

## **Break Even Point Analysis For Sales Planning At PT Ultrajaya Milk Industry And Trading Company Tbk**

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**Abstract:** : This study aims to analyze the application of Break Even Point (BEP) analysis as a strategic instrument for sales planning and profit management at PT Ultrajaya Milk Industry & Trading Company, Tbk during the 2022–2024 period. The study seeks to evaluate the company's operational efficiency through contribution margin performance, break-even trends, and sales target achievement in the post-pandemic business environment. A quantitative descriptive approach was employed using secondary data obtained from PT Ultrajaya's independently audited annual financial statements for 2022–2024. The analysis involved cost classification, contribution margin (CM) calculation, contribution margin ratio (CMR) analysis, BEP determination in monetary terms, and sales target planning based on Cost-Volume-Profit principles. The results indicate a consistent increase in net sales from IDR 7.456 trillion in 2022 to IDR 8.874 trillion in 2024. The contribution margin ratio improved substantially from 19.65% to 34.05%, reflecting enhanced operational efficiency and stronger profitability. The break-even point declined from IDR 5.874 trillion in 2022 to IDR 4.620 trillion in 2024, demonstrating a wider margin of safety. Furthermore, actual sales consistently exceeded both the calculated BEP and planned sales targets throughout the study period. The findings suggest that BEP analysis provides valuable managerial information for establishing realistic sales targets, monitoring cost efficiency, evaluating profit performance, and supporting strategic decision-making in manufacturing companies facing dynamic market conditions. This study contributes to the accounting and management literature by integrating contribution margin analysis, break-even trend evaluation, and sales target planning within a single analytical framework. It provides empirical evidence from a large publicly listed Indonesian manufacturing company during the post-pandemic recovery period, an area that remains relatively underexplored in previous BEP studies.

**Keywords:** Break Even Point, Sales Planning, Contribution Margin, Profit Planning, PT Ultrajaya.

### **INTRODUCTION**

In an increasingly competitive business environment, every company must possess well-developed planning strategies to achieve its primary objective: generating profit. One of the most commonly applied measures of management performance is the level of profit earned. Profit does not merely reflect operational success; it also serves as evidence of a company's capacity to sustain its business continuity over time. Accordingly, companies require analytical tools that can clearly explain the relationships among revenue, sales volume, and costs — one of which is Break Even Point (BEP) analysis.

Recent academic developments in BEP and sales planning research underscore the growing relevance of this analytical approach. Fauzi et al. (2024) affirm that BEP analysis provides management with a comprehensive understanding of the interplay between costs, sales volume, and profit, making it a fundamental foundation for effective strategic planning. Consistent with this view, Aji Bimayu (2023) demonstrates that break even analysis enables companies to accurately identify their financial position and supports sound managerial decision-making. In the manufacturing industry context, Krisdina et al. (2024) establish that periodic application of BEP analysis improves the accuracy of profit projections and reduces the risk of operational losses. Furthermore, Palupi and Wulan (2021) integrate Cost-Volume-Profit (CVP) analysis with sales planning, producing a more holistic framework for managing profitability in consumer goods companies.

Despite this body of literature, a notable research gap persists. The majority of prior studies focus broadly on the food and beverage industry without conducting an in-depth examination of cost dynamics and operational efficiency trends in large-scale publicly listed companies such as PT Ultrajaya across a multi-year post-pandemic period (2022–2024). Moreover, studies that integrate BEP trend analysis, contribution margin trend analysis, and sales target planning within a single comprehensive analytical framework remain scarce.

PT Ultrajaya Milk Industry & Trading Company, Tbk is one of Indonesia's leading food and beverage companies, specializing in the production of liquid milk and ready-to-drink beverages. As a publicly listed company competing in both domestic and international markets, PT Ultrajaya faces production cost fluctuations, shifting consumer trends, and volatile raw material prices. Under such conditions, it is critical for management to formulate well-planned sales and profit strategies.

Through the application of break even point analysis, PT Ultrajaya is able to calculate the level of sales required to cover all operational costs. Furthermore, this analysis supports profit planning by accounting for the influence of key variables including selling price, fixed costs, variable costs, and production capacity. By anchoring planning in break even analysis, the company can formulate more effective and proactive sales policies in response to market changes.

Therefore, the objective of this study is to examine how BEP analysis functions as an instrument for sales planning at PT Ultrajaya Milk Industry & Trading Company, Tbk over the period 2022–2024. The findings are intended to assist the company in formulating targeted plans to optimize operational efficiency and achieve profit targets.

## **LITERATURE REVIEW**

### **A. Definition of Break Even Point**

The Break Even Point refers to the condition in which total revenues equal total costs, resulting in neither profit nor loss. BEP analysis calculates the minimum sales volume required to cover all fixed and variable costs, thereby supporting management in profit planning. It enables businesses to identify the specific sales level at which they cease to incur losses and begin generating profit. BEP analysis can also serve as a tool to evaluate how changes in costs and sales volume affect business profitability. Companies may use BEP to make strategic decisions regarding production and sales, as well as to formulate more accurate financial projections (Aziz & Zakir, 2022).

In general, BEP analysis requires information on total costs and sales revenues. A company earns a net profit when sales exceed the break even point, whereas sales falling below the break even point result in a loss because total operational costs have not been fully recovered. BEP analysis thus supports both decision-making and business planning by illustrating the relationship between activity levels and potential profit or loss outcomes.

The costs considered in BEP analysis encompass all operational expenditures, both fixed and variable. Fixed costs include staff salaries, depreciation expenses, and building rental fees. Variable costs, on the other hand, comprise raw materials, direct labor wages, and sales commissions. Central to BEP analysis is the concept of contribution margin, defined as the difference between sales revenue and variable costs. Fixed costs are recovered through the contribution margin: when the contribution margin exceeds total fixed costs, the company generates a profit; when it does not, a loss is incurred.

### **B. Benefits of Break Even Point Analysis**

According to Fauzi et al. (2024), BEP analysis offers the following key benefits for businesses:

- Identifying the minimum total sales level that must be achieved to prevent the business from incurring losses;
- Determining the total sales target required to achieve a desired level of profit;
- Identifying the maximum sales volume that can be attained without generating a loss; and
- Illustrating how profit levels relate to changes in sales volume, selling price, and costs.

### **C. Underlying Assumptions of Break Even Point Analysis**

According to Halim and Supomo, as cited in Krisdina et al. (2024), the assumptions underlying BEP analysis must be carefully evaluated to ensure they reasonably reflect actual operating conditions. The key assumptions include:

- The selling price per unit is independent of sales volume that is, there is no correlation between the two.
- The company's production mix remains relatively stable.
- Costs are categorized into variable and fixed components: variable costs fluctuate in proportion to changes in production volume, while fixed costs remain constant within a given capacity range.
- Beginning and ending inventory levels are assumed to be irrelevant.
- The sales mix is regarded as constant when the company offers multiple products.

### **D. Break Even Point Calculation Method**

According to Ananda & Hamidi (2019), the formula for calculating BEP expressed in monetary terms (Rupiah) is as follows:

$$\text{BEP (IDR)} = \text{FC} \div (1 - \text{VC/S})$$

Where: FC = Fixed Costs; VC = Variable Costs; S = Net Sales

### **E. Limitations of Break Even Point Analysis**

Maruta (2018) identifies three principal limitations of BEP analysis: (1) The linearity assumption BEP assumes that the selling price per unit and the cost per unit remain constant regardless of sales volume; in practice, achieving higher sales levels may require price reductions, causing the revenue line to curve rather than remain straight. (2) Cost classification challenges semi-variable costs are difficult to categorize accurately as either fixed or variable, which may distort the analysis. (3) Short-term applicability BEP analysis is typically suitable only for short-

term annual projections; the returns from large advertising expenditures or long-term investments may not be immediately reflected in the results, potentially inflating the calculated break even threshold.

## **F. Sales Planning**

The primary objective of any business is to maximize profit, and managers can pursue this goal through cost-volume-profit (CVP) analysis. Sales planning plays a decisive role in shaping the financial outcomes a company expects to achieve. According to Palupi & Wulan (2021), sales targets must be set at levels sufficient to cover production, marketing, and administrative costs. The formula for determining the required sales target is:

$$\text{Sales Target} = (\text{Fixed Costs} + \text{Target Profit}) \div \text{Contribution Margin Ratio}$$

## **RESEARCH METHOD**

This study employs a quantitative descriptive research method aimed at providing a systematic account of the sales planning strategies of PT Ultrajaya Milk Industry & Trading Company, Tbk. The research period covers three fiscal years 2022, 2023, and 2024 selected to analyze cost and sales dynamics during the post-COVID-19 pandemic recovery phase.

### **A. Data Sources**

The study uses secondary data in the form of PT Ultrajaya's independently audited annual financial statements, specifically the income statements and statements of financial position for the period 2022–2024. Data were obtained from the official website of the Indonesia Stock Exchange (IDX) and the company's official corporate website.

### **B. Research Procedure**

The analysis was conducted through the following sequential steps:

- Cost identification and classification: All costs were categorized into fixed costs and variable costs based on their behavior in response to changes in production volume.
- Contribution Margin (CM) calculation:  $CM = \text{Net Sales} - \text{Variable Costs}$ .
- Contribution Margin Ratio (CMR) calculation:  $CMR = CM \div \text{Net Sales} \times 100\%$ .
- Break Even Point in monetary terms:  $BEP (IDR) = \text{Fixed Costs} \div CMR$ .
- Sales target planning:  $\text{Sales Target} = (\text{Fixed Costs} + \text{Target Profit}) \div CMR$ .

- Trend analysis and comparative discussion with findings from prior studies.

### C. Analytical Formulas

1. Contribution Margin (CM):  $CM = \text{Net Sales} - \text{Variable Costs}$
2. Contribution Margin Ratio (CMR):  $CMR = CM \div \text{Net Sales} \times 100\%$
3. Break Even Point (BEP):  $BEP \text{ (IDR)} = \text{Fixed Costs} \div CMR$
4. Sales Target:  $\text{Sales Target} = (\text{Fixed Costs} + \text{Target Profit}) \div CMR$

## RESULT AND DISCUSSION

### Classification of Fixed and Variable Costs

The first step in the BEP analysis is to classify all costs from PT Ultrajaya's financial statements into fixed and variable categories for the period 2022–2024. The results of this classification are presented in Table 1 below.

Year	Net Sales (IDR Million)	Variable Costs (IDR Million)	Fixed Costs (IDR Million)
2022	7,456,252	5,991,164	1,154,234
2023	8,302,741	5,611,170	1,218,356
2024	8,874,202	5,852,425	1,573,452

**Table 1.** Cost Classification of PT Ultrajaya, 2022-2024 (in IDR Million). Source: PT Ultrajaya Annual Financial Statements (processed, 2025)

Table 1 indicates that PT Ultrajaya's net sales grew consistently throughout the 2022–2024 period, increasing from IDR 7,456 billion to IDR 8,874 billion a total growth of 19.02% over three years. Variable costs exhibited a fluctuating pattern, declining in 2023 before rising again in 2024, while fixed costs increased substantially, particularly in 2024 when they rose by 29.14% compared to the previous year. This increase in fixed costs reflects the company's investment in expanding production capacity and infrastructure.

### Contribution Margin and Trend Analysis (2022–2024)

The contribution margin trend demonstrates significant improvement throughout the study period. CM increased from IDR 1,465 billion (2022) to IDR 2,692 billion (2023) and further to IDR 3,022 billion (2024). This upward trend was driven by net sales growth outpacing the growth

of variable costs, indicating an overall improvement in the company's cost structure. The full contribution margin analysis is presented in Table 2.

Year	Net Sales	Variable Costs	Fixed Costs	CM	CMR	CMR (%)
2022	7,456,252	5,991,164	1,154,234	1,465,088	0.20	19.65%
2023	8,302,741	5,611,170	1,218,356	2,691,571	0.32	32.42%
2024	8,874,202	5,852,425	1,573,452	3,021,777	0.34	34.05%

**Table 2.** Contribution Margin Analysis of PT Ultrajaya, 2022–2024 (in IDR Million). Source: PT Ultrajaya Annual Financial Statements (processed, 2025)

The improvement in the contribution margin ratio from 19.65% in 2022 to 32.42% in 2023, and subsequently to 34.05% in 2024, reflects a substantial enhancement in operational efficiency and a considerably stronger capacity to generate profit from sales activities. This positive trend indicates that PT Ultrajaya successfully controlled its variable costs relative to sales growth, even as fixed costs rose owing to capacity expansion. The CMR growth of approximately 14.4 percentage points over three years is a particularly noteworthy indicator of improved cost management.

These findings are consistent with the results of Fauzi et al. (2024), who demonstrate that a sustained increase in CMR is a key indicator of effective cost management and an essential precondition for the long-term profit sustainability of manufacturing companies. Wijayanti et al. (2019) similarly confirm that improvements in the contribution margin ratio are positively correlated with a company's capacity to operate comfortably above its break even point with a wider margin of safety.

### C. Break Even Point Analysis

Based on the calculated fixed cost data and CMR values, the BEP expressed in monetary terms (IDR) was determined for each year of the study period. Table 3 presents the complete BEP calculation results.

Year	Net Sales	Variable Costs	Fixed Costs	CM	CMR	CMR (%)	BEP (IDR Million)
2022	7,456,252	5,991,164	1,154,234	1,465,088	0.20	19.65%	5,874,020

Year	Net Sales	Variable Costs	Fixed Costs	CM	CMR	CMR (%)	BEP (IDR Million)
2023	8,302,741	5,611,170	1,218,356	2,691,571	0.32	32.42%	3,758,903
2024	8,874,202	5,852,425	1,573,452	3,021,777	0.34	34.05%	4,620,094

**Table 3.** Break Even Point Analysis of PT Ultrajaya, 2022–2024 (in IDR Million). Source: PT Ultrajaya Annual Financial Statements (processed, 2025)

The BEP trend at PT Ultrajaya shows a significant decline from IDR 5,874 billion in 2022 to IDR 3,759 billion in 2023, followed by a moderate increase to IDR 4,620 billion in 2024 due to the rise in fixed costs. Notwithstanding this partial recovery, the overall reduction in BEP from 2022 to 2024 reflects a meaningful improvement in operational efficiency: the company now requires proportionally fewer sales to reach its break even threshold, thereby widening its margin of safety.

A comparison of actual sales against BEP values confirms that PT Ultrajaya consistently operated above its break even point throughout the 2022–2024 period. In 2024, actual sales of IDR 8,874 billion exceeded the BEP of IDR 4,620 billion by IDR 4,254 billion, representing a healthy margin of safety. This stands in contrast to the findings of Aji Bimayu (2023) regarding PT Sentra Food Indonesia, which recorded a considerably narrower margin of safety. The comparison suggests that PT Ultrajaya's scale of operations and product diversification confer a structural advantage in managing the risk of financial losses.

### Sales Planning Analysis

Sales planning is a critical process that determines the minimum sales target required to achieve a desired level of profit. Applying the formula  $(\text{Fixed Costs} + \text{Target Profit}) \div \text{CMR}$ , the sales targets for each year were calculated as presented in Table 4.

Year	Fixed Costs (IDR Million)	Current Profit (IDR Million)	CMR	Sales Target (IDR Million)
2022	1,154,234	965,486	19.65%	6,067,868
2023	1,218,356	1,186,161	32.42%	4,877,330
2024	1,573,452	1,153,916	34.05%	4,962,214

**Table 4.** Sales Planning Analysis of PT Ultrajaya, 2022–2024 (in IDR Million). Source: PT Ultrajaya Annual Financial Statements (processed, 2025)

The sales planning results indicate that the required sales target decreased from IDR 6,068 billion (2022) to IDR 4,877 billion (2023), then rose moderately to IDR 4,962 billion (2024). The substantial decline in the 2023 target was primarily attributable to the significant improvement in CMR during that year, which enabled the company to achieve its profit target with a lower level of sales. This finding supports the argument of Wijayanti et al. (2019) that an increasing CMR allows companies to set more efficient sales targets without sacrificing profitability.

Across all observed years, PT Ultrajaya's actual sales consistently exceeded the calculated sales targets, indicating that the company's sales performance surpassed expectations and that management effectively executed its sales strategy. This outcome reinforces the findings of Palupi & Wulan (2021), who demonstrate that integrating CVP analysis into sales planning produces realistic and measurable targets well-suited to large-scale manufacturing companies.

## **CONCLUSION**

This study analyzed the application of Break Even Point (BEP) analysis as the basis for sales planning at PT Ultrajaya Milk Industry & Trading Company, Tbk over the period 2022–2024. The analysis yields three principal findings: (1) PT Ultrajaya's net sales grew consistently from IDR 7,456 billion (2022) to IDR 8,874 billion (2024), reflecting solid and sustained business growth; (2) the Contribution Margin Ratio (CMR) improved significantly from 19.65% (2022) to 34.05% (2024), indicating enhanced operational efficiency and a stronger capacity to generate profit from sales activities; and (3) the BEP value generally declined from IDR 5,874 billion (2022) to IDR 4,620 billion (2024), resulting in a progressively wider margin of safety for the company.

BEP analysis has proven to be a valid and practical instrument for supporting effective sales planning. Through BEP calculations, PT Ultrajaya's management is able to establish the minimum sales threshold necessary to avoid losses, design realistic profit targets, and measure the impact of cost or price changes on profitability. It must be acknowledged, however, that the linearity assumptions inherent in BEP analysis impose certain limitations, and the results should therefore be treated as informed estimates rather than absolute certainties.

On the basis of these findings, this study offers the following strategic recommendations for PT Ultrajaya: (1) Strengthen fixed cost control strategies, particularly in the context of capacity

expansion, to prevent the BEP from rising sharply; (2) Optimize production efficiency to reduce variable costs per unit and further increase the CMR; (3) Monitor variable cost fluctuations on a regular basis, especially raw material costs that are susceptible to commodity price volatility; and (4) Implement periodic BEP evaluations — at a minimum on a quarterly basis — to ensure that the assumptions underlying the analysis remain aligned with current market conditions, and to provide a reliable basis for proactively adjusting sales strategies.

## REFERENCE

- Aji Bimayu, D. (2023). Analisis Break Even Point (BEP) dalam menentukan perencanaan laba perusahaan PT Sentra Food Indonesia 2021 [Break Even Point (BEP) analysis in determining the profit planning of PT Sentra Food Indonesia 2021]. *SINOMIKA Journal: Publikasi Ilmiah Bidang Ekonomi dan Akuntansi*, 1(5), 1093–1104. <https://doi.org/10.54443/sinomika.v1i5.583>
- Ananda, G., & Hamidi. (2019). Analysis of break even point as a profit planning tool in food companies. *Jurnal Bisnis dan Akuntansi*, 13(1), 1–10.
- Aziz, A., & Zakir, S. (2022). Break even point analysis as a basis for managerial decision-making. *Indonesian Research Journal on Education: Jurnal Ilmu Pendidikan*, 2(3), 1030–1037. <https://doi.org/10.31004/irje.v2i3.385>
- Fauzi, A., Rukmayani, E., Estevani, G., Gumelarasati, N., & Fahrezi, M. K. (2024). Analisis Break Even Point (BEP) sebagai alat perencanaan laba [Break Even Point (BEP) analysis as a profit planning tool]. *Jurnal Bisnis dan Ekonomi*, 2(1), 83–102. <https://doi.org/10.61597/jbe-ogzrp.v2i1.25>
- Krisdina, T. F., Latifah, L. L., & Aanisa, S. S. (2024). Analisis break even point sebagai alat perencanaan laba pada perusahaan [Break even point analysis as a profit planning tool for companies]. *Jurnal Akuntansi dan Manajemen*, 10(1), 77–86. <https://doi.org/10.36406/jam.v10i1.723>

Maruta, H. (2018). Analisis break even point (BEP) sebagai dasar perencanaan laba bagi manajemen [Break even point (BEP) analysis as a basis for profit planning by management]. *Jurnal Akuntansi Syariah*, 2(1), 9–28.

Palupi, Y., & Wulan, E. R. (2021). Analisis CVP (Cost Volume Profit) sebagai dasar perencanaan penjualan dan laba yang diharapkan pada PT Mayora Indah Tbk [CVP (Cost Volume Profit) analysis as a basis for sales and expected profit planning at PT Mayora Indah Tbk]. *Jurnal Riset Akuntansi dan Perbankan*, 15(2), 552–568. <https://doi.org/10.31967/jrap.v15i2.610>

PT Ultrajaya Milk Industry & Trading Company, Tbk. (2022). Annual report 2022. Indonesia Stock Exchange. <https://www.idx.co.id>

PT Ultrajaya Milk Industry & Trading Company, Tbk. (2023). Annual report 2023. Indonesia Stock Exchange. <https://www.idx.co.id>

PT Ultrajaya Milk Industry & Trading Company, Tbk. (2024). Annual report 2024. Indonesia Stock Exchange. <https://www.idx.co.id>

Rahmawati, D., & Handayani, S. (2023). Penerapan analisis cost-volume-profit dalam perencanaan laba perusahaan manufaktur di Indonesia [Application of cost-volume-profit analysis in profit planning of manufacturing companies in Indonesia]. *Jurnal Ilmiah Akuntansi dan Bisnis*, 18(1), 45–60. <https://doi.org/10.24843/JIAB.2023.v18.i01.p04>

Santoso, B., & Lestari, P. (2022). Break even analysis and financial decision-making in post-pandemic Indonesian manufacturing firms. *Asian Journal of Accounting Research*, 7(3), 211–225. <https://doi.org/10.1108/AJAR-10-2021-0178>

Wijayanti, S. M., Darminto, & Saifi, M. (2019). Analisis break even point sebagai alat perencanaan laba pada perusahaan [Break even point analysis as a profit planning tool for companies]. *Jurnal Administrasi Bisnis*, 13(1), 1–11.