](#).

This is the result of a study [\(Kahaleh, 2002\)](#), improving the quality of investment decisions using managerial accounting information.

This study aimed to highlight the accounting media dimension through the communication and disclosure functions as two pillars to support investment decision-making. As a requirement of the contemporary trend of accounting as a system of information as a service activity, accounting media represents one of its most important axes.

In this regard, the success of the service media role depends on the outputs of the accounting system represented in the accounting information published in the reports and financial statements and the subsequent analyzes and interpretations by the specialists are the basis on which all internal and external parties depend when making their decisions.

This study concluded that the information enables the investor to extrapolate future revenues and their trends and the potential for risk and uncertainty associated with these revenues and that it enables the investor to determine the amount and timing of future cash flows and what will be distributed from them in the form of profits or interest or in the form of recovery of the investment's principal, as well as This investor evaluates the degree of risk and uncertainty associated with these distributions and these flows and it helps the investor to evaluate the company's cash position in terms of the degree of short-term liquidity in it and its financial flexibility, in addition to its ability to pay obligations The long-term maturity dates, and it enables the investor to evaluate and test the quality of the planned number net income target for the company investment.

It recommended that the media content of the annual financial reports and lists published on the comparative list of the actual and planned income for the current year should include the deviations and obligate the companies registered in the stock market to submit to the Authority of this market periodic quarterly reports on their activities and the results of their work, in the form of lists Financial according to specific models that are easy for its users to read, perceive, interpret and understand.

3. Accounting Information System as a Basis for Quality Decision-Making Process

3.1. Bargo Study (2014)

The study aims to identify the nature of modern concepts in cost accounting on the basis of activity and a method of accounting for achievement to increase the efficiency of the symbiotic measurement of the Arab Sudanese

Oil Company (ABC) Plant Limited with a comparison with measurement in accordance with the traditional method, and help in making decisions related to a costly measurement.

The study reached several results, the most important of which is that the integration between the two cost methods based on the activity and the accounting method of achievement provides sound symbiotic information that can be relied upon in making decisions.

This study recommended the management of the Sudanese Company for Vegetable Oils Limited to pay attention to the cost division and provide it with employees in proportion to the workload required of them, and provide new methods for the purposes of accurate costing and performance evaluation.

3.2. The Concept of Management Accounting

The development of accounting thought, especially when the owner was separated from the project, led to the emergence of managerial accounting that is concerned with the project delegated by the owners 'law to manage the project. This stage was called "managerial accounting". Management Science That school which calls for "what cannot be measured cannot be managed" and interest at that time in the concept of profitability in the industrial stage emerged, and therefore the importance and role of the primary accountant in measuring costs, profitability, productivity and performance evaluation emerged, and I understood the Management calculator as important manager to provide data and information for (planning, control and decision-making (Al-Rawi, 1990).

Management accounting definition: is an information system that specializes in collecting, classifying, analyzing and storing basic data or information resulting from other sub-systems of information in the facility for the purpose of producing information of a financial or non-financial quantitative nature that assists management in planning, control and decision-making (Juma, 1994).

Also known as "the set of procedures for registering, classifying, summarizing, and deciding the economic operations of an entity, it is mainly intended as an information system to provide information to users of financial statements and reports to assist them in the decision-making process. (As a case, 2002, p. 25)

This is what the researcher mentioned in a study (Al-Mansour, 2000): for modern managerial accounting methods to meet the characteristics of the changing competitive environment

The researcher has conducted an analytical study of modern managerial accounting methods to meet the characteristics of the changing competitive environment, and to identify development needs in managerial accounting methods to suit the requirements of strategic planning and achieve the company's increase in the product market, and as a result of analyzing the results it was found necessary to develop managerial accounting methods in order to interact and respond with Requirements and characteristics of the environmental, economic and social variables surrounding the company.

The researcher also recommended working to activate the role of modern methods of managerial accounting as an information system in achieving the competitive competitiveness strategy of the company, and the need for Egyptian companies to apply modern methods of managerial accounting so that they can achieve competitiveness under the application of global economic agreements, and achieve increased costs in the product market.

3.3. Management Accounting Activities and Goals (Othman et al., 2003, p. 10)

In order to produce and communicate appropriate information to assist management in making planning and control decisions, management accounting carries out several activities, the most important of which are:

- 1- Defining, measuring and explaining the manufacturing and non-manufacturing mandate and how it is reported in the financial statements.
- 2- Calculating the cost of providing a service, or manufacturing a product, in an economic, service or industrial economic facility.
- 3- Determine the behavior of costs and expenses whenever the activity levels change and analyze the cost relationship with the size of the profit within the establishment.

3.4. The Four Main Objectives of Managerial Accounting Activities are: (Al-Fedaa, 2000, p. 19)

- 1- Providing information for managers for the purpose of planning and taking decisions.
- 2- Assisting managers in directing and controlling operational activities.
- 3- Motivating managers and other employees towards the goals of the facility.
- 4- Measuring the performance of the sub-units and other workers inside the facility.

Although most of the information provided by management accounting is financial, there are strong trends towards displaying largely non-financial data as well.

This is what the study (Al-Attas, 2004) brought to the effect of the conditional approach on the application of modern management accounting systems and methods:

The study aimed to describe the management control systems used in some Saudi industrial facilities, which are characterized by the use of advanced manufacturing systems in their production processes, in order to find an explanation of the reasons and justifications that led to these systems in each facility taking the form in which they are currently present. As well as learning about the reality of practical practices in applying management accounting systems and methods as an integral part of management control systems in those facilities.

The study found that many management accounting systems and methods are not used in practical application as tools for managerial control, and that some of these methods are mainly used due to the influence of conditional variables such as size, organizational culture, and type of ownership.

As for the degree to which modern management accounting systems and methods are adopted, it is moving slowly, despite the apparent progress and changes that occur in other procedures and systems, such as production methods, organizational structure, culture, strategy and competition, with which it is necessary to review the work of changes that are compatible and compatible with other systems, which One of the most important is accounting information systems as a subsystem of the management control system.

The results of the study also show that accounting systems are not seen as priority areas for the development of activities and systems in establishments. Sometimes, development may be limited to some facilities making improvements to traditional systems in cost control and performance measurement.

The study recommends the importance of the establishment continuously analyzing the surrounding environmental factors, and identifying the most important of these influencing factors, in order to assist them in the accuracy of designing their appropriate control systems. The study also recommends the importance of renewing and developing accounting practices to suit the modern manufacturing environment and the systems, methods and information that it requires may differ from those required by the traditional manufacturing environment.

The role of the management accountant in the field of management accounting.

Who is responsible for preparing and preparing the information required for planning, oversight and decision-making?

In most of the projects that he is entrusted with as an management accountant within the senior management, he is the financial manager who prepares the reports necessary for planning and evaluating the company's activities (such as budgets and performance reports), and provides the information required for management decision-making (Nour and Al-Swafiri, 2003)

This is what the Bushra, 2006 study brought to the contemporary role of managerial accounting - renewal or threat

The aim of the research is to explain the contemporary role of managerial accountants in the light of new changes in the business environment and what are the business requirements and skills to be developed by managerial accountants to blend in with this change.

The study concluded that the managerial accountant must become part of the value addition team for the organization and participate in the formulation and implementation of its strategies and contribute to the transfer of strategic goals and purposes within the managerial and operational standards and move away from the management accountant holding records to become a designer of accounting information systems.

The researcher recommended that he will find management accountants who cannot adapt to these changes from the difficulty of competition in this widespread profession, as they were unable to provide professional services of good quality, which exposes them to threats that may result in the inability to retain the jobs they practice today.

3.5. The Role of the Accounting Information System in Providing the Necessary Information for the Decision Quality Process

The large size of the establishments, and the intertwining of their activities and activities, have led to an increase in their need for fixed means and methods for collecting data, analyzing, classifying and keeping them to be ready and close to the decision-making centers, and these methods and methods are called by the information system.

The information system in the field of decision-making means the organized way to present the data and information that the decision-maker needs in a timely manner, and in a way that he can and pushes him to make a specific decision.

This was confirmed by Al-Mansour with the study of Mutasim Fadl Abdul Rahim Abdul Majeed, Fath Al-Rahman Al-Hassan Al-Mansour 2015 (Balanced Scorecard and its Role in Performance at the National Pension Fund) 10

The problem of the study represented in the form of questions is how the activation of the dimensions of the balanced financial performance card, internal operations, clients, growth and education, social performance) affect the performance evaluation process (financial and non-financial) in the National Pension Fund. The study reached results, including the use of the balanced performance card in its dimensions. The five (financial, internal processes, clients, learning and growth, social performance (In the success of the performance evaluation process according to an integrated and comprehensive framework). The Balanced Scorecard provides a continuous cycle of information on internal operations and the results obtained from these actions to bring about continuous improvement at the operational and strategic levels. The study recommended recommendations, including activating the policy of actual collection of contributions to increase awareness of government institutions, bodies and ministries. Activating external audits of cases of non-conformity by raising the time limit of the National Pension Fund.

3.6. The Role of Accounting Information in the Quality of Decision-Making

The success of any facility depends on the presence of three basic elements: management, capital, and labor. The most important component of these elements is management as the engine, organizer and planner of other elements, and to the extent that management plans and decisions are sound, the growth and development of the facility will be rapid towards success.

3.7. Management Concept

The concept of management and its diversity varied according to the difference of opinions of managers and thinkers. These definitions include the following:

(Wehrich & Koontz) described management as “the process of designing and maintaining a specific environment in which individuals work together as a team efficiently to achieve selected goals.”

Holt believes that management is: “the process of planning, organizing, leading, and controlling each of the human, material, financial, and information resources in a specific organizational environment.”

(Taylor) defines her as: “Determining what is required of the workers to work properly, then making sure that they are performing what is required of them in the best way and at the lowest cost.” (Dorah, 2009).

From the above, management can be defined as being the best use of all available means, resources and methods, including leadership, control, planning, coordination and organization, with the aim of achieving the goals that the facility seeks.

We cannot overlook the fact that the validity and integrity of these decisions depend primarily on the availability of sound and correct information.

Hence the important role that the accounting information system plays in providing the manager with the sound information it needs to manage the affairs of the facility.

It is evident that the degree of quality of information available to the decision-maker has a significant impact on the quality of the decision taken. The higher the quality of that information, the better the decision-maker's choice, which means that management must constantly search for the best information regarding the goals and expected results of alternative actions. Information increases the knowledge of the decision maker and reduces the risks involved in decision-making. In fact, decision-making and information are two related topics that cannot be dealt with without one another (Zamel, 2000).

The decision-making process depends at all stages on the information available to the decision-maker, which requires the necessity of observing the following principles when designing the information system: (Nour A. and Abdel-Al, 1993)

3.8. And (Karima, 2005) Study: The Role of Information Systems in Improving the Effectiveness of Decision-Making

The study aimed to shed light on the concept of decision supportive systems and their areas of development and their uses, the efforts of researchers and scientific and professional organizations in this field and explain the impact of multiple goals on decision-making, and the use of one of the methods of operations research, which is a model of goal programming to solve the problems of multi-purpose decision-making in the researched company and Presenting proposals that support the decision-making process in general and the investment decision in particular, by making use of mathematical and statistical methods.

The study concluded that the decision-making process is considered a process that affects the future growth of the organization and all its activities, and requires the allocation of large economic resources, and the decision-making process is a complex process and affects many internal and external factors, and economic organizations are often not interested in modern tools to support the strategic decision, but rather It has a database that stores historical information, which enables the decision maker to refer to in similar cases.

The study recommends that the company use specific procedures when making investment decisions, by creating an independent department that handles this process, by studying and analyzing investment alternatives in a systematic manner based on sound scientific foundations while taking advantage of theoretical models for making investment decisions. The assistance of people with expertise and specialization from outside the company, such as scientific and academic institutions, and the company introducing the risk factor and uncertainty when making decisions because failure to take the aforementioned worker into consideration in the evaluation process will lead to the possibility of converting the lost investment proposals into attractive proposals and a comprehensive re-evaluation of the systems used In the evaluation process.

4. Hypotheses Testing and Data Analysis

4.1. Tool Stability

* The stability of the instrument has been tested by the Cronbach alpha coefficient test, from table (1) below show the Alpha values and all of these values are greater than 0.60 so there is stability in the study instrument.

Table-1. Alpha Cronbach test results

Dimension	Alpha Value
The success of management operations	0.78
Internal factor	0.69
External Factor	0.84
Information Condition	0.90
Weakening competitive power	0.74
Adopting managerial accounting methods	0.76

4.2. Hypotheses Test

4.2.1. The First Major Hypothesis

H₁: The decision-making process, as it is the basic substance of the success of the managerial process, affected by internal and external factors, which divided in to two sub-hypothesis:

H_{1.1}: The decision-making process, as it is the basic substance of the success of the managerial process, affected by internal factors.

Table (2) Indicates that all of the paragraphs have obtained mathematical means greater than 3.00 and viewing significance levels less than 0.05, that is, they are statistically significant. Paragraph No. 4, which measures the degree of influence of the degree of clarity of the basic objectives of the company on decision-making, came in the first rank and in the middle of arithmetic 4.63, and Paragraph No. 2 came in second place, then paragraphs No. 1, 5, 3 and 6 came in the following ranks. Paragraph No. 7, which measures the extent of the influence of psychological and personal factors on decision-making, in the last rank and with an average of 3.83.

As for the combined paragraphs, it turns out that the mean was (4.31) which is greater than 3.00 and the observed significance level is 0.00, that is, it is statistical, that is, the first sub-hypothesis is accepted, that is, the decision-making process in industrial companies is affected by internal factors.

Table-2. The mean, the standard deviation, t- value, and the observed significance level affected by internal factors:

Paragra ph No.	Paragraph	Arithmet ic Mean	Standard Deviation	T- value	Sig*
1-	The lack of an information system within the company affects decision-making	4.40	0.93	8.23	0.00
2-	The lack of clarity on the degree of organizational relationship between individuals, departments and divisions affects decision-making	4.50	0.82	10.02	0.00
3-	A central degree, size, and degree of organization influence decision making	4.27	0.98	7.08	0.00
4-	The degree of clarity of the main objectives of the company affects decision-making	4.63	0.61	14.55	0.00
5-	The availability of human, financial and technical resources affects decision-making	4.40	0.86	8.97	0.00
6-	Decisions issued by other management levels without senior management influence decision-making	4.17	0.91	7.00	0.00
7-	Psychological and personal factors influence decision-making	3.83	1.12	4.09	0.00
	The arithmetic mean and general standard deviation	4.31	0.46	15.59	0.00

4.2.2. H_{1.2}: The Decision-Making Process in Industrial Companies Influenced by External Factors

Table 3 indicates that all of the items have obtained mathematical means greater than 3.00 and viewing significance levels less than 0.05, that is, they are statistically significant. Paragraph No. 13, which measures the effect of the degree of competition in the markets on decision-making, came in the first rank and in the arithmetic mean 4.60, and Paragraph 9 came in second place, then paragraphs 9, 12, 8, and 10 came in the following ranks, and Paragraph No. 11, which measures The extent of influence of social and cultural factors on decision-making, in the last rank and with an average of 3.90.

As for the combined paragraphs, it turns out that the mean was 4.39, which is greater than 3.00, and the observed significance level is 0.00, meaning that it is statistical, meaning that the second sub-hypothesis accepted, that is, the decision-making process in industrial companies affected by external factors.

Table-3. The mean, the standard deviation, t- value, and the observed significance level affected by external factors:

Paragra ph No.	Paragraph	Arithme tic Mean	Standard Deviation	T- value	Sig*
8-	Economic conditions clearly influence decision-making	4.47	0.82	9.81	0.00
9-	Technological developments clearly affect decision-making	4.57	0.73	11.79	0.00
10-	Productive conditions clearly affect decision-making	4.33	0.92	7.92	0.00
11-	Social and cultural factors clearly influence decision-making	3.90	1.06	4.64	0.00
12-	Government legislation and laws clearly affect decision-making	4.50	0.73	11.24	0.00
13-	The degree of competition in the markets clearly influences decision-making	4.60	0.56	15.56	0.00
	The arithmetic mean and general standard deviation	4.39	0.54	14.18	0.00

4.3. The Second Major Hypothesis

4.3.1. H₂: There are Conditions for Information that Help in Making Decisions in Industrial Companies under Conditions of Uncertainty

Table 4 indicates that all of the individual paragraphs have obtained arithmetic mean greater than 3.00 and levels of viewing significance less than 0.05, that is, they are statistically significant, and they are actually present. Paragraph No. 14, which measures the follow-up of several consecutive steps, constitutes a logical method for reaching an optimal solution when making the decision, in the first rank and in the arithmetic mean 4.60, and Paragraph No. 20 came second, then paragraphs No. 18, 15, 16, 17 came in the following ranks, and it was replaced Paragraph No. 19, which measures the benefit of cases of confirmation of decisions more than cases of uncertainty, in the last rank and with an average of 3.63.

As for the paragraphs combined, the mean is 4.22, which is greater than 3.00, and the level of significance seen is 0.00, that is, it is statistically significant, that is, the second hypothesis is accepted, that is, there are conditions for information that help in making decisions under conditions of uncertainty.

Table-4. The mean, the standard deviation, t-test, and the observed significance level for the field of information conditions

Paragraph No.	Paragraph	Arithmetic Mean	Standard Deviation	T-value	Sig*
14-	Decision-making is made by following several consecutive steps that constitute a logical method for reaching an optimal solution	4.60	0.56	15.56	0.00
15-	Any general situation or problem has alternative solutions that must be identified, analyzed, and compared over specific rules or standards	4.40	0.72	10.59	0.00
16-	The way to discover alternatives, define selection rules, and choose the optimal solution depends entirely on a goal or a group of goals that can be achieved	4.17	1.02	6.27	0.00
17-	Management predicts and makes decisions in an uncertain world	3.77	1.25	3.36	0.00
18-	The decision-maker must be fully aware of the expected results for each of the available alternatives.	4.43	0.73	10.79	0.00
19-	Confirmations of decisions benefit more than uncertainties	3.63	1.50	2.32	0.03
20-	Modern accountings systems help accelerate management decision-making.	4.53	0.78	10.82	0.00
	The arithmetic mean and general standard deviation	4.22	0.47	14.26	0.00

4.4. The Third Major Hypothesis

4.4.1. H₃: Not Using Managerial Accounting Affects Industrial Companies by Weakening the Enterprise's Competitive Strength

Table 5 indicates that all of the individual paragraphs have obtained arithmetic mean greater than 3.00 and levels of viewing significance less than 0.05, that is, they are statistically significant and present. Paragraph No. 22, which measures the extent to which cost accounting is considered an important source of data in management accounting, came first and in intermediate calculations 4.67, Paragraph 21 came second, then paragraphs 23, 26, 24 and 25 came in the following ranks, and Paragraph 27 came to measure The extent of management accounting service is effectively and consistently higher, middle, and lower departments and divisions of departments and departments. 3.36.

As for the paragraphs combined, the mean is 4.47, which is greater than 3.00, and the level of significance seen is 0.00, it has a statistical function, that is, the third hypothesis is accepted, that is, not using managerial accounting leads to weakening the competitive strength of the facility.

Table-5. The mean, the standard deviation, t- value, and the observed mean for a field weakening the competitive power

Paragrah No.	Paragraph	Arithmetic Mean	Standard Deviation	T-value	Sig*
21-	The accounting information provided by managerial accounting for senior management is strategic.	4.53	0.68	12.32	0.00
22-	Cost accounting is an important source of data in management accounting.	4.67	0.48	19.04	0.00
23-	Financial accounting is an important source of data in management accounting.	4.50	0.86	9.54	0.00
24-	Management accounting works to manage and invest funds effectively in the facility.	4.40	0.77	9.96	0.00
25-	The use of management accounting works to interact and respond to the requirements and characteristics of environmental, economic and social variables and achieve competitiveness in global markets.	4.37	0.67	11.20	0.00
26-	Management accounting is an advanced science in its methods.	4.43	0.63	12.54	0.00
27-	Management accounting serves the elements, departments, and departments of upper, middle and lower departments effectively.	4.36	1.03	7.24	0.00
	The arithmetic mean and general standard deviation	4.47	0.47	17.09	0.00

4.5. The Fourth Major Hypothesis

4.5.1. H₄: Industrial Companies Adopt Management Accounting Methods in Order to Reach What is called Quality Decision

Table 6 indicates that the paragraphs of this dimension separately have obtained mathematical means greater than 3.00 and levels of viewing significance less than 0.05, that is, they are statistically significant and present. Paragraph No. 29, which measures the extent of the existence of independent divisions and persons responsible for the use of management accounting methods, came in the first rank and in the middle of arithmetic 4.69, Paragraph No. 28 came in second place, then paragraphs No. 30, 33, 31 came in the following ranks, and Paragraph No. 32, which measures the extent of The adoption of planning decisions in costs on management accounting, at the last rank and with an average of 3.37.

As for the paragraphs combined, the mean is 4.37, which is greater than 3.00, and the level of significance seen is 0.00, that is, it has a statistical function, that is, the fourth hypothesis accepted, meaning that industrial companies adopt management accounting methods appropriately.

Table-6. The mean, the standard deviation, t- value, and the observed mean for a field of Management accounting methods

Paragrah No.	Paragraph	Arithmetic Mean	Standard Deviation	T-value	Sig*
28-	There is a clear definition of the concept of management accounting for employees working in the finance department.	4.53	0.68	12.32	0.00
29-	There are separate divisions and persons responsible for the use of management accounting methods.	4.69	0.48	19.04	0.00
30-	There are training courses and programs for employees that introduce them to managerial accounting and its methods.	4.50	0.86	9.54	0.00
31-	The decisions to use funds and expenditures depend on management accounting.	4.40	0.77	9.96	0.00
32-	Planning decisions depend on management accounting.	4.37	0.67	11.20	0.00
33-	More interest in traditional accounting than modern management accounting.	4.43	0.63	12.54	0.00
	The arithmetic mean and general standard deviation	4.37	1.03	7.24	0.00

5. Results and Recommendations

5.1. The Study Reached the Following Results

Theory of decision-making is the core of the success of management operations in industrial companies, where the decision is based on practical experience and scientific knowledge and foundations within the framework of an organization. Decisions are taken based on past experiences not personally. Decisions affect management processes

effectively and the process of the management process effectively . The companies involved in decision-making are based on foundations to references in decision-making made by senior management only.

- 2- The decision-making process in industrial companies is affected by internal factors, the most important of these factor is: the lack of an information system within the company, the lack of clarity of the degree of organizational relationship between individuals, and departments , the degree of centralization, the size of the organization, the degree of its spread and the degree of clarity of basic aims and the extent of human, financial and technical resources in it
- 3- The decision-making process in industrial companies affected by external factors. Where economic conditions, technological developments, production conditions, social and cultural factors, legislation, government laws and the degree of competition in markets clearly influence decision-making
- 4- There are conditions for information that helps in decision-making under conditions of uncertainty. Where decision-making is made through following several successive steps that constitute a logical method in reaching an optimal solution, and that there are alternative solutions that must be identified, analyzed, and compared over the course of specific rules or measures of problems.
- 5- The non-use of management accounting in industrial companies affects and weakens the competitive strength of the facility. Where management accounting provides strategic accounting information for senior management, cost accounting and financial accounting are an important source of data in management accounting, and management accounting works to manage and invest funds effectively in the facility.

5.2. Recommendations

5.2.1. The Study Recommends the Following

- 1- Attention and Continuous improvement to all elements of the decision-making process, because it is the essential essence of the success of the management processes in it, especially by relying on the correct scientific foundations and avoiding subjective personal judgments.
- 2- Continuous attention to the internal factors affecting the decision-making process, such as creating an information system that provides appropriate information, providing organizational relations between the various parties, in addition to human, financial and technical resources, clarity of basic goals, and not neglecting psychological and personal factors.
- 3- Trying to find appropriate, flexible and fast mechanisms to mitigate the negative effects of external factors such as economic, social, cultural and technological developments, as well as taking advantage in a timely manner of the positive changes resulting from these factors.
- 4- Providing conditions for information that help in making decisions under conditions of uncertainty, such as following consecutive steps that constitute a logical method of reaching the optimal solution, analyzing and comparing alternatives based on specific rules and standards, providing expected results for each alternative, and using Modern accounting systems to accelerate the process of making management decisions.
- 5 - The need to use and continuous development management accounting to achieve many advantages of management, especially with regard to increasing competitiveness.

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