

Analysis of the Treatment of Damaged Products in Bread Factories in Determination of Cost Price

Niken Nurjanah¹, Nitri Mirosea^{1*}, Andi Basru Wawo¹, Andi Muhammad Fuad Ramadhan¹

¹Department of Accounting, Faculty of Economics and Business, Halu Oleo University, Indonesia

*Corresponding Author, Email: nitri.mirosea@uho.ac.id

Abstract

This study aims to determine the treatment of damaged products in determining the cost of finished products at UD. Sari Rama Bakery and to find out whether the cost of goods for each finished product is in accordance with the actual amount of costs that have been used by each product. The data used is primary data obtained through interviews with UD owners. Sari Rama Bakery. Technical data analysis with the process of systematically searching and compiling data obtained from interviews and documentation. The results showed that in UD. Sari Rama Bakery has abnormally defective products. Accounting treatment of defective products at UD. Sari Rama Bakery is not recorded and also not reported in the cost of goods produced report, this is not in accordance with the concept of cost accounting which should report damaged products to the cost of goods produced report as an increase to the cost of goods produced.

Keywords: *Accounting Treatment, Cost of Goods Produced, Defective Products.*

INTRODUCTION

Currently, the industrial world is playing an important role in Indonesia's production era. The development of the times and technological advances have caused companies engaged in the industry to experience very rapid progress. This progress has had an impact on competition between companies, which is also getting tighter. Considering these conditions, each company must make more efforts to streamline and efficiently the time and costs that will be used to meet quantity targets but still produce high-quality products. (Nosra Weti, 2016).

In Indonesia, the majority of entrepreneurs develop their products, especially in the food industry, which grows rapidly by producing a variety of high-quality products, all of which were established with the intention of achieving the goal that has been set, namely, to obtain the maximum profit, thus increasing fierce competition between companies, especially in the field of food production, to create the best and quality products to attract consumers to the market. To create a high-quality product, companies cannot avoid mistakes, mistakes made by employees, and limitations of machines used in production or product management. Therefore, the company needs quality and prices that can compete with other businesses and follow its development, especially in the food industry.

The production process that pays attention to quality will produce good-quality products that are expected to be free from damage to avoid wasted costs.

In every production process, the company strives for the quality of the product to be maintained, but in its implementation, it cannot be separated from obstacles that can be caused by human error, limited machine capabilities, and lack of supervision of the production process. These obstacles cause damage, so the resulting products do not meet the quality standards that have been set (Glassie, 2014).

According to Kotler (2012), a product is anything that can be offered to the market to get attention, bought, used, or consumed to satisfy a desire or need. Conceptually, the product is the subjective understanding of what the producer can offer in an effort to achieve organizational goals by meeting the needs and activities of consumers, according to the competence and capacity of the organization, as well as the purchasing power of the market. An advanced company will not be separated from the quality that is improved by reducing the occurrence of damaged products, resulting in costs that will continue to decrease and ultimately increase profits. Damaged products are products produced during the production process, but they do not comply with the established quality standards. However, economically, the product can be repaired at a certain cost, but it could be that the required costs will be greater than the selling value after the product is repaired. The problem of defective products is important for companies. The effect of these product defects on the quality of the products adversely affects the company's main goal, which is to

make a profit. With the damaged product, the company experiences losses in costs and production processes because it is not suitable for sale at a price that has been determined by the company; therefore, the company must apply accounting treatment in accordance with these conditions to minimize the occurrence of production cost overruns.

According to Mulyadi (2015), damaged products do not meet predetermined quality standards and cannot be repaired economically into better products. Economically damaged products cannot be repaired if the cost of repair is greater than the increase in selling value, which may be because the damaged product sells well or does not sell.

According to Nosra Weti (2016), defective products are products produced in the production process, but the products do not conform to established quality standards, but in a timely manner.

economically, such products can be repaired at a certain cost, but it could be that the costs required will be greater than the selling value after the product is repaired. The problem of defective products is important for companies. The effect of these product defects on the quality of the products adversely affects the company's main goal, which is to make a profit. With the damaged product, the company experiences losses in costs and production processes because it is not suitable for sale at a price determined by the company; therefore, the company must apply accounting treatment in accordance with these conditions to minimize the occurrence of production cost overruns.

Based on defective product interviews that took place during UD. Sari Rama Bakery is due to expire (past the expiration date).

Table 1. Results of bread production at UD. Sari Rama Bakery from October to December 2022

No	Product Type	October		November		December	
		Finished Products	Product expired	Finished Products	Product expired	Finished Products	Product expired
1	Brown Bread	5.616	624	4.576	624	4.165	515
2	Braid Bread	4.680	520	4.118	562	3.471	429
3	Roti Polo	8.892	988	8.008	1.092	7.405	915
	Sum	19.188	2.132	16.702	2.279	15.041	1.859

On UD. Sari Rama Bakery does not allocate or charge the cost of damaged products to each finished product, the owner does not take into account the costs that have been absorbed by the existence of the damaged product. This defective product should be charged the cost of goods completed in the cost of goods produced report.

Defective products are a very important problem within a company. The influence of these products on the quality of the products produced has a negative influence on the company's main goal, which is to make a profit. With the damaged product, the company experiences losses in the production process because this product is not suitable for sale at the price determined by the company; therefore, it is necessary to understand the proper accounting treatment and adjust to the company's conditions. Cost accounting treatment in damaged products will help in providing detailed information on the costs used in damaged products, the causes of damage, and the cost of goods, so that they can be identified and classified to allow

careful calculation of the cost of goods produced. (Pradana, 2014)

According to Mulyadi (2015), the cost of goods produced is the overall cost incurred for the production process, which consists of direct raw materials, direct labor, and factory overhead costs plus product inventory in the initial process and minus product inventory in the final process. The calculation of the cost of goods produced is one of the most important cost accounting objectives because the cost of goods produced will be used in the calculation of the cost of goods sold and affect profits.

With damaged products, of course, this will also affect the calculation of the cost of goods produced. The cost of goods produced is a collection of production costs consisting of direct raw materials, direct labor, and factory overhead costs plus product inventory in the initial process and minus product inventory in the final process. The calculation of the cost of goods produced is one of the cost accounting objectives that is felt to be quite important because the

cost of goods produced will be used in the calculation of the cost of goods sold and considerations to determine the selling price of products. This significantly affects a company's profits. (Mulyadi, 2015)

Profit is the difference between revenue and profit after deducting expenses and losses, and profit is also a measurement of operating activities (Riwayadi 2017). A company's success or failure is seen from the company's profits or profits. If the desired company profit is appropriate, then the company has been involved in achieving the goal; if the profit received is not as desired or even a loss, it can be said that the company has failed to achieve the goal of obtaining profit. (Bastian, 2017)

Therefore, the problem that can be formulated in this study is how the treatment of damaged products determines the cost of finished products at UD. Sari Rama Bakery and What is the cost of goods for each finished product at UD. Sari Rama Bakery has adjusted the actual amount of costs that have been used by each.

The purpose of this study is to determine the treatment of damaged products to determine the cost of finished products at UD. Sari Rama Bakery. Determine the cost of goods for each finished product at UD. Sari Rama Bakery has adjusted the amount of actual costs that have been used by each.

According to Nasrul (2016), cost accounting is a process of identifying, defining, measuring, reporting, and analyzing elements of direct or indirect costs related to the production and marketing process of products.

Cost is the amount of money spent (or can be in the form of debt) on the company's operational activities to produce goods or services. Expense is a decrease in economic benefits during an accounting period in the form of outflows, decreases in assets, or the occurrence of liabilities that result in a decrease in equity that is not related to investment (Darsono, 2013).

In manufacturing enterprises, the cycle of activities begins with the processing of raw materials in the production section and ends with the delivery of finished products to the warehouse section. In manufacturing companies, the cost accounting cycle begins by recording the cost of raw materials included in the production process, followed by recording direct labor costs and factory overhead costs consumed for production, and ends with the presentation of the cost

of finished products submitted by the production department to the warehouse section. Cost accounting in manufacturing companies aims to present information on the cost of goods produced per unit of finished product submitted to a warehouse. (Sampurno, 2012).

According to Kotler (2012), quality refers to all the characteristics and properties of a product or service that affect the ability to satisfy stated or implied needs. This is a consumer-centered definition of quality: a producer can provide quality if the product or service provided can meet or exceed consumer expectations.

The importance of quality can be explained from two angles, namely from the point of operational management and marketing management. From the perspective of operational management, product quality is an important policy for increasing product competitiveness that must provide satisfaction to consumers exceeding or at least equal to the quality of products from competitors. (William, 2012).

Production costs are the costs used in the production process, consisting of direct raw material costs, direct labor costs, and factory overhead costs. This production cost is also called the product cost, which is the cost that can be associated with a product, and is part of the inventory.

The cost of the goods produced is closely related to the indicators of company success. The cost of goods produced shows the cost of goods (goods and services) produced in a certain accounting period. This means that the cost of the goods produced is part of the cost price, which is the cost of goods sold in an accounting period. According to Mulyadi (2015), the benefits obtained from the Cost of Goods Produced information for management are as follows: 1) determine the selling price of a product, 2) control production cost practices in the field, 3) calculate and know periodic profits or losses of the business, and 4) determine the cost of goods inventories and products in the process.

The methods of determining the cost of goods produced are the full costing method and variable costing. Full costing is a method of determining production costs that takes into account all elements of production costs, including raw material costs, direct labor costs, and factory overhead costs, both variable and fixed (Mulyadi, 2015). Variable costing is a method of determining the cost of production that only considers production costs that only behave variably

into production costs, consisting of raw material costs, direct labor costs, and variable factory overhead costs. (Mulyadi, 2015).

According to Muhtarudin (2019), damaged products are failed products that technically or economically cannot be repaired into products that comply with established quality standards, but have used all elements of production costs (raw materials, labor, and factory overhead). Bustami and Nurlela (2007) Define a damaged product is a product produced in the production process, where the resulting product can be repaired at a certain cost, but the costs incurred tend to be greater than the selling value after the product is repaired.

Damaged products can be caused by two factors: first, damaged products are caused by external conditions, for example, difficult workmanship specifications set by the customer, or these conditions are commonly called abnormal causes. If this condition is treated as a good increase in the cost of goods of the product, the damaged product is estimated to be sold. The estimated market value is treated as a reduction in production costs. This indicates that the incurred losses are charged in the order in question. Second, damaged products caused by internal parties, such as poor raw materials, equipment, and experts, are commonly called normal causes.

Damaged products that occur in the production process can be caused by a lack of supervision during the production process, which is considered an abnormal error; damaged products that occur can also be caused by the state of the machine used to produce; for example, the machine is worn out or the machine is damaged, and damaged products can also occur because of the quality of raw materials used in the production process, and if the raw materials used are of low quality, the volume of damaged products is also large.

Defective products can be divided into normal and abnormal products. The accounting treatment of defective products is intended to determine the magnitude of the cost of damage and distinguish between the costs of normal and abnormal damage.

Normal damage is the damage inherent in a particular production process that still occurs, even though operations have taken place efficiently. In general, the production cost or cost of goods of defective products that are normal are treated as part of the cost of goods completed because the presence of

damaged products is considered necessary to produce a number of finished products. Abnormal damage is not inherent in a particular production process and does not occur under efficient operating conditions. To address the effect of abnormal damage costs, the company calculates abnormal damaged units and records their costs on the loss account of abnormal damage, which is presented as a separate heading in the income statement. (Horngren et al., 2012)

According to Murshidi (2010), the accounting treatment of damaged products has four properties and causes: 1) damaged products are normally sold, and the sales results are treated as: a) Other income b) Reduction of factory overhead costs, c) Deduction of each element of production costs, d) Deduction of the cost of goods of finished products; 2) Normal damaged products are not sold, and the cost of damaged products will be charged to the finished product so that the cost of finished products increases. 3) Damaged products are abnormally sold; therefore, the sales results of damaged products are treated as a deduction for damaged product losses. 4) The defective product is abnormal and unsellable; therefore, the cost of the defective product should not be calculated as the cost of the finished product but must be considered as a loss, so it will be treated as a loss of the defective product.

METHODS

The research was conducted at UD. Sari Rama Bakery which is located at Jalan Sains II Gg. IV, Mataiwoi, Kec. Wua-Wua, Kendari City, Southeast Sulawesi 931117. The location of the research was chosen considering that both the data and information needed are easy to obtain and relevant to the subject matter, which is the main object of research.

Quantitative and qualitative data were used in this study. This study uses quantitative data in the form of production data, cost data, and other information related to production cost reports. In this study, qualitative data are in the form of an explanation from the company regarding the information related to this study. The data sources used in this study are primary and secondary data. The primary data in this study were collected through direct interviews with company owners. The data to be obtained are in the form of an overview of the company, organizational structure, and information on the treatment of damaged products and the UD cost of goods produced reports. Sari Rama

Bakery in production in 2022. Secondary data: The data obtained in this study are in the form of theory, literature review, and previous research.

Data collection in this study used interview and documentation methods. In this study, direct interviews were conducted with the company's management, in which case the company's leaders and the documents used in this study were in the form of document information in the company that was revalidated with this research.

This study uses descriptive analysis with a quantitative approach to calculate the cost of goods that UD should set. Sari Rama Bakery and explained the treatment of damaged products to determine the cost of goods of their products.

Production costs are the costs incurred to process the raw materials into finished products. The production costs used in the production process consist of direct raw material, direct labor, and factory overhead costs. Costs are often measured in monetary units (dollars) that must be paid for goods and services.

The cost of goods produced is the total cost of producing goods that have been completed in a certain period. The cost of goods produced includes the costs incurred during the production process, namely the cost of raw materials, labor costs, and factory overhead costs. The calculation of the cost of goods produced is one of the most important cost accounting objectives because the cost of goods produced will be used in the calculation of the cost of goods sold and affect profits.

Damaged products are products that have gone through the production process but do not meet the quality standards that have been set; to repair the damaged product will cost more and the quality is still not better than other standard products. Occurrence of Defective Products in UD. Sari Rama Bakery is due to mistakes made by employees and lack of supervision of the implementation of the production process.

RESULTS AND DISCUSSION

Presenting data based on the right type of research. Data can be presented in the form of a narrative, table, or an appropriate picture. Then, the data were analyzed by comparing the concepts, theories, and results of previous research.

Collection of production costs at UD. Sari Rama Bakery for the period of October, November, and December in 2022. The results of the interviews were as follows:

The direct raw material costs in the manufacture of brown bread, braids, and polo consist of flour, eggs, butter, sugar, chocolate, vanilla, messes, cheese, milk, and miscellaneous adjuvants.

"The raw materials used in making the three types of bread consist of flour, eggs, butter, sugar, chocolate, vanilla, messes, cheese, milk, and other auxiliary ingredients. (interview by Abe's mother on March 7, 2023)

Direct labor is all employees who directly participate in the production process consisting of 3 people for the procurement of materials, 4 people who carry out processing and forming, 5 people for combustion and cooling, and the last consists of 6 people who do packaging.

"In the manufacture of products at UD. Sari Rama Bakery uses 3 people to procure ingredients for each type of bread made, consisting of 4 people who do processing and forming, 5 people for baking and cooling, and the last one consists of 6 people who do packaging. Employee salaries are determined based on the employee's old or new and type of work, for old employees the salary amount is Rp. 2,750,000, and the amount of salary for old employees is RP. 1,300,000, and it has been covered by the employees' meals and residences." (interview by Abe's mother on March 7, 2023)

Factory overhead costs, that is, all costs other than direct raw material costs and direct labor costs, but help in converting materials into finished products consisting of electricity and water costs. "In carrying out the bread production process using machines that require electricity, so the electricity costs incurred every month are Rp. 1,750,000. (interview by Abe's mother on March 7, 2023)

"In the process of extracting bread ingredients requires water, the cost incurred every month is Rp. 1,750,000." (interview by Abe's mother on March 7, 2023)

"In the bread packaging process, bread is packaged using plastic, the cost used every month is Rp. 2,000,000". (interview by Abe's mother on March 7, 2023)

"In the roasting process, the gas cost incurred every month is Rp. 2,990,000" (interview by Abe's mother on March 7, 2023)

Calculation of production costs and treatment of damaged products based on UD. Sari Rama Bakery

that happened in three months, The results of the interviews were as follows:

"Yes, in the production process, there are damaged products due to mistakes made by employees in the combustion and packaging process and lack of supervision of the implementation of the production process. As well as the number of damaged products for three months for brown bread which is 104 pcs, braid bread 90 pcs, and polo bread 177 pcs." (interview by Abe's mother on March 7, 2023)

Based on interviews with UD owners. Sari Rama Bakery about how the treatment of damaged products, here are the results of her interview:

"There are indeed goods that do not meet standards such as damage, for example due to employee errors in the combustion and packaging process and lack of supervision of the implementation

of the production process. The item cannot be repaired and cannot be sold, so we burn it unless someone wants to buy it to feed the fish." (interview by Abe's mother on March 7, 2023)

The interview was then conducted with UD. Sari Rama Bakery about how the factory presents a report on the cost of goods produced, here are the results of her interview:

"In this factory there is no presentation of the cost of goods produced report specifically, because it only records thoroughly every production process carried out in the factory, and it is still recorded manually and there is no one specifically to record the report of cost of goods produced." (interview by Abe's mother on March 7, 2023).

Table 2. Calculation of Production costs and treatment of defective products based on UD. Sari Rama Bakery for October, November and December 2022

No	Types of Fees	Total		
		Brown Bread	Braided bread	Polo Bread
1.	Flour	18,018,000	14,586,000	32.318.000
	Sugar	11,232,000	8.424.000	18.252.000
	Butter	5.070.000	3.510.000	9.750.000
	Egg	6.370.000	.5.070.000	10.660.000
	Brown	2.500.000	-	-
	Vanilla	-	900.000	1.582.000
	Messes	-	630.000	-
	Cheese	--	840.000	-
	Milk	1.550.000	-	1.470.000
	Other Auxiliary Materials		1.350.000	2.140.000
Total		44,740,000	47,460,000	76.172.000
2.	BTKL	36,450,000	36,450,000	36.450.000
3.	BOP	15,490,000	15,490,000	15.490.000
Total cost of production / Cost of Goods Produced		96,680,000	99,400,000	128,122,000
Production Volume (Units)		16.016	13.690	27.123
Cost of goods produced per piece		6,036.46	7,260.77	4,723.37

Data Source: Processed in 2023

Based on the results of the calculation of the cost of goods damaged at UD. Sari Rama Bakery should calculate depreciation costs and include the cost of damaged products as an increase in the cost of goods produced so that the profit generated becomes greater.

Based on the results of the study, the calculation results according to the company before including the cost of damaged products, the cost of goods produced for brown bread is IDR 96,680,000, braid bread IDR 99,400,000, and polo bread IDR 128,122,000. for the selling price per unit of brown bread and Rp. IDR

6,036.46, braid bread IDR 7,260.77, and polo bread IDR 4,723.37. Meanwhile, according to the results of the analysis in Table 4.5, after including depreciation costs and the cost of damaged goods, the cost of goods produced becomes greater, namely brown bread Rp. Rp. 103,660,942. braid bread Rp. 106,359,759 and polo bread Rp. 135,323,755. Therefore, the unit price of brown bread is Rp. 6,472.33, and that of braided

bread is Rp. 7,769.15, and that of polo bread is Rp. 4,989.26.

The difference in the company's calculation results with the calculation results according to the analysis is due to the fact that in calculating factory overhead costs, the company does not calculate depreciation costs, and in calculating the cost of goods produced, the company does not include the cost of damaged products in its calculations.

Table 3. Analysis of Cost of Goods Produced Calculation

No	Types of Fees	Total		
		Brown Bread	Braided bread	Polo Bread
1.	Flour	18.018.000	14.586.000	32.318.000
	Sugar	11.232.000	8.424.000	18.252.000
	Butter	5.070.000	3.510.000	9.750.000
	Egg	6.370.000	5.070.000	10.660.000
	Brown	2.500.000	-	-
	Vanilla	-	900.000	1.582.000
	Messes	-	630.000	-
	Cheese	-	840.000	-
	Milk	-	-	1.470.000
	Other Auxiliary Materials	1.550.000	1.350.000	2.140.000
	Total	44.740.000	47.460.000	76.172.000
2.	BTKL	36.450.000	36.450.000	36.450.000
3.	BOP	22.281.584	22.281.584	22.281.584
Total cost of production/cost of goods produced		103,471,584	106,191,584	134,903,584
Cost of Goods Damaged		189.358	168.175	420.171
Cost of Goods Produced		103,660,942	106,359,759	135,323,755
Production volume (Units)		16.016	13.690	27.123
Cost of goods produced per piece		6,472.33	7,769.15	4,989.26

Data Source: Processed in 2023

Calculation of production costs and treatment of defective products at UD. Sari Rama Bakery is that there is no calculation of production costs specifically because the factory owner does not know about the calculation of production costs in accordance with accounting procedures. In addition, there is no special treatment for damaged products or reprocessing of these products, unless someone wants to buy fish feed. The damaged product was not calculated in the cost of goods produced first, so losses due to the damaged product should be charged into production costs at that

time. In this case, the company suffered a loss due to a damaged product, but the company did not calculate it.

Defective products that occur during UD. Sari Rama Bakery is external or abnormal, because the occurrence of damaged products is due to mistakes made by employees in the combustion and packaging process and lack of supervision of the implementation of the production process. In this case, the accounting treatment of damaged products, namely, the cost of damaged products, increases the cost of goods produced because it has absorbed all production costs.

Based on the calculation of the analysis results, the cost of goods produced increases, resulting in a lower profit calculation. However, in the long run, when the company calculates production costs correctly to account for all goods and damaged products, it will greatly help the company.

Thus, from the results of this study, it is expected that with damaged products, the company can minimize the damage by looking for more experienced employees, conducting supervision (quality control), using more sophisticated machines, and calculating all production costs that have been absorbed, both good products and damaged products; it is expected that the company can run in the long term and there are no losses that are unknown to the company, because the damaged products that occur have absorbed all production costs.

CONCLUSION

Based on the results of research and discussion that have been described by the author, it can be concluded that the treatment of damaged products in determining the cost of finished products according to the company has not been in accordance with accounting for damaged products; the damaged products are not reported to the report of cost of goods produced as an increase in cost of goods produced and damaged products must be considered as losses because the damaged products are abnormal in nature, where the damaged product occurs due to employee errors in the combustion and packaging process and lack of supervision of the implementation of the production process and calculation of the cost of goods produced by each finished product at UD. Sari Rama Bakery does not yet reflect the actual cost amount consumed by each product. This is because the damaged product is not reported in the cost of goods produced as an increase in the company's initial cost of goods produced.

REFERENCES

- Bastian and Nurlela. (2017). *Cost Accounting*. Graha Science.
- Bustami and Nurlela. (2007). *Cost Accounting: Theory & Applications*. Graha Science.
- Darsono Prawironegoro and Ari Purwanti. (2013). *Management Accounting* (p. p. p.) 49). Media Discourse Partners.
- Glassie L.A.D. Maringka., J.J. Tinangon., V. Z. T. (2014). Analysis of the Accounting Treatment of Defective Products in the Calculation of Cost of Goods at UD. Gladys Bakery Maumbi. *EMBA*, II(2), 756.
- Hornrgren et al. (2012). *Cost Accounting with Managerial Emphasis* (12th ed., p. 216). Erlangga.
- Kotler Philip. (2012). *Marketing Management* (13th ed.). Hawk.
- Muhtarudin, Tuti Sulastri. (2019). *Accounting for Defective Products in Determining Cost of Goods Produced* (Case Study of Determining Production Costs in the Cibaduyut Shoe Industry Center Area of Bandung City). *MEA Scientific (Management, Economics, and Accounting)*, III(1), p.85.
- Mulyadi. (2015). *Cost Accounting* (5th ed.). YKPN, College of Management Sciences.
- Murshidi. (2010). *Cost Accounting* (p. 116). Refika Aditama.
- Nasrul Zahirudin, et. al. (2016). *Analysis of the Accounting Treatment of Defective Products in Cost of Goods Produced at UD. The work of Jaya Waru Sidoarjo*. Faculty of Economics, Bhayangkara University, Surabaya II(4) 143.
- Nosra Weti. (2016). *Analysis of the Accounting Treatment of Damaged Products at PT. Indofood CBP Sukses Makmur Tbk Pekanbaru in Scientific Articles*. Faculty of Economics, Pasir Pengaraian University, Rokan Hulu 2.
- Pradana Setiadi, et. al. (2014). Calculation of the Cost of Goods Produced in Determining Selling Prices on CV Minahasa Mantap Perkasa. *Periodical of Scientific Efficiency*, XIV(2), 71.
- Sampurno Wibowo and Yani Meilani. (2012). *Cost Accounting* (p. 42). Telkom Polytechnic.
- William K Carter. (2012). *Cost Accounting* (14th ed.). Salemba Four.