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The Impact of Management Accounting Information System Characteristics on the Quality of Cost Accounting Information: A Field Study at Al-Joud Company for Modern Industrial and Agricultural Technology

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Abstract. The purpose of this study is to investigate the effect of the characteristics of the management accounting information system (MAIS) on the quality of the information of cost accounting in Al-Joud Company for Modern Industrial and Agricultural Technology. This is very important since accounting information is critical to assisting managerial decisions and improving cost planning and control processes. The study is descriptive-analytical and data collection is carried out through a questionnaire to the employees of accounting, financial and administrative jobs in a company. A total of 225 questionnaires were distributed and 206 questionnaires were returned and considered valid for statistical analysis (91.56% response rate). The independent variable, operationalized in this study, is the characteristics of the MAIS in four aspects, namely information scope, timeliness, aggregation and integration. Information quality of cost accounting is the dependent variable, which is assessed by eight items based on the existing accounting literature. The study is of practical value in offering an analytical tool to evaluate the contribution MAIS characteristics can make towards enhancing the quality of cost information accessible to management. The study highlights the need for improvement in the features of MAIS (integration of accounting information, timely delivery of information and tailoring of information, depending on the managerial level) so as to increase the reliability of cost information and its usefulness for planning, control and decision making.

Keywords: characteristics of management accounting information systems, quality of cost accounting information, information scope, information timeliness, information aggregation, information integration.

1. Introduction

In the recent business context, there has been a substantial transformation of the production and administrative processes, together with the growing complexity of the decisions that the organizations have to make, especially in the fields of resource planning, cost control, performance analyzing and allocating available skills. It is clear that organizational efficiency is not simply about having accounting data, but it is now about providing information that is relevant, accurate, timely and actionable for supporting managerial decision making in the organization. In this context, the role of management accounting information systems becomes a basic part to provide information to help management understand the operating conditions, monitor the variances, and react to the variables that may impact an organization's activities and/or results.

The managerial usefulness of a management accounting information system depends on its ability to provide information appropriate to the kind of managerial decisions and the information needs of different levels in management. The utility of this kind of system can't be measured just with the number of information it generates, but also with scope, timeliness, degree of aggregation and degree of integration. In this respect the research of Chenhall and Morris (1986) brings a valuable framework to the study of the nature of information provided by management accounting systems. This framework

considers four dimensions: scope, timeliness, aggregation, and integration, and explores how they relate to organizational structure, external environment and interdependence between organizational units. These dimensions serve as an appropriate framework for study of the degree to which a system can satisfy the information requirement of management in different organizational settings.

Additionally, cost accounting information is a key component in the activities of production and service management. It is important for determining the costs of products and activities, analysing cost components, monitoring resource use, and serves as an information base for planning, controlling and evaluating performance. The usefulness of the information, however, does not rely just on its availability, but also on the quality of the information and on its appropriateness for intended uses. Information that is not timely, does not provide sufficient detail, does not clearly differentiate the elements or categories of costs, or does not clearly differentiate between the various costs and benefits related to a management decision may prevent management from diagnosing operational problems, evaluating alternatives and making appropriate decisions. In this context, Pizzini (2006) studied the link between the design of a cost system and managers' evaluations of the relevance and usefulness of cost information – emphasising that the design of an information system influences the usefulness of the information used by managers.

While there is a conceptual relationship between the attributes of a MIS and the quality of cost accounting information, it is important that the study of this relationship be conducted in an empirical manner that takes into consideration the information system and the usage requirements of the system. The subject becomes more and more relevant in companies that have modern industrial and agricultural production processes, in which the demands of the monitoring of the operation processes and the demands of information related to costs overlap. This is key information to assess resources usage, monitor spending and increase the efficiency of decisions about different activities.

In this context, the present study explores the effect of the features of a managerial accounting information system on the quality of the cost accounting information of "Al-Joud Company for Modern Industrial and Agricultural Technology. It deals with particular characteristics of the system, namely scope, timeliness, aggregation and integration of information and examines their relationship with the quality of cost accounting information. The study seeks to give an applied view that would help to understand the role of these informational features in the generation of cost data more useful for management needs and thus in the company's planning, control, and decision making.

Section One: Research Methodology

I. Research Problem

The research problem is based on the increasing significance of accounting information in assisting managerial decisions with respect to cost planning, cost control, and the analysis of the efficiency of resource utilization. The ability of a management accounting information system to deliver an information that suits the needs of the management, in terms of scope, timeliness, level of aggregation and degree of integration, is a major factor in the effectiveness of these decisions. Information for accounting is a condition for managerial activity, but its production does not ensure the quality of the information and its suitability for the purposes of managerial activity. This underscores the importance of studying the attributes of an information system since these could be associated with the quality of cost accounting information.

The significance of this problem is the critical function of cost accounting information in costing the activities and products, categorization of cost elements, control and monitoring of resource utilization and the indicators to help the management plan, control and evaluate the performance. This means any deficiencies in the qualities of the system that produces this information can impact management's capacity to receive information at the right time, in the right amount, in the right depth and in an integrated format. In this context, the characteristics of the information that management accounting information systems deliver to managements was emphasized by Chenhall and Morris (1986) and the relationship of the design of the cost system to how managers assess the appropriateness and usefulness of cost data was the focus of Pizzini's (2006) research. Based on this, the problem in the current study is to find out the impact of the characteristics of the management accounting information system (MAIS) on the quality of cost accounting information in Al-Joud Company for Modern Industrial and Agricultural Technology, empirically. An analysis of four dimensions of the system—information scope, timeliness, aggregation, and integration—is carried out, and their contribution to the understanding of the quality of cost accounting information is analyzed.

Thus, the research problem is based on the following main questions:

- What is the impact of management accounting information system characteristics on the quality of cost accounting information at Al-Joud Company for Modern Industrial and Agricultural Technology?

Second: Significance of the Study

The significance and value of this study is due to the role of accounting information in assisting management and the need for understanding the link between the characteristic of a management accounting information system (MAIS) and the quality of information as a field of cost accounting. The meaning of the research can be expressed in two ways:

2. Scientific Significance

The scientific value of this research is based on the investigation of topic that combines the properties of management accounting information system with quality of cost accounting information in one framework. This helps to elucidate the relationship between the informational nature of the system and the quality of the information that management uses when managing cost data. In addition, the study is based on the definition of the characteristics of a management accounting information system provided by Chenhall and Morris (1986), as well as on literature regarding the design of cost system and the uses of the cost data – mainly Pizzini (2006). This offers a scientific basis to be used in subsequent studies on accounting information systems and the quality of accounting information products in different settings.

3. Practical Significance

The applied value of this study is that it provides some empirical indications that help to evaluate the features of the management accounting information system in Al-Joud Company for Modern Industrial and Agricultural Technology, and determine the degree of their correlation with the quality of cost accounting information. Moreover, the results of the research can be used by the management of the company to determine what needs to be more closely monitored when developing an information system, such as the delivery of information in time, presenting information at the right level of detail or aggregation, and ensuring the information is integrated for various levels of management. Therefore, the study is expected to give a practical base that can be used in the utilization of cost-related information in planning, control and decision making – in the context of the findings that have been obtained from the statistical analysis.

Third: Research Objectives

The study aims to analyze the effect of the features of the management accounting information system on the quality of cost accounting information in Al-Joud Company for Modern Industrial and Agricultural Technology. The main objective is accompanied by the following sub-objectives:

To measure the level of the items of the Management accounting information system that can be found in the company under study, according to the dimensions used in this research.

- To evaluate the level of the quality of the information available in the cost accounting of the study sample.
- To investigate the effect of information scope on the quality of cost accounting information.
- To discuss the effect of the timeliness of information on the quality of cost accounting information.
- To investigate the effect of the information aggregation on the quality of cost accounting information.
- To analyze the influence of information integration on information quality of cost accounting.
- To give practical advice – derived from the findings of the statistical analysis – to help the company's management to design the features of the management accounting information system and enhance the quality of its cost-related information.

Fourth: Study Population and Sample

The study population consists of workers at Al-Joud Company for Modern Industrial and Agricultural Technology, who are involved in accounting, financial or administrative tasks, and use, prepare or monitor cost-related information as the work of workers in these roles is directly related to the subject and variables of the study. The group was selected because they are the ones most involved with the attributes of the management accounting information system and the data it provides to plan, control, and make decisions.

The main instrument used for collecting the data needed to meet the objectives and test the variables of the study is using questionnaire which is used in the field. 225 questionnaires were sent to the target group and 206 questionnaires were returned and considered valid for statistical analysis, and the other 19

questionnaires were not valid. Therefore, the rate of valid questionnaires was 91.56% of the questionnaires distributed. The figure is the proportion of valid responses to questionnaires distributed; it is not necessarily the proportion of all returned questionnaires (including invalid questionnaires).

The questionnaires used were valid questionnaires and were used as the basis for the process of the necessary statistics. This enabled the sample respondents' perceptions of the characteristics of the management accounting information system and the quality of cost accounting information to be evaluated and the hypothesized relationships between the study variables to be tested, using the statistical techniques applied in the practical aspects of the research.

Fifth: Study Variables, Their Dimensions, Operational Definitions, and Sources

Table (1) presents the study variables, their dimensions, operational definitions, and the sources of the scales used for each of the study variables.

Source	Operational definition	Variables and Dimensions
،2022)Manossoh et al(	The set of information characteristics that allows the management accounting information system of the Al-Joud Company for Modern Industrial and Agricultural Technology to deliver information for the support of management decisions. This includes the breadth of the financial and non-financial information, the timeliness of its release, the level of aggregation and integration across different departments and management levels.	Characteristics of a Management Accounting Information System
	A variety of information, relevant and accessible, to help the company's employees and management better understand operational, financial issues and factors that impact operations.	Breadth of information scope
	Availability of accounting information in a timely manner, at the speed and frequency necessary to meet the company's management requirements.	Timing of information
	How accounting information is structured and summarized to a level or format that is useful to management for analysis and use.	Aggregation of information
	The level of interdependence of accounting information across activities, departments and levels of management and the level of coordination and exchange of information in the company.	Integration of information
،2023)Pavlatos & Kostakis(	The appropriateness, detail, timeliness, frequency and proper classification of cost-related information, which facilitates management planning, cost control and cost decision making.	Quality of cost accounting information

Source: *Prepared by the researcher*

Section Two: Theoretical Framework of the Study

First: Characteristics of the Management Accounting Information System

1. Concept of the Characteristics of a Management Accounting Information System

The information systems used in management accounting are a key technological and structural component on which modern organizations depend to shift from the traditional processing to integrated digital work process systems, which support and inform strategic decision making. It is a technically and organizationally sophisticated system comprising hardware, software, structured data, standardized procedures and qualified employees responsible for processing financial and operational information. It turns this data into information added value to assist management to plan, control and effectively monitor the organization's performance (Mawarti & Yaya, 2025: 601).

A management accounting information system is a specific system that gathers, processes and analyzes enormous amounts of financial and non-financial information from a variety of sources. It goes beyond the mere recording of accounting transactions, offering a comprehensive analytical report that reflects the true picture of the operational process and helping the management to evaluate costs, develop future policies and allocate available resources to economically and strategically viable activities (Rodrigues et al., 2022: 2).

In addition, this is a structure that helps to regulate data flow between different organizational levels. It offers information that is relevant and helps to minimize the uncertainty that exists in the business environment, allowing decision makers to react quickly to changes

in the environment and competition. It is crucial in implementing innovative strategies by tracking and identifying the costs and returns related to providing new services and products, and routinely reviews financial performance (Saleh & Al-Nimer, 2022: 2).

A management accounting information system technologically and organizationally serves as a unified connection between the different departments and subunits of an organization. It brings together all sales management, budgeting and management reporting systems into a single database, so that information flows seamlessly. This helps to improve financial and operational efficiency and ensures that financial goals are linked to the overall strategic goals of the organization (Husain, 2023: 467).

The management accounting information systems have become dynamic systems in the era of ever-accelerating digital transformation and the use of cloud computing and big data technologies. They allow easy access to indicators, both financial and non-financial, which helps to increase transparency, reduce operational errors and deviations, and help to create accurate, periodic indicators. Effective risk management as well as regulatory and compliance requirements are satisfied with efficiency and competence thanks to these reports (Rahim, 2025: 1). This system can be understood in terms of Contingency Theory; information systems for management accounting are developed in the light of the organization's structure, competitive environment and the changing problems faced by the organization. This means that the accuracy, comprehensiveness, and quick response of the system form an integral part of the process of converting data into strategic insights. These insights, in turn, guide employee behavior and bolster the organization’s capacity for growth and sustainability (Carolina et al., 2024: 379).

In addition, the management accounting information system enables the monitoring and management of the internal environment which reduces the complexity of administrative work. These systems give executive management advanced analytical tools, which can measure the performance of activities, evaluate service quality, and detect indicators to correct deviations before they become serious, improving the quality of both administrative and financial decision-making (Monteiro et al., 2022: 2). These systems are also designed to connect with budgetary estimates and cost analysis programs for an effective control environment. This allows for the distribution of financial and material resources in different areas in accordance with the performance priorities, so as to minimize financial waste, increase transparency and administrative/financial accountability, and make the system part of the general corporate governance system (Mawarti & Yaya, 2025: 604).

A management accounting information system is a system defined by the researcher as an integrated system of technological, procedural and human components. This system is designed to ensure that the financial and non-financial information comes from a variety of sources, is processed and analyzed, and becomes accurate, complete and reliable information. This information is delivered when needed to all levels of management and helps with strategic and operational decision making, increased resource planning efficiency and the monitoring of financial performance, which all contributes to the quality of services provided to the organization.

Second: Dimensions of Management Accounting Information System Characteristics

In contemporary organizations, the integration of a set of structural characteristics and integrated dimensions into the management accounting information system (MAIS) significantly influences the quality and maturity of the management accounting information. The literature of modern management accounting indicates that four dimensions of management accounting are fundamental and mutually interdependent, operating alongside each other in perfect harmony, and that when taken together they enable the organization to provide management with the tools they need to manage with high efficiency (Manossoh et al., 2022: 15).

1. Scope of Information: The extent of informational output produced by a system beyond just historical and internal financial information. It includes both non-financial indicators as well as information on the external environment and future projections which all help management to manage environmental uncertainty.

2. Timeliness of Information: relates to how quickly a system can generate reports and information to different levels of management either upon request or as events in the system occur. It provides a timeline of regular real-time reporting, with reduced time between event and decision making.

3. Aggregation of Information: The ability of the system to summarize and compress huge amounts of raw data, to segment it into management center, time period and/or decision-making model. This allows leadership to make use of targeted reporting which

helps to illustrate how sub-activities affect the overall financial performance.

4. Information Integration: This dimension is how interconnected and co-ordinated the various departments and operational units in an organization are in their use of software. It helps to make sure your data is flowing smoothly and that decisions taken in one part of the organization have a reciprocal effect on other parts, making it easier to produce comprehensive reports that contribute to organizational cohesion.

Second: Cost Accounting Information Quality

1. The Concept of Cost Accounting Information Quality

The backbone of accounting outputs is the quality of cost accounting information, which is used to inform the organizational and operational processes for achieving maximum efficiency and effectiveness. It refers to the ability of the processed financial and cost information to offer reliable and complete indicators that help various management levels to analyse, predict and manage the available economic resources. This quality is a true indicator of the effectiveness of a cost accounting system in transforming the system from a traditional system used for data aggregation into a modern system used for data processing that produces value added information that meets the expectations of decision makers and is in line with the future direction of the organization (Fitriati & Mulyani, 2023: 66).

The key to the quality of cost accounting information is that it helps to decrease uncertainty among different organizational actors and to reduce information asymmetry. It creates an environment of transparency, making the operational activities and processes understandable in terms of cost figures and indicators, and a real reflection of the organization's economic reality. In addition, this idea covers the level of compliance of processed data with accounting standards and regulations, hence that the product is free of significant errors and biases, thus improving investment and management value of periodic reports (Halimi & Mostafa, 2024: 7). Nowadays in the context of the modern management and accounting thinking, the quality of cost accounting information is a strategic analytical tool. It allows leaders to assess the structure of direct and indirect costs and to measure the profitability of services and products to the highest degree of accuracy. In addition, it is a key component in helping to price the output and in determining activities that do not contribute to the organization's value. This effectiveness is achieved by having flexible, comparable data, that helps people compare actual results against planned results and provides for timely identification and resolution of variances (Cooper & Kaplan, 2022: 351).

The quality of cost information is determined by the integrated interaction of computerized software infrastructure and unified databases from a technological and information perspective. They are the latest technologies that can help review huge amounts of financial and non-financial data quickly and accurately. This quality is reflected in the ability to immediately meet the urgency of management needs, by providing real-time reports to decision makers that can improve competitiveness and reduce operational and financial risks that could occur in the business environment (Krismiaji & Djaja, 2025: 68).

The quality of cost accounting information has other dimensions in service oriented and/or production organizations, relating to the quality of services provided and to finances. This data can help a hospital's management make a fine balance between profitability and improvement of service quality by providing accurate estimates of the expenses for operations and support services. This quality helps to reduce financial waste and allocate cash flow to the improvement of medical equipment and human capital, given the clarity and reliability of indicators which are based on costs (Lachmann et al., 2020: 7).

In addition, the quality of cost accounting information is a key lever to institutional transparency and accountability. It builds trust for the clients, the investors and the regulators in the financial data provided. This confidence is built when the information is presented as neutral, and it can project the expected cash flow and financial performance, thus enabling the formulation of sound strategic decisions that are consistent with the rapidly changing environmental and competitive landscape (Gyamera et al., 2025: 56).

The researcher's definition of the quality of cost accounting information is the efficiency, relevance, and reliability of the financial and cost related reports and outputs produced by account accounting system. This involves delivering timely and accurate, comprehensive, up to date and unbiased data that will enable the management to plan cost, oversee operational processes and make decisions that will strengthen financial efficiency to ultimately improve the quality-of-service delivery to the institution in both the service and production sectors.

2. The Importance and Determinants of Cost Accounting Information Quality

Cost accounting information quality is important to the organization for planning, controlling and evaluating processes as these are the foundation of the contemporary organization. High-quality information allows managers to develop fair pricing policies, to identify the cost structures accurately and to remove the waste and non-value adding activities, which ultimately result in increased profitability and better financial and operational performance (George & Desmidt, 2022: 127).
This is not just an internal relevance; it enhances corporate governance and effective financial monitoring. High-quality cost outputs serve as a reliable database that enables management and regulatory authorities to track the budget implementation, curb fraud, manipulation of data, and identify and rectify financial deviations as they occur, thus avoiding financial losses and maximizing the allocation of resources (Setiyawati & Dokoralina, 2023: 484).

Concerning whatever reasons make it possible to obtain such quality, they rely on the presence of professional people educated to use contemporary accounting systems and sophisticated data-processing technologies. These human skills are supported by the quality of the inputs and the standardised procedures used to enter and classify cost data, while the integrity of the raw data is an important precondition for accurate and reliable outputs (Jacko, 2022: 127). Quality of cost-related information is an integral part of organizational, as well as technological, components. These include the presence of sophisticated digital infrastructures, seamless software systems that link different aspects of the operation, and a culture of transparency and knowledge sharing within the organization. These elements combine to develop a comprehensive work environment that provides seamless and highly accurate flow of accounting information (Oyewo, 2023: 5).

Section Three: Practical Framework of the Study

1. Coding of Study Variables and Scale Reliability

To determine the reliability of the scale, Cronbach's Alpha coefficient is calculated for the dimensions of the study variables—namely, "characteristics of the management accounting information system" and "quality of cost accounting information"—as shown in Table (2).

Table (2): Coding of Study Variables and Scale Reliability

Cronbach's Alpha	Encoding	Encoding	Dimensions	Variables
.88	5	BS	Breadth of information	Characteristics of a Management Accounting Information System CMAIS
.78	5	TL	Timing of information	
.77	5	LG	Aggregation of information	
.75	5	LI	Integration of information	
.89	8	Quality of Cost Accounting Information QCA		

Source: *Prepared by the researcher based on the results from the SPSS software.*

As seen in Table (2) each Cronbach's alpha coefficient value of the study variables dimensions is above 0.70 and are in the range of 0.75 to 0.89. This means that the study instrument has reliability.

2. Descriptive Data Analysis

The descriptive analysis of the "Characteristics of the Management Accounting Information System" variable is presented below. The descriptive analysis of the variable "Characteristics of the Management Accounting Information System" is as follows:

The results of several descriptive analyses, such as arithmetic mean, standard deviation, and variance are presented for the variable "characteristics of the management accounting information system" in Table (3).

Table (3) Descriptive Analysis of the "Characteristics of the Management Accounting Information System" Variable

Variance	Std. Deviation	Mean		N	Paragraph	
Statistic	Statistic	Std. Error	Statistic	Statistic		
.772	.87856	.07858	3.9520	206	Information in an accounting system of management for any company can include accounting information and information that is non-financial, which are used to help business performance.	BS1
.898	.94753	.08475	3.6240	206	The system provides information on the factors that affect the costs of the company's activities.	BS2
.809	.89932	.08044	3.2640	206	This system is used to send out data about external factors which could affect the company's tasks and costs.	BS3
.665	.81573	.07296	3.6480	206	The system provides comprehensive data that helps to understand different aspects of the company's working process.	BS4
.576	.75878	.06787	3.1920	206	The system offers forward looking and estimated information which can be used for planning activities and costs.	BS5
.671	.81928	.07328	3.5120	206	A management accounting information system provides management with the necessary information in a timely manner.	TL1
.753	.86755	.07760	3.2240	206	Information regarding account can be available at any time when required to make management decisions.	TL2
.929	.96386	.08621	3.2800	206	Data received from the system is kept up to date with any changes in the company's operations.	TL3
.653	.80826	.07229	3.4560	206	The system provides quick retrieval of information when called for by the relevant personnel in the company.	TL4
.688	.82946	.07419	3.2480	206	Accounting reports and information are presented regularly, in accordance with the company's management needs.	TL5
.690	.83062	.07429	3.3280	206	The information kept in the system is aggregated on various time periods as required by management for accounting information.	LG1
.800	.89443	.08000	3.7200	206	The system can be used to present accounting information to different levels of management.	LG2
.856	.92513	.08275	3.8240	206	The system offers information collected on a department or organisational unit basis within the company.	LG3
.972	.98590	.08818	3.5760	206	The system allows to integrate cost related data into a system for comparison and analysis.	LG4
.953	.97630	.08732	3.4080	206	The system provides management with a summary of accounting information to enable him/her to have a clear picture of performance.	LG5
.743	.86196	.07710	3.8240	206	A management accounting information system helps to coordinate information among different departments within a company.	LI1
.716	.84609	.07568	3.8160	206	The system supports the sharing of accounting data with the appropriate management levels.	LI2
1.123	1.05952	.09477	3.0800	206	It associates cost-related data with cost data related to the operational activities associated with it.	LI3
1.126	1.06116	.09491	3.7120	206	The system supports the standardisation of the accounting information of the departments that participate in the system.	LI4
.949	.97398	.08712	3.7120	206	It is a tool for giving integrated information that helps the management to coordinate decisions among various activities and departments.	LI5
0.8171	0.900171	0.080515	3.52	206	CMAIS	Average

Source: *Prepared by the researcher based on the results from the SPSS software.*

The results of the arithmetic mean analysis for Al-Joud Company for the Modern Industrial and Agricultural Technology (the study company) are presented in the Table (3). The company's Cost and Management Accounting Information System (CMAIS) has a high and positive performance level as revealed by the views of the 206 respondents which included administrative staff and employees of the company. The overall arithmetic mean obtained in this variable is 3.52, which is quite higher than the hypothetical expectation of 3 indicating that the company has a competent and advanced management accounting information system which is able to satisfy their operational needs. This accuracy is also considered a high level of consistency and consensus among the respondents, given the overall standard error of 0.080515, a standard deviation of 0.900171 and a variance of 0.8171 for the items related to this variable.

The arithmetic mean of the responses to the first item (BS1) was 3.9520 with a standard deviation of 0.87856, which placed it in first position. This is followed by item (LG3) which states "provision of information aggregated by department/organizational unit" (Arithmetic mean = 3.8240) and item (LI1) (Arithmetic mean = 3.8240). The result shows how comprehensive, integrated and accurate the system is in facilitating management decision making at various levels in the organization. Therefore, further effort is needed by the management of Al-Joud Company for Modern Industrial and Agricultural Technology to continue supporting and focusing on updating the features of its management accounting information system, while keeping it efficient and integrated, to improve both the strategic and operational decision-making processes.

Descriptive Analysis of the Cost Accounting Information Quality Variable

Table (4) presents the results of several descriptive analysis tests—namely the arithmetic mean, standard deviation, and variance—for the cost accounting information quality variable.

Table (4) Descriptive Analysis of the Cost Accounting Information Quality Variable

Variance	Std. Deviation	Mean		N	Paragraph	
Statistic	Statistic	Std. Error	Statistic	Statistic		
.522	.72218	.06459	3.4320	206	Cost accounting information gives the details that help in analyzing the costs corresponding to a business product and activities.	QCA1
.819	.90497	.08094	3.3280	206	The presentation of cost accounting information is in a manner suitable for various levels of management.	QCA2
1.220	1.10436	.09878	3.1880	206	Cost data that is needed can be quickly provided for decision making by management.	QCA3
.979	.98949	.08850	3.1440	206	Regular cost reports are generated and help to track operational activities.	QCA4
1.362	1.16719	.10440	3.0240	206	Cost data is communicated on time to the appropriate persons which can be used in the activities of business.	QCA5
.860	.92757	.08296	3.1360	206	Cost accounting information helps in distinguishing between fixed and variable costs.	QCA6
.940	.96967	.08673	3.7920	206	Cost accounting information is used to differentiate between direct cost and indirect cost.	QCA7
1.090	1.04419	.09339	3.7200	206	Cost accounting information helps to distinguish between costs which are under management control and those which are not under management control.	QCA8
0.974	0.087536	0.084066	3.3455	206	QCA	المعدل

Source: *Prepared by the researcher based on the results from the SPSS software*.

Table (5) shows the outcome of the arithmetic mean analysis of Al-Joud Company for Modern Industrial and Agricultural Technology. The company has a high and positive Cost Accounting Information Quality (QCA) based on the answers of the 206 persons included in the sample. The mean of this variable is 3.3455, which is higher than 3 (the theoretical value), thus indicating that this variable is indeed present and applied to a very high degree in a very positive and acceptable manner within the management of the company.

The analysis shows a high degree of consistency and consensus among the sample respondents, as evidenced by an overall standard error of 0.084066, a standard deviation of 0.087536 and a variance of 0.974 for the items that make up this variable.

The first item, QCA7 (cost accounting information helps to differentiate between direct and indirect costs) had the highest arithmetic mean (3.7920) and standard deviation (0.96967). It is followed by item QCA8 which has an arithmetic mean of 3.7200. These results show that the cost system that the company uses can be capable of giving accurate and detailed cost classifications for decision making.

Based on positive results, Al-Joud Company for Modern Industrial and Agricultural Technology should continue to enhance and develop the digital and organizational environment to ensure the efficiency and sustainability of its cost accounting information quality to support the decision-making process for managers and executives.

3. Hypothesis Testing

The main hypothesis stated that "there is a significant positive effect of the characteristics of the management accounting information system on the quality of cost accounting information."

Table (6) Results of the structural model evaluation for the main hypothesis

Adjusted R^2	Coefficient of determination R^2	Effect size f2	Result	p Value	t Value	Path coefficient	VIF	Path	Hypothesis
0.796	0.749	1.776	Acceptance	0	21.37	0.779	1	CMAIS → QCA	H1

Source: *SmartPLS software output*

Based on the results shown in table (6), the path coefficient (direct effect) is 0.749, and the coefficient of determination (R^2) is 0.796. The significance of the path coefficient was checked by the t-value and p-value as both values are below the required threshold as shown in the table which confirms the significance of the path. Thus, the hypothesis is accepted.

Testing the Sub-hypotheses

The sub-hypotheses derived from the main hypothesis are as follows:
H1-1: There is a significant positive effect of information scope on the quality of cost accounting information.
H1-2: There is a significant positive effect of information timeliness on the quality of cost accounting information.
H1-3: There is a significant positive effect of information aggregation on the quality of cost accounting information.
H1-4: There is a significant positive effect of information integration on the quality of cost accounting information.

To test these hypotheses (H1-1, H1-2, H1-3, and H1-4), the researcher developed a structural model, the results of which are presented in Figure (1) and Table (7).

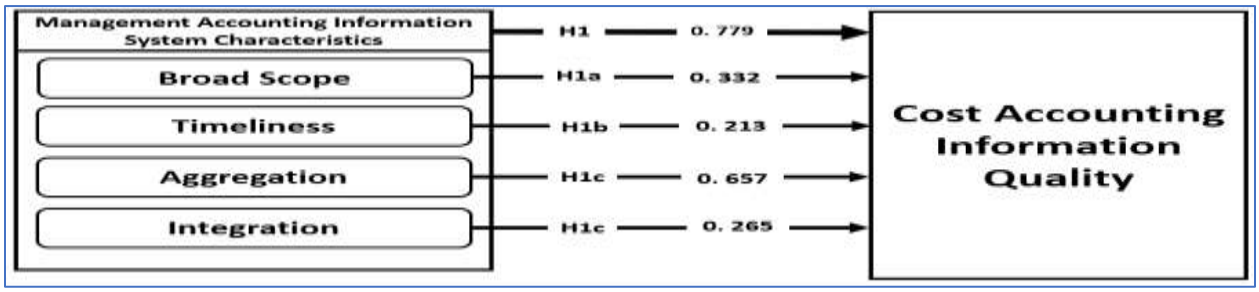


Figure 1: *Path Model*

Table (7) Results of the structural model evaluation for the sub-hypotheses

Adjusted R^2	Coefficient of determination R^2	Effect size f2	Result	p Value	t Value	Path coefficient	VIF	Path	Hypothesis
0.754	0.789	0.054	Acceptance	0.000	3.792	0.332	1.201	BS → CMAIS	H1-1
		0.195	Acceptance	0.000	2.753	0.213	1.276	TL → CMAIS	H1-2
		0.174	Acceptance	0.000	3.754	0.657	1.324	LG → CMAIS	H1-3
		0.215	Acceptance	0.000	2.756	0.265	1.289	LI → CMAIS	H1-4

Source: *SmartPLS software output*

The evaluation results of the structural model about the sub-hypotheses are presented in table (7). The sub-hypotheses (H1-1, H1-2, H1-3, and H1-4) showed statistically significant relationships with both the t- and p-values as required, thus the sub-hypotheses were accepted. In addition, the coefficient of determination (R^2) was 57%, which indicates that the dimensions of the "management accounting information system characteristics" variable explain 57% of the factors that explain the "cost accounting information quality" variable, and the remaining percentage is attributed to the factors that were not covered in the present study.

Section Four: Conclusions and Recommendations

First: Conclusions

The study results show that the characteristics of the management accounting information system has positive relationship with the quality of cost accounting information in Al-Joud Company for Modern Industrial and Agricultural Technology. The path coefficient in the main table is 0.779 which shows that it is positively related. This discovery reinforces the need to understand the information system as an integrated system, with characteristics that allow the provision of cost related information appropriate for their management use.

The overall descriptive analysis shows that the characteristics of the management accounting information system have an average of 3.52 which is higher than the hypothetical average of 3. In the light of the feedback received from the respondents, this indicates that the characteristics of the system are found above average, but there is still room for improvement, especially aspects that need a fast response from the system and integration of data across organizational units.

The overall mean score obtained shows that the quality of cost accounting information in the study area is 3.3455 which is higher than a hypothetical mean score of 3. This is a positive evaluation of the quality of the cost information from a respondent's point of view but at the same time indicates that opportunities exist to improve the accuracy, timeliness and relevance of the information to meet managerial information requirements beyond what is currently available.

It can be seen from the results of the analysis of the sub-hypothesis testing that the path coefficient for the "breadth of information scope" obtained was 0.332 with a t value of 3.792. This discovery emphasizes the need for information that goes beyond the historical financial information to include operational and nonfinancial information as well as data on the factors that influence a company's activities and expenses. Information such as this can help management to get a fuller picture for planning and control.

The results showed that the dimension "timing of information" had the lowest path coefficient of 0.213 and the t-value was 2.753 for the dimension. This implies that the speed and timeliness of information provision should receive more attention; the usefulness of the information related to cost depends not only on the content of the information but also on the timing of its availability to management for decision making.

The path coefficient for "aggregation of information" was 0.657 and the t-value was the highest one among all the sub-dimensions presented in the table (3.754). This highlights the need to structure, summarise and categorise cost data (temporal, departmental or management level) to enable analysis, comparison and performance assessment. Therefore, it is important to have consolidated reporting without sacrificing the detail required for day-to-day decision making.

The 'information integration' dimension had a path coefficient of 0.265, and a t value of 2.756.

The result highlights the need to make accounting information cross-referenced with pertinent operational information, and to encourage information sharing between different departments and organizational units. In some cases, weak integration might cause data duplication and inconsistency between the involved departments, making it more difficult for management to obtain a single picture of the costs of different activities or product.

The reliability test results indicate that the Cronbach's alpha coefficients for four dimensions of management accounting information system characteristics are 0.88 (information scope); 0.78 (information timeliness); 0.77 (information aggregation); and 0.75 (information integration). The coefficient of the cost accounting information quality scale is 0.89, meanwhile. These values represent an acceptable degree of internal consistency on the scales employed as measured by the thresholds set for this study and therefore in supporting the use of the scales for analysing the perceptions of the sample participants.

All the above results indicate that enhancing the quality of cost accounting information cannot be achieved by addressing only one characteristic of the information system at a time but must address all characteristics at the same time. These four

characteristics of scope, aggregation, timeliness and integration are interconnected attributes in the admin context, and improvement of these characteristics can be helpful to build up a strong information foundation for the company's planning, control, cost analysis and decision making.

Second: Recommendations

The study concludes that the management of Al-Joud Company for Modern Industrial and Agricultural Technology should formulate a plan of improvement in the management accounting information system over a period of time. The plan should outline the characteristics of the system in its current state and identify the needs of different levels of management and prioritize enhancements that would help to improve cost accounting information. The plan should be in terms of measurable indicators including the time taken for reports to be delivered, the accuracy of the data in the reports and the extent to which information is integrated across departments.

The information the system provides should be extended to cover non-financial information in addition to financial information, and information related to the activities of the business and the use of resources and other factors affecting changes in costs. In addition, it is recommended that historical data be linked to projected (estimated) data, if the information is available, to assist in expenditure planning, alternative analysis and identification of factors influencing the cost of activities and products.

Reassessment of existing processes for cost collection and processing and for preparing cost reports with clear timelines for updating the data and accessing it by relevant stakeholders. Further, the use of a computer system should be used to reduce delays in the preparation of reports. Data entry, review and approval processes should be clearly established to maximize management's ability to use data accurately when required.

Based on the high path coefficient that was observed in the results presented, the study recommends the development of cost reports which would enable data to be presented in different levels of detail based on cost centre, department, activity and time period. It also recommends a uniform classification and aggregation of data in the reporting process will support the comparison of reported actual results with the planned results and help to identify and analyse the variances.

Enhancement of integration of the Management Accounting Information System with data from operational, inventory, production and financial departments, depending from the company's organizational structure. It is recommended to establish standard procedures for the input, categorization and updating of information and to make it clear who is responsible for the correctness of information and its exchange in the departments. This will contribute to reducing redundancy and discrepancies, and more uniformity in reporting on costs.

Recommendation 6: Periodic training programs of staff related to the preparation, processing and use of cost information should be implemented. These should be directed towards and reinforce correct data entry, classification of cost elements, generation of the reports, variance analysis and the use of the information to inform managerial decision making. The effect of this training can be measured by the practical results, such as fewer data entry mistakes and more timely reporting.

Clear procedures for monitoring the accuracy, completeness and consistency of data before it is used in a report must be maintained and there is a need for regular reviews of data and cost classifications. In addition, it is recommended that the quality-monitoring indicators for information be established such as the percentage of information which contains errors, percentage of information which is provided timely, percentage of required information which is not provided and percentage of discrepancy between two information reports.

The study suggests that additional efforts should be undertaken to improve the application of cost-related information in the plan and budget preparation, implementation monitoring and evaluation of cost variances. In addition, the report should (if at all possible) provide explanations for any significant variations, besides just numerical data, which would help management determine what has caused the variance and what corrective action is needed to correct it.

The study suggests to form a special team and/or special unit in the company to oversee the performance of the management accounting information system and assessing to what extent the output of the system is fulfilling the need of the user from time to time. The evaluation process is recommended to consist of a survey of information users, a review of the quality indicators of the reports, identification of areas that could be improved, and

then monitoring the implementation of corrective measures and measuring their success.

Study recommendations include the need to conduct additional research in other industrial, agricultural and service companies to allow for comparison of results and generalizability to various settings. Furthermore, the research model can be enriched with additional variables that are relevant for the study, such as the technical capabilities of the workforce, quality of raw data, as well as digital integration level, while keeping the distinction between results backed by data collected on the field and hypotheses awaiting further empirical research.

References

Carolina, Y., Miftah, D., & Julina, J. (2024). Mediating Role of Management Accounting Information Systems: Contingency Theory Perspective. *Jurnal ASET (Akuntansi Riset), 16(2),* 373-382.

Chenhall, R. H., & Morris, D. (1986). The impact of structure, environment, and interdependence on the perceived usefulness of management accounting systems. *The Accounting Review, 61(1),* 16-35.

Husain, A. (2023). Integration of Enterprise Resource Planning and Management Accounting Information Systems. *Journal of Accounting and Information Technology, 11(2),* 460-475.

Manossoh, A., Alexander, S. W., & Kalalo, M. Y. B. (2022). Pengaruh Karakteristik Sistem Informasi Akuntansi Manajemen Terhadap Kinerja Manajerial Pada PT. Bank SulutGo. *Jurnal Riset Akuntansi, 17(1),* 10-28.

Mawarti, R., & Yaya, R. (2025). The Role of Management Accounting Information Systems and Corporate Governance in Firm Performance. *Asian Journal of Economics, Business and Accounting, 25(2),* 600-615.

Monteiro, A. P., Cepeda, C., & Silva, A. M. (2022). Accounting Information Systems and Internal Control Quality: Decision-Making Perspective. *Electronic Journal of Business, 20(1),* 1-18.

Pires, R., & Alves, M. C. (2023). Broad Scope Information in Management Accounting Systems: A Systematic Review. *Journal of Risk and Financial Management, 16(3),* 1-15.

Rahim, N. K. (2025). Digital Transformation in the Public Sector: Evaluating the Role of Accounting Information Systems in Strategic Decision-Making. *Aran Journal for Language and Humanities, 1(1),* 1-12.

Rodrigues, M., Ferreira, J., & Santos, C. (2022). Management Accounting Information Systems and Strategic Cost Management. *International Journal of Accounting, 57(4),* 1-22.

Rosmawati, R., Nurul, H., & Fitriani, A. (2024). Evaluating the Characteristics of Management Accounting Information Systems in Financial Institutions. *Journal of Economic and Social Sciences, 13(4),* 21320-21330.

Saleh, Q. Y., & Al-Nimer, M. B. (2022). The moderating role of the management accounting information system in the relationship between innovation strategy and financial performance in the Jordanian industrial companies. *Cogent Business & Management, 9(1),* 2135206.

Cooper, R., & Kaplan, R. S. (1992 / 2022). Activity-Based Systems: Measuring the Costs of Resource Usage. *Accounting Horizons, 6(3),* 1-13.

Darma, D. C., & Sagala, R. (2022). Unidimensional Scale Items for Evaluating Cost Accounting Information Quality in Public and Private Sector. *International Journal of Psychosocial Rehabilitation, 26(2),* 125-138.

Fitriati, A., & Mulyani, S. (2015 / 2023). Factors that Affect Accounting Information System Success and Its Implementation on Accounting Information Quality. *Asian Journal of Information Technology, 14(5),* 154-161 / *Nigerian Journal of Management Sciences, 24(1),* 65-78.

George, B., & Desmidt, S. (2022). Strategic Decision-Making and Cost Information Quality: A Public Sector Perspective. *Public Performance & Management Review, 45(2),* 120-142.

Gyamera, E., Atuilik, W. A., & Eklemet, I. (2024 / 2025). The Influence of Clan Culture on the Accounting Information Quality: Evidence from Privately Listed Firms. *Cogent Business & Management, 11(1),* 1-24.

Halimi, A., & Mostafa, M. (2020 / 2024). Reliability and Faithful Representation of Financial and Cost Data in Accounting Reports. *Horizons for Economic Studies, 5(2),* 1-16.

Jacko, J. A. (2012 / 2022). Information Quality Concepts and Determinants in Enterprise Accounting Systems. *Journal of Information Systems Management, 29(3),* 125-140.

Krismiaji, K., & Djaja, I. (2018 / 2025). Accounting Information Quality and Predictability of Future Cash Flows. *Journal of Applied Accounting Research, 19(4),* 65-80.

Lachmann, M., Knauer, T., & Trapp, R. (2020). Management Accounting Information Quality in Healthcare and Hospital Settings. *European Accounting Review, 29(1),* 1-22.

Oyewo, B. (2023). Determinants and Outcomes of Cost Accounting Information Quality in Manufacturing SMEs. *Journal of Accounting & Organizational Change, 19(1),* 1-25.

Setiyawati, H., & Doktoralina, C. M. (2023). Internal Control, Cost Accounting Information Quality, and Good Corporate Governance. *International Journal of Financial Research, 14(3),* 480-495.