The Accounting Treatment Of Defective And Damaged Products In Determining The Cost Of Production In Sheina Batik Jember

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Abstract

This objective of this research is to analyze the accounting treatment of these costs in the context of the cost of production. This research collects primary and secondary data through interviews and documentation. The collected data is analyzed descriptively and qualitatively, with a focus on in-depth explanations regarding the accounting treatment of defective and damaged in determining the cost of production. This analysis will present research data in the form of numbers and be preented in a comprehensive narrative form. The result of this study indicated that the accounting treatment for the costs of defective and damaged products is carried out by reselling these products, thereby reducing losses due to defective and damaged products at Sheina Batik Jember. Additionaly, based on the calculation of losses from defective products recirded at Rp 5.682.400 and sold at a price of Rp 4.600.000, the losses incurred amount to Rp 1.082.400. Meanwhile, losses for damaged products reach Rp 3.600.000.

Keywords: Defective Products, Damaged Products, Production Costs.

INTRODUCTION

In line with increasing competition in the global landscape, business entities are urged to produce goods with competitive prices. To create quality goods, the effort undertaken is to optimize the production process so that the resulting products are free from defects. In the production process, issues related to defective and damaged products play a very important role, as they can lead to inaccuracies in the calculation of production costs. Imperfect goods have consumed costs during the production process, and ultimately, this will impact the quality of the final product (Zuhroh 2021).

Defective products are a significant problem for the smooth operation of a company. Defective products can damage the quality achieved during the production process, which will ultimately have a negative impact on the company's ability to maximize profits (Sartika and Muttagin 2022).

A damaged product is an item that does not meet the established quality specifications and does not fulfill the criteria for a usable product. The causes of damaged products can vary, including machine malfunction, low-quality materials, as well as human factors such as a lack of thoroughness in workmanship (Terang, Anggraini, and Noermaning 2023).

Sheina Batik is a small and medium-sized enterprise located in Andongsari Village, Ambulu Subdistrict, Jember Regency, that operates in the field of hand-drawn batik production. Sheina Batik is known for producing high-quality hand-drawn batik. The production process is carried out traditionally, starting from motif creation to coloring.

Every business inevitably faces various challenges, including Sheina Batik, which is the focus of this research and experiences phenomena such as a decrease in turnover. High-quality products are expected to help the business compete with similar enterprises. However, their implementation is often hindered by damage resulting from employee negligence and poor raw material quality.

The production process at Sheina Batik is not free from the problem of defective and damaged products. Mistakes in the making of hand-drawn batik fabric, such as incorrect coloring, wax drips on the fabric, as well as untidy motifs or layouts and uneven colors, frequently occur.

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Naturally, this results in losses for Sheina Batik, as damaged goods will impact the cost of goods sold

There are two different accounting treatments for handling products that do not meet quality standards, whether due to defects or damage: products that are saleable and those that are not. At Sheina Batik, there are defective and damaged products that are still considered saleable. These products are marketed at a price equivalent to perfect products.

Research conducted by (Zuhroh 2021) concluded that the company PT Exedy Prima Indonesia (EPI) has implemented accounting treatment for defective products in accordance with applicable accounting theory. In this case, all repair costs for defective products have been calculated as part of the product manufacturing costs. However, PT EPI has not yet implemented appropriate accounting treatment for products that have experienced significant damage. Ideally, the costs of these significantly damaged products should be recognized as a loss and not charged to the cost of goods manufactured. Instead, PT EPI charges these costs to the production cost of finished goods, which are then transferred to the finished goods inventory.

Research by (Marlinda et al. 2024) shows that the company classifies the costs of defective products as allocated to the factory overhead cost account, and the accounting treatment regarding this is in line with accounting theory. However, damaged products are not recorded by the company's finance department. Based on this, it can be concluded that improper accounting treatment of defective and damaged products will lead to an increase in the cost of goods sold, thereby potentially affecting the company's ability to generate profit.

The accounting treatment of defective and damaged products is very important for Sheina Batik because it will provide recommendations for improving their accounting system. Based on the explanation above, the author is interested in conducting research related to defective and damaged products entitled "Accounting Treatment of Defective and Damaged Products in Determining the Cost of Goods Sold at Sheina Batik Jember."

LITERATURE REVIEW

Production Cost

The cost of goods sold (COGS) is the total cost incurred to create a product, from raw materials to a ready-to-sell item (Terang, Anggraini, and Noermaning 2023). The cost of goods sold includes all expenditures necessary to produce high-quality, ready-to-sell products. This information is crucial for companies in determining profitable selling prices, controlling costs, and making appropriate business decisions (Samantha and Almalik 2019).

The cost of goods sold encompasses all expenditures incurred during the production process or related to the conversion of raw materials into finished goods. These costs include expenses related to raw material costs, direct labor costs, and factory overhead costs (Ketut Muliati, N. 2024).

Production Cost Element

The production function encompasses various activities aimed at processing raw materials into finished products. Meanwhile, the marketing function involves various activities to promote and sell products to consumers. The administration function consists of various activities aimed at supporting the other functions.

According to (Siregar, Baldric 2013), production costs are the expenditures required to process raw materials into finished products. If these costs are categorized based on the elements of production costs, they can be divided into three types:

- 1. Raw material cost.
- 2. Direct labor cost.
- 3. Manufacture overhead cost.

Production Cost Method

The method for determining the cost of goods sold is a way to allocate various cost elements into the cost of goods sold. In calculating the components of production costs, there are several methods that can be used :

1. Full Costing Method

The full costing method is an approach used to calculate the cost of producing a product by considering all cost factors involved during the production process. These costs include raw material costs, direct labor costs, and factory overhead costs, both variable and fixed. By using the full costing method, the total price of a product not only includes production costs but also non-production-related expenses such as marketing costs and general administrative costs (Soemarsoe 1999). Therefore, the full costing method integrates all the following elements of production costs:

Raw Material Costs	XX
Direct Labor Costs	XX
Variable Factory Overhead Costs	XX
Fixed Factory Overhead Costs	XX
Cost of Goods Sold	XX
Marketing Costs	XX
Admin. & General Costs	XX
Total Cost of Goods Sold	XX

2. Variable Costing Method

The variable costing method is an approach used to determine production costs by focusing only on variable cost components. These costs include expenditures related to raw material costs, direct labor costs, and variable factory overhead costs. Based on the variable costing approach, the total production cost consists of variable cost elements plus non-production-related costs such as variable marketing and general administrative costs, as well as fixed costs that include fixed factory overhead costs, fixed marketing costs, and fixed general administrative costs (Soemarsoe 1999). Therefore, the production costs calculated using the variable costing method include all the following components of production costs:

Raw Material Costs	XX
Direct Labor Costs	XX
Variable Factory Overhead Costs	XX
Cost of Goods Sold	XX
Variable Marketing Costs	XX
Variable Admin. & General Costs	XX
Fixed Factory Overhead Costs	XX
Fixed Marketing Costs	XX
Fixed Admin. & General Costs	\underline{XX}
Total Cost of Goods Sold	XX

Definition of Defective Products and Damaged Products

Defective products are products that do not meet the predetermined quality standards but can still be repaired at a low cost. These defects are caused by two factors: those resulting from customer demands (external factors), also known as abnormal causes, and those caused by internal factors, categorized as normal causes (Mursyidi 2008).

According to (Widyastuti 2017), defective goods differ from other raw materials because they are fully or almost fully complete units but exhibit defects in certain areas. These defective goods are not worth repairing because the repair costs would be disproportionate to the utility value of the goods after repair. Defective goods arise due to external factors, such as changes in specifications requested by clients that occur mid-production, or due to needs that adhere to very specific criteria. Additionally, internal factors, such as employee negligence or machine damage,

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can also contribute to these defects. The accounting treatment for defective goods will depend on the underlying cause.

Damaged products are items that are in poor condition or do not meet the established standards, making them unsuitable for repair with the aim of restoring them to normal products. Non-conforming, damaged, and defective products may still be repairable. The repair process requires costs to pay employees and additional costs that will be recognized as factory overhead (FOH) costs (Bahri, S,. Wayan Eny M 2021).

According to (Lantjo 2023), damaged products during the production process are difficult to prevent, whether due to normal circumstances or negligence. Damaged products are typically detected only after production is complete. Although these products do not meet the predetermined quality standards, there is a possibility of repairing them by incurring additional costs that are often more expensive than the selling price of the product after repair. Damaged products can be evaluated from two different perspectives: damaged goods considered saleable and unsaleable, and damaged products resulting from errors that are saleable and unsaleable.

Accounting Treatment of Defective Products and Damaged Products

Issues related to defective products are associated with the management of additional costs that arise from repairing damaged goods. According to (Mulyadi, 2012), the treatment of costs associated with defective products is determined by the cause of the defect, namely:

- 1. If defective products in the production process do not occur frequently but arise due to specific characteristics of a particular order, the costs to replace the defective components can be considered as additional costs for the production of that order.
- 2. If defective products occur frequently during the production process, the repair costs can be allocated to the entire production by including these expenditure costs in the factory overhead rate. The actual repair costs of defective products will be recorded in the actual factory overhead cost account.

The treatment of damaged products depends on the nature and cause of the damage (Soemarsoe 1999), which includes :

- 1. If product damage is caused by the complexity of the production process or external factors, it will result in additional production costs. These additional costs will be charged to the normal products within the same order. However, if the damaged products are still saleable, the profit obtained will be used to reduce the burden of these additional costs.
- 2. If product damage is considered normal in the production process, it will be charged as part of the total production cost by including the loss in the calculation of factory overhead.

Accounting for Defective Products and Damaged Products

According to (Sofia Prima, Septian 2010), the accounting treatment for defective goods varies, depending on the factors that caused the goods to become defective.

- 1. Defective goods due to changing customer demands after the goods have been produced (external factor). In this case, the resulting costs cannot be considered as part of the company's quality costs. Instead, these costs should be borne by the customer involved.
- 2. Defective goods that arise due to problems during the manufacturing stage, such as employee negligence or equipment damage (internal factor). In this case, the repair costs will be included in the factory overhead cost account, and this information will be reported regularly to management.

The treatment of damaged products can be assessed based on whether the products are in normal condition and saleable or unsaleable. This can be viewed from the perspective of damaged products caused by errors, as well as whether the products remain saleable or unsaleable (Lantjo, 2023).

- 1. Damaged products are considered normal and still saleable. The sales proceeds can be recorded as follows:
 - a. Recorded and booked as other income.
 - b. Recorded and booked as a reduction of factory overhead costs.
 - c. Recorded and booked as a decrease in various components of production costs.

- d. Recorded and booked as a reduction of finished goods inventory.
- 2. Damaged products are normal and unsaleable.

 The costs associated with these damaged products are recorded as an increase or expense in the production costs of finished goods, thus resulting in a higher per-unit manufacturing cost of the finished products.
- 3. Damaged products due to errors, are saleable.

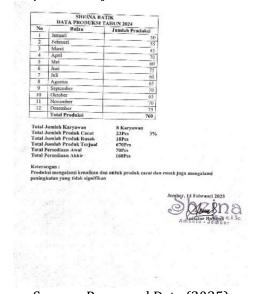
 The revenue generated from the sale of saleable damaged products resulting from errors will be recorded and booked as a reduction of the losses associated with the damaged goods.
- 4. Damaged products due to errors, are unsaleable.
 Costs associated with unsaleable damaged products resulting from errors are recorded and booked as a loss, comprehensively reflecting the damage incurred by the affected goods.

METHOD

The research method used is descriptive qualitative, which includes the collection, compilation, observation, interview, and analysis of data with the aim of gaining a clear understanding of the issues being researched. The data sources used in this study come from secondary data in the form of production cost reports, production process documentation, and materials used during the production process. Data analysis will involve calculating production costs, identifying defective and damaged products, preparing the cost of goods sold report, and determining the accounting treatment of defective and damaged products in relation to the cost of goods sold.

RESULTS AND DISCUSSION Initial Supplies

Beginning inventory refers to the stock of goods that is still available at the start of a period or the beginning of the current fiscal year. The amount of this beginning inventory can be found in the trial balance of the current period. Based on the beginning trial balance of the current year at Sheina Batik, there are 70 units of goods recorded as available. This beginning inventory consists of leftover products from the previous year that will be sold in the following year. This information aligns with the data provided by Sheina Batik.



Source : Processed Data (2025)

Fig 1. Sheina Batik Production Data in 2024

Final Inventory

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Final inventory is a stock of goods that still exist at the end of the accounting period or financial year. To find out the final inventori amount, the following formula can be used:

Final Inventory = Initial supplies + Production amount – Number of Products Sold

= 70 units + 760 units - 670 units

= 160 units

Calculating Production Costs

1. Raw Material Cost

Table 1. The Cost of Sheina Batik Raw Material in 2024

Raw	Number of	Number of	Unit Price	Raw Material
Matrial	Production	Units Used		Cost
	Units			
Kain	760 units	1.596 m	Rp 21.000/m	Rp 33.516.000
Pewarna	760 units	760 ons	Rp 14.500/ons	Rp 11.020.000
Malam/Lilin	760 units	2.280 ons	Rp 1.100/ons	Rp 2.508.000
Waterglass	760 units	760 kg	Rp 6.000/kg	Rp 4.560.000
Total				Rp 51.604.000

Source: Processed Data (2025)

Table 1 indicates that the total raw material cost in one year is Rp 51.604.000. The raw materials used by Sheina Batik are cotton fabric and environmentally friendly synthetic dyes.

2. Direct Labor Cost

Table 2. Sheina Batik Labor Cost in 2024

Direct Labor	Type of Wages	Number of Employees	Wages	Number of Effective Months	Direct Labor Cost
Gaji Karyawan Total	Monthly	8	Rp 600.000	12	Rp 57.600.000 Rp 57.600.000

Source: Processed Data (2025)

The data presented in Table 2 indicates that the labor costs incurred by Sheina Batik amount to Rp 57.600.000 per year for 8 employees.

3. Manufacture Overhead Cost

Table 3. Sheina Batik Factory Overhead Cost in 2024

Types of Factory Overhaed	Factory Overhaed Needed	Number of Production Units	Unit Price	Manufature Overhaed Cost
Biaya Pengemasan	760	760 units	Rp 20.000/product	Rp 15.200.000
Biaya Listrik	-	-	Rp 25.000/month	Rp 300.000
Total				Rp 15.500.000

Source: Processed Data (2025)

Based on Table 3, the total factory overhead cost at Sheina Batik amounts to Rp 15.500 000. This total includes packaging costs and electricity costs.

Table 4. The Cost of Sheina Batik Production in 2024

Type of Cost	Cost Amount
Raw Material Cost	Rp 51.604.000
Direct Labor Cost	Rp 57.600.000
Manufacture Overhead Cost	Rp 15.500.000
Total	Rp 124.704.000

Source: Processed Data (2025)

Calculate The Repair Cost

Table 5. Defective Product of Sheina Batik in 2024

Type of Batik	Number of Defective Batik Units	Percentage
Batik Tulis	23 units	3%

Source: Processed Data (2025)

Based on Table 5, the number of defective products was 23 units with a percentage of 3% in 2024. This significant number of defective products can lead to losses if sold below standard. Therefore, the repair of defective products requires proper cost allocation to ensure accurate calculation of the cost of goods sold.

Here are the costs to repair defective products in 2024, presented in the following table:

Table 6. The Cost of Raw Materials For The Repair of Defective Products

Raw	Number of	The	Unit Price	Repair Cost
Material	Defective	Number		
	Products	of Units		
		Used		
Warna	23 units	23 ons	Rp	Rp 333.500
			14.500/ons	
Malam/Lilin	23 units	69 ons	Rp 1.100/ons	Rp 75.900
Waterglass	23 units	23 kg	Rp 6.000/kg	Rp 138.000
Total				Rp 547.400

Source: Processed Data (2025)

Table 6 shows that the raw material costs for repairing defective products in 2024 amounted to Rp 547.400.

Table 7. Labor Cots of Repairing Defective Products

Labor Cost	Number of	The Cost	Cost Amount
	Defective	Used For	
	Products Units	Units	
Biaya Mencanting	23 units	Rp 10.000	Rp 230.000
Biaya Menyolet/Pewarnaan	23 units	Rp 10.000	Rp 230.000
Biaya Nglorod	23 units	Rp 5.000	Rp 115.000
Total			Rp 535.000

Source: Processed Data (2025)

Table 7 shows that the labor costs for repairing defective products at Sheina Batik are calculated per defective fabric. For the 23 units of defective products, the total labor cost for repairs amounted to Rp 535.000, which includes the costs of mencanting (wax application), pewarnaan (menyolet) (dyeing), and nglorod (wax removal).

Table 8. The Total Cost of Repairing Defective Products in 2024

Repairing Cost	Cost Amount
Biaya Bahan Baku	Rp 547.400
Biaya Tenaga Kerja	Rp 535.000
Total	Rp 1.082.400

Source: Processed Data (2025)

The table shows that throughout 2024, Sheina Batik incurred costs of Rp 1.082.400 for repairs, encompassing raw material costs and labor costs.

Production Cost Calculation

To determine the cost of goods manufactured, production costs are calculated based on the components of raw material costs, labor costs, and factory overhead costs. A production report is also necessary for this calculation. Therefore, the calculation of the cost of goods manufactured is as follows:

Cost of Goods Manufactured before Repairs

Raw Materials (BBB)	Rp 51,604,000
Direct Labor Costs (BTKL)	Rp 57,600,000
Factory Overhead Costs (BOP)	Rp 15.500.000
Total Production Costs	Rp 124,704,000

Production Costs after Repair Costs

Raw Materials (BBB) Rp 547,400
Direct Labor Costs (BTKL) Rp 535,000
Total Production Costs Rp 1,082,400

Dtermining of Defective and Damaged Products

1. Defective Products

The calculation of defective and spoiled products is performed using the formula (Siregar, Baldric, 2013). The calculation of the number of products can be done during the product manufacturing process.

Defective Products = % defective products × number of products

 $=3\% \times 760$ units

= 23 units

2. Damaged Product

The number of damaged products at Sheina Batik that are still tolerable is 18 units. These are not repaired but are sold at a lower price, with the corresponding data shown in the following figure:



Source : Processed Data (2025)

Fig 2. Sheina Batik Production Data in 2024

Production Cost Report

Table 9. Price of Batik Products

Table 3.1 fice of Batik i founcts				
Product Name	Number of Units	Selling Price	Total	
	01 011100			
Batik Tulis	760 units	Rp 200.000	Rp 152.000.000	

Source: Processed Data (2025)

Table 10. The Basic Price of Batik Production

Product Name	Number of Units	Production Cost of Units	Profit Per Units	Selling Price	Total
Batik Tulis	760 units	Rp 164.084	Rp 35.916	Rp 200.000	Rp 152.000.000

Source: Processed Data (2025)

Table 11. The Cost of The Production Price od Batik Defective Products

Number of Units	Cost of The Production of Defective Products	Selling Price	Desired Profit Per Units	Loss Per Units	Total Loss Per Units	Total Loss	
23 Units	Rp 211.145	Rp200.000	Rp 35.916	Rp 11.145	Rp 47.061	Rp 1.082.400	
Source : Processed Data (2025)							

Table 12. The Cost Price of The Production od Damaged Batik Products

Product Name	Number of Units	Production Cost	Profit Per Units	Selling Price	Total
Batik Tulis	18 units	Rp 164.084	Rp 35.916	Rp 200.000	Rp 3.600.000

Source: Processed Data (2025)

Treatment of Defective and Damaged Product Accounting Against The Cost of Production

1. Formula for the Cost of Defective Products

Loss Cost = Selling Price + Repair Cost \times Number of Defective Products = Rp 200,000 + Rp 47,061 \times 23 units = Rp 5,682,403

Sale of Defective Products = Price of Defective Product \times Number of Defective Products = Rp 200.000 \times 23 units

= Rp 4,600,000

Therefore, the loss from defective products amounts to Rp 5,682,400 - Rp 4,600,000 = Rp 1,082,400.

Since Sheina Batik sells defective products at the same price as normal products, the loss only lies in the cost of production repairs.

Repair Cost = Loss Cost : Number of Defective Products

= Rp 1,082,400 : 23 units

= Rp 47,061

2. Formula for the Cost of Spoiled Products

Loss Cost = Cost of Goods Sold per Unit × Number of Spoiled Products

 $= Rp 200,000 \times 18 units$

= Rp 3,600,000

Therefore, the loss from spoiled products amounts to Rp 3,600,000.

CONCLUSION

From the discussion above, it can be concluded that the accounting treatment for the costs of defective and spoiled products at Sheina Batik is carried out by repairing the defective products and reselling them. Thus, the company can reduce losses caused by imperfect products. Based on the calculations, the accounting treatment for defective and spoiled products shows that the production loss cost for defective products is Rp 1,082,400, while for spoiled products it is Rp 3,600,000.

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