

Extent of Availability of Prerequisites for The Application of Lean Accounting in Industrial Companies

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Abstract

This research aims to specify the scientific procedures for applying lean accounting in Iraqi companies. The community of the re-research is made up of industrial companies in Diyala Governorate, and the Diyala General Electrical Industries Company, which was chosen as a sample for this research. The most crucial results of this paper include: The traditional accounting system is appropriate to be use with large-scale production. Therefore, if the economic unit desires to shift into using a lean production system, it must apply lean accounting. It will create value for the customer, reduce loss, and manage the flow of the value. The application of lean accounting tools results in the ability to reduce costs and quantity of inventory, increase quality, and the customer's increased response in achieving their satisfaction. Foremost among the key recommendations are: working on applying lean accounting tools due to the fact that they provide information for making decisions and preparing reports clearly, as well as easily and in a timely manner.

Keywords: Accounting; Lean accounting; Industrial companies; Components.

1. Introduction

In the 21st century, traditional methods of cost determination have become inadequate for meeting the demands of modern industry, which is characterized by rapid technological advancement and dynamic markets. Such strategies tend to only address one part of cost management, making them ill-suited for today's integrated and fast-changing business environment (Camilleri, 2024)

That is due to the diversity of customer requests, globalization, and increasing competition between companies seeking a competitive advantage. This challenge is intensified in contexts adopting lean manufacturing methods, where lean accounting has emerged as a key solution. Recent studies emphasize how modern technologies including cloud computing, artificial intelligence (AI), big data analytics, enterprise resource planning (ERP) systems, and Industry 4.0 tools are reshaping management accounting by enabling real-time analytics, predictive modeling, and automation, thereby improving decision-making, cost control, and strategic agility (Alnor, 2024; Smith & Khan, 2023; Lee et al., 2022).

Outstanding performance by the organization's employees has become a significant criterion, especially in the industrial sector, for assessing business excellence. When employee performance is developed and supported, it can contribute effectively to building the national economy. Therefore, it is essential to focus on enhancing performance in this important sector to achieve superior results.

Lean accounting is an innovative method of management accounting that aims to eliminate unnecessary expenditure in the use of resources, leading to cost reductions and improved profitability. It is a strong framework for continuous improvement initiatives, which can become fundamental to contemporary industrial practice (Carvalho, Carvalho and Silva, 2019). Lean involves a set of tools to identify and remove non-value-added practices. By streamlining information flows and aligning accounting with value-stream management, lean accounting increases efficiency, reduces operational expenses, and shortens reporting time (Čečević and Đorđević, 2020). In organizations where lean accounting is implemented, there is greater control of costs involved, the reports are more relevant and timelier, and there is better decision-making amongst the functional areas (Khan and Babar Ali, 2021). These advantages are observed in manufacturing settings through an increase in the productivity of the production process, the quality of the manufactured products, and the delivery time, and in the case of service organizations, they can provide better service performances in shorter periods of time.

The definition of Lean Accounting is a system that provides the company with appropriate and accurate information to help it make appropriate decisions, which leads to increased profitability and cash flow. It uses some tools that help in eliminating waste by removing activities that do not add value to the product. In other words, it is also defined as a set of processes that aims to analyse the company's activities in eliminating all the activities that do not add any special value to the company, eliminate waste, and so it will add value to the customer (Maskell et al. 2011).

In today's business environment, lean accounting is not merely a tool for financial measurement but also a structured system for measuring and managing value. It has influenced companies to rethink their internal processes, evaluating them from the customer's point of view

(Prohl-Schwenke & Kleinaltenkamp, 2021). It is an organized method for eliminating waste caused by overproduction, waiting, transportation, and excess inventory through continuous improvement.

From the above perspectives and definitions, lean accounting can be understood as a comprehensive management system that seeks to eliminate waste by applying specific principles and tools to remove activities that do not add value to the customer. This approach simplifies production and manufacturing processes, ultimately delivering better value.

Lean accounting consists of numerous advantages and benefits (Arora and Soral, 2017), such as:

- 1) Reduces waste in the accounting process, resulting in effective production and increasing employee participation in achieving and implementing the organization's goals and strategies.
- 2) Supports the culture of agility through motivating and encouraging employees, providing the appropriate pieces of information, and encouraging continuous improvement throughout all levels of the economic unit.
- 3) To work according to the generally accepted accounting principles.
- 4) Increase the value of sales by providing good information for decision-making.
- 5) Increase gains and reduce costs.
- 6) Supports long-term continuous improvement by using vital information and metrics for rationalization.

By applying these strategies, a company can save money, reduce costs, and increase profitability, while also ensuring that management receives timely and accurate information. Consequently, the company will be able to make more effective decisions, advantages found in the lean accounting system but often absent in traditional systems.

Referring to the above introduction, one can realize why this research sheds light on the idea of revealing the extent of the availability of applying lean accounting in industrial companies in Iraq. The research aims to achieve the following:

- 1) To identify lean accounting in terms of concept, principles, objectives, and requirements.
- 2) Acknowledgment of the tools and techniques of lean accounting.
- 3) Specify the steps of applying lean accounting to reduce costs.
- 4) Determine the differences between traditional and lean accounting.
- 5) Identify the scientific procedures for applying lean accounting in Iraqi companies.

The vitality of the research lies in the modification of applying traditional methods of cost reduction, which were applied in the twentieth century, to a new method, which is called lean accounting. That is done by using several of its tools, which help in guiding the company's available resources effectively and efficiently. This will also reduce time waste and result in better performance and products while maintaining control processes and providing accurate and fast information to all management levels in the company.

2. Principles of Lean Accounting

The primary views of lean accounting, which help achieve favorable results through the methods they contain to achieve agility (Do, 2017), include:

- 1) Lean and simple business accounting.
- 2) Accounting processes that support the transition to agility.
- 3) Conveying the information clearly and at the appropriate time.
- 4) Strategic planning from a lean perspective.

Hereinafter is an explanation of each of these principles and specifying the needed tools that must be followed in each principle:

2.1. Lean and Simple Business Accounting

This principle involves applying agile methods to accounting processes, as many traditional processes contain waste. Tools are used to identify and eliminate this waste. The most recent studies (Sanka, 2025) focus on the fact that automation, AI-facilitated analytics, and cloud-enabled ERP systems can substantially minimize such waste due to the improved efficiency of financial data collection, diminishing the number of manual-entry mistakes, and harmonizing accounting outputs and real-time operating performance.

2.2. Accounting Processes that Support The Transition to Agility

What is meant by accounting processes that support the transition to agility is a set of reports and methods that help with the transition to agility. It is a mirror of the financial and operational performance of the value stream. The information assists in ongoing improvement, the relationship with the client improves, and product design and pricing increase as well. In this case, the application of performance measures, scoreboxes, and a value stream performance dashboard in attaining this principle takes place (Malaluan, 2024).

2.3. Conveying The Information Clearly and at the Appropriate Time

This principle aims to provide clear information to both inside and outside the company. That is, the information is presented in clear language without any complexities or sophistication in conveying the information. To do so within the framework of Industry 4.0, companies are moving to standard visual reporting formats and mobile-accessible scorecards that make lean accounting outputs intelligible to not only technical but non-technical stakeholders, streamlining the amount of time it takes to make decisions across departments (Miranda Zamora Iribarren et al., 2024).

2.4. Strategic Planning from A Lean Perspective

Planning from a lean perspective is done using some lean accounting tools. Contemporary lean strategic planning also incorporates sustainability metrics (ESG), carbon footprint tracking, and circular economy indicators alongside traditional cost and revenue metrics, ensuring that financial planning aligns with both profitability and environmental performance goals (Banu Z and V, 2024).

3. Objectives of Lean Accounting

Lean accounting aims to create an organizational culture in which all employees participate and continuously focus on reducing all types of waste in processes such as waiting time, inventory, and transportation. In the contemporary industrial context, this also means leveraging digital tools such as ERP-integrated value stream costing, AI-driven waste detection, and real-time production analytics to identify and eliminate inefficiencies faster and with higher precision (Pokala, 2025).

The philosophy of agility strengthens the organization and stabilizes its processes, enabling it to deliver what customers need with accuracy, speed, efficiency, and at the lowest cost. Additionally, when integrated into industrial policy frameworks, lean accounting can support government-led initiatives aimed at increasing competitiveness, improving public-sector enterprise performance, and aligning national manufacturing strategies with sustainability goals.

Many goals lean accounting achieves; however, the most important ones are (Huyen, 2025):

- 1) Enhancing the application of lean accounting tools at the value stream level.
- 2) Improving the performance of managers working in production lines (value stream managers) by enabling them to better understand financial reports.
- 3) Apply agility principles to eradicate any complexities and losses.
- 4) Involve value stream managers in financial planning and budgeting processes.
- 5) Train value stream managers through their participation in financial decision-making.

Current best practices also recommend including environmental and social performance metrics in financial decision-making to meet stakeholder expectations and comply with emerging sustainability reporting standards.

4. Tools for Applying Lean Accounting

In order to form control and management for lean companies, there are multiple tools that all work together for such an act, as they stem from the principles and practices of lean accounting (ALShanti, Al-Refae, and Jebreel, 2025). Such as:

- 1) Value Stream Maps
- 2) Target Costing
- 3) Continuous improvement (Kaizen)
- 4) Performance Measurement Linkage Chart
- 5) Scorebox (Value Stream Performance)
- 6) Dashboards for Value Stream Performance
- 7) Easy and clear language
- 8) Hoshin Policy
- 9) Sales, operations, and financial planning
- 10) Inventory Reduction
- 11) Employee Satisfaction and Training.

There are various other tools which can be used, for example, visual management, etc

5. Research Methodology

This study takes both the deductive and inductive approaches that include the contents of books, periodicals, academic research, and industry publications based on the subject. The collection of data involved onsite observations with the production lines, a 50 units/day time study during two weeks, oral interviews with 5 production supervisors, and reading the company records of the operations and finance during January 2024-February 2024. These approaches are based on a logical description of finance and non-financial information and premises that may be used when it comes to lean accounting.

6. Practical Side of The Current Study

6.1. Research Community and Sample

The research community consisted of industrial companies in Diyala Governorate, and Diyala General Company for Electrical Industries, which was chosen as the sample for this study.

6.2. A Brief Overview of The Sample Company

Diyala General Company for Electrical Industries is in Diyala Governorate, 8 km from Baqubah, the center of Diyala Governorate in Iraq. It is not far from the capital, Baghdad, more than 57 km away. It was established in 1974 as the industrial complex. It initially included the electrical meter workshop, iron workshop, spark plug workshop, and fan workshop, all opened in 1978.

The electrical transformer production project (distribution transformers - power transformers) was opened in 1983. In 1984, a new spark plug workshop was established to replace the old one. In the same year, the workshops mentioned above were merged under the name of Al-Qadisiyah General Establishment for Electrical Industries. In 1990, the argon workshop was established to produce oxygen and argon gas. After that, in 2003, the optical cable workshop was opened. Simultaneously, the name of Al-Qadisiyah Company was changed to Diyala General Company for Electrical Industries (Nazar et al., 2020). In 2023, the company employed 2,987 staff and had a capital of 2,211,326,000 Iraqi dinars.

8 factories in the company produce different products:

- 1) Power transformer factory.
- 2) Distribution transformer factory.
- 3) Electrical meter factory.
- 4) The switchboard station.

- 5) Optical cable factory.
- 6) Iron factory.
- 7) Spark plug factory.
- 8) Ceiling fan factory.

This study discusses the possibility of benefiting from the lean accounting method and its numerous tools, which are represented by the value stream map, target cost, continuous improvement, performance measurement linkage chart, scorecard, value stream cost, and other lean accounting tools. The researchers have chosen one of Diyala Company for Electrical Industries' products, which is represented by ceiling fans. The ceiling fan production process goes through five main stages; these are:

- 1) Plastic Injection Stage: The fan blades and plastic base are formed, which cover the motor and the protective layer of the fan blades, the fan base, and the electrical buttons.
- 2) Motor Installation Stage: The motor is installed inside the protective layer, and the quality of the selected motor is ensured. That is because the motor piece is the basis for making fans.
- 3) Assembly Stage: The fan's exact parts are connected; therefore, the motor base is connected to the blade, and they are connected to the base.
- 4) Electrical Wiring Stage: The electrical wiring stage is made inside the electric fan, as it ensures the high quality of the electrical wires and their ability to withstand high temperatures, followed by installing the electrical buttons.
- 5) Inspection and Packaging Stage: It ensures the safety of the fan operation, ensures that it is free from defects, and is packaged.

Table 1: Raw Materials Used in the Manufacture of the Fan

Material
Sheets to cover the sides of the fan
Sheets to cover the motor of the fan
Plastic for the fixed part of the fan
Plastic for the rotating part of the fan
Sheets for the fan base
Plastic for the rear cover of the fan
Plastic for the upper cover of the fan
Plastic fan
Base of the electrical board
Main wire coil with insulator
Secondary wire coil with insulator

Source: Based on the company's data for 2023.

Concerning cost estimations, the cost of the fan produced by the company during the research period will be determined by tracking production operations and identifying material details. Table 2 shows the exchange rates of these materials, their prices, and the total price, as follows:

Table 2: Fan Cost (Material Exchange Rates and Prices)

Material	Material exchange rate for the fan (kg)	Purchase price of the material (IQD/kg)	Total price (IQD)
Sheets to cover the sides of the fan	2.167	3000	6501
Sheets to cover the motor of the fan	1.25	1600	2000
Plastic for the fixed part of the fan	0.5	3000	1500
Plastic for the rotating part of the fan	1	2500	2500
Sheets for the fan base	0.5	3000	1500
Plastic for the rear cover of the fan	0.75	3333	2500
Plastic for the upper cover of the fan	0.2	3750	750
Plastic fan	0.1	2500	250
Base of the electrical board	0.9	833	750
Main wire coil with insulator	0.22	4791	1078
Secondary wire coil with insulator	0.75	1896	1422
Total			20751

Source: Based on the company's data for 2023.

6.3. Testing The Possibility of Applying Lean Accounting Tools in Diyala Company for The Electrical Industries

6.3.1. Drawing a Value Stream Map

The value stream mapping process began with the selection of the product, followed by documenting data flows and production schedules based on direct field observations, structured interviews, and review of internal cost and production records.

- 1) Product type selection: Because there is a current demand for Ceiling fans, they were chosen especially during the summer by customers. Thus, it is produced entirely in the company. Data related to the flow of cost elements has been collected, in addition to the information that is obtained through field observations of the production process, as well as through reviewing records and books, and interviews with company employees.
- 2) Data and information flow: The demand for the product from customers or the prediction of a demand for the product by the marketing department determines the start of the production process and the development of production scheduling based on specific data and information.
- 3) Raw material flow: raw materials are received from the warehouse and transferred to go through the production stages until they become finished goods based on production scheduling.
- 4) Daily orders: The production department in the company obtains the quantity of daily orders and then determines the daily, weekly, and monthly production volume. As for the sample company, it schedules its production every month using projected annual production figures. Because the product is seasonal and not always available, the corporation tries to establish a plan based on projections, particularly in the summer months.

6.3.2. Operations within The Value Stream

Table 3 illustrates the production cycle times, conversion time, number of work shifts, and number of workers for each value stream operation to produce the ceiling fan, with details of the production process times:

Table 3: Cycle Times, Number of Shifts, And Workers for Each Operation

Operation	Cycle time	Conversion time	Number of shifts (50 fans)	Number of workers
Plastic injection stage	7.5 minutes	17 minutes	1	8
Motor installation stage	4.75 minutes	16 minutes	1	6
Assembly stage	21.5 minutes	25 minutes	1	12
Electrical wiring stage	8.5 minutes	60 minutes	1	7
Inspection and packaging stage	10.25 minutes		1	5
Total	52.5 minutes	118 minutes		38

Source: Prepared by the researcher based on the company's data.

Production Time Analysis

- Total production cycle time per fan = $7.5 + 4.75 + 21.5 + 8.5 + 10.25 = 52.5$ minutes (0.875 hours).
- Available time per shift = $(7 \text{ hours} \times 60 \text{ min}) - (30 \text{ min start} + 30 \text{ min break} + 60 \text{ min end}) = 420 - 120 = 300$ minutes.
- Since each stage runs one shift per day, available time at each work center = 300 minutes \times number of workers.

Available time per stage:

- Plastic injection = $8 \times 300 = 2400$ min
- Motor installation = $6 \times 300 = 1800$ min
- Assembly = $12 \times 300 = 3600$ min
- Electrical wiring = $7 \times 300 = 2100$ min
- Inspection & packaging = $5 \times 300 = 1500$ min

Utilization rates (Required time \div Available time $\times 100$):

- Plastic injection = $(7.5 \times 50) \div 2400 \times 100 = 15.63\%$
- Motor installation = $(4.75 \times 50) \div 1800 \times 100 = 13.19\%$
- Assembly = $(21.5 \times 50) \div 3600 \times 100 = 29.86\%$
- Electrical wiring = $(8.5 \times 50) \div 2100 \times 100 = 20.24\%$
- Inspection & packaging = $(10.25 \times 50) \div 1500 \times 100 = 34.17\%$

Worker requirements (Cycle time \times daily units $\div 300$, rounded up):

- Plastic injection = $(7.5 \times 50) \div 300 = 1.25 \rightarrow 2$ workers
- Motor installation = $(4.75 \times 50) \div 300 \approx 0.79 \rightarrow 1$ worker
- Assembly = $(21.5 \times 50) \div 300 \approx 3.58 \rightarrow 4$ workers
- Electrical wiring = $(8.5 \times 50) \div 300 \approx 1.42 \rightarrow 2$ workers
- Inspection & packaging = $(10.25 \times 50) \div 300 \approx 1.71 \rightarrow 2$ workers

Total workers needed for lean operation: 11 workers

Table 4: Number of Surplus Workers According to the Application of Lean Accounting

Operation	Current number	Number of lean accountings	Difference
Plastic injection stage	8	2	6
Motor installation stage	6	1	5
Assembly stage	12	4	8
Electrical wiring stage	7	2	5
Inspection and packaging stage	5	2	3
Total	38	11	27

Source: Prepared by the researcher based on the company's data for 2023.

Interpretation: The analysis shows that each production stage requires fewer workers than currently assigned to meet planned production volumes. The surplus capacity totals 27 workers, who could be reassigned to other value streams or cross-trained to support multiple tasks, consistent with lean accounting principles and workforce flexibility.

6.3.3. Target Cost

The price of the local product is higher than that of the imported one due to the additional components in the company's product, such as the fan motor, base, rotating and fixed parts, main and secondary coils, etc., when comparing the ceiling price fan of the sample company. To improve market competitiveness, the company can adopt targeted raw material cost reductions. Based on Table 2 and observed production data, the following measures are recommended:

Table 5: Recommended Raw Material Cost Reductions Per Fan

#	Material	Current Cost (IQD)	Target Cost (IQD)	Reduction (IQD)
1	Fan sides & fasteners	6,501	5,625	876
2	Fan motor cover	2,000	1,500	500
3	Rotating part	1,500	875	625
4	Fixed part	2,500	1,687.5	812.5
5	Fan base	1,500	875	625
6	Rear cover	2,500	1,125	1,375
7	Upper cover	750	375	375
8	Plastic fan	250	250	0
9	Electrical board base	750	588.75	161.25
10	Main wire coil (insulated)	1,078	708.75	369.25
11	Secondary wire coil (insulated)	1,422	888	534

Total Reduction per Fan: 6,253 IQD

Summary of Impact: Implementing these cost reduction measures could lower the raw material cost of each fan by 6,253 IQD, directly enhancing competitiveness in both domestic and regional markets. This approach aligns with lean accounting principles by eliminating waste in material procurement and optimizing resource use without compromising product quality

6.3.4. continues improvement (kaizen cost)

The following are the proposed improvement steps for the sample company:

- 1) Determining the specified field that needs improvement concerning the ceiling fan product that was produced by the sample company and suffers from the problem of increased costs. In contrast to imported products, which have resulted in a decrease in their market value.
- 2) Replace the old machine shapes that are used in the production of old fans with new ones. They would be highly specified to contribute to reducing maintenance costs and spare parts by about 70%.
- 3) There is a high number of workforces, with a surplus rate of 18% because of the low production. Therefore, it is suggested to utilise these surplus workers to perform other tasks in the factory.

It makes it clear that continuous improvement plays a significant role in decreasing the level cost of ceiling fan production while maintaining quality and improving its price in the market.

6.3.4.1. Manufactured units

This metric measures output per worker in the value stream. Since ceiling fan demand is seasonal, production efficiency is crucial. Lean Accounting:

Manufactured units per worker = $50 \div 25 = 2.0$ units per worker

Traditional Accounting:

Manufactured units per worker = $50 \div 82 \approx 0.61$ units per worker

According to lean accounting principles, a ratio between 1.5 and 2 units per worker is considered acceptable. The lean accounting figure meets this standard, while the traditional accounting figure indicates significant underutilization of labor.

Table 6: Workers According to Traditional and Lean Accounting

Operation	Traditional accounting	Lean accounting	Difference
Finance staff	7	2	5
Customer service	3	1	2
Sales and marketing	5	2	3
Purchasing	1	1	0
Production and assembly	38	5	33
Cleaning and services worker	7	4	3
Electricity generator worker	1	1	0
Transport worker	1	1	0
Quality assurance officer	1	1	0
Design and inspection	3	1	2
Guard and security	7	3	4
Maintenance	8	3	5
Total	82	25	57

Source: Prepared by the researcher based on the company's data for 2023.

The aim of this metric is to raise the value using human resources. Therefore, according to the basics of lean accounting, a ratio of 2 is acceptable as it is close to the upper limit of the ratio, ranging between 1.5% and 2%. This is accomplished by the application of lean accounting

6.3.E.2 Delivery on time

This metric measures the percentage of orders shipped by the agreed delivery date.

Formula:

On-time delivery (%) = $(\text{Units shipped on time} \div \text{Total units}) \times 100$

For the test period:

= $(0 \div 50) \times 100 = 0\%$

The order was shipped one week later than planned, indicating poor schedule adherence and the need for process improvements in scheduling and logistics.

6.3.4.3. Average collection period for accounts receivable

This measures the average number of days taken to collect receivables.

Formula: $\text{Balance of debtors} \div (\text{Monthly sales} \div \text{Number of sales days})$

Given:

Balance of debtors = 0

Monthly sales = 4,200,000 IQD

Number of sales days = 20

= $0 \div (4,200,000 \div 20) = 0$ days

This indicates all sales are on a cash basis, with no deferred payments.

6.3.4.4. Floor space

This measures the proportion of available floor space used by the value stream.

Formula:

$$= (\text{Utilized area} \div \text{Total area}) \times 100$$

$$= (250 \text{ m}^2 \div 330 \text{ m}^2) \times 100 = 75.76\%$$

This level of utilization suggests available capacity for future production without additional facility expansion.

6.3.5. Scorebox

The scorebox is a visual management tool that summarizes weekly operational and financial performance for the value stream. It enables management to track progress, identify problems, and set improvement priorities.

Key characteristics:

- Provides weekly data on production, quality, delivery, and financial metrics.
- Allows comparison of actual vs. planned performance.
- Accessible to all levels of the organization, supporting transparency.
- Can be presented to senior management or external stakeholders when required.

The scorebox framework helps ensure accountability, supports decision-making, and aligns operational activities with strategic goals.

Table 7: Scorebox For Reporting on the Performance of the Value Stream

Details		Current
Operational performance	Number of units per person	2
	On-time delivery	0
	Average collection of debtors	0
	Floor space	75.76%
Capacities	Production capacity	25%
	Non-production capacity	28.267%
	Surplus capacity (unused)	46.733%
Financial performance	Revenues	1,250,000
	Cost of transformational and other materials	1,140,880
	Profits	109,120
	Profit margin	8.73%

Source: Prepared by the researcher based on the company's data for 202.

6.3.5.1 Capacities

- Available capacity per week = 5 days × 300 minutes/day × 7 machines = 10,500 minutes
- Total time required = Cycle time per unit × Number of units = 52.5 minutes/unit × 50 units = 2,625 minutes
- Capacity utilization (%) = Total time required Available capacity × 100 = 2,625 / 10,500 × 100 = 25
- Surplus capacity (%) = 100 – 25 = 75%

This indicates that only one-quarter of total machine time is being used, leaving significant unused capacity. According to lean accounting principles, surplus time should be reduced by:

- Eliminating waiting time between stages (currently 2,850 minutes = 9.5 days × 300 minutes/day).
- Reducing conversion time, particularly in the assembly stage, where delays are most significant.

6.3.5.2. Financial performance

- Revenue = Selling price per fan × Quantity produced = 25,000 IQD × 50 = 1,250,000
- Cost per fan (based on material and transformation costs): If total cost = 1,140,880 IQD for 50 fans:
- Average unit cost = 1,140,880 / 50 = 22,817.6 IQD
- Gross margin per fan = 25,000 – 22,817.6 = 2,182.4 IQD
- Total gross margin: = 2,182.4 × 50 = 109,120 IQD

Interpretation:

- The gross margin is less than 9%, which is low for a seasonal product with high demand in summer.
- Lean accounting improvements (e.g., reducing raw material costs and minimizing idle capacity) could significantly increase margins without raising the selling price.

Implementation considerations:

Applying lean accounting in an existing company mainly requires:

- Training staff in lean methods and metrics.
- Process restructuring to streamline flow and reduce waste.
- Leveraging existing infrastructure (machines, tools, buildings) to avoid major capital expenditures.

7. Conclusion

- 1) Mass production is suitable for use with a traditional accounting system. When the economic unit desires to change into a lean production system, it must apply a lean accounting strategy to create value for the client, reduce waste, and manage the value flow.
- 2) Traditional accountants and methods are an obstacle to the transference to agility within the economic unit.
- 3) When applying lean accounting tools, it provides the ability to decrease costs, inventory quantity, increase quality, speed of response to the client, and finally achieve customer satisfaction.
- 4) When applying lean accounting in the sample company, it results in achieving a competitive advantage and improving production efficiency.

- 5) Lean accounting provides the required information for making an appropriate, correct, and implementable decision.

8. Suggestions for Further Investigations

- 1) Enhancing the operational and financial performance level is required of the sample company through applying lean accounting.
- 2) The employees of the economic unit should adopt the agile way of thinking through training and development courses. That is, on the concept of lean production and lean accounting.
- 3) To use lean accounting tools and methods because they give a clear picture of the economic units' performance. In addition to that, it helps them in the evaluation process and attain their strategic aims.
- 4) Accountants should improve their awareness of the culture of lean accounting and not hinder the transition to agile thinking due to their fear of performing additional tasks, especially data collection and processing.
- 5) Lean accounting provides the necessary information for making decisions and making clear and easy reports on time.

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