

Accounting Treatment of Defective Products in Determining The Cost of Production at UD Mebel Sahabat

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ABSTRACT

Objective: This study aims to analyze the accounting treatment of defective products in determining the cost of production at UD Mebel Sahabat. Defective products produced can affect the efficiency and effectiveness of the company's operations.

Method: The research employs a qualitative descriptive method with data obtained through interviews, observations, and documentation. **Results:** The findings reveal that defective products at UD Mebel Sahabat are caused by worker errors and low-quality raw materials. The costs incurred from defective products are recalculated to ensure the accuracy of production costs. **Novelty:** This study recommends improving production quality control and better accounting records to minimize losses due to defective products.

INTRODUCTION

In the era of competitive globalization, companies are faced with complex business dynamics. The speed of change in the business environment requires companies to adapt flexibly. One of the main factors driving this change is the rapid advancement of technology. This technology is changing the way companies produce, market products, and serve customers (Mawarni, 2021). Every business needs to continue to make continuous improvements in order to be able to survive in an increasingly competitive global competition. For manufacturing companies engaged in production, maintaining product quality is the top priority to maintain consumer trust. The main activity of a manufacturing company is to process raw materials into finished products that have added value. The products produced are expected to be of high quality and meet feasibility standards to be marketed to consumers or customers (Terang et al., 2023). In the midst of fierce market competition, companies are required to prioritize two crucial aspects, namely product quality and cost-effectiveness. The ability to produce high-quality products that satisfy or even exceed customer expectations is key, without neglecting competitive pricing. Excellent customer service also plays an essential role in capturing and maintaining customer loyalty (Dennisa et al., 2016).

The quality of products that do not meet the standards, or commonly referred to as defective products, can be a stumbling block for companies in achieving their goals. This is because defective products have the potential to lower the company's image in the eyes of consumers and result in a decrease in sales and profits. Therefore, it is important for companies to implement strict quality control to minimize defective products and ensure

consumer satisfaction (Makhmul & Hari, 2021). Many companies are faced with defective products, i.e. products that do not meet quality standards.

High-quality products can increase customer satisfaction with the goods offered by the company. On the other hand, the main goal of every company is to obtain maximum profits to maintain the sustainability and stability of its business. If there is damage or defect in the product, it will affect the calculation of the cost of production, which ultimately has an impact on determining the selling price of goods. If this condition is not addressed immediately, the company risks losses in its operations (Nender et al., 2021). Products that do not meet the established standards are included in the category of defective products. Produced from any production process or part that does not meet the requirements and expectations of consumers. The calculation of the company's profit and the determination of the selling price will be greatly affected by the slightest mistake (Rahayu et al., 2020).

A qualified accounting system to record and track defective products and their costs is crucial for the company. This accurate information allows companies to make more informed decisions in managing defective products and formulate more effective production cost control strategies. In the era of globalization with fierce competition, efficient management of defective products can be a key factor in winning market competition (Rahmansyah et al., 2023). Accounting recording of the cost of defective products has an important role in presenting detailed information on the costs that have been absorbed by the defective product, including the cause of the defect and its cost price. This information can then be classified and analyzed to allow for more accurate calculations of the cost of production (Setiadi et al., 2014).

The cost of production is the overall value of the expenditure used in the production process, including the raw materials used, the wages of workers directly involved, and the additional costs of the factory. The calculation considers products that are in process at the beginning of the period and subtracted from products that are still in process at the end of the period (Zahirudin, 2016). The determination of the cost of production is an important element in cost accounting. This is because the cost of production plays an important role in determining the cost of goods sold and has direct implications on the company's profit (Mulyadi, 2016).

UD Mebel Sahabat is a furniture in Pleyan Village which is quite famous for its unique carving motifs. Unlike UD Jaya Lestari which does not use engraving on its products, Mebel Sahabat offers different products. Nonetheless, both of these ventures contribute to local culture based on their designs, helping to preserve cultural heritage. The uniqueness of the carving motif on wood produced by Mebel Sahabat has attracted the attention of the author to conduct further research. The high public interest in Sahabat Furniture products is proof of the attractiveness of furniture design produced by this local craftsman. Based on an interview with Mr. Sanusi as the owner of the business on August 4, 2024, it is known that the majority of UD Mebel Sahabat employees are

experienced parents and there are also young people who are still in the learning stage, so the products produced sometimes still have shortcomings.

This research focuses on manufacturing companies, especially UD Mebel Sahabat, to investigate "Accounting Treatment of Defective Products in Determining the Cost of Production". The reason for choosing this topic is because of its high relevance in the manufacturing industry, where defective products can result in financial losses and distortion of cost information. A deeper understanding of the accounting treatment of defective products at UD Mebel Sahabat is expected to contribute to accounting literature, especially in the context of the manufacturing industry in Indonesia.

RESEARCH METHOD

This study employs a qualitative approach with a descriptive method. The qualitative approach allows the researcher to explore in-depth information on the accounting treatment of defective products at UD Mebel Sahabat. The descriptive method is used to provide a detailed depiction of the phenomenon based on the data collected.

1. Location and Duration

The research was conducted at UD Mebel Sahabat, a furniture company located in Desa Pleyan, Kapongan Subdistrict, Situbondo Regency, East Java. Data collection took place from July to November 2024.

2. Data Sources

This study uses two types of data sources:

Primary Data: Obtained directly through in-depth interviews with the business owner and employees of UD Mebel Sahabat, as well as observations of the production process (Sugiyono 2017).

Secondary Data: Derived from company documents, such as production cost reports, defective product reports, and supporting literature (Sugiyono 2017).

3. Data Collection Techniques

- a. Interviews: Conducted to gather information about the company's policies on defective products, cost recording methods, and production processes (Albi & Johan, 2018).
- b. Observation: Direct observation of the production process to understand the causes of defective products (Albi & Johan, 2018).
- c. Documentation: Collecting documents related to production costs, defective product reports, and company policies (Jaya, 2020).

4. Data Analysis Techniques

The collected data were analyzed descriptively through the following steps:

- a. Cost Classification: Mapping production costs into direct and indirect costs.
- b. Defective Product Identification: Analyzing the causes of defects and calculating additional costs due to defective products.
- c. Production Cost Calculation: Using the full costing method to calculate production costs, including costs from defective products.
- d. Loss Analysis: Identifying financial losses caused by defective products.

- e. **Drawing Conclusions:** Summarizing the findings based on the analysis to provide recommendations to the company.

This research method aims to provide a comprehensive understanding of the accounting treatment of defective products, helping the company improve efficiency and accuracy in determining production costs.

RESULTS AND DISCUSSION

Results

UD Mebel Sahabat faces obstacles related to defective products that arise due to errors in the process of making household furniture. This problem brings losses to the company because damage to goods has the potential to increase the cost of production. In production in September and November 2024, the company produced four units of carving cabinets and 2 units of carving tables, but one of them was defective.

In the face of the problem of defective products, the company has a policy to improve products to make them suitable for sale through additional production processes. These repair costs involve a certain allocation according to the company's policy. The study highlights how repair costs are allocated as well as how defective products are treated in accounting reports. In general, the repair of defective products requires cost allocation for raw materials, direct labor, and factory overhead costs. The amount of repair costs is adjusted to the level of damage that occurs and management policies. At UD Mebel Sahabat, this cost allocation is calculated based on the level of product damage by adding a certain number of costs to repair the product until it is ready for the market, including raw materials, direct labor, and factory overhead. The following is the calculation of the cost of raw materials for 1 unit of defective products during the period in September-November 2024 as follows:

Table 1. Raw Material Cost for 1 Unit of Defective Products (Table) September 2024, UD Mebel Sahabat.

No	Description	Product Output/ Month	Quantity of Raw Materials	Raw Materials Cost
1	Teak Wood (Grade A)	1	-	2.800.000
	TOTAL			2.800.000

Source : UD Mebel Sahabat, 2024

Based on the table above, it shows that 1 unit of carving table products requires a total of raw materials of Rp. 3,100,000.

Table 2. Raw Material Cost for 1 Unit of Defective Products (cupboard) September 2024, UD Mebel Sahabat.

No	Description	Product Output/ Month	Quantity of Raw Materials	Raw Materials Cost
1	Teak Wood (Grade A)	1	-	5.625.000
2	Carved Ornaments		Set	300.000
	TOTAL			5.925.000

Source : UD Mebel Sahabat, 2024

Based on the table above, it shows that 1 unit of carved cabinet products requires a total of raw materials of Rp. 6,520,000.

Table 3. Direct Labor Cost 1 Unit of Defective Products (Table) September 2024, UD Mebel Sahabat.

NO	Type of Labor	Wages/Units	Total
1	Cutting Parts	100.000	100.000
2	Assembly Parts	100.000	100.000
3	Finishing Parts	200.000	200.000
	Total		400.000

Source : UD Mebel Sahabat, 2024

Table 4. Factory overhead cost for 1 unit of defective product (table)September 2024, UD Mebel Sahabat.

NO	Types of Overhead Costs	Total Cost (Rp)
1	Lubricating	70.000
2	Paku	25.000
3	Large	50.000
4	Paint Material	75.000
5	Wood Glue	30.000
6	Others	50.000
7	Electricity Costs	37.500
8	Gasoline and oil costs	7.500
9	Machine Maintenance Cost	15.000
10	Indirect Material Costs	10.000
11	Equipment Shrinkage	15.000
	TOTAL	385.000

Source : UD Mebel Sahabat, 2024

Production Costs For Defective Products

Raw Material Cost	: Rp. 8.965.000
Direct Labor Costs	: Rp. 400.000
Factory Overhead Costs	: <u>Rp. 385.000</u> +
	Rp. 9.750.000

Table 5. Direct Labor Cost 1 Unit of Defective Products (Cabinet) November 2024, UD Mebel Sahabat.

NO	Type of Labor	Wages/Units	Total
1	Cutting Parts	150.000	150.000
2	Assembly Parts	100.000	100.000
3	Finishing Parts	200.000	200.000
	Total		450.000

Source : UD Mebel Sahabat, 2024

Table 6. Factory overhead cost for 1 unit of defective product (engraved cabinet) November 2024, UD Mebel Sahabat.

NO	Types of Overhead Costs	Total Cost (Rp)
1	Lubricating	87.500
2	Paku	37.500
3	Large	50.000
4	Paint Material	300.000
5	Wood Glue	120.000
6	Electricity Costs	37.500
7	Gasoline and oil costs	7.500
8	Machine Maintenance Cost	15.000
9	Indirect Material Costs	10.000
10	Equipment Shrinkage	15.000
	TOTAL	680.000

Source : UD Mebel Sahabat, 2024

Production Costs For Defective Products

Raw Material Cost	: Rp. 6.520.000
Direct Labor Costs	: Rp. 450.000
Factory Overhead Costs	: <u>Rp. 680.000</u> +
	Rp. 7.650.000

Calculation of Cost of Production of Defective Products

The price of the production process reflects the total costs incurred during the manufacture of goods, which includes the cost of direct raw materials, direct labor, and other costs. This cost is then divided by the number of equivalent units of total production. Based on the analysis, in September UD Mebel Sahabat produced a total of 2 units of carving tables, one of which was not in good condition with a total production

cost for a good product of Rp. 8,180,000 and one defective product with a total production cost of Rp. 9,750,000. Then in November UD Mebel Sahabat produced 4 sets of Carved Wardrobes, consisting of 3 sets in good condition and 1 set of defects. The total production cost reaches Rp 29,820,000,-, with a cost for good products of Rp 22,170,000 and for defective products of Rp 7,650,000

However, UD Mebel Sahabat has not included the cost of rework to repair defective products in the calculation of the total production cost. If the cost of reworking for carving table products is estimated to reach Rp 785,000, which consists of Rp 400,000 for direct labor and Rp 385,000 for factory overhead which has been explained in detail the calculation, as well as for reworking the carving cabinet costs a total cost of around Rp. 1,130,000,-, Rp 450,000 for direct labor costs and Rp. 680,000 for total factory overhead costs, then the cost of production can be calculated using the appropriate formula.

Cost of Carving Table Production after rework

$$\begin{aligned} &= \frac{\text{Total Production Cost} + \text{Rework Cost}}{\text{Total Number of Units}} \\ &= \frac{\text{IDR } 9,750,000 + \text{IDR } 1,130,000}{1} = \text{IDR } 10.880.000,- \end{aligned}$$

Cost of Production of Engraving Cabinet after rework

$$\begin{aligned} &= \frac{\text{Total Production Cost} + \text{Rework Cost}}{\text{Total Number of Units}} \\ &= \frac{\text{IDR } 7,455,000 + \text{IDR } 785,000}{1} = \text{IDR } 8.240.000,- \end{aligned}$$

In accordance with the data above, it can be seen that the HPP of defective products of carved tables is as high as Rp. 10,880,000,- and defective products of carved cabinets of Rp. 8,240,000,-

Loss Calculation

UD Mebel Sahabat experienced a loss due to one of the four carved cupboard units produced having a defect. This defective product requires rework to become sellable. The loss incurred includes the additional cost of rework as well as the potential increase in the cost of production (COGS). Below is a breakdown of the calculation to analyze the loss due to rework. The defective product experienced by UD Mebel Sahabat was caused by the incorrect use of manual tools for carving wood in the making of the cupboard, and some parts of the finishing were not neatly done. This was due to the use of operational machines that need maintenance and carelessness from the workers in the production operations, resulting in a defective product.

The policy taken by the owner of UD Mebel Sahabat is to sell the defective product at the same price as the good product. The loss calculation uses the formula:

Loss Cost for Carved Table Product

$$\begin{aligned} &= \text{Cost of Production per Unit} \times \text{Number of Defective Products} \\ &= \text{Rp. } 10,880,000 \times 1 \\ &= \text{Rp. } 10,880,000 \end{aligned}$$

Loss Cost for Carved Cupboard Product

= Cost of Production per Unit X Number of Defective Products

= Rp. 8,240,000 X 1

= Rp. 8,240,000

Sales Calculation

Sales are usually calculated based on the number of units of products or services successfully sold during a given period, multiplied by the selling price per unit, taking into account discounts, discounts, or returns of goods. Therefore, sales revenue can be an important indicator in assessing a company's performance, the effectiveness of marketing strategies, and overall operational success. Effective sales reflect a company's ability to understand market needs, offer quality products or services, and compete in the midst of business dynamics.

Table 7. Sales Calculation Results September-November 2024 UD Mebel Friends.

MOON	SUM	PRICE	TOTAL SALES
Good Products			
September	1	10.100.000	10.100.000
October	8	4.700.000	37.600.000
November	3	8.450.000	25.350.000
Defective Products			
September	1	10.100.000	10.100.000
October	0	0	0
November	1	8.450.000	8.450.000
Total			91.600.000

Source: data processed, 2024

Based on the table above in the period from September to November 2024, UD Mebel Sahabat recorded total sales of IDR 91,600,000,-. The sales consist of two product categories, namely good products and defective products.

Good product sales dominated, with total revenue reaching Rp 73,050,000 from 12 units sold. The month with the highest sales was October, where 8 units of good products were sold with a total revenue of IDR 37,600,000,-. The price of good products varies, starting from IDR 4,700,000 to IDR 10,100,000 per unit.

Meanwhile, the sale of defective products contributed revenue of IDR 18,550,000 from 2 units sold. Sales of defective products occur in September and November, with the same unit price as good products.

Overall, this table shows UD Mebel Sahabat's sales performance is quite good, with good products being the main contributor to the company's revenue. The existence of defective products that are still sold also helps to increase revenue even in smaller amounts. Although defective products contribute to total revenue, this figure indicates potential losses that can be minimized through better control of production quality. By focusing on quality improvement and optimal marketing strategies for good products,

UD Mebel Sahabat can increase revenue and strengthen its position in the market.

Discussion

Based on the analysis conducted by the author, it appears that UD Mebel Sahabat records the production costs for 2 units of carved tables, 8 units of carved chairs, and 4 units of carved cabinets in a simple manner, which is merely recording expenses in a table format without using journals. The owner believes that this recording method is sufficient to provide the necessary information for the company's production business report.

Meanwhile, the defective products produced include 1 unit of carved table due to the intricate design of the carved table, which can be one of the causes of the defect. The complex design requires extra precision at every stage of production, particularly in the carving process and the installation of additional ornaments. Small mistakes, such as misaligned carving patterns or inaccurate ornament installation, can occur more frequently with intricate designs. Additionally, the high level of difficulty increases the risk of human error, especially if the labor force lacks experience or if the working time is too limited. As a result, the final product does not meet the expected quality standards. Furthermore, one unit of carved cabinet was damaged due to poor quality of raw materials and careless storage of materials. The use of raw materials, such as wood with improper moisture levels, cracks, or fragile wood fibers, can reduce the strength and durability of the product. Additionally, storing materials carelessly, such as placing wood in damp areas, exposing it to direct sunlight, or not protecting it from wood pests, can lead to deformation, mold, or damage before the production process begins. These factors increase the risk of failure in the manufacturing stage, such as uneven carving, weak joints, or a final product that does not meet quality standards. Therefore, better raw material management is crucial to prevent defects in the final product

The recording for both defective products is done in the same way as for the main products, where the treatment only involves adding production costs equivalent to the repair costs for the defective products. Based on the author's analysis of these defective products, it appears that the accounting treatment applied is correct, where the production costs incurred are added to the work-in-process inventory.

However, the presentation and reporting for the 1 unit of defective carved cabinet and 1 unit of defective carved table at UD Mebel Sahabat are not in accordance with generally accepted accounting principles, leading to the conclusion that the presentation and reporting are still inadequate. In September and November 2024, 2 units of defective products were recorded due to poor raw material quality and careless storage. These defective products added costs to the processing, and the company decided to sell them for Rp. 10,100,000 for the carved table, Rp. 4,700,000 for the carved chair, and Rp. 8,450,000 per unit for the carved cabinet. The following is the cost calculation for the defective products.

The defective products successfully sold at UD Mebel Sahabat for Rp. 10,100,000 for the carved table and Rp. 8,450,000 for the carved cabinet, which shows that the company

did not incur a loss after repairing these products.

CONCLUSION

Fundamental Finding : The study reveals that UD Mebel Sahabat incorporates rework costs into the accounting treatment of defective products to determine the accurate cost of production. Specifically, one defective table out of two produced in September 2024 and one defective carved cabinet out of four produced in November 2024 were repaired and their associated rework costs—covering direct labor and factory overhead—were added to the total cost. These defective items were subsequently sold at the same price as non-defective ones. This method allowed the company to maintain profitability, albeit marginally, as seen in the cases where the table incurred an additional cost of Rp 1,130,000 and the cabinet Rp 785,000, yet both were sold at standard prices without incurring losses. **Implication :** The findings imply that reworking defective products can serve as an effective strategy to mitigate potential financial losses and enhance revenue recovery. By allocating rework costs into the overall production cost, the company ensures pricing remains consistent while still turning a profit. This accounting approach not only sustains revenue flow but also demonstrates a practical solution for small-scale manufacturers in managing product defects without sacrificing product valuation or profitability. **Limitation :** However, the research is limited to a single case study involving only two instances of defective product rework within a small-scale furniture manufacturing context. The scope does not cover a broader range of defect types, frequency of occurrence, or a more extensive analysis across different time periods or other manufacturing entities. As such, the generalizability of the findings to other firms or industries may be restricted. **Future Research :** Future studies could explore the long-term financial impact of repeated defective product repairs on overall profitability, particularly when defect rates increase or when the cost of rework significantly rises. Additionally, research may be extended to comparative studies across multiple small and medium enterprises (SMEs) to examine variations in accounting treatment and the effectiveness of different defect management strategies under diverse operational conditions.

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