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CALCULATION OF COST OF GOODS PRODUCED USING THE VARIABLE COSTING APPROACH ORDER PRICE METHOD AT MSME TOMANG BAKERY MEDAN CITY

Sri Miranty Siregar*[1], Tanti Septiana BR Sembiring[2], Rahelsa Octaviana[3], Raudatul Jannah[4], An Suci Azzahra[5], Noviani[6]
[1,2,3,4,5,6]Universitas Pembangunan Pancabudi
Jl. Jend. Gatot Subroto Km. 4,5 Sei Sikambing Kota Medan
***Email:** srimirantysiregar38@gmail.com

ABSTRACT
This research aims to calculate the cost of production of brownies orders using the cost of order method with factory overhead costs determined in advance and then calculating the operating profit obtained by the company. The research methods used to collect data were interviews, observation and literature study, so that quantitative data, qualitative data, primary data and secondary data were obtained. The writing method used is the method of description and exposition. The description method is used to explain the general picture of the company, while the exposition method is used to analyze production data which is used as a basis for calculating the cost of production. The results of calculating the cost of production using the cost of goods ordered method with factory overhead costs determined in advance show the variable costing method, the production cost of brownies per 1 box of brownies is IDR 58,035, and with the addition of the desired profit of 40%, the selling price per 1 box of brownies is IDR 81,249. So it can be compared the selling price of the company's products using the traditional method and the variable costing method is IDR 80,000 for the selling price using the traditional method and IDR 81,249 for the selling price using the variable costing method, and has a difference of IDR 1,249.

INTRODUCTION

Amidst the danger of recession, MSMEs are the determinant of the national economy. Micro, Small and Medium Enterprises (MSMEs) play a significant role in Indonesia's economic development. This group of MSMEs has a very large number compared to other parts of the effort (Handayani et al., 2023). According to Zakawali (2022) sourced from information from the Investment Coordinating Body, MSMEs have a participation in GDP of 61.97% of the total national GDP or comparable to Rp. 8. 500 trillion in 2020. MSMEs also absorbed 97% of the activity power in the same year. Such is the significance of the position of MSMEs that the authorities in various regions are constantly trying to accommodate and share support for the development of MSMEs. (Handayani et al., 2023). MSMEs want the insight to master the determination of costs produced as a result of being able to write, measure, and identify costs produced adrift. This will increase the accuracy of small business profits (Leatemia, 2024). MSME players should carry out regular assessments so that the main price determination can be applied

well, resulting in better profit accuracy in MSMEs. (Leatemia, 2024). According to Nabila et al., (2022) stated that the low description of small factory actors in terms of financial management can cause the defeat of the effort. Financial management is the programming, application, and organization of industrial finance in carrying out industrial operations. (Nahdiatul Hasanah et al., 2023). Entrepreneurs then create and update, one of which is in the ingredients they produce, not least in the food service industry. Not only that, the industry must also pay close attention to determining the selling price for customers in order to compete with other industries. The main price of the creator is the main factor in ensuring the selling price of the product. (Ainiah & Primastiwi, 2024). Entrepreneurs then create and update, one of which is in the ingredients they produce, not least in the food service industry. Not only that, the industry must also pay close attention to determining the selling price for customers in order to compete with other industries. The main price of the costs produced is the main factor in ensuring the selling price. (Ainiah & Primastiwi, 2024).

Monitoring the cost of delivery in a detailed way, the industry can carry out better programming to maximize the use of the energy base as well as ensure a suitable selling price. Equating the main price of the cost produced by the delivery with the selling price, the industry can assess the profitability of each delivery in an individual way. This helps in gathering decisions on whether to welcome or reject deliveries in the future. Accuracy in estimating the cost of basic materials, activity power, factory overheads, and other aspects is crucial to deciding on a competitive selling price and a natural profit limit. (Rakhman et al., 2023). According to Azizah and Sulistiyo (2018) Calculation of the main price of costs produced must be tried carefully, because mistakes in this calculation can cause losses for the industry. If the main price of the cost produced is formalized very large, the selling price of the product will also be large, and vice versa. A very large selling price can make it difficult for the industry to compete with other industries that offer smaller prices, while a very small selling price will harm the industry because the profits earned are small. (Ainiah & Primastiwi, 2024). If the industry can divide the main price of the costs produced carefully, so that it can decide on a natural selling price, not very large or very small, as a result it can create profits that match the industry's dreams. (Fauzi, 2023). Calculation of HPP (Cost of Goods Manufactured) of orders that are precise and accurate is something that must be done by every company or MSME actor. Without a correct and accurate calculation of the COGS of an order, the company or MSME actor will face problems in setting the selling price of a product. (Monoarfa et al., 2023). Order cost of goods manufactured calculation is an important process in cost accounting to determine the manufacturing costs associated with each order processed by a company. Each order can have unique characteristics, such as different raw materials or varying degrees of complexity in the production process, resulting in variability in production costs between orders. Order production costs include direct costs (such as raw materials and direct labor) as well as indirect costs (such as factory overhead costs). According to Carter, et al (2015) The job order costing method accumulates costs for each group or order separately. This method requires that the identity of each order be clearly separated. (Ainiah & Primastiwi, 2024). In the order-based cost calculation method by accumulating raw material costs, direct labor costs and overhead charged to each order. (Andriatama et al., 2020). Each

industry has to be able to divide the main price of the product made correctly and appropriately to get profit, as a result it can be used in collecting provisions and determining profitable policies in the industry with the help of careful data. (Syam et al., 2023). This in-depth description of the costs produced is meaningful for protecting quality, client happiness, and competitive energy in a competitive market. (Situngkir et al., 2024).. Greater emphasis on description and more efficient management of the cost of production could be the key to success for businesses in food service factories and culinary zones in a totalizing way. (Situngkir et al., 2024).

According to Dewi and Kristianto (2015: 21-22) Main Price Produced costs are the cost of objects purchased for processing to end, either before or during the current accounting time span. All of these costs are supply costs. Supplies are all product costs that are counted as assets in the balance sheet when they are established and then become the main price of marketing when the product is sold. The main price of marketing includes all the costs of production costs incurred to make the object being sold. (Alfarisi & Boediono, 2021). According to V. Wiratna Sujarweni (2015) assumes that an important goal in pursuing cost accounting is to obtain data on the costs produced which will be used for: 1. Determination of the main price of the product; 2. Cost programming and cost control; 3. Collection of special provisions (Fahira Aundri, 2021). The main price of costs produced has the purpose of being a tool for deciding the selling price of a product, for deciding the profit expected by the industry, and as a tool for measuring or calculating the ability of a method of costs produced. (Yanto, 2023). According to Lestari and Dhyka (2017: 108) there are 2 major approaches that can be used in the calculation of the main price of costs produced, namely the calculation of the cost of delivered products and the calculation of the cost of manufactured products. (Suryani & Putiharjo, 2023). One of the parts that has a very significant position in the determination of industrial profits is the determination of the main price of costs produced (Rakhman et al., 2023). According to Dewi Dan Kriswanto (2015: 21-22) The elements of the calculation of the main price of production are to recognize the amount of production costs incurred to produce an object, usually the production costs include basic material costs, direct activity power costs, and factory overhead costs. (Alfarisi & Boediono, 2021). The elastic costing procedure is a procedure for ascertaining the ultimate price of the product by estimating only the elastic cost of production, the costs that are taken into account as the ultimate price of production in the elastic costing procedure are the elastic cost of production consisting of direct material costs, direct activity costs, and elastic factory overhead costs. In the elastic costing approach, only those costs of produced costs that change in the same direction as output changes are treated as part of the product's ultimate cost. (Mangintiu et al., 2020). Determining the method of distributing overhead costs to orders in a balanced and appropriate manner is an integral part of the calculation of the cost of goods ordered. According to Widyastuti and Mita (2018), one of the cases experienced by the industry is the duration of the formation of factory overhead costs that are not similar and the attitude of factory overhead costs that are not similar, as a result it will be difficult for the industry if it is obliged to delegate factory overhead costs until all factory overhead costs are known. This character also makes factory overhead costs difficult to weigh in an

appropriate way, because it requires description and accuracy to be able to ensure the right BOP payment. (Ainiah & Primastiwi, 2024).

METHOD

The analysis procedure that the author utilizes in this research is a qualitative descriptive analysis procedure, which is an analysis that describes or describes how to decide the product price using the elastic costing procedure. Inferior information in this research is obtained from librarian research, as well as researchers in advance, as well as information obtained from Tomang Bakery's efforts in the form of information on one-time creation of brownie delivery fees. Data collection techniques are interviews, documentation records and observation. The analysis method used in this research is as follows:

1. Calculate information or deeds in the form of basic material fees, auxiliary material fees, direct activity power fees, and factory overhead fees.
2. Calculate basic material expenses, auxiliary material expenses, direct activity power expenses, factory overhead expenses.
3. Divide the cost price produced using the price plant queue procedure.
4. Recognize different industrial creation price calculations and order pricing procedures

RESULTS

Tomang Bakeri is a company engaged in the culinary field. Products that are done are birthday cakes, bolen, brownies, kuker, donuts, pizza, various pies, pudding, hampers and others. In this business, it produces based on orders with product specifications that have been determined by the orderer, so the method of collecting the cost of production used by this business is the order cost method. In this research, the author cites 1 type of product to be used as an illustration is brownies because the product is a product that is very much liked by clients. The production flow of the package order is as follows:

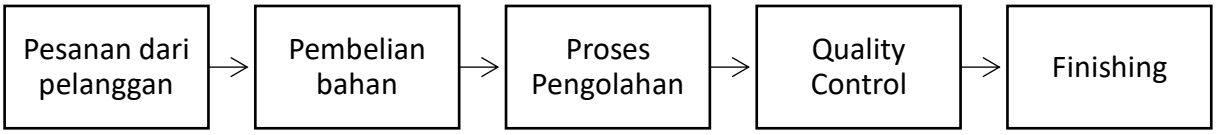

Figure : Brownie Production Process at Tomang Bakery

In calculating the cost of goods manufactured using the order cost method, there are costs inherent in the product. The costs contained in production costs consist of raw material costs, labor costs, and factory overhead costs. The calculation of COGS for Brownies Order 1 Box is as follows:

Raw Material Cost

Table 1. Calculation of Raw Material Cost for 1 Box of Brownies

Material Name	Unit	Price Per Unit (Rp)	Total Price (Rp)
Wheat Flour	200 grams	1.500	3.000
Chocolate	200 grams	7.000	14.000
Eggs	3 items	2.000	6.000
Butter	100 grams	4.000	4.000
Sugar	250 grams	2.000	5.000
Total			**32.000**

Source:*Author's compilation, 2024*

Based on this data, it can be seen that the amount of raw material costs used to produce an order for 1 box of Brownies is IDR 32,000.

Direct Labor Costs

Direct labor costs are salaries and wages paid to all workers directly involved in the production process to produce finished goods. Tomang Bakery has 2 employees, one in production and one in marketing. Employee wages per production of 1 box of brownies is IDR 10,000 per employee. Employee wages are paid once every production. In one month employees work normally for 29 working days with working hours 07.30-16.30 WIB. The calculation of the use of direct labor costs on orders for 1 box of brownies is as follows:

Table 2. Calculation of Direct Labor Costs of 1 Brownie Box

No.	Type of Labor	Number (people)	Wage Cost per Production	Direct Labor Wage Cost
1.	Production Section	1	IDR 10,000,-	IDR 10,000,-

Source:*Author's compilation, 2024*

Based on this data, it can be seen that completing an order for 1 box of brownies requires direct labor costs of IDR 10,000.

The factory overhead costs calculated in an order of 1 box of brownies are as follows:

Cost of auxiliary materials

Auxiliary materials are materials that are used in the completion of the product but the usage is relatively small. The auxiliary materials used by Tomang Bakery can be seen in the following table:

Table 3. Usage of auxiliary materials

Type of auxiliary materials	**Raw Material Cost**
Oreo	1000 IDR
Chopped Peanuts	1000 IDR
Choco Chips	RP 1000
Almonds	RP 1000
Chocolate Glaze	1000 IDR
Plastic Packaging	IDR 200

Box brownies	IDR 2,500
Brand label	500 IDR
Total	**IDR 8,200**

Source:*Author's compilation, 2024*

From the table, it can be seen that the use of auxiliary materials for the order of the Grilled Chicken Package is IDR 8,200. There are several elements of factory overhead costs that have not been accounted for by Tomang Bakery. These costs are:

Electricity Cost

The cost of electricity is the cost incurred to use electricity as an energy source for various purposes, both in households and in business environments. This cost consists of various components, including the actual cost of electrical energy (the cost of kWh consumed), fixed costs (e.g. metering fees or network maintenance fees), as well as taxes and other related fees. The electricity usage to operate an oven depends on several factors such as the type of oven (electric or gas), the power (wattage) of the oven, the temperature used, and the duration of usage. Here is how to calculate the electricity consumption of an electric oven in general: Calculating Electricity Consumption of Electric Ovens:

1. **Knowing the Oven Power (Watt):**
   - Electric ovens usually have a power listed in their specifications, for example 1000 watts (1 kW) to 3000 watts (3 kW).
2. **Usage Duration (Hours):**
   - Determine how long the oven is used in one use, for example 1 hour, 2 hours, and so on.
3. **Calculating Electricity Consumption:**
   - The formula for calculating electricity consumption is:
   - Electricity Consumption (kWh)=Power (kW)×Duration (hour)

Calculation of electricity costs for using the oven 1 time for brownie production:

- Electric oven with 2000 watts (2 kW) power
- Oven time is 30 minutes.
- Electricity Consumption=2 kW×0.5 hours= 1 kWh
- Electricity tariff IDR 1,500 per kWh
- Electricity Cost = 1 kWh x Rp 1,500,-/kWh = Rp 1,500,-

The cost of electricity used for every 1 production of 1 box of brownies is IDR 1,500.

Depreciation Expenses.

Depreciation costs of fixed assets include depreciation of machinery and equipment owned by Tomang Bakery business. The method used to calculate depreciation is the straight-line method. Depreciation is the process of allocating the fixed costs of fixed assets (such as equipment, buildings, or vehicles) over their useful lives. Depreciation expense per unit is a method to calculate the depreciation expense per unit of product produced by the asset. This method is commonly used in integrated cost systems or as part of product cost analysis. The general formula for calculating depreciation expense per unit is as follows:

Depreciation Expense per Unit = $\frac{\textit{Biaya Penyusutan Total}}{\textit{Total Unit Produksi atau Penjualan}}$

Table 4. Machine Depreciation Cost per 1 Box of Brownies

Description	Acquisition Price per unit	Number of Units	Total Acquisition Price	Economic Life per use	Depreciation expense per usage
Digital cake weigher	28.000	1	28.000	200	IDR 125,-
Electric oven	1.400.000	1	1.400.000	500	IDR 2,800,-
Total Machine Depreciation Cost per 1 production of 1 box of Brownies					**IDR 2,925**

Source:*Author's compilation, 2024*

Table 5. Equipment Depreciation Cost per 1 Box of Brownies

Description	Acquisition Price per unit	Number of Units	Total Acquisition Price	Economic Life (per use)	Depreciation expense per usage
Steam pot	25.000	1	25. 000	500	IDR 50,-
Brownie pan	35.000	1	35.000	200	IDR 175,-
Mixing bowl	65.000	1	65.000	500	IDR 130,-
Spatula	10.000	1	10.000	200	IDR 50,-
Egg whisk (Whisk)	40.000	1	40.000	500	IDR 80,-
Total Equipment Depreciation Cost			**1.603.000**		**IDR 3,410**

Source:*Author's compilation, 2024*

From the explanation above, it is obtained a recapitulation of the actual factory overhead costs for each production of 1 box of brownies for Tomang Bakery:

Table 6. Recapitulation of Factory Overhead Costs per 1 Box of Brownies

Cost Type	Cost Amount
Cost of auxiliary materials	IDR 8,200,-
Electricity Cost	IDR 1,500,-
Machine Depreciation Cost	RP 2,925,-
Equipment Depreciation Cost	RP 3,410,-
Total	**IDR 16,035,-**

Source:*Author's compilation, 2024*

Based on the data above, it can be seen that the overhead cost rate per 1 box of Brownies at Tomang Bakery is IDR 3,410.

DISCUSSION

Review The elastic costing procedure is a way to determine the main price of the product by only taking into account the elastic creation cost. The elastic costing approach is to divide all the intertwined expenses ranging from basic materials, factory overhead costs, direct activity power costs, indirect activity power costs, divide the main price of creation after which decide the selling price by increasing the mark up according to what percentage profit the industry wants.

Cost of Goods Manufactured with Variable Costing Method

Table 7. Cost of Goods Manufactured using the Variable Costing Method

Cost Type	Cost Amount
Raw Material Cost	IDR 32,000
Direct Labor Costs	IDR 10,000,-
Factory Overhead Costs	RP 16,035,-
Total Production Cost	**IDR 58,035,-**

Source:*Author's compilation, 2024*

The table above shows that the total production cost of 1 box of brownies is IDR 58,035. Furthermore, the selling price of production can be calculated by summing up the Total Production Cost with a profit set at 40% then divided by the Total Production of 1 box of brownies. The calculation is as follows:

$$\text{Product Selling Price} = \frac{Total\ Biaya\ Produksi + Laba\ yang\ diharapkan}{Total\ Unit\ Produksi}$$

$$= \frac{Rp\ 58.035 + (40\% \ x\ Rp\ 58.035)}{1}$$

$$= \frac{Rp\ 58.035 + Rp\ 23.214}{1}$$

$$= \text{Rp } 81{,}249{,}-$$

Based on these calculations, the selling price of 1 box of brownies using the variable costing method after adding the expected profit of 40% is IDR 81,249.

Table 8. Difference in Selling Price of Company Products with Variable Costing Method

Product Type	Company	Variable Costing	Difference
1 Box of Brownies	IDR 80,000	IDR 81,249,-	IDR 1,249

Source:*Author's compilation, 2024*

From the results of the above calculations, the selling price of the product can be compared using the company's method and the variable costing method. The selling price of the company's product for 1 box of brownies is IDR 80,000, while according to the variable costing method for 1 box of brownies is IDR 81,249, - The selling price of the product according to the company and the variable costing method does not have a large enough difference, namely IDR 1,249.

CONCLUSION

Based on the discussion of the calculation of the selling price of production in determining the selling price of 1 box of brownies at Tomang Bakery using the variable costing method, the following conclusions can be drawn: By using the variable costing method, the production cost of brownies per 1 box of brownies is IDR 58,035, and with the addition of the desired profit of 40%, the selling price per 1 box of brownies is IDR 81,249. So it can be compared the selling price of the company's products using the traditional method and the variable costing method is IDR 80,000 for the selling price using the traditional method and IDR 81,249 for the selling price using the variable costing method, and has a difference of IDR 1,249. The selling price set by Tomang Bakery still uses the selling price method set by the producer, which is the selling price that follows the market price set by other similar trading businesses. The selling price set by the company is lower than the selling price calculated based on the variable costing method.

REFERENCES

Ainiah, S. M., & Primastiwi, A. (2024). Perhitungan Harga Pokok Produksi dengan Menggunakan Metode Harga Pokok Pesanan-Full Costing pada Anisa Catering Jepara. *EQUILIBRIUM: Jurnal Bisnis & Akuntansi (EJBA)*, *XVIII*(1), 74–85. https://doi.org/https://doi.org/ 10.61179/ejba.v18i1.554

Alfarisi, S., & Boediono, G. S. B. (2021). Evaluasi Penerapan Job Order Costing dalam Penentuan Harga Pokok Produksi. *Small Business Accounting Management and Entrepreneurship Review*, *1*(1), 46–55. https://doi.org/10.61656/sbamer.v1i1.50

Andriatama, M. F., Yulanda, A. D., Ridarto, V. R., & Suriyanti, L. H. . . (2020). Perhitungan harga pokok pesanan pada cv. karya lestari yang mempengaruhi biaya produksi. *Jurnal Pendidikan Tambusai*, *4*(1), 861–868.

Fahira Aundri, W. (2021). Penetapan Job Order Costing Dalam Penetapan Harga Pokok Produksi Pada Nimetler Project. *Jurnal Keuangan Negara Dan Kebijakan Publik*, *1*(2), 196–199. https://doi.org/10.31092/jaa.v1i2.1360

Fauzi. (2023). Penentuan Harga Pokok Produksi Berdasarkan Metode Harga Pokok Pesanan Pada Melayu Izza Taylor. *Journal STIE Pembangunan*, *6*(2), 32–38.

Handayani, M., Rudianto, T., Kadriyani, E., & Khairiana, K. (2023). Perhitungan Harga Pokok Produksi Menggunakan Metode Harga Pokok Pesanan pada Rumoh Kue Aceh. *Jurnal Ilmiah Akuntansi*, *10*(2), 82–94.

Leatemia, S. Y. (2024). Pengaruh Harga Pokok Produksi Dengan Metode Harga Pokok Pesanan Terhadap Peningkatan Akurasi Laba. *Akuisisi: Jurnal Akuntansi*.

Mangintiu, A. C., Ilat, V., & Runtu, T. (2020). Analisis Perhitungan Harga Pokok Produksi Roti Tawar Dalam Penetapan Harga Jual Dengan Menggunakan Metode Variabel Costing (Studi Kasus Pada Dolphin Donuts Bakery Manado) Analysis of the Calculation of Cost of Production of White Bread in Determining Sell. *Jurnal EMBA*, *8*(4), 675–682.

Monoarfa, V., Sapa, S., Safitri, I., Kaluku, A., & Setiawati, H. (2023). Pendampingan Penentuan Harga Pokok Produksi Pesanan pada UMKM Sahabat Ummu Hafidz. *Jurnal Pengabdian Ekonomi*, *2*(2), 104–110.

Nahdiatul Hasanah, A., Wahyuni Sukiyaningsih, T., & Purnamasari, M. (2023).

Pendampingan Perhitungan Harga Pokok Produksi Pengusaha Roti Kota Serang. *Jurnal Pengabdian Vokasi*, *2*(1), 31–36.

Rakhman, A., Maula, K. A., Faris, W. M., & ... (2023). Analisis Metode Harga Pokok Pesanan Dalam Menentukan Harga Pokok Produksi Pada Toko Jahit Sr. *Jurnal Ilmiah Wahana …*.

Situngkir, T. L., Jundullah, M. M., Ramadhan, M. R., Khoerunnisa, N., Novelina, R. R., & Sasmita, T. P. (2024). Analisis penentuan harga pokok produksi dengan metode pesanan pada Rains Catering. *Jurnal Pendidikan Tambusai*, *8*(1), 646–656.

Suryani, F., & Putiharjo, C. A. (2023). Analisis Perhitungan Harga Pokok Produksi Dengan Menggunakan Metode Job Order Costing Pada Cv. Rumah Sablon Pekanbaru. *Jurnal Pendidikan Ekonomi Akuntansi*, *11*(1), 9–22.

Syam, I. S., Sahade, & Afiah, N. (2023). Analisis Harga Pokok Produksi dengan Menggunakan Metode Harga Pokok Pesanan pada PT Tiga Bintang Griyasarana. *Jurnal Pendidikan Tambusai*, *7*(1), 2512–2523.

Yanto, M. (2023). Penentuan Harga Pokok Produksi Berdasarkan Metode Harga Pokok Pesanan Pada Penjahit Melyzza Kijang. *Journal of Innovation Research and Knowledge*, *3*(1), 4969–4974.