DANADYAKSA
POST MODERN ECONOMY JOURNAL
Vol. 4 No. 1, (2026), 1049–1063
e-ISSN: 3025-8545

ANALYSIS OF USING BREAK-EVEN POINT AND MARGIN OF SAFETY INFORMATION AS A BASIS FOR DETERMINING PRODUCTION QUANTITY IN CONTROLLING SALES RISKS AT SUMEDANG TOFU AMIRA FACTORY

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Abstract

Micro, Small, and Medium Enterprises (MSMEs) in the food industry face challenges in determining production quantities due to demand fluctuations and the perishable nature of their products. This study aims to analyze the use of Break Even Point (BEP) and Margin of Safety (MOS) information as a basis for deciding production quantities to manage sales risk at Amira Sumedang Tofu Factory. The study uses a descriptive quantitative approach by utilizing primary data obtained through observation, semi-structured interviews, and documentation, as well as secondary data in the form of company production and sales cost reports. Data analysis is carried out using a Cost–Volume–Profit (CVP) approach by calculating the Contribution Margin, Break-Even Point (BEP), and Margin of Safety (MOS). The research results show that the company's production costs consist of fixed costs of Rp9,000,000 per month and variable costs of Rp15,765,000, with a contribution margin ratio of 60.2%. The Break-Even Point (BEP) is recorded at Rp14,950,166 or equivalent to 68,181 pieces of tofu (136 barrels). During the January–April 2026 period, actual sales ranged from Rp35,750,000 to Rp42,240,000, meaning all sales were above the break-even point. The Margin of Safety (MOS) ranged from 58.2% to 64.6%, indicating a relatively high sales safety level and low risk of loss. These findings suggest that BEP and MOS information is effectively used as a basis for determining production quantities, controlling sales risks, and planning operations in SMEs producing perishable products. This research gives practical insights by showing that integrating BEP and MOS analysis into production decision-making can boost operational efficiency, minimize waste from overproduction, and support business sustainability.

Keywords: Break Even Point; Margin of Safety; Cost–Volume–Profit; Production Planning; Sales Risk Control; MSMEs

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INTRODUCTION

Micro, Small, and Medium Enterprises (MSMEs) are one of the strategic sectors that contribute a lot to national economic growth by creating jobs, increasing community income, and strengthening local economic resilience (Hidayat & Iskandar, 2022; Hutapea & Hasibuan, 2023). In Indonesia, the MSME sector is not only a support for economic activities but also plays an important role in driving the development of the food processing industry that can meet people's consumption needs sustainably (Marliyah, Dharma, Yafiz, & Syarbaini, 2022). Even so, the sustainability of SMEs still faces various challenges, especially in terms of financial management, cost control, and effective production planning. The lack of management accounting information often leads to operational decisions being made based on intuition or experience alone, which increases the risk of production inefficiency and reduced business profits.

One of the MSME subsectors that has these characteristics is the tofu processing industry. Tofu products are a food item that has a high consumption rate because they are relatively affordable and have pretty good nutritional content (Lenon, Harahap, & Harahap, 2024). However, tofu is a perishable product, so its production process needs to match market demand. Getting the production quantity wrong can lead to excess inventory and losses from unsold products, while producing too little can mean missed revenue opportunities because you can't meet consumer demand. So, figuring out the right production amount is key to keeping costs efficient and managing sales risks.

Amira Sumedang Tofu Factory is one of the SMEs engaged in tofu processing and faces similar challenges. Based on the company's operational conditions, consumer demand fluctuates over time, so sales revenue hasn't reached an optimal level of stability. This makes it difficult for the company to decide on the right production quantity to meet market needs. So far, production decisions have mostly been based on the owner's estimates without support from measurable cost and sales analysis. As a result, the company risks wasting costs when production is excessive or losing profit opportunities when production can't meet market demand. This situation shows that sales risk is influenced not only by changes in demand but also by the company's accuracy in determining production volume.

In dealing with this situation, management accounting information plays an important role as a basis for operational decision-making. One approach that is widely used is Cost–Volume–Profit (CVP) analysis, especially through Break Even Point (BEP) and Margin of Safety (MOS) analysis. BEP analysis provides information about the minimum sales level or production quantity that must be achieved so that the company does not incur losses, while MOS shows the sales safety limit that can still be tolerated before the company enters a loss situation. Both pieces of information are very important for MSME actors because they can illustrate the relationship between fixed costs, variable costs, production volume, and sales level as a basis for planning production activities more rationally.

Various previous studies have shown that BEP and MOS analysis are widely used as tools for profit planning and financial performance evaluation in SMEs. Research (Nurkholisa, Idris, & Prasasti, 2024) proving that BEP analysis helps business owners determine the minimum sales target to avoid losses. Research (Purwanti, Maulana, Nurfadilah, & Gultom, 2025) explaining that BEP and MOS can provide information about the safety level of sales, so they can be used as a basis for business decision-making. Meanwhile, research (Medyawati & Jamiah, 2025) It also found that applying both analyses helps tofu industry players understand safe sales limits and improve profit

DANADYAKSA
POST MODERN ECONOMY JOURNAL
Vol. 4 No. 1, (2026), 1049–1063
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planning effectiveness. However, most studies still focus on using BEP and MOS as profit planning tools, while their use as a basis for determining production amounts to control sales risks hasn't been studied in depth much, especially in small and medium-sized tofu industries.

This research gap shows that there is still a need for studies that integrate break-even point (BEP) and margin of safety (MOS) information as a basis for production decision-making. This study sees BEP and MOS information not just as financial evaluation tools, but also as strategic instruments in determining the optimal production quantity according to market conditions. By using these two indicators, companies can estimate the minimum production level that needs to be achieved and also understand the sales safety margin if demand drops. This approach is expected to help companies reduce the risk of losses from overproduction as well as missed sales opportunities due to underproduction.

Based on this description, this study aims to analyze the use of Break Even Point (BEP) and Margin of Safety (MOS) as a basis for determining production quantities to manage sales risk at Amira Tofu Factory in Sumedang. This research is expected to provide a theoretical contribution to the development of management accounting studies, especially regarding the application of Cost–Volume–Profit analysis in food sector SMEs. In addition, practically, the results of this study are expected to serve as recommendations for SME actors in designing more effective, efficient production strategies based on financial information, thereby improving competitiveness and business sustainability.

REVIEW OF LITERATURE

Management Accounting

Management accounting is an internal information system that provides financial and non-financial data to support planning, control, and managerial decision-making functions. The information produced is not only used to evaluate company performance, but also serves as a basis for deciding production strategies, cost control, and profit planning (Sari, Yanti, & Nasution, 2026). In the context of SMEs, applying management accounting becomes increasingly important because limited resources demand that every operational decision is made efficiently and based on information.

Some research shows that applying management accounting can improve the quality of decision-making. (Fadilah & Sidik, 2023) stating that accurate cost information helps management control operational activities more effectively. This finding is reinforced by (Suraju, 2025) which found that the use of management accounting information can improve production cost efficiency and support the development of more competitive business strategies. However, these studies mostly discuss the benefits of management accounting in general and have not specifically looked at how this information is used as a basis for determining production quantities in SMEs that produce perishable products.

Production Cost

Production costs are all the economic sacrifices a company makes in the process of making a product, including the cost of raw materials, direct labor, and factory overhead (Setyawati, Usman, & Fidyah, 2023). Grouping costs into fixed and variable costs forms the basis of various managerial analyses because it determines how much costs change with production volume and how much fixed costs the company has to bear.

Research (Rivera, Kizildag, & Croes, 2021) explaining that controlling production costs has

DANADYAKSA
POST MODERN ECONOMY JOURNAL
Vol. 4 No. 1, (2026), 1049–1063
e-ISSN: 3025-8545

a direct impact on operational efficiency and increasing company profits. Meanwhile, (Husna, Syafina, & Nasution, 2024) finding that weak cost control can lead to an imbalance between costs and revenue, increasing the risk of losses. However, previous research has mostly focused on production cost efficiency, while the connection between cost structure and deciding production volume through the Cost–Volume–Profit approach has not been discussed comprehensively.

Cost–Volume–Profit (CVP) Analysis

Cost–Volume–Profit (CVP) analysis is one of the main tools in management accounting used to analyze the relationship between costs, sales volume, selling price, and company profit. This analysis provides information about changes in profit due to changes in production or sales volume, so it can be used as a basis for business planning and decision-making. (Bastomi, Sudarmiatin, & Hermawan, 2023). Research (Aisyah, 2024) shows that CVP analysis can improve the effectiveness of production planning through better cost control. (Hesti, Aswat, & Yunita, 2024) adding that the CVP components, namely the Break Even Point (BEP) and Margin of Safety (MOS), provide information about the company's sales safety level. However, most studies still use CVP mainly as a tool to evaluate profitability, while its use as a basis for determining production amounts to control sales risk is still relatively limited.

Break Even Point (BEP)

Break Even Point (BEP) is the condition when total revenue equals total costs, so the company neither makes a profit nor incurs a loss. Information about the break-even point gives an idea of the minimum amount of sales or production that must be achieved to cover all operating costs (Kharismawati, Dewi, & Zaenuddin, 2021). Some studies show that BEP is effective to use as a tool for profit planning and business feasibility evaluation.

Research (Bimayu, 2023) found that BEP analysis helps companies set minimum sales targets more realistically, while (Litamahuputty, Pelamonia, & Nanlohy, 2022) shows that BEP supports production decision-making through analysis of the relationship between costs and revenue. On the other hand, (Putri, Susena, & Nasution, 2023) It emphasizes that the BEP functions as an indicator of a company's safe operational limits. However, most studies only use the BEP as a profitability indicator without integrating it with sales risk analysis. The Break Even Point is calculated using the Contribution Margin approach through the formulas for Contribution Margin, Contribution Margin Ratio, BEP in currency, and BEP in units. These calculations provide information on the minimum number of products that must be produced and sold for the company to reach a break-even point.

Margin of Safety (MOS)

Margin of Safety (MOS) is the difference between actual sales and sales at the break-even point, showing how safe a company's sales are. The bigger the MOS, the lower the risk for the company to suffer losses if sales drop (Iammarino, Berardi, Tomasevic, & Nardelli, 2023). Meanwhile, the research (Bennekou, et al., 2025) stated that MOS is an important indicator in measuring business resilience to changes in market demand. This information allows management to evaluate the company's ability to cope with sales fluctuations before entering a loss-making condition. However, previous research has generally used MOS as a complementary indicator in profitability analysis and has not made it the main basis for the formulation of production strategies.

The Relationship Between Break Even Point, Margin of Safety, and Determining Production Quantity

Conceptually, the Break Even Point and Margin of Safety are closely related in supporting

DANADYAKSA
POST MODERN ECONOMY JOURNAL
Vol. 4 No. 1, (2026), 1049–1063
e-ISSN: 3025-8545

production decisions. BEP shows the minimum production quantity that must be reached so the company doesn't incur losses, while MOS shows the safety margin of sales above the break-even point (Rahmia, et al., 2024). The combination of these two indicators gives more comprehensive information about the optimal production level as well as the potential risk if market demand drops.

Research (Rusmayanti, 2021) explaining that BEP and MOS information can help companies avoid overproduction or underproduction through more measured planning. Findings (Febriyanti & Avriyanti, 2025) It also shows that CVP analysis can help in setting sales targets and production plans more systematically. However, these studies haven't specifically tested using BEP and MOS information as a basis for determining production levels to manage sales risk in the tofu industry, which has products that spoil easily. This situation highlights a research gap that provides an important foundation for this study.

Based on the synthesis of various previous studies, it can be concluded that Cost–Volume–Profit analysis, particularly Break Even Point and Margin of Safety, has proven useful as a tool for profit planning and business performance evaluation. However, research on using these two indicators as a basis for determining production levels to manage sales risk is still limited. Therefore, this study aims to fill that gap by analyzing the use of break-even and margin of safety information as a basis for production decision-making at Amira Tofu Factory in Sumedang, with the expectation of contributing both theoretically and practically to the development of management accounting in the MSME sector.

RESEARCH METHOD

This research uses a descriptive quantitative approach, which is an approach aimed at analyzing numerical data to produce a factual picture of the condition of a research object based on the results of calculations and simple statistical analysis (Sugiyono, 2022). A quantitative approach was chosen because the research uses financial data such as production costs, sales volume, and production quantity to calculate the Break Even Point (BEP) and Margin of Safety (MOS) as a basis for evaluating production planning and managing sales risk. Meanwhile, the descriptive method is used to explain the business's operational conditions based on the analysis results, providing a clear picture of the minimum sales level that must be achieved and the company's sales safety margin (Garrison, Noreen, & Brewer, 2021).

The research was carried out at Amira Sumedang Tofu Factory, which is located on Sei Mencirim Street, Dusun III Paya Geli, Pinang Alley, Medan Sunggal District, Deli Serdang Regency, North Sumatra. The research location was chosen purposively considering that the company is a micro business engaged in tofu production with fluctuating demand, so it requires proper production planning based on cost, volume, and profit analysis. In addition, the availability of production cost data and sales data makes it possible to conduct a Cost–Volume–Profit (CVP) analysis, particularly through calculating the Break Even Point and Margin of Safety, to support managerial decision-making regarding the optimal production quantity (Bastomi, Sudarmiatin, & Hermawan, 2023).

The data sources used consist of primary and secondary data. Primary data was obtained directly from the owner or manager of Sumedang Amira Tofu Factory through observations and interviews about the production process, production costs, selling prices, sales volume, and policies applied in determining production quantities. Meanwhile, secondary data was obtained from company documents, such as production cost reports, sales records, as well as various scientific

DANADYAKSA
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e-ISSN: 3025-8545

literature like books, journal articles, and previous research related to management accounting, Cost–Volume–Profit analysis, Break Even Point, and Margin of Safety. Using both types of data aims to get more comprehensive information while also increasing the validity of the research results through the data triangulation process (Sugiyono, 2022).

Data collection was done through observation, interviews, and documentation. Observations were conducted directly on production activities to understand the tofu processing process, the use of raw materials, labor utilization, and the cost structure that arises during production. Interviews were carried out in a semi-structured way with the business owner or manager as the main informant to get information about production costs, sales volume, selling prices, and policies for determining production capacity. Documentation was done by gathering various supporting documents, such as production cost reports, sales reports, and other operational documents relevant to the research objectives. Combining these three techniques allows researchers to get more accurate, complete, and reliable data, which increases the credibility of the research results (Creswell, 2018).

The data obtained was then analyzed using the Cost–Volume–Profit (CVP) analysis technique by calculating the Break Even Point (BEP) to determine the minimum sales level so that the company does not incur losses, as well as the Margin of Safety (MOS) to measure the sales safety limit against potential decreases in sales. The results of these calculations are then interpreted descriptively to provide recommendations regarding the optimal production quantity and sales risk control strategies at Sumedang Amira Tofu Factory. This analysis is expected to serve as a basis for more effective managerial decision-making in improving operational efficiency and business sustainability (Horngren, Datar, & Rajan, 2021).

RESULTS AND DISCUSSION

Results

Amira Sumedang Tofu Factory is a micro-enterprise engaged in tofu production that was established in 2018 and has been operating for approximately seven years. The business is located on Sei Mencirim Street, Dusun III Paya Geli, Gang Pinang, Medan Sunggal District, Deli Serdang Regency, North Sumatra, Indonesia. In its daily operations, the factory employs two workers who assist in the production process.

The tofu production process begins with soaking soybeans for approximately two hours until they expand. The soaked soybeans are then ground using a grinding machine to produce soybean pulp. The pulp is subsequently boiled and filtered to obtain soybean extract resembling coconut milk. The soybean extract is then molded and pressed for approximately 30 minutes until it forms solid tofu. After the molding process is completed, the tofu is cut into standardized sizes using a rolling cutter. The tofu produced by the factory has a relatively short shelf life of approximately two days. Beyond this period, the quality and taste of the tofu begin to deteriorate and become sour. Therefore, determining the appropriate production quantity is essential and must be aligned with sales levels to avoid losses caused by unsold products.

In a single production cycle, the factory is capable of producing approximately 12 barrels of tofu per day. Each barrel yields around two tofu boards, and each board contains approximately 250 pieces of tofu, resulting in a total output of 500 pieces per barrel. Consequently, daily production reaches approximately 6,000 pieces of tofu. However, during periods of high demand, such as before the month of Ramadan and major religious holidays, sales can increase to as many

DANADYAKSA
POST MODERN ECONOMY JOURNAL
Vol. 4 No. 1, (2026), 1049–1063
e-ISSN: 3025-8545

as 18 barrels per day. The production cost structure of Amira Sumedang Tofu Factory consists of fixed costs and variable costs. The fixed costs include employee salaries, electricity and water expenses, diesel fuel for the grinding machine, firewood, and machine maintenance costs.

Table 1.
Fixed Costs of Amira Sumedang Tofu Factory

Component	Cost
Employee salaries (2 workers × IDR 120,000)	IDR 240,000 per day / IDR 7,200,000 per month
Electricity and water	IDR 250,000 per month
Diesel fuel for grinding machine	IDR 500,000 per month
Firewood	IDR 1,000,000 per month
Machine maintenance	IDR 50,000 per month
Total Fixed Costs per Month	**IDR 9,000,000**

Source: Amira Sumedang Tofu Factory

The variable costs primarily consist of soybean raw materials, packaging materials, binding rubber bands, and tofu flour used during the production process.

Table 2.
Variable Costs of Amira Sumedang Tofu Factory

Component	Cost
Soybeans (30 sacks / 1,500 kg)	IDR 15,000,000
Packaging plastic	IDR 700,000
Binding rubber bands	IDR 15,000
Tofu flour	IDR 50,000
Total Variable Costs	**IDR 15,765,000**

Source: Amira Sumedang Tofu Factory

Based on the production data, 50 kilograms of soybeans can produce approximately 6,000 pieces of tofu. Therefore, the production yield can be calculated as follows:

Tofu Production Yield per Kilogram of Soybeans

6,000 pieces of tofu ÷ 50 kg of soybeans = 120 pieces of tofu per kilogram of soybeans

This result indicates that each kilogram of soybeans used in the production process generates approximately 120 pieces of tofu, demonstrating the production efficiency achieved by the factory.

Total Production Cost

Total production cost = fixed cost + variable cost
= Rp. 9,000,000 + Rp. 15,675,000
= Rp. 24,765,000

Production and sales capacity

Tofu production is done daily with a capacity of 120 barrels per day.
Monthly production: 12 barrels x 30 days = 360 barrels.
Each barrel contains 500 pieces of tofu = 360 barrels x 500 pieces of tofu

DANADYAKSA
POST MODERN ECONOMY JOURNAL
Vol. 4 No. 1, (2026), 1049–1063
e-ISSN: 3025-8545

= 180,000 pieces of tofu.

Selling price of production

Price per piece = 220

Price per batch = 220 x 500

= Rp. 110,000

Break Even Point Analyst

$$\text{Calculation of variable cost per unit} = \frac{15.765.000}{180.000} = \text{Rp. } 88$$

Calculating contribution margin

Contribution margin = selling price per unit – variable cost per unit

= 220 – 88

= Rp. 132

BEP in units

$$\text{BEP unit} = \frac{\text{Rp.9.000.000}}{132} = 68.181 \text{ cut the tofu}$$

BEP in a Barrel

1 barrel = 500 pieces

68,181 ÷ 500 = 136 barrels

BEP dalam rupiah

BEP (Rp) = 68.181 x 220

= Rp. 15.000.000

Margin of Safety (MOS) Analysis

Margin of Safety is a measure that shows the safety level of sales from the possibility of incurring losses.

$$\text{MOS} = \frac{\text{Actual Sales} - \text{BEP Sales}}{\text{Actual Sales}} \text{ x } 100\%$$

Actual Sales = 360 tong x Rp. 110.000

= 39.600.000

$$\text{MOS Calculation} = \frac{39.600.000 - 15.000.000}{39.600.000} \text{ x } 100\%$$

= 62.1%

Calculating Contribution Margin

Contribution Margin is the difference between net sales revenue and variable costs. Calculating the contribution margin starts by identifying net sales revenue and variable costs, then calculating using the formula:

Contribution Margin = Total Sales – Variable Costs

Table 3.
Break-Even Point (BEP) Analysis Results of Amira Sumedang Tofu Factory for the First Four-Month Period

Month	Units Sold (Barrels)	Sales Revenue (IDR)	Variable Costs (IDR)	Contribution Margin (IDR)	Fixed Costs (IDR)
January	384	42,240,000	16,815,744	25,424,256	9,000,000
February	325	35,750,000	14,232,075	21,517,925	9,000,000

DANADYAKSA
POST MODERN ECONOMY JOURNAL
Vol. 4 No. 1, (2026), 1049–1063
e-ISSN: 3025-8545

Month	Units Sold (Barrels)	Sales Revenue (IDR)	Variable Costs (IDR)	Contribution Margin (IDR)	Fixed Costs (IDR)
March	360	39,600,000	15,765,000	23,835,000	9,000,000
April	372	40,920,000	16,357,212	24,562,788	9,000,000

Based on Table 5, it can be observed that the sales performance of Amira Sumedang Tofu Factory fluctuated throughout the first four months of the year. The highest sales revenue was recorded in January, amounting to IDR 42,240,000, while the lowest sales revenue occurred in February, totaling IDR 35,750,000. This decline in sales was influenced by unstable consumer demand. Variable costs changed according to the level of production and sales each month, whereas fixed costs remained constant at IDR 9,000,000 per month. This indicates that fixed costs are not affected by production volume, while variable costs increase or decrease in line with business production activities.

Table 4.
Break-Even Point (BEP) Calculation

Month	Fixed Costs (IDR)	Variable Costs (IDR)	Sales Revenue (IDR)	Contribution Margin Ratio	BEP Sales (IDR)
January	9,000,000	16,815,744	42,240,000	60.2%	14,950,166
February	9,000,000	14,232,075	35,750,000	60.2%	14,950,166
March	9,000,000	15,765,000	39,600,000	60.2%	14,950,166
April	9,000,000	16,357,212	40,920,000	60.2%	14,950,166

Based on the Break-Even Point (BEP) calculations, it is evident that sales revenue from January to April 2026 consistently exceeded the break-even point. This indicates that the company was able to cover all fixed and variable costs and therefore did not incur any losses. February was the month closest to the break-even point because it recorded the lowest sales revenue among all observed months, amounting to IDR 35,750,000, while the BEP sales value was IDR 14,950,166. In contrast, January represented the most favorable condition, as the company's sales were substantially higher than the break-even level. Therefore, BEP analysis can be used by the company as a basis for determining the minimum production quantity required to maintain profitability and avoid financial losses.

Table 5.
Margin of Safety (MOS) Calculation

Month	Actual Sales (IDR)	Variable Costs (IDR)	BEP Sales (IDR)	Margin of Safety (%)
January	42,240,000	16,815,744	14,950,166	64.6%
February	35,750,000	14,232,075	14,950,166	58.2%
March	39,600,000	15,765,000	14,950,166	62.2%
April	40,920,000	16,357,212	14,950,166	63.4%

DANADYAKSA
POST MODERN ECONOMY JOURNAL
Vol. 4 No. 1, (2026), 1049–1063
e-ISSN: 3025-8545

Based on the Margin of Safety (MOS) calculations, the sales security level of Amira Sumedang Tofu Factory remained in a safe condition throughout the study period. The highest MOS value was recorded in January at 64.6%, while the lowest MOS value occurred in February at 58.2%. The high MOS value in January indicates that the company's sales were significantly above the break-even point, resulting in a relatively low risk of financial loss.

Meanwhile, in February, the sales safety level declined because sales revenue was lower than in the other months. Nevertheless, the company remained within a safe operating range because sales continued to exceed the break-even point. In March and April, the MOS values increased again to 62.2% and 63.4%, respectively. These results indicate that the company was able to manage sales risk effectively by adjusting production quantities to match market demand. Therefore, MOS information can be utilized by the company to identify safe sales limits and control the risk of losses resulting from potential declines in sales. The higher the MOS value, the safer and more secure the company's business condition.

Utilization of Break-Even Point (BEP) and Margin of Safety (MOS) Information in Controlling Sales Risk

Break-Even Point (BEP) and Margin of Safety (MOS) information can be utilized as a basis for determining production quantities in order to control sales risk at Amira Sumedang Tofu Factory. BEP information assists the company in identifying the minimum level of sales and production required to avoid financial losses, while MOS information enables the company to determine its sales safety margin and assess the level of risk associated with potential declines in sales.

During the period from January to April, the company consistently maintained sales levels above the break-even point and achieved relatively high MOS values. This indicates that the production quantities implemented by the company were aligned with actual sales conditions, allowing the business to effectively control the risk of financial losses. Consequently, the utilization of BEP and MOS information plays a crucial role in supporting production planning, determining optimal production quantities, and maintaining the stability of business sales performance.

Discussion

Research results show that the Amira Sumedang Tofu Factory has a cost structure dominated by variable costs, especially the cost of purchasing soybeans as the main raw material, while fixed costs remain relatively stable at IDR 9,000,000 per month. This characteristic aligns with the Cost–Volume–Profit (CVP) concept, which states that changes in production volume will directly affect total variable costs, while fixed costs do not change within a certain production capacity range (Indarriyanti, Wahyudi, & Masrunik, 2025). This condition shows that the efficiency of raw material use and the company's ability to manage production volume are key factors in maintaining business profitability. Production efficiency is also reflected in the company's ability to produce around 120 pieces of tofu from each kilogram of soybeans, indicating that the production process is running optimally on a micro-business scale.

The Break-Even Point (BEP) analysis shows that the break-even point of the Sumedang Amira Tofu Factory is at sales of IDR 14,950,166 or around 68,181 pieces of tofu (136 barrels). During the January-April 2026 period, all sales realizations were well above this value, ranging from IDR 35,750,000 to IDR 42,240,000. This finding indicates that the company is able to cover all fixed and variable costs while making a profit in each observation period. These results strengthen the management accounting theory which states that BEP is an important indicator in determining

DANADYAKSA
POST MODERN ECONOMY JOURNAL
Vol. 4 No. 1, (2026), 1049–1063
e-ISSN: 3025-8545

the minimum sales limit so that the company does not suffer losses and becomes the basis for the preparation of production and sales targets (Atoyebi, Bello, & Owolarafe, 2022).

The findings of this research align with the research (Fatmawatie, 2021; Shofi, Agustin, Maydina, & Dewi, 2025) which states that Break Even Point analysis can be used as a profit planning tool because it can provide information about the minimum production quantity that must be reached for all operational costs to be covered. In small and medium-sized businesses, BEP information is very helpful for business owners in making decisions about production capacity, especially when market demand fluctuates. In the context of the Amira Sumedang Tofu Factory, this information becomes even more important considering that tofu has a relatively short shelf life of around two days. Therefore, mistakes in determining production quantities can potentially lead to losses due to unsold products and a decline in quality.

The research results also showed that the Margin of Safety (MOS) during the observation period ranged from 58.2% to 64.6%, with an average of around 62%. This value indicates that the company has a high sales safety level since actual sales could still drop by more than half before reaching the break-even point. According to (Oliynyk, et al., 2021; Dailami, Kardofa, & Saputra, 2024), The higher the Margin of Safety value, the lower the company's risk of experiencing losses due to a drop in sales. Thus, the MOS value obtained by Amira Sumedang Tofu Factory shows that the company's operational condition is at a relatively safe level and has a good ability to handle market demand fluctuations.

These results are consistent with research (Fazhillah & Nurlaila, 2024) which found that applying Margin of Safety analysis to micro-scale manufacturing businesses can provide information about the level of sales safety, allowing management to anticipate the risk of demand decline. The study emphasized that companies with high MOS values tend to have greater flexibility in dealing with changing market conditions compared to companies with low MOS values. In this study, the lowest MOS value occurred in February at 58.2% due to a decrease in sales volume. Nevertheless, the company remained above the break-even point, so it did not incur losses. This situation shows that the company still has enough safe room to face a drop in demand without disrupting operational continuity.

Sales fluctuations from January to April reflect the characteristics of demand in the micro-scale food industry, which is influenced by changes in consumer needs. The highest sales occurred in January at IDR 42,240,000, while the lowest sales occurred in February at IDR 35,750,000. Even so, the company was able to maintain a Contribution Margin ratio of 60.2% throughout the research period. The stability of this ratio shows that the company's cost structure is relatively consistent, so any increase in sales contributes proportionally to profit. These findings support the opinion (Wibowo, Asmarawati, & Susanti, 2022; Tajidan, et al., 2024) that Contribution Margin is the main indicator in CVP analysis because it shows how much each sales rupiah can cover fixed costs and generate profit.

When linked to previous studies on the application of Cost–Volume–Profit, this study shows a similarity in that BEP and MOS analysis are effective tools in supporting managerial decision-making in small and medium enterprises. However, this study has a different characteristic as it was conducted in the tofu industry, which produces products with a very limited shelf life. This condition makes decisions regarding production quantity influenced not only by profit targets but also by the risk of product spoilage if production exceeds market demand. Therefore, BEP and

DANADYAKSA
POST MODERN ECONOMY JOURNAL
Vol. 4 No. 1, (2026), 1049–1063
e-ISSN: 3025-8545

MOS information not only serve as cost control tools but also as a basis for reducing inventory waste and maintaining the company's operational efficiency.

Overall, the research results show that using Break Even Point (BEP) and Margin of Safety (MOS) information plays a strategic role in production planning at Amira Sumedang Tofu Factory. During the period from January to April 2026, the company consistently managed to keep sales above the breakeven point and maintained a high level of sales safety. These findings strengthen previous research that stated that Cost–Volume–Profit analysis is an effective tool in supporting managerial decision-making, especially for micro and small businesses facing market demand fluctuations. Therefore, applying BEP and MOS analysis continuously can help the company determine optimal production quantities, minimize the risk of losses from unsold products, improve cost efficiency, and maintain business sustainability in the long run.

CONCLUSION

This study concludes that Break-Even Point (BEP) and Margin of Safety (MOS) information are effectively used as a basis for determining production quantities to control sales risk at Amira Sumedang Tofu Factory. During the January–April 2026 period, the company consistently recorded sales above the break-even point with a BEP value of Rp14,950,166 and an MOS ranging from 58.2%–64.6%, indicating that the business was in a high sales safety condition, able to cover all production costs and make a profit. These findings suggest that applying BEP and MOS analysis can support more accurate production decision-making, improve operational efficiency, and minimize the risk of losses in MSMEs producing perishable products. However, this study is limited to a single research object with an observation period of four months and only uses the Cost–Volume–Profit (CVP) approach through BEP and MOS analysis. Therefore, future research is recommended to involve more SMEs, extend the observation period, and combine CVP analysis with other methods, such as Activity-Based Costing (ABC), Economic Order Quantity (EOQ), or demand forecasting, to provide more comprehensive recommendations to support production decision-making and business risk control.

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