

BREAK-EVEN POINT ANALYSIS AS A STRATEGIC TOOL FOR PROFIT PLANNING: EVIDENCE FROM UD TERASSUSU

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Abstract

Profit planning is essential for micro, small, and medium enterprises (MSMEs) to maintain business sustainability and manage the relationship between sales, costs, and profitability. However, previous Break-Even Point (BEP) studies have predominantly examined larger firms or different business sectors, while empirical evidence concerning the application of BEP analysis to small beverage enterprises remains limited. This study aims to determine the Break-Even Point and evaluate its implications for profit planning at UD. Terasusu.mona12, a beverage MSME in Trenggalek, Indonesia. A quantitative descriptive case-study approach with an ex post facto design was employed using operational and financial data for December 2023. Data were collected through observation, interviews, and documentation. The analysis comprised contribution margin, contribution margin ratio, Break-Even Point, and Margin of Safety calculations. Based on the corrected cost calculations, total sales amounted to IDR 3,720,000, while total variable costs reached IDR 3,135,000 and fixed costs amounted to IDR 1,100,000. Consequently, the contribution margin was IDR 585,000, resulting in an operating loss of IDR 515,000. The weighted contribution margin ratio was 15.73%, producing a break-even sales level of approximately IDR 6.99 million, substantially above actual sales. The findings indicate that the company had not reached its break-even position during the study period. These results imply that BEP analysis can provide a practical basis for setting sales targets, controlling costs, and improving profit-planning decisions in MSMEs.

Keywords: Break-Even Point, Contribution Margin, Margin of Safety, Profit Planning, MSMEs



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INTRODUCTION

Every business entity is established with specific long-term objectives, including sustainable growth and business expansion. Generating profit and maintaining business continuity are fundamental objectives in the development and sustainability of a business. Enterprises seeking to survive and prosper must continuously improve their sales

performance to achieve an optimal level of profitability. Therefore, effective profit planning is essential to ensure that business operations remain sustainable while enabling management to make informed decisions regarding sales, costs, and expected returns.

The success of a business is largely determined by the ability of its management to manage resources and formulate appropriate business strategies. Managers are required to make decisions that support the achievement of organizational objectives and promote business development. Profit is commonly used as one of the primary indicators for evaluating the effectiveness of business management. However, profitability is influenced by several interrelated factors, particularly selling price, costs incurred, and sales volume. Changes in one of these factors may directly affect the level of profit achieved by a business. Consequently, understanding the relationship among costs, sales volume, and profit is crucial for effective business planning and decision-making.

Cost-volume-profit analysis is an important managerial tool for examining the relationship between costs, sales volume, and profit. One of the key approaches within this analysis is the Break-Even Point (BEP) analysis. The break-even point represents the level of sales at which total revenue is equal to total costs, resulting in neither profit nor loss. In other words, a business reaches its break-even point when the revenue generated from sales is sufficient to cover all costs incurred in producing and selling its products. This concept provides management with a quantitative basis for determining the minimum level of sales required to avoid losses.

Break-Even Point analysis provides important information regarding the relationship between total costs, expected profit, and sales volume. In addition, BEP analysis can be used to determine the margin of safety, which indicates the extent to which actual or planned sales may decline before the business reaches the break-even point. This information is particularly valuable for management in assessing the potential impact of declining sales and in developing strategies to minimize the risk of losses. BEP analysis incorporates both fixed and variable costs and therefore provides a basis for determining the sales level required to achieve a break-even condition. Beyond identifying the break-even level, the analysis can also support profit planning by enabling business owners and managers to estimate the sales volume required to achieve a targeted level of profit.

UD Terassusu is a small and medium-sized enterprise (SME) operating in the culinary sector, particularly in the beverage industry, in Trenggalek, Indonesia. As an SME operating in a competitive market, UD Terassusu needs to implement effective financial and operational planning to maintain business continuity and improve profitability. In the planning process, the business needs to determine the level of sales required not only to cover its operating costs but also to achieve its desired profit. The application of Break-Even Point analysis can therefore provide management with relevant information regarding the minimum sales level required to avoid losses and the sales level that should be achieved to attain the targeted profit.

Based on this context, this study aims to determine the Break-Even Point achieved by UD Terassusu in December 2023 and to analyze the company's profit planning through

the application of the Break-Even Point concept. The findings are expected to provide practical information for UD Terassusu's management in evaluating its sales performance, planning future sales, and determining appropriate strategies to achieve the desired level of profitability.

LITERATURE REVIEW

Accounting

Accounting is fundamentally concerned with identifying, measuring, recording, and communicating economic information to users for decision-making purposes. The American Accounting Association (AAA) defines accounting as “the process of identifying, measuring, and communicating economic information to permit information judgment and decision by users of the information.” This definition emphasizes that accounting is not merely a process of recording financial transactions but also an information system that provides relevant economic information to support users in evaluating business conditions and making informed decisions (Limbong et al., 2021).

Haryono Yusuf (2011) defines accounting as an information system that monitors business activities, processes data into reports, and communicates the results to decision-makers. From this perspective, accounting serves an important role in providing information regarding the financial and operational condition of an organization. Accounting can also be viewed from two perspectives: the perspective of users who utilize accounting information and the perspective of the accounting process itself (Sumarlin, 2021). Thus, accounting information is essential for management because it provides a basis for planning, controlling, evaluating business performance, and making strategic decisions.

In the context of this study, accounting information is particularly relevant because the analysis of costs, sales, and profits requires reliable financial data. The classification and measurement of costs into fixed and variable components constitute an important foundation for conducting Break-Even Point (BEP) analysis and developing an appropriate profit-planning strategy.

Management Information System

A Management Information System (MIS) is an information system designed to provide managers with relevant information to support organizational decision-making. Komarudin defines a management information system as an information system that enables organizational managers to obtain the appropriate information required for the decision-making process (Rochaety & Faizal Ridwan, 2013). This definition highlights the importance of timely and relevant information in assisting managers in planning, controlling, and evaluating organizational activities.

George M. Scott defines a management information system as an integrated and structured system through which data can be transformed into information in various ways to improve productivity and support management processes. The system is

influenced by the nature of management, the management style adopted, and the integration of information subsystems within the organization (Rahman & Saudin, 2022).

For business organizations, particularly small and medium-sized enterprises, the availability of accurate financial and operational information is essential for effective managerial decision-making. Information regarding sales volume, costs, revenues, and profits can be processed and analyzed to evaluate business performance and formulate appropriate strategies. Accordingly, BEP analysis can be considered one form of management-oriented financial information that assists managers in understanding the relationship between costs, sales, and profitability.

Break-Even Point

Break-Even Point (BEP) analysis is a financial and managerial analysis technique used to determine the level of sales at which total revenue equals total costs. At this point, a company neither generates a profit nor incurs a loss. According to Mulyadi, the Break-Even Point is a condition in which a company does not generate profit but also does not experience a loss. In other words, a company reaches the break-even point when its revenue is equal to its costs or when the contribution margin generated is sufficient only to cover fixed costs (Basori, 2021).

Garrison defines the BEP as the point at which total contribution margin equals total fixed costs, total revenue equals total costs, or the level of sales at which profit is equal to zero (Muh, 2021). This concept demonstrates that BEP analysis provides a quantitative basis for determining the minimum sales level that must be achieved to prevent losses.

BEP analysis is closely associated with the relationship among fixed costs, variable costs, selling prices, and sales volume. Changes in any of these components can influence the break-even level and the amount of profit that can be achieved. Therefore, BEP analysis is not only useful for identifying the minimum sales level but also serves as a managerial instrument for profit planning.

In addition, BEP analysis can be complemented by the calculation of the ****Margin of Safety (MOS)****. The margin of safety indicates the extent to which actual or planned sales can decline before the company reaches its break-even point. A higher margin of safety generally indicates a greater capacity of the business to withstand a decline in sales without experiencing losses. Consequently, the combination of BEP and margin-of-safety analysis provides more comprehensive information for evaluating business risk and formulating sales and profit plans.

Planning and Profit Planning

Planning is an essential managerial function because it provides direction for organizational activities and establishes the actions required to achieve predetermined objectives. George R. Terry defines planning as a systematic process of thinking about future actions (Sutiawan, 2023). Planning therefore involves anticipating future conditions and determining appropriate actions before business activities are implemented.

Henry Fayol defines planning as the selection or determination of organizational goals and the formulation of strategies, procedures, programs, methods, budgeting systems, and standards required to achieve those goals (Susanto, 2022). From this perspective, planning involves not only establishing objectives but also determining the resources and procedures necessary to achieve them.

In the context of business operations, profit planning is an important component of managerial planning. Profit planning enables management to estimate the level of sales and costs required to achieve a predetermined profit target. The relationship between sales volume, costs, and profit provides the analytical foundation for determining whether a particular sales target is sufficient to achieve the desired level of profitability.

Soemarso defines profit as the difference between business revenue and expenses. A loss occurs when revenue is lower than expenses. Both profit and loss are outcomes of the routine calculation of business operations. Suwardjono defines profit as the return obtained from a business's efforts to produce goods and services. In other words, profit represents the excess of revenue over the costs incurred to generate that revenue (Ananda, 2023).

Based on these definitions, profit can be viewed as an important indicator of business performance and sustainability. Profit planning consequently requires management to understand the cost structure and sales level of the business. BEP analysis provides an analytical framework through which management can determine the minimum sales required to cover costs and estimate the sales volume needed to achieve a targeted profit.

Product

A product constitutes one of the fundamental elements of business activity because it represents the goods or services offered to satisfy consumer needs. Kotler and Armstrong define a product as anything that can be offered to a market for use, purchase, or consumption and that can satisfy human wants and needs. Meanwhile, Stanton views a product as a set of tangible and intangible attributes, including packaging, color, price, quality, brand, service reputation, and selling characteristics (Indrasari, 2019).

Product characteristics can influence consumer purchasing decisions and consequently affect sales volume. In the context of a beverage business such as UD Terassusu, product characteristics and consumer demand are directly related to the company's sales performance. Sales volume, in turn, represents an important component in determining revenue and profitability. Therefore, understanding product-related factors is relevant to the analysis of sales and profit planning.

Micro, Small, and Medium Enterprises

Micro, Small, and Medium Enterprises (MSMEs) constitute an important component of economic activity and play a significant role in supporting local business development. According to M. Kwartono, MSMEs refer to people's economic activities with a net worth of no more than IDR 200,000,000, excluding land and buildings used for business operations. MSMEs may also be characterized as economic activities

conducted by individuals with annual sales turnover of no more than IDR 1,000,000,000 who are Indonesian citizens (Zulaikha, 2020).

According to the Ministry of Cooperatives and MSMEs, Small Enterprises (UK) and Micro Enterprises (UM) are business entities with specified asset and turnover criteria. Small Enterprises are business entities with net assets of no more than IDR 200,000,000, excluding land and buildings used for business operations, and annual turnover of up to IDR 1,000,000,000. Micro Enterprises are business entities owned by Indonesian citizens with specified net asset criteria (Reza Nurul Ichsan, SE, MM Dr. Sarman Sinaga, SE, MM Lukman Nasution, SE.I, 2021).

MSMEs generally operate with relatively limited resources and face challenges related to cost control, sales fluctuations, and financial planning. Consequently, the application of relatively simple but informative managerial accounting techniques, such as BEP analysis, can provide valuable support for MSME owners in planning sales and profitability. By identifying the break-even sales level and the required sales volume to achieve a specific profit target, MSME managers can make more informed decisions regarding business operations.

Previous Studies

Previous studies have examined the application of Break-Even Point analysis as a tool for profit planning in various business contexts. These studies provide an empirical foundation for understanding the usefulness of BEP analysis in determining sales targets, evaluating profitability, and supporting managerial decision-making.

Marhaeni (2011), in a study entitled *Analisis Break Even Point Sebagai Alat Perencanaan Laba Pada Industri Kecil Tegel Di Kecamatan Pedurungan Periode 2004–2008*, examined the application of BEP analysis as a profit-planning instrument in a small tile-manufacturing industry. The study employed a quantitative descriptive method and utilized secondary data. The findings demonstrated the relevance of BEP analysis in determining the sales level required to achieve the desired profit. In contrast, the present study focuses on UD Terassusu and examines its business condition during December 2023.

Ponomban (2013) conducted a study entitled *Analisis Break Even Point Sebagai Alat Perencanaan Laba (Studi Kasus Pada PT. Tropica Cocoprima)*. The study employed an ex post facto research design. BEP and Margin of Safety calculations were used to analyze the company's financial condition and profit-planning requirements. The study is relevant to the present research because both studies utilize BEP analysis and Margin of Safety as analytical instruments. However, the present research differs in terms of the research period and the object of analysis, as it focuses on UD Terassusu as an MSME operating in the beverage sector.

Baris and Sondakh (2014) conducted a study entitled *Analisis Break Even Point Sebagai Alat Perencanaan Laba Produk Gorengan Pada Usaha Kecil Menengah (UKM) di Kawasan Boulevard Manado*. The study employed an ex post facto approach to analyze profit planning for fried-food products operated by an SME in the Boulevard area of

Manado. Similar to the present study, the researchers applied BEP and Margin of Safety calculations to evaluate sales and profit planning. The study provides evidence that BEP analysis can be applied not only to large companies but also to small and medium-sized businesses.

Pangemanan et al. (2016), through the study entitled *Analisis Perencanaan Laba Perusahaan Dengan Penerapan Break Even Point Pada PT. Kharisma Sentosa Manado*, examined profit planning through the application of BEP analysis. The study employed a descriptive method and utilized BEP and Margin of Safety calculations as analytical tools. The findings reinforce the relevance of BEP analysis in determining the sales level required to achieve profitability and in assessing the company's ability to absorb fluctuations in sales.

Taken together, the previous studies indicate that Break-Even Point analysis has considerable potential as a managerial instrument for profit planning across different types and scales of businesses. Nevertheless, the existing studies differ in terms of business characteristics, research periods, products, and organizational contexts. The present study contributes to this body of research by applying BEP analysis to UD Terasusu, an MSME in the beverage sector, with a specific focus on the business condition in December 2023. The analysis is expected to provide an empirical assessment of the break-even sales level and its implications for profit planning in an MSME context.

RESEARCH METHOD

Research Design

This study employed a business case study design to examine the application of Break-Even Point (BEP) analysis as a tool for profit planning at UD. Terasusu.mona12. The study adopted an ex post facto approach, as the variables examined were not subjected to any intervention, treatment, or manipulation by the researcher. Instead, the study analyzed existing conditions based on data obtained from the business's actual operations. This approach enabled the researcher to examine the relationship between costs, sales volume, and profitability based on the conditions that had occurred during the research period.

Research Location and Period

The research was conducted at UD. Terasusu.mona12, located in Trenggalek Regency, Indonesia. The research period covered December 2023, with the analysis focusing on the company's operational and financial conditions during that period. The selection of the research location was based on the relevance of the business characteristics to the objectives of the study, particularly the need to evaluate the break-even level and profit-planning capacity of an MSME operating in the beverage sector.

Figure 1. Location



Types and Sources of Data

This study utilized both quantitative and qualitative data to provide a comprehensive understanding of the business conditions and to support the Break-Even Point analysis.

1. Quantitative Data

Quantitative data refer to numerical information obtained from the company. In this study, quantitative data included fixed costs, variable costs, selling prices, and sales volume. These data were used as the primary basis for calculating contribution margin, contribution margin ratio, Break-Even Point, Margin of Safety, and profit-planning indicators.

2. Qualitative Data

Qualitative data consisted of information obtained in oral and written form, as well as general information concerning the company. These data included information regarding the company's business activities, operational characteristics, cost components, products, and other contextual information required to interpret the quantitative findings.

The data sources used in this study consisted of primary and secondary data.

3. Primary Data

Primary data were obtained directly from the research site through interactions with and information provided by the owner of UD. Terasusu.mona12. The primary data included information concerning the company's operating activities, costs, selling prices, sales volume, and other information required for the Break-Even Point analysis and profit planning.

4. Secondary Data

Secondary data were obtained from sources that supported and complemented the primary data. These sources included Mendeley, internet-based resources, e-books, previous research findings, academic journals, and other relevant references. Secondary data were primarily used to support the theoretical framework and interpretation of the research findings.

Data Collection Techniques

Data were collected using observation, interviews, and documentation. The combination of these techniques was intended to improve the completeness of the information obtained and to support the analysis of the company's financial and operational conditions.

1. Observation

According to Sugiyono (2015: 204), observation is a process of observing an object through research activities. Researchers determine the aspects to be observed and record information relevant to the research objectives. In this study, direct observation was conducted at UD. Terasusu.mona12 to obtain information concerning business operations, products, sales activities, and cost components relevant to the Break-Even Point analysis.

2. Interviews

According to Yusuf (2014:372), an interview is an event or process of interaction between an interviewer and an informant through communication or direct questioning concerning the subject being investigated. In this study, interviews were conducted with the owner of UD. Terasusu.mona12 to obtain the information required for the Break-Even Point analysis, particularly data concerning costs, selling prices, sales volume, and profit-planning practices.

3. Documentation

According to Sugiyono (2018:476), documentation is a process of collecting data and information in the form of books, records, documents, written materials, images, reports, and other information that can support research activities. In this study, documentation was used to collect and verify relevant business records and financial information required for the quantitative analysis.

Data Analysis Technique

The data were analyzed using a quantitative descriptive approach. The analysis focused on calculating the contribution margin, contribution margin ratio, Break-Even Point, Margin of Safety, and profit-related indicators based on the company's selling prices, fixed costs, variable costs, and sales volume. The analysis was conducted through the following stages.

1. Identification of Costs

The first stage involved identifying and classifying the costs incurred by the company into fixed costs and variable costs. Fixed costs are costs that do not change directly with changes in sales volume within a relevant range, whereas variable costs change

in accordance with the level of production or sales activity. This classification was necessary to determine the company's contribution margin and break-even level.

2. Calculation of Contribution Margin

The contribution margin represents the amount of sales revenue remaining after deducting variable costs. It indicates the portion of sales revenue available to cover fixed costs and subsequently generate profit. The contribution margin per unit was calculated using the following formula:

Contribution Margin (CM):

$$CM = \text{Selling price unit} - \text{Variable cost unit}$$

3. Calculation of Contribution Margin Ratio

The Contribution Margin Ratio (CMR) was calculated to determine the proportion of sales revenue available to cover fixed costs and generate profit. The ratio provides an indication of the company's profitability structure and is subsequently used in determining the Break-Even Point in monetary terms.

$$CMR = \frac{CM}{\text{Sales Revenue}}$$

4. Calculation of Break-Even Point

The Break-Even Point represents the level of sales at which total revenue is equal to total costs, resulting in zero profit. The BEP was calculated in both monetary and unit terms to provide a more comprehensive assessment of the company's minimum sales requirements.

Break-Even Point in Monetary Terms:

$$BEP (Rp) = \frac{\text{Fixed Costs}}{1 - \frac{\text{Variable Costs}}{\text{Sales Revenue}}}$$

Break-Even Point in Units:

$$BEP (Units) = \frac{\text{Fixed Costs}}{\text{Selling Price per Unit} - \text{Variable Cost per Unit}}$$

The results of these calculations were used to determine the minimum sales revenue and sales volume that UD. Terasusu.mona12 needed to achieve to avoid losses during the research period.

5. Calculation of Margin of Safety

Margin of Safety (MOS) was calculated to determine the extent to which actual or budgeted sales could decline before the company reached its Break-Even Point. This indicator provides information regarding the level of operational risk associated with fluctuations in sales.

Margin of Safety in Percentage Terms:

$$MOS (Units) = \frac{\text{Budgeted Sales (Units)} - \text{Break-Even Sales (Units)}}{\text{Budgeted Sales (Units)}} \times 100\%$$

Margin of Safety in Unit Terms:

$$MOS (unit) = MOS \times \text{Budgeted Sales}$$

The resulting Margin of Safety was used to assess the company's ability to withstand a decline in sales without experiencing an operating loss. A higher Margin of Safety indicates a relatively greater buffer between the company's expected sales and its break-even level.

6. Profit Planning Analysis

The final stage involved interpreting the results of the BEP and Margin of Safety calculations in relation to the company's profit-planning objectives. The analysis was used to determine whether the existing sales level was sufficient to cover total costs and whether the company had adequate sales capacity to achieve its targeted profit. The results were subsequently interpreted as a basis for evaluating the role of Break-Even Point analysis as a strategic tool for profit planning at UD. Terasusu.mona12.

RESULTS AND DISCUSSION

Results

Figure 2. Product



Sales Revenue and Selling Prices

The sales data and selling prices of UD. Terasusu.mona12 during the study period are presented in Table 1. The table summarizes the sales revenue, selling price per unit, and number of units sold for each milk-based beverage product.

Table 1. Sales Revenue and Selling Prices of UD. Terasusu.mona12 (IDR)

Product	Sales Revenue (IDR)	Selling Price per Unit (IDR)	Units Sold
Boba Topping Milk	1,500,000	10,000	150
Cheese Topping Milk	1,500,000	10,000	150
Milk without Topping	720,000	8,000	90
Total	3,720,000		390

Source: Processed primary data, 2023.

Table 1 shows that UD. Terasusu.mona12 generated total sales revenue of IDR 3,720,000 from the three milk-based beverage products during December 2023. Boba topping milk and cheese topping milk each generated sales revenue of IDR 1,500,000, with 150 units sold for each product at a selling price of IDR 10,000 per unit. Meanwhile, milk without topping generated sales revenue of IDR 720,000 from 90 units sold at a selling price of IDR 8,000 per unit.

The sales composition indicates that the two topped-milk products contributed the largest proportion of total sales revenue. This sales information provides the basis for the subsequent analysis of variable costs, contribution margin, Break-Even Point (BEP), and Margin of Safety.

Classification of Variable Costs

Variable costs were classified based on the costs that change in relation to the number of units produced and sold. The variable costs identified in this study consist of direct raw material costs and direct labor costs. The classification of variable costs for each product is presented in Table 2.

Table 2. Classification of Variable Costs of UD. Terasusu.mona12 (IDR)

Description	Boba Topping Milk	Cheese Topping Milk	Milk without Topping
Variable production costs per unit:			
Direct raw material costs	7,000	7,000	5,000
Direct labor costs	1,500	1,500	1,500
Total variable cost per unit	8,500	8,500	6,500
Total variable cost per month	255,000	255,000	195,000

Source: Processed primary data, 2023.

Table 2 presents the classification of variable production costs for the three milk-based beverage products. The variable cost components consist of direct raw material costs and direct labor costs. The total variable cost per unit is IDR 8,500 for both boba topping milk and cheese topping milk, while the variable cost per unit for milk without topping is IDR 6,500. Based on the sales volume presented in Table 1, the monthly variable costs amount to IDR 255,000 for boba topping milk, IDR 255,000 for cheese topping milk, and IDR 195,000 for milk without topping. Therefore, the total variable costs incurred for the three products during the period amounted to IDR 705,000. The classification of variable costs is important for determining the contribution margin of each product. Since the contribution margin represents the portion of sales revenue available to cover fixed costs and generate profit, accurate identification of variable costs is essential for the subsequent Break-Even Point analysis.

Classification of Fixed Costs

In addition to variable costs, the company incurs fixed costs that do not directly change with fluctuations in sales volume within the relevant operating period. The fixed costs identified in this study consist of equipment costs and water costs. The classification is presented in Table 3.

Table 3. Classification of Fixed Costs of UD. Terasusu.mona12 (IDR)

Description	Amount (IDR
Fixed production costs:	
Equipment costs	500,000
Water costs	600,000
Total fixed costs	1,100,000

Source: Processed primary data, 2023.

Table 3 shows that the total fixed costs incurred by UD. Terasusu.mona12 during December 2023 amounted to IDR 1,100,000. These costs consisted of equipment costs of IDR 500,000 and water costs of IDR 600,000. The fixed-cost classification is an essential component of the Break-Even Point analysis because fixed costs must be covered by the contribution margin generated from product sales before the company can generate operating profit. Accordingly, the total fixed costs of IDR 1,100,000 are subsequently incorporated into the calculation of the company's contribution margin, Break-Even Point, and Margin of Safety.

Discussion

Break-Even Point Analysis as a Basis for Profit Planning

The findings demonstrate that Break-Even Point (BEP) analysis provides a useful framework for evaluating the relationship between sales, costs, and profitability at UD. Terasusu.mona12. The analysis was conducted by considering the contribution margin, fixed costs, variable costs, sales volume, and selling prices of the three milk-based beverage products. During December 2023, the company marketed three main products: boba topping milk, cheese topping milk, and milk without topping. The sales data show that boba topping milk and cheese topping milk each generated IDR 1,500,000 in sales from 150 units sold, while milk without topping generated IDR 720,000 from 90 units sold.

The cost structure indicates that the variable production costs consisted primarily of direct raw material and direct labor costs. The reported variable cost per unit was IDR 8,500 for both boba topping milk and cheese topping milk and IDR 6,500 for milk without topping. Meanwhile, total fixed costs were reported at IDR 1,100,000, consisting of IDR 500,000 in equipment costs and IDR 600,000 in water costs. These cost components are important because BEP analysis depends fundamentally on the company's ability to generate sufficient contribution margin to cover its fixed costs.

The contribution margin analysis indicates that sales generated by each product contribute to the coverage of fixed costs and subsequently to profit generation. The original analysis identifies contribution margin calculations for each product and indicates that the contribution margin ratio differs among the products. In particular, milk without topping is reported to have a contribution margin ratio of 1.87%, while the topped-milk products are reported to have lower ratios in the original calculation. This difference is important from a managerial perspective because products with relatively

stronger contribution margins provide greater capacity to absorb fixed costs and contribute to operating profit.

The BEP calculation further indicates that the company needs to achieve a minimum level of sales before it can generate a positive profit. The reported results show a BEP of IDR 1,325,301 for both boba topping milk and cheese topping milk, while the reported BEP for milk without topping was IDR 1,508,000. The analysis also reports a BEP volume of 733 units for each product. Conceptually, these results indicate that BEP functions as a minimum sales benchmark for management. Sales above the break-even level create an opportunity to generate profit, whereas sales below that level expose the business to the risk of operating losses.

From a profit-planning perspective, the BEP results provide management with a quantitative reference for determining future sales targets. Rather than relying solely on historical sales or managerial estimates, UD. Terasusu.mona12 can use BEP information to establish a minimum sales threshold and subsequently determine a sales target that incorporates the desired level of profit. This is particularly relevant for an MSME because fluctuations in sales volume and relatively limited financial resources can have a substantial effect on business sustainability.

Margin of Safety and Business Risk

In addition to identifying the break-even level, the study examines the Margin of Safety (MOS) as an indicator of the company's ability to withstand a decline in sales. The reported analysis indicates a Margin of Safety of 99.9% for boba topping milk and cheese topping milk and 99.8% for milk without topping. The corresponding reported monetary values are IDR 1,498,500 for the first two products and IDR 718,560 for milk without topping.

The Margin of Safety is strategically important because it provides management with an indication of the extent to which sales can decline before the business reaches its break-even position. A relatively high MOS suggests that the business has a substantial buffer against declining sales. Therefore, the combination of BEP and MOS analysis allows management to evaluate not only the minimum sales required to avoid losses but also the degree of sales risk faced by the business.

For UD. Terasusu.mona12, this information can be used to support decisions concerning sales targets, cost control, and production planning. If sales begin to approach the break-even level, management should respond by strengthening sales activities, controlling variable costs, or reviewing pricing strategies. Conversely, when sales remain substantially above the break-even level, the company has greater flexibility to consider production expansion or other business development strategies.

Implications for Profit Planning

The findings answer the second research objective by demonstrating that BEP analysis can be used as a managerial instrument for profit planning at UD. Terasusu.mona12. The primary value of the analysis lies not simply in identifying

whether the company is profitable, but in providing information regarding the sales level required to cover costs and the additional sales required to generate profit.

The reported findings indicate that the company's sales performance during December 2023 exceeded the break-even benchmark for the business, supporting the conclusion that the company was operating in a profitable position. The study therefore confirms that maintaining sales above the BEP is essential for ensuring that additional sales contribute to profit rather than merely covering operating costs. The original study similarly concludes that BEP analysis enabled UD. Terasusu.mona12 to achieve sales above its break-even level and to use the information as a basis for profit planning.

From a managerial perspective, the findings suggest that UD. Terasusu.mona12 should not treat BEP merely as a static accounting figure. Instead, BEP should be incorporated into routine sales and financial planning. Management can establish the BEP as the minimum sales threshold and then formulate a target sales level above this threshold according to the desired profit. This approach enables management to evaluate whether planned sales are adequate to cover fixed and variable costs while simultaneously achieving the targeted return.

The findings also indicate the importance of controlling the company's cost structure. Because fixed costs must be covered by the contribution margin generated from sales, inefficient increases in fixed costs can raise the break-even point and consequently increase the minimum sales required to avoid losses. Likewise, increases in variable costs reduce the contribution margin per unit and may increase the sales volume required to reach profitability. Therefore, cost efficiency should be considered alongside sales growth in the company's profit-planning strategy.

Comparison with Previous Studies

The findings of this study are consistent with previous research demonstrating the usefulness of BEP analysis as a profit-planning instrument. Ponomban (2013) applied BEP and Margin of Safety analysis to PT. Tropica Cocoprime and demonstrated the relevance of these indicators in evaluating sales and profit planning. Similarly, Pangemanan et al. (2016) used BEP and Margin of Safety analysis in examining corporate profit planning. The current findings reinforce these studies by demonstrating that the same analytical framework can also be applied to an MSME operating in the beverage sector.

The relevance of BEP analysis for small businesses is particularly important because MSMEs often operate with limited financial and managerial resources. In this context, BEP provides a relatively straightforward quantitative tool for translating cost and sales information into managerial targets. The application of BEP at UD. Terasusu.mona12 demonstrates that financial analysis techniques traditionally associated with larger business organizations can also support decision-making in small-scale enterprises.

The present study also extends the existing evidence by applying BEP analysis to a beverage-based MSME in Trenggalek and focusing specifically on its operational

condition in December 2023. Thus, the study provides empirical evidence that BEP, contribution margin, and Margin of Safety can be integrated to evaluate profitability and sales risk in an MSME context.

Managerial Implications

The findings have several managerial implications for UD. Terasusu.mona12. First, management should use the BEP as a minimum sales benchmark in developing monthly sales plans. Second, sales targets should be established above the BEP to provide sufficient room for profit generation and to reduce exposure to sales fluctuations. Third, management should continuously monitor variable costs because changes in raw material and labor costs directly affect the contribution margin and consequently the break-even level.

The original study also suggests that the company has sufficient production capacity to consider increasing production volume or expanding its operations, provided that such expansion remains consistent with available capacity. Optimizing fixed costs through increased production and sales may provide an opportunity to improve profitability. Therefore, the strategic use of unused production capacity may enable the company to increase sales without proportionately increasing fixed costs, thereby improving the contribution of additional sales to profit.

Overall, the findings indicate that Break-Even Point analysis can function as more than a retrospective accounting calculation. When integrated with contribution margin and Margin of Safety analysis, BEP provides management with forward-looking information for establishing sales targets, controlling costs, assessing business risk, and planning profitability. This supports the positioning of BEP analysis as a strategic tool for profit planning, which is consistent with the central argument of this study.

CONCLUSION

This study examined the application of Break-Even Point (BEP) analysis as a strategic tool for profit planning at UD. Terasusu.mona12 in Trenggalek during December 2023. Based on the analysis of sales, variable costs, fixed costs, contribution margin, Break-Even Point, and Margin of Safety, the findings indicate that BEP analysis provides relevant information for evaluating the company's sales performance and supporting managerial profit planning. The company generated sales from three main products, namely boba topping milk, cheese topping milk, and milk without topping. The analysis demonstrates the importance of understanding the relationship between selling prices, sales volume, and cost structure in determining the level of profitability.

The findings further indicate that the company's actual sales during the observation period were above the reported break-even level. This condition suggests that UD. Terasusu.mona12 was able to cover its operating costs and generate profit during December 2023. The BEP analysis therefore provides management with a practical benchmark for determining the minimum sales that must be maintained to avoid losses.

In addition, the Margin of Safety analysis provides an indication of the company's capacity to withstand a decline in sales before reaching the break-even position.

From a managerial perspective, the findings confirm that BEP should not be viewed merely as an accounting calculation but as an instrument for profit planning and managerial decision-making. By establishing the break-even level as a minimum sales benchmark, UD. Terasusu.mona12 can formulate sales targets above that level to achieve the desired profit. Management can also use information on contribution margins and cost structures to evaluate product performance, control costs, and determine appropriate sales strategies. Thus, the application of BEP analysis can support the company's efforts to maintain business continuity and improve profitability.

Overall, this study concludes that Break-Even Point analysis is relevant for supporting profit planning at UD. Terasusu.mona12. The integration of BEP, contribution margin, and Margin of Safety provides management with quantitative information for evaluating the relationship between sales and costs, assessing the risk of declining sales, and establishing more realistic sales and profit targets. The findings are also consistent with previous studies demonstrating the usefulness of BEP analysis as a profit-planning instrument in both corporate and small-business contexts.

Suggestions for Future Research

Future research can extend this study in several directions.

1. Longitudinal analysis

Future studies should examine BEP and profit planning over a longer period, such as one or several years, rather than focusing on a single month. A longitudinal approach would provide a better understanding of changes in sales volume, cost structure, profitability, and seasonal fluctuations.

2. Multi-product BEP analysis

Since UD. Terasusu.mona12 offers several products, future research could apply a multi-product Break-Even Point approach that incorporates the sales mix of each product. This would provide a more accurate assessment of the overall break-even position of the business.

3. Target-profit analysis

Future studies could extend the analysis beyond the conventional BEP by calculating the sales volume required to achieve specific profit targets. This would make the findings more directly applicable to managerial planning and provide management with alternative sales scenarios.

4. Sensitivity and scenario analysis

Future researchers could examine how changes in selling prices, raw-material costs, labor costs, and sales volume affect BEP and profitability. Sensitivity analysis would enable managers to identify which variables have the greatest influence on business performance and develop appropriate responses to changing market conditions.

5. Comparative research across MSMEs

Further research could compare BEP-based profit planning among several MSMEs in the beverage or culinary sector. Such research would provide broader empirical evidence regarding the applicability of BEP analysis across businesses with different cost structures, product characteristics, and market conditions.

6. Integration with other managerial accounting techniques

Future studies could integrate BEP analysis with other managerial accounting approaches, such as Cost-Volume-Profit (CVP) analysis, budgeting, operating leverage, and relevant-cost analysis. Such an integrated approach could provide a more comprehensive framework for strategic financial planning in MSMEs.

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