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The Impact of Implementing Lean Accounting on Cost Reduction and Improving the Quality of Managerial Decisions

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ABSTRACT

This research aims to study the impact of implementing lean accounting on reducing operational costs and enhancing the quality of administrative decision-making in Iraqi institutions. The study employed a descriptive-analytical approach to data collection, distributing a questionnaire to a group of employees in an industrial company. The results showed that the relationship between implementing lean accounting and cost reduction was not statistically significant, reflecting a weak level of implementation and the need for more effective improvement. The results also indicated that lean accounting contributes to improving the quality of administrative decisions by providing easily understandable and transparent financial information, but this effect was weak and not statistically significant. The study emphasized that continuous employee training, along with updating accounting systems, are essential elements for the successful implementation of lean accounting. Based on these findings, the study recommends fostering an organizational culture based on lean principles, developing accounting information systems, and linking the implementation of lean accounting to clear performance indicators to ensure the sustainability of the results.

Keywords: Lean Accounting, Cost Reduction, Quality of Managerial Decisions, Financial Performance Improvement, Resource Management

INTRODUCTION

Lean accounting is a modern approach in management accounting that aims to help organizations improve their financial and administrative performance by streamlining procedures and reducing operational waste. This method is based on principles derived from lean production systems and seeks to provide accurate and timely information to support management in making effective decisions. With rising economic challenges and increasing competition, adopting innovative accounting methods to reduce costs and improve the quality of management decisions has become essential.

SUBJECT ONE: RESEARCH METHODOLOGY

Research Problem

Despite the significant increase in the concept of Lean Accounting, many organizations still face challenges in assessing its actual impact on financial performance and the quality of management decisions. The most prominent challenges include a lack of clarity regarding how Lean Accounting contributes to cost reduction, a shortage of applied studies linking the use of Lean Accounting to the quality of management decisions, and cultural

and organizational challenges that hinder the adoption of modern accounting methods within organizations. Therefore, the research problem can be defined by the following question:

What is the impact of using Lean Accounting on cost reduction and improving the quality of management decisions in organizations?"

Research Objectives

1. To clarify the concept of Lean Accounting and explain its importance for contemporary organizations.
2. To measure the impact of implementing Lean Accounting on reducing operational costs.
3. To evaluate the role of Lean Accounting in enhancing the quality of management decisions.
4. To offer practical suggestions that contribute to enabling organizations to effectively implement Lean Accounting.

Research Hypotheses

A. Main Hypothesis:

There is a positive correlation between the use of Lean Accounting and the reduction of operational costs in organizations.

B. Sub-Hypotheses

- Applying Lean Accounting contributes to improving the quality of administrative decisions.
- Organizations that adopt Lean Accounting principles achieve a significant reduction in levels of financial and administrative waste.

1. Significance of the Research

- ***Scientific Significance:*** The research contributes to the development of modern accounting literature and enhances academic understanding of Lean Accounting.
- ***Practical Significance:*** It provides an applied framework that enables organizations to improve the efficiency of their operations, reduce their costs, and increase the quality of their administrative decisions.
- ***Social Significance:*** It enhances the ability of organizations to improve resource utilization, which positively impacts the quality of products and services provided to society.

2. Scope of the Research

- ***Subjective Scope:*** The research is limited to studying the impact of applying Lean Accounting without addressing other accounting systems.
- ***Geographical Scope:*** The study focuses on industrial and service institutions in Baghdad.

3. Research Methodology

- ***Research Methodology:*** The descriptive-analytical approach is followed.
- ***Data Collection Tools:*** These include questionnaires, interviews with accountants and administrators, and analysis of financial statements.
- ***Research Sample:*** The sample consists of a group of employees in the financial and administrative departments of a selected group of institutions.
- ***Analysis Methods:*** Statistical methods are used through analysis programs such as SPSS or Excel, and hypotheses are tested using correlation coefficients and regression.

SUBJECT TWO: THEORETICAL FRAMEWORK

First: Definition and Principles of Lean Accounting

1. The Concept of Lean Accounting

Lean accounting is defined as a new approach aimed at improving the financial performance of organizations that adopt lean thinking principles, striving to achieve the best possible financial performance. This approach requires comprehensive changes to existing accounting, measurement, and control systems to align with business strategies and accurately reflect the results of applying lean thinking principles across the various activities of the economic unit (Issa & Mohsen, 2015). Mohammed & Issa (2020) believe that the principle of lean accounting is based on eliminating all forms of waste resulting from manufacturing and operational

processes, in addition to enhancing product quality and improving time efficiency, in line with market demands and customer needs. Therefore, lean accounting is considered an effective means of achieving operational efficiency and increasing the competitiveness of companies. Agile accounting seeks to achieve a set of strategic objectives, the most important of which are: eliminating activities that do not add value, developing processes, increasing sales, measuring the financial impact of agile improvements, providing appropriate and timely accounting data, reducing operating costs, in addition to promoting a culture of continuous improvement across all organizational levels within the organization, creating an effective organizational culture, and improving inventory risk management (Al-Masoudi and Al-Qasir, 2016; Al-Rubaie et al., 2019).

2. Foundations and Practices of Lean Accounting

Lean accounting, also known as budgeting, is based on a set of principles that distinguish it from traditional accounting, contributing to its simplified implementation and increased effectiveness in supporting management and its choices.

Principles of Lean Accounting: Lean accounting principles include five key principles that form the foundation distinguishing it from traditional accounting systems, as follows (Maskell & Baggaley, 2006, p. 36):

- ***Smooth and Flexible Accounting Processes:*** This refers to the use of lean methods in the accounting activities themselves, where waste and inefficiencies can be reduced in many of these activities. Therefore, lean principles must be rigorously applied to accounting measurement and recording procedures to minimize any waste or unnecessary complexity.
- ***Accounting Processes that Support Leanness:*** Lean accounting reports and methods help promote the overall shift towards leanness by reflecting the total flow of output value, both financial and non-financial. Lean accounting also focuses on measuring the added value provided to the customer and strengthening customer relationships, as well as supporting product design and improving pricing strategies, thus contributing to overall agility success at the enterprise level.
- ***Providing information clearly and on Time:*** Lean accounting is characterized by the issuance of clear and easy-to-understand financial reports that anyone can easily access and comprehend. For example, income statements are presented in simple language, similar to a household budget, avoiding complex terminology and obscure figures. This approach helps shift the discussion from "What do these numbers mean?" to "What should we do?", thereby enhancing the effectiveness of management decisions.
- ***Planning from an Agile Perspective:*** Agile planning involves implementing Hoshin Kanri's theory (policy guidance) and extends from monthly sales planning and financial planning activities to developing a comprehensive enterprise plan. The implementation of these plans is value-based, relying on information provided by lean accounting.
- ***Enhancing the Role of Internal Audit:***Lean accounting contributes to enhancing the effectiveness of internal audit by employing control methods based on lean principles, particularly in inventory analysis and management. Simplified inventory valuation methods can be used without relying entirely on perpetual inventory records.

Lean Accounting Tools: Implementing lean accounting requires a set of tools that support its objectives, most notably:

- ***Value Stream Mapping:*** The value stream mapping is a fundamental element for achieving lean production. Value flow encompasses all the economic activities necessary to complete the production process, from product design and receiving the customer order, through production processes, and finally, delivery of the product to the customer. Value is defined from the customer's perspective, representing the set of features and benefits they are willing to pay for. It reflects the difference between the customer's perceived benefits and the sacrifices they are willing to make. The value stream map helps track the movement of materials and information across the supply chain and is considered one of the key tools in lean planning, given its role in helping lean practitioners focus on value-added activities and apply different lean techniques in parallel (Rother, 2021).
- ***Target Costing Approach:*** This contemporary approach aims to determine the cost of banking services. It begins by defining the target price that the customer is willing to pay for the service. In other words, this approach differs from traditional pricing methods because it starts with the target price and ends with the target cost. Target costing is the appropriate method for determining expenses and then developing the product within those expenses, which allows the accountant to provide data on the potential profitability of the product. (Ansari, 2020)

Employee Satisfaction: The modern approach focuses not only on satisfying employees but also on making them happy and earning their satisfaction. Developed countries consider human capital a pivotal factor for the success and competitiveness of any financial institution. Contemporary management requires organizing and directing the combined efforts of individuals to achieve better results, as technical and financial resources become worthless without the human skills that enhance their effective utilization and deployment. In this context, private and public banks have worked to develop their employees and gain their satisfaction in various ways, believing in the strong link between employee satisfaction and the successful implementation of their quality plans and programs. (Israa Abdel Salam Mohsen, 2016, p. 49)

Inventory Reduction: Inventory reduction is part of minimizing resource waste and reducing storage costs based on the concept of biological storage, which helps avoid the costs of waste and defective inventory. Materials are stored in a way that prevents damage and ensures they remain in their original condition, or they are modified as needed. It is essential that these materials are available when requested by the customer. (Shah & Ward, 2020)

Continuous Improvement: Customers seek to improve products and processes by enhancing efficiency and reducing production costs, thereby meeting their needs and expectations. Continuous improvement is defined as the actions an organization takes to increase the effectiveness and efficiency of its activities and processes in order to provide additional benefits to the organization and its customers. (Duarte & Cruz-Machado, 2021

Focusing on Value Streams Rather Than Individual Departments: Agile accounting helps evaluate performance at the value stream level, rather than independently assessing administrative departments. This enables the identification of opportunities for process improvement and the discovery of ways to enhance operational efficiency, as well as reduce the overall costs of the organization.

The Overall Impact of Agile Accounting on the Organization: By implementing these systems, agile accounting not only directly reduces costs but also contributes to creating an efficient and transparent work environment where resources are allocated to activities that add high value. This approach also supports the financial and administrative sustainability of the organization, making cost reduction an expected and inevitable outcome of applying agile accounting principles, rather than an independent goal in itself.

Second: Relationship Between Lean Accounting and Cost Reduction

Lean accounting is a modern approach to business management that aims to enhance lean management strategies by providing simplified financial information directly linked to operational processes. One of the main objectives of lean accounting is to reduce costs without compromising the quality of products or services.

Mechanisms for Cost Reduction in Lean Accounting

1. ***Reducing Financial and Administrative Waste:*** Lean accounting relies on examining processes to identify and eliminate or reduce activities that do not add value, directly contributing to lower operational and administrative costs.
2. ***Enhancing Resource Utilization:*** By simplifying accounting measurement systems, financial and human resources are allocated to the most valuable activities, reducing waste and increasing the efficiency of the corporate economy.
3. ***Accelerating Management Decision-Making:*** Lean accounting provides accurate and timely financial reports, helping managers identify problems and make decisions quickly, thus reducing the additional costs resulting from delays in problem-solving.
4. Focusing on value lines rather than individual departments, lean accounting enables performance measurement at the value line level, facilitating the identification of areas for improvement, enhancing operational efficiency, and reducing the organization's overall costs.

Overall Impact on the Organization

As a result of these mechanisms, lean accounting not only reduces costs but also contributes to creating a more efficient and transparent work environment, where resources are directed toward high-value activities, leading to the organization's financial and managerial sustainability. Therefore, cost reduction becomes a natural consequence of implementing lean accounting rather than a separate objective.

Third: Relationship Between Lean Accounting and the Quality of Administrative Decisions

Lean accounting is a modern approach in the field of management Lean accounting is a modern approach in the field of management accounting. It aims to streamline accounting procedures and processes and provide accurate financial data directly related to operational activities. This framework empowers management to make more efficient strategic decisions, positively impacting organizational performance and competitiveness.

Mechanisms of Lean Accounting's Impact on the Quality of Management Decisions

The ways in which lean accounting improves the quality of management decisions can be summarized as follows (Goad & Fischer, 2025; Reynolds, 2024):

A. ***Providing Simplified Financial Information linked to Operational Processes:*** Lean accounting helps in preparing clear and easy-to-understand financial reports that focus on valuable information, enabling management to make quick and effective decisions based on accurate and relevant data.

B. ***Enhancing Strategic Decision-Making:*** By focusing on measuring performance at the value stream level, lean accounting allows management to obtain a comprehensive and integrated picture of operational performance. This helps identify weaknesses and areas for improvement and supports informed strategic decision-making.

C. ***Increased Operational Efficiency:*** Applying lean accounting principles contributes to reducing waste and improving the utilization of available resources, positively impacting operational efficiency and supporting managerial decisions that enhance the overall performance of the organization.

Recent Studies Supporting the Relationship

A. A recent study published in 2025, titled "Lean Accounting: A Decision-Making Tool," demonstrated that lean accounting is an effective tool for supporting continuous improvement by developing reporting methods and accounting practices, thereby enhancing the quality of managerial decisions.

B. Another study published in 2024 discussed the role of lean accounting in supporting strategic decision-making from a management accounting perspective, emphasizing its effectiveness in improving decision quality and increasing organizational performance efficiency.

SUBJECT THREE: PRACTICAL FRAMEWORK

First: Description of the Study Sample

In this section, we will present and analyze the information related to the study, providing clarity on the characteristics of the study sample and its variables. This chapter will address the results of the demographic and personal analysis of the study participants, in addition to the results of the statistical analysis of their responses to the required variables. This analysis will rely on basic statistical indicators such as means and standard deviations to answer the research questions and achieve its objectives.

Study Population and Sample

A. ***Study Population:*** The study population consists of employees working in a heavy equipment company within the economic units in Iraq.

B. ***Study Sample:*** The researcher used a purposive sampling method to select the study sample. The questionnaire was distributed to employees in an Iraqi economic unit, taking into account stratified random distribution to ensure appropriate representation of different departments and job levels within the company.

Data Collection Methods

The study was based on a descriptive-analytical approach to examine the information system in the study population. Field research was also employed to fulfill the study objectives and test its hypotheses. Data was collected from two main sources: primary and secondary sources, as follows:

A. ***Primary Sources:*** These consisted of collecting information through a questionnaire developed and created by the researcher to align with the study's objectives and test its hypotheses. The questionnaire was distributed to the study sample and collected for use in statistical analysis.

B. ***Secondary Sources:*** The secondary sources included the following:

- Scientific publications and references in Arabic and foreign languages related to the research topic.
- Scientific journals, periodicals, newspapers, and specialized reports.
- Previous research, studies, and university theses that addressed the research topic or related topics.
- Searching on a number of specialized scientific websites.

Research Instrument

The questionnaire is a fundamental data collection tool. It is defined as a structured set of questions presented by the researcher to a selected group of participants to obtain specific information related to the research topic. Questionnaire design relies on various strategies, including open-ended questions that allow participants to express their opinions according to their individual perspectives.

The questionnaire was designed to contain two main sections. The first section presents the participants' demographic information, including variables such as gender, age, educational qualification, job category, and total years of experience. The second section comprises three main areas: the application of Lean Accounting principles, the impact of Lean Accounting on cost reduction, and the impact of Lean Accounting on improving the quality of managerial decisions. Each area contains five items, as shown in Table 1.

One hundred and seven (107) questionnaires were sent to the research sample, and eighty-nine (89) valid questionnaires were returned for statistical analysis. This represents a response rate of eighty-three percent (83%) of the total number of questionnaires distributed. This rate is encouraging and enhances the reliability of the research results.

Table (1): Questionnaire Items Distribution

Main Axis	Questions	Item Numbers in the Questionnaire
Application of Lean Accounting Principles	1. Financial reports are simplified to focus only on essential information. 2. Modern accounting tools help track operational performance in real time. 3. Lean Accounting helps eliminate non–value-added activities. 4. Accounting results are directly linked to efficiency and productivity improvement goals. 5. Employees receive continuous training on the principles and tools of Lean Accounting.	1–5
The Role of Lean Accounting in Cost Reduction	1. Lean Accounting helps identify areas of waste in materials and time. 2. Lean Accounting methods lead to a reduction in overall operating costs 3. Resource utilization efficiency is improved through the application of Lean Accounting 4. Lean Accounting provides accurate data that facilitate cost control. 5. Adopting Lean Accounting has helped reduce costs compared to traditional systems.	6–10
The Role of Lean Accounting in Improving the Quality of Administrative Decisions	1. Lean Accounting provides timely and rapid information to management. 2. Strategic decisions have become more accurate thanks to Lean Accounting reports. 3. Lean Accounting has contributed to improving both short- and long-term planning 4. Lean Accounting has reduced incorrect administrative decisions caused by delayed information 5. Lean Accounting has supported decisions related to enhancing efficiency and reducing costs.	11–15

Source: Prepared by the Student

All study variables were measured using the **five-point Likert scale (1–5)**, as shown in the following table:

Table (2): The Five-Point Likert Scale for Response Degree

Response Degree	Strongly Agree	Agree	Somewhat Agree	Disagree	Strongly Disagree
Score	1	2	3	4	5

Source: Prepared by the Student

Statistical Methods Used

To answer the research questions and test its hypotheses, the student used the SPSS social statistics program, applying the following methods:

First: Descriptive Statistics: This statistical method aims to clarify the demographic and personal characteristics of the individuals in the sample and explain their responses, using the following tools:

- Percentages and frequencies were used to monitor distributions.
- ***Arithmetic Mean:*** Measures the average of the sample's responses to the questionnaire items.
- ***Standard Deviation:*** Used to measure the extent to which the sample's responses differ from the arithmetic mean.
- ***Relative Significance:*** Determines the relative significance of the questionnaire items and the dimensions of the study's variables within three levels according to a Likert scale consisting of five points for the available choices for each item, as per the following equation:

$$\text{Relative Importance} = \text{Upper Limit} - \text{Lower Limit} \;/\; \text{Number of Levels}$$

$$1\text{-}5/3 = 1.33$$

Accordingly, the mean score levels were classified as follows:

Mean Score	Level of Importance
(1 – 2.33)	Low
(2.34 – 3.67)	Moderate
(3.68 – 5.00)	High

Testing the Reliability and Validity of the Research Instrument (Questionnaire)

First: Validity of the Research Instrument

The validity of the instrument was confirmed by presenting it to a number of academic experts who are part of the teaching staff at Iraqi universities and are knowledgeable in the field.

Second: Reliability of the Research Instrument

The internal consistency of the accuracy components and the degree of correlation between the measurement elements and the stability in measuring the dimensions that the instrument aims to measure are examined in terms of the reliability coefficient.

The internal reliability coefficient (Cronbach's alpha) of the research instrument showed (0.887), which is an indicator that indicates a very high level of internal consistency between the instrument's questions, reflecting good reliability. This is considered an acceptable indicator for relying on the instrument to measure the research variables and achieve its objectives.

Third: The Applied Aspect (Data Analysis)

The research data will be presented and analyzed, where the characteristics of the research sample will be explained, its variables described, and the relative importance of the research items will be indicated. This analysis will include presenting the results of the demographic and personal characteristics of the research sample, as well as the results of the statistical analysis of the study sample's responses using arithmetic means and standard deviations for each research variable and their relative significance.

1. Testing the Normality of the Data

The demographic and personal characteristics of the study sample members, in terms of gender, age, academic degree, department, and years of experience, are shown in the following table:

Table (3): Normality Test and Demographic Characteristics of the Study Sample

Variable	Category	Frequency	Percentage (%)
Gender	Male	40	44.9%
	Female	49	55.1%
Total		89	100%
Age	Less than 25 years	7	7.9%
	From 25 to 35 years	26	29.2%
	From 36 to 45 years	17	19.1%
	More than 45 years	39	43.8%
Total		89	100%

Variable	Category	Frequency	Percentage (%)
Academic Qualification	PhD	2	2.2%
	Master's Degree	12	13.5%
	Higher Diploma	26	29.2%
	Bachelor's Degree	49	55.1%
Total		89	100%
Department	Finance	4	4.5%
	Management	9	10.1%
	Operations	24	27.0%
	Sales	22	24.7%
	Human Resources	12	13.5%
	Information Technology	18	20.2%
Total		89	100%
Years of Experience	Less than 3 years	27	30.3%
	From 3 to 5 years	34	38.2%
	From 6 to 10 years	2	2.2%
	More than 10 years	26	29.2%
Total		89	100%

Source: Prepared by the student based on SPSS program

The results shown in Table (3) indicate that 44.9% of the sample are males, which represents the lower percentage compared to 55.1% of the sample who are females.

The results also reveal that 7.9% of the respondents are under 25 years old, while 29.2% are between 25 and 35 years old. Furthermore, 19.1% of the respondents are between 36 and 45 years old, whereas the largest proportion (43.8%) belongs to those over 45 years old.

It was also found that 2.2% of the respondents hold a PhD degree, while 13.5% hold a Master's degree. The percentage of those holding a Higher Diploma was 29.2%, and the majority of the respondents hold a Bachelor's degree with a percentage of 55%.

The results further show that 4.5% of the respondents work in the Finance Department, 10.1% in the Management Department, followed by 27% in the Operations Department. Next comes 24.7% of the respondents who work in Sales, while 13.5% work in Human Resources, and 20.2% of the respondents work in the Information Technology Department.

It was also found that 38.2% of the respondents have 3 to 5 years of experience, representing the highest percentage, followed by 30.3% who have less than 3 years of experience. The group with more than 10 years of experience represents 29.2%, while only 2.2% of the respondents have 6 to 10 years of experience.

Statistical Description of Study Variables

In this section of the study, the various study descriptions and data are presented, and the arithmetic and standard deviations for the items are calculated by determining the degree of agreement and determining the relative importance of each item.

First Axis: Applying the Principles of Lean Accounting

Table (4): Mean, Standard Deviation, and Coefficient of Variation

No.	Value Stream Statement	Mean	Std. Deviation	Coefficient of Variation
1	Financial reports are simplified to focus only on essential information.	2.26	1.05	0.47
2	Modern accounting tools help track operational performance in real time.	1.96	1.02	0.52
3	Lean accounting helps eliminate non–value-added activities.	2.43	0.93	0.38
4	Accounting results are directly linked to efficiency and productivity improvement goals.	2.45	0.97	0.39
5	Employees receive continuous training on the principles and tools of lean accounting.	3.11	1.11	0.36

No.	Value Stream Statement	Mean	Std. Deviation	Coefficient of Variation
Total		12.20	5.80	2.12

Source: Prepared by the researcher.

As displayed in Table (4), concerning the feedback associated with the first aspect — Implementation of Lean Accounting Methods — the average scores within the organization varied from (3.11 to 1.96), resulting in a general average of and an overall standard deviation of (5.8) according to the five-point Likert scale.

The assertion "Staff members undergo ongoing training about the principles and tools of lean accounting" achieved the peak average of (3.11), surpassing the overall average, with a standard deviation of (1.11) and a variation coefficient of (0.36).

Conversely, the assertion "Contemporary accounting instruments assist in monitoring operational performance instantly" exhibited the lowest mean score of (1.96), falling below the overall average, with a standard deviation of (1.02) and a variation coefficient of (0.52).

The table reflects a minor variation in the responses from participants related to the Value Stream dimension, indicating a consensus in their views on the significance of value flow and displaying relatively similar mean scores across different items.

Second Axis: The Role of Lean Accounting in Cost Reduction

Table (5): Arithmetic Mean, Standard Deviation, and Coefficient of Variation

No.	Item	Mean	Std. Deviation	Coefficient of Variation
1	Lean accounting helps identify areas of material and time waste.	2.44	0.916	0.38
2	Lean accounting methods lead to reduced overall operating costs.	2.31	0.874	0.38
3	Resource utilization efficiency is enhanced through lean accounting application.	2.47	1.109	0.45
4	Lean accounting provides accurate data facilitating cost control.	2.45	0.965	0.39
5	Adopting lean accounting has helped reduce costs compared to traditional systems.	2.34	0.878	0.38
Total		**12.1**	**4.742**	**1.98**

Source: *Prepared by the researcher based on SPSS outputs.*

As shown in Table (5), which addresses the results related to the role of lean accounting in reducing costs, the arithmetic means within the organization ranged from (2.31 to 2.47), with an overall mean of (12.1) and a total standard deviation of (4.742) based on a five-point Likert scale. The statement referring to "improving resource utilization efficiency through the application of lean accounting" received the highest rating with an arithmetic mean of (2.47), which is higher than the overall mean, with a standard deviation of (1.109) and a coefficient of variation of (0.45). Conversely, the statement stating "lean accounting methods lead to a reduction in total operating costs" had the lowest mean, recording (2.31) with a standard deviation of (0.878) and a coefficient of variation of (0.38). We also note a convergence in the arithmetic means.

Third Axis: The Role of Lean Accounting in Improving the Quality of Managerial Decisions

Table (6): Arithmetic Mean, Standard Deviation, and Coefficient of Variation

No.	Item	Mean	Std. Deviation	Coefficient of Variation
1	Lean accounting provides real-time and prompt information for management.	1.90	0.905	0.48
2	Strategic decisions have become more accurate due to lean accounting reports.	2.11	0.872	0.41
3	Lean accounting contributes to improving short- and long-term planning.	2.45	0.965	0.39
4	Lean accounting reduces erroneous managerial decisions caused by delayed information.	2.44	0.904	0.38
5	Lean accounting supports decisions related to increasing efficiency and reducing costs.	2.21	0.885	0.40
Total		**11.11**	**4.531**	**2.06**

Source: *Prepared by the researcher based on SPSS outputs.*

As shown in Table (6) regarding responses concerning the role of lean accounting in enhancing the quality of managerial decisions, the mean scores within the organization varied between (2.47 – 2.31), with an overall mean of (11.11) and a cumulative standard deviation of (4.531) according to the five-point Likert scale. The statement "Lean accounting has contributed to improving short- and long-term planning" received the highest rating, with a mean of (2.45), exceeding the overall mean, a standard deviation of (0.965), and a coefficient of variation of (0.39). The statement "Strategic decisions have become more accurate thanks to lean accounting reports" received the lowest mean of (2.11), with a standard deviation of (0.872) and a coefficient of variation of (0.41). A close correlation between the means is evident.

Relationship Between Variables

Table (7): Pearson Correlation Test Results

No.	Variable	Statement	First Axis	Second Axis	Third Axis
1	First Axis	Correlation	1	0.175	0.117
		Significance		0.101	0.275
2	Second Axis	Correlation	0.175	1	-0.211
		Significance	0.101		0.037
3	Third Axis	Correlation	0.117	-0.221	1
		Significance	0.275	0.037	

Note: *Correlation is significant at the 0.05 level (2-tailed).*

Hypotheses Analysis

Main Hypothesis H01:

"There is a statistically significant positive relationship between the application of lean accounting and the reduction of operating costs in organizations at $\alpha \leq 0.05$."

Table (9): Multiple Regression Analysis Results

Coefficients					ANOVA				Model Summary		
Sig.*t	T.	Standard error	β		Sig.*F	DF		F.	(R^2)	(R)	Dependent variable
0.020	-2.365	0.074	0.143	Applying Lean Accounting Principles		2 88	Slope Eloued				The Role of Agile Accounting in Improving the Quality of Managerial Decisions
0.131	1.524	0.094	-0.176	The role of lean accounting in reducing costs	0.037	89	total	3.432	0.074	0.272	

Source: *Prepared by the researcher.*

The multiple correlation coefficient (R) = 0.272, and the determination coefficient $R^2 = 0.074$, indicating that independent variables together explain only 7.4% of the variance in managerial decision quality, which is relatively low.

The ANOVA F-test (F = 3.432, Sig = 0.037) shows that the model is statistically significant as a whole.

Coefficient analysis shows:

Role of Lean Accounting in Cost Reduction has a negative significant effect on decision quality (B = -0.176, Beta = -0.249, Sig = 0.020).

Lean Accounting Application has a weak positive effect (B = 0.143, Beta = 0.161), but it is not statistically significant (Sig = 0.131 > 0.05).

CONCLUSION

Although the model is significant overall, the main hypothesis of a positive significant relationship between lean accounting and cost reduction was **not confirmed statistically**, as the effect was not significant at $\alpha = 0.05$.

Sub-Hypotheses

Hypothesis 1:

Adopting lean accounting principles enhances the quality of management decisions in organizations.

Regression analysis revealed that using lean accounting principles had a small positive impact on the quality of management decisions, but this impact did not reach statistical significance (Sig = 0.131 > 0.05). The results indicate initial interest in implementing lean accounting, but further support through more effective tools and more mature implementation mechanisms is needed to achieve a clear impact.

Hypothesis 2:

Organizations that adopt lean accounting play a role in reducing financial and administrative waste.

The descriptive analysis results showed that lean accounting contributes to identifying waste and enhancing resource utilization efficiency, with the arithmetic means of the relevant statements falling within a medium range (2.31–2.47). Therefore, this hypothesis can be considered partially accepted, as implementing lean accounting contributed to reducing waste, but the achieved impact did not reach the high levels expected.

SUBJECT FOUR CONCLUSIONS AND RECOMMENDATIONS

First: Conclusions:

1. The investigation results showed that the relationship between implementing lean accounting and reducing operational costs was not statistically significant at the (0.05) level. This indicates that Iraqi institutions still need to strengthen their lean practices to achieve sustainable cost reduction effectiveness.
2. The application of lean accounting principles was found to positively impact the quality of administrative decisions, but this impact was weak and not statistically significant, reflecting the need to improve the effectiveness of the tools and mechanisms used.
3. The analysis results indicated that lean accounting helps in detecting financial and administrative losses and improving resource efficiency. However, this role is moderate, indicating that implementation has not yet reached the required level to achieve a strong and sustainable impact.
4. The study highlighted the importance of continuous employee training on lean accounting principles and tools. This factor received a high rating, emphasizing the central role of human resources in the successful transition to modern accounting systems.
5. The data showed that institutions face organizational and cultural difficulties when adopting lean accounting, most notably inadequate technological infrastructure and a lack of awareness about the importance of lean management methods.
6. The results confirmed that lean accounting provides simple and clear information. However, the limited technological systems in some organizations have restricted the effectiveness of these practices in supporting strategic decisions

Secondly: Recommendations:

1. Organizations should enhance ongoing training programs for accounting and management staff on the principles and tools of lean accounting to ensure effective implementation.
2. Modern accounting information systems should be improved to provide accurate and timely data, facilitating better management decision-making and reducing errors resulting from data delays.
3. The value stream map should be used as a key tool to identify and eliminate non-value-added activities, reducing financial and administrative waste.
4. An organizational culture based on leanness and continuous improvement must be built by involving all management levels in development and change processes.
5. Researchers and specialists should be encouraged to conduct successive applied studies in diverse industrial, service, and banking sectors to more broadly measure the actual impact of lean accounting.
6. The implementation of lean accounting should be linked to a clear performance indicator system that comprehensively measures cost, quality, and time to ensure sustainable long-term results.

REFERENCES

Al-Masoudi, Haider & Al-Qasir, Ali (2016). Integration between Lean Accounting Techniques and Balanced Scorecard for Sustainable Balance. Iraqi Journal of Administrative Sciences, 12(5), 110–140.

Al-Rubaie, Mohammed Sameer Dheirb; Al-Mamouri, Ali Mohammed Thajeel; and Al-Amiri, Saud Jaid Mashkoor (2019). Lean Thinking in Cost Accounting: Theoretical Framework and Practical Application. Amman: Dar Al-Manahij for Publishing and Distribution.

Ansari, S. L., Bell, J., & Okano, H. (2020). Target Costing: Uncharted Research Territory. Accounting Horizons.

Brian Maskell, Bruce Baggaley, What's Lean Accounting All About, the Association for Manufacturing Excellence's Target Magazine, first issue, USA, 2006

Duarte, S., & Cruz-Machado, V. (2021). Exploring continuous improvement in lean organizations: A systematic literature review. Total Quality Management & Business Excellence

Esraa Abd Al-Salam Mohsen (2016). The Extent of Using Lean Accounting Tools to Achieve Competitive Advantage under Total Quality Management: A Case Study of Bank of Palestine. Master's Thesis, Al-Azhar University, Palestine.

Fullerton, R. R., & Kennedy, F. A. (2013). Lean manufacturing and firm performance: The incremental contribution of lean management accounting practices. Journal of Operations Management, 31(7-8), 414-428.

Goad, J., & Fischer, J. (2025). "Lean Accounting: A Decision-Making Tool." ResearchGate.

Isa, Sarwan Karim & Mohsen, Mohammed Abd Al-Aziz (2015). Lean Accounting: Application of a Proposed Value Stream Model in Family Company for Food Production. Journal of University of Kirkuk for Administrative Sciences, 15, 112–138.

Kennedy, F. A., & Widener, S. K. (2008). A control framework: Insights from evidence on lean accounting. Management Accounting Research, 19(4), 301-323.

Maimako, L. k., & Ishaya, D. L. (2020). Impact of Resposibility Accounting on Bank Management Performance in Nigeria. IJMSR, 4(1), 146-152.

Maskell, B., & Baggaley, B. (2004). Practical lean accounting: A proven system for measuring and managing the lean enterprise. Productivity Press.

Nguyen, T. H., & Ngo, T. H. C. (2023). Lean accounting and continuous improvement practices in Vietnamese manufacturing firms. Journal of Risk and Financial Management (MDPI).

Reynolds, S. N. (2024). "Decoding Lean Accounting." Ayden Global Journals

Rother, M., & Shook, J. (2021). Learning to See: Value Stream Mapping to Create Value and Eliminate MUDA. Lean Enterprise Institute.

Shah, R., & Ward, P. T. (2020). Inventory reduction and lean practices: Evidence from manufacturing firms. International Journal of Production Economics.

Womack, J. P., & Jones, D. T. (2003). Lean thinking: Banish waste and create wealth in your corporation. Simon and Schuster.

