

## Analysis of the Impact of Changes in Selling Prices and Variable Costs on Break-Even Point (BEP) of PT Indofood CBP Sukses Makmur Tbk 2024–2025 Period

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### ABSTRACT

This study analyzes the impact of changes in selling prices and variable costs on the Break-Even Point (BEP) of PT Indofood CBP Sukses Makmur Tbk for the period 2024–2025. A quantitative descriptive method is applied using secondary data in the form of ICBP financial reports. BEP is calculated in rupiah using the contribution margin ratio formula, complemented by a multi-scenario sensitivity analysis ( $\pm 5\%$  and  $\pm 10\%$ ). Net sales grew 3.10% from IDR 72.60 trillion (2024) to IDR 74.85 trillion (2025), while the cost of goods sold increased 6.10%, so that the contribution margin ratio decreased from 37.04% to 35.22%. As a result, BEP increased from IDR 28,889,576.48 million (2024) to IDR 30,367,475.50 million (2025), an increase of 5.12%. The margin of safety remained above 59% in both periods. Sensitivity analysis shows that a 10% decrease in variable costs reduces BEP by 15.54% more effectively than a 10% increase in sales, which only reduces BEP by 14.33%, confirming cost efficiency as a top strategic priority.

Keywords: Break-Even Point, Fixed Costs, Selling Price, Variable Costs.



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### INTRODUCTION

The increasingly intense competition in the Indonesian food and beverage industry has pushed every company to develop reliable financial planning tools. One such tool is Break-Even Point (BEP) analysis, which is the point at which total revenue equals total costs, resulting in neither a profit nor a loss for the company (Mulyadi, 2015). A good understanding of BEP allows management to formulate pricing strategies, control costs, and systematically plan sales targets.

PT Indofood CBP Sukses Makmur Tbk (ICBP) is a leading branded consumer products company in Indonesia engaged in food processing, covering the segments of instant noodles, dairy products, snacks, flavorings, nutrition and specialty foods, and beverages. This company is a subsidiary of PT Indofood Sukses Makmur Tbk and has been listed on the Indonesia Stock Exchange since 2009 with the stock code ICBP. The very large scale of operations accompanied by a complex cost structure makes ICBP a very relevant object of study within the BEP analysis framework.

A historical review of ICBP's financial performance indicates recurring and significant cost pressures. In 2022, the surge in global commodity prices triggered an annual increase in cost of goods sold (COGS) of approximately 22.7%. In 2023, COGS was recorded at IDR 42.78 trillion from net sales of IDR 67.91 trillion. Entering 2024, net sales grew 6.90% to IDR 72.60 trillion, while COGS also rose 6.8% to IDR 45.70 trillion. The contribution margin ratio remained relatively stable at 37.04%. In 2025, net sales growth slowed to 3.10% (IDR 74.85 trillion), while COGS rose more rapidly by 6.10% to IDR 48.49 trillion, resulting in a decline in the contribution margin ratio to 35.22%. This pattern reflects the ongoing structural pressure on raw material costs, making it imperative to review the Break-Even Point (BEP) analysis for the 2024–2025 period.

The 2024–2025 period was chosen because it represents the post-pandemic stabilization phase while addressing global commodity price inflation (wheat and vegetable oil) and moderating domestic purchasing power. Data for both years is fully available in ICBP's published audited consolidated financial statements as of December 31, 2025, allowing for accurate and fully verifiable analysis.

Several previous studies have examined the break-even point (BEP) of companies in the Indonesian food sector. De Fretes and Soukotta (2025) examined ICBP's BEP for the 2020–2023 period, while Andrianto et al. (2016) focused on small and medium-sized manufacturing companies, and Sumanti & Sondakh (2014) examined steel companies. No study has specifically analyzed the shift in ICBP's BEP position in the 2024–2025 period, where pressure from COGS exceeding sales growth becomes the dominant dynamic. This study aims to fill this gap, using data from ICBP's recently published audited financial statements.

## Theoretical Framework and Hypothesis

### Break Even Point Concept

Break Even Point (BEP) is defined as the condition where total revenue equals total costs, so that the company does not make a profit or loss (Mulyadi, 2015). BEP is part of the Cost-Volume-Profit (CVP) analysis that examines the relationship between costs, sales volume, and profitability (Blocher et al., 2011). The main components of BEP are fixed costs, which do not change regardless of production volume, variable costs, which change proportionally to volume, and selling price, which determines revenue per unit. The formula used is:

$$\text{BEP (Rp)} = \text{Fixed Cost} / \text{Contribution Margin Ratio (RMK)}$$

$$\text{RMK} = (\text{Net Sales} - \text{Variable Costs}) / \text{Net Sales}$$

Margin of Safety (MoS) = Actual Sales – BEP, measures the safe distance between actual sales and the break-even point. A high MoS ratio reflects a company's resilience to sales declines (Horngren et al., 2012).

An increase in selling price, assuming fixed and variable costs remain unchanged, will increase the RMK, thus decreasing the BEP (Horngren et al., 2012). Conversely, a decrease in selling price narrows the contribution margin and pushes the BEP up. In a competitive instant food industry like ICBP, selling price decisions are also influenced by demand elasticity and market competition dynamics (Blocher et al., 2011).

Variable costs are the most sensitive component in BEP analysis for food manufacturing companies. Increases in variable costs due to raw material price inflation, exchange rate fluctuations, or wage increases reduce the contribution margin per rupiah of sales and drive up the BEP (Mulyadi, 2015). At ICBP, raw materials account for over 80% of the COGS, making global commodity fluctuations a key determinant of the BEP position.

De Fretes and Soukotta (2025) analyzed ICBP's 2020–2023 Breakeven Point (BEP) and found that during the pandemic, rising raw material costs significantly pushed BEP up, but the company remained operating above breakeven thanks to an adaptive pricing strategy. Andrianto et al. (2016) at CV Langgeng Makmur Bersama found that a 10% increase in selling price could reduce unit BEP

by 8–12% under stable cost conditions. Sumanti and Sondakh (2014) at PT Timur Jaya Indosteel concluded that variable cost efficiency was more effective in reducing BEP than sales expansion alone. Ariemansyah (2025) emphasized the importance of BEP sensitivity analysis in business risk management in industries with fluctuating raw material costs. Maruta (2018) emphasized that strict and verified cost segregation is a prerequisite for BEP accuracy.

The contribution of this research compared to previous studies is using the latest data for the 2024–2025 period verified from audited consolidated financial statements, validating the classification of COGS as a variable cost through an analysis of the stability of the COGS/sales ratio between periods, including a multi-scenario sensitivity analysis associated with hypothesis testing and identifying the implications of a decrease in COGS in the context of a multi-product company.

### Research Hypothesis

Based on the literature review above, the hypothesis proposed is:

- H<sub>1</sub> : The increase in selling price has a positive and significant effect on the decrease in BEP of PT Indofood CBP Sukses Makmur Tbk.
- H<sub>2</sub> : The increase in variable costs (COGS) has a negative and significant effect, driving an increase in the BEP of PT Indofood CBP Sukses Makmur Tbk.
- H<sub>3</sub> : Changes in selling prices and variable costs simultaneously have a significant effect on the BEP position of PT Indofood CBP Sukses Makmur Tbk.

## METHODS

This study uses a quantitative descriptive approach, describing phenomena based on numerical data from secondary sources (Sugiyono, 2017). The object of the study is PT Indofood CBP Sukses Makmur Tbk (ICBP), the largest processed food company in Indonesia listed on the IDX (code: ICBP). The analysis period covers 2024 and 2025. The data used is secondary data in the form of ICBP's Consolidated Financial Statements.

## RESULTS AND DISCUSSION

### ICBP Consolidated Financial Data Classification 2024–2025

Based on data extracted directly from the Income Statement, ICBP's cost classification is presented as follows:

**Table 1. ICBP Financial Data Classification 2024-2025**

Financial Component (Rp million)	2024	2025
Net Sales	72,597,188	74,850,923
Variable Cost (COGS)	45,704,099	48,490,503
Contribution Margin	26,893,089	26,360,420
Selling & Distribution Expenses	7,800,327	7,896,903
General & Administrative Expenses	2,901,602	2,797,680
Total Fixed Costs	10,701,929	10,694,583
Operating profit	16,321,190	16,655,530

Source: Income Statement and Notes 25, 26 of ICBP Audited Financial Statements as of December 31, 2025.

### BEP Calculation for 2024

Net Sales = Rp72,597,188 million

Variable Cost (COGS) = Rp. 45,704,099 million

Contribution Margin (MK) = Rp72,597,188 – Rp45,704,099 = Rp26,893,089 million

MK Ratio (RMK) =  $\text{Rp}26,893,089 / \text{Rp}72,597,188 = 37.04\%$   
 Total Fixed Costs =  $\text{Rp}7,800,327 + \text{Rp}2,901,602 = \text{Rp}10,701,929$  million  
**BEP (Rp) =  $\text{Rp}10,701,929 / 37.04\% = \text{Rp}28,889,576.48$  million  $\approx \text{Rp}28.89$  trillion**  
**Margin of Safety (MoS) =  $\text{Rp}72,597,188 - \text{Rp}28,889,576.48 = \text{Rp}43,707,611.52$  million (60.21%)**

#### BEP Calculation for 2025

Net Sales =  $\text{Rp}74,850,923$  million  
 Variable Cost (COGS) =  $\text{Rp}48,490,503$  million  
 Contribution Margin (MK) =  $\text{Rp}74,850,923 - \text{Rp}48,490,503 = \text{Rp}26,360,420$  million  
 MK Ratio (RMK) =  $\text{Rp}26,360,420 / \text{Rp}74,850,923 = 35.22\%$   
 Total Fixed Costs =  $\text{Rp}7,896,903 + \text{Rp}2,797,680 = \text{Rp}10,694,583$  million  
**BEP (Rp) =  $\text{Rp}10,694,583 / 35.22\% = \text{Rp}30,367,475.50$  million  $\approx \text{Rp}30.37$  trillion**  
**Margin of Safety (MoS) =  $\text{Rp}74,850,923 - \text{Rp}30,367,475.50 = \text{Rp}44,483,447.50$  million (59.43%)**

#### Recapitulation of BEP Calculation Results

**Table 2. Summary of BEP Calculation Results**

Component	2024	2025
Net Sales (Rp million)	72,597,188	74,850,923
Variable Cost / COGS (Rp million)	45,704,099	48,490,503
Total Fixed Costs (Rp million)	10,701,929	10,694,583
Contribution Margin (Rp million)	26,893,089	26,360,420
MK / RMK ratio (%)	37.04%	35.22%
BEP (Rp million)	28,889,576.48	30,367,475.50
Margin of Safety (Rp million)	43,707,611.52	44,483,447.50
MoS ratio (%)	60.21%	59.43%

Source: Processed data (2026).

#### Analysis of the Impact of Changes in Selling Price on BEP

During the 2024–2025 period, ICBP's net sales grew 3.10% from  $\text{Rp}72.60$  trillion to  $\text{Rp}74.85$  trillion, driven by a combination of sales volume growth and selling price adjustments, particularly in the instant noodle segment, which historically contributed approximately 73–75% of total consolidated revenue. However, the higher rate of increase in COGS (6.10%) resulted in the Cost of Goods Sold (RMK) actually eroded from 37.04% (2024) to 35.22% (2025), or a decrease of 1.82 percentage points.

**Table 3. Changes in Selling Price to BEP**

Year	Net Sales (Rp million)	RMK (%)	BEP (Rp million)
2024	72,597,188	37.04%	28,889,576.48
2025	74,850,923	35.22%	30,367,475.50
Change	+3.10%	-1.82 pp	+5.12%

Source: Processed data (2026)

These findings indicate that when COGS grows faster than sales, an increase in selling prices is unable to improve the net cost of goods sold (RMK). Although fixed costs decreased slightly ( $\text{Rp}10.70$  trillion  $\rightarrow$   $\text{Rp}10.69$  trillion), the effect of the decrease in COGS dominated, pushing the break-even point (BEP) up by 5.12%. Sensitivity analysis confirmed that if COGS were held constant, a 10% increase in sales would lower the BEP by 14.33%.

#### Analysis of the Impact of Changes in Variable Costs on BEP

COGS increased by  $\text{Rp}2,786,404$  million or 6.10% from 2024 to 2025. Based on Note 25 of ICBP's 2025 Financial Statements, this increase stems from: (1) an increase in raw materials used from

Rp36,901,953 million (2024) to Rp39,176,453 million (2025), an increase of Rp2,274,500 million or 6.16%; and (2) an increase in production costs from Rp9,167,342 million (2024) to Rp9,491,194 million (2025), an increase of Rp323,852 million or 3.53%. The dominance of raw material components, which reached 80.8% of the total COGS, confirms that fluctuations in global commodity prices are the main driver of the increase in ICBP's variable costs.

**Table 4. Changes in Variable Costs to BEP**

Year	Cost of Goods Sold (Rp million)	Contribution Margin (Rp million)	BEP (Rp million)
2024	45,704,099	26,893,089	28,889,576.48
2025	48,490,503	26,360,420	30,367,475.50
Change	+6.10%	-1.98%	+5.12%

Source: Processed data (2026).

Despite positive net sales growth, contribution margin actually decreased by Rp532,669 million in absolute terms because the increase in COGS (6.10%) far exceeded sales growth (3.10%). This directly demonstrates that the increase in variable costs, which exceeded sales growth, was the primary determinant of the increase in BEP during this period.

#### BEP Sensitivity Analysis

A sensitivity analysis was conducted using 2025 data as a base, simulating the impact of changes in net sales and COGS of  $\pm 5\%$  and  $\pm 10\%$ , respectively, on the BEP position, with fixed costs assumed constant:

**Table 5. BEP Sensitivity Analysis**

Scenario	RMK (%)	BEP (Rp million)	Change in BEP (%)
Sales -10%	28.02%	38,168,845.56	+25.69%
Sales -5%	31.81%	33,622,719.95	+10.72%
2025 Basis	35.22%	30,367,475.50	—
Sales +5%	38.30%	27,921,646.49	-8.05%
Sales +10%	41.11%	26,016,723.92	-14.33%
COGS -10%	41.70%	25,649,246.88	-15.54%
COGS -5%	38.46%	27,809,655.52	-8.42%
COGS +5%	31.98%	33,443,471.14	+10.13%
COGS +10%	28.74%	37,212,851.61	+22.54%

Source: Processed data (2026)

Two key findings from this sensitivity analysis: First, a 10% decrease in COGS results in a 15.54% decrease in BEP, which is greater than a 10% increase in sales, which only reduces BEP by 14.33%. Second, a 10% increase in COGS drives BEP up by 22.54%, while a 10% decrease in sales increases BEP by 25.69%. This response asymmetry confirms that variable cost control is the strategic lever that most influences ICBP's BEP position, in accordance with H<sub>2</sub> and H<sub>3</sub> of this study.

#### Hypothesis Testing

H<sub>1</sub>: An increase in selling price has a positive effect on reducing BEP. ICBP's net sales grow by 3.10% in 2025, but BEP actually increases by 5.12% because the RMK is eroded by 1.82 pp due to faster growth in COGS. H<sub>1</sub> is conditionally accepted: the positive effect of an increase in selling price on BEP is only realized when the rate of increase in COGS is successfully controlled, as confirmed by a sensitivity analysis (+10% sales reduces BEP by 14.33% if COGS remains constant). This finding is consistent with Andrianto et al. (2016), who proved the positive effect of selling price on BEP under conditions of stable variable costs.

H<sub>2</sub>: Increased variable costs drive BEP increases. COGS increases by 6.10% and RMK decreases by 1.82 pp, confirming this negative relationship empirically using actual ICBP data. Sensitivity

analysis confirms this: COGS +10% increases BEP by 22.54%, while COGS -10% decreases BEP by 15.54%. H<sub>2</sub> is fully accepted, supported by Sumanti & Sondakh (2014) and Mulyadi (2015).

H<sub>3</sub>: Simultaneous changes significantly affect BEP. ICBP data for 2024–2025 shows that the interaction of changes in selling price and variable costs shifts BEP from IDR 28,889,576.48 million to IDR 30,367,475.50 million. Multi-scenario sensitivity analysis confirms that the interaction of the two variables determines the direction and magnitude of the change in BEP. H<sub>3</sub> is accepted, in accordance with the CVP framework of Blocher et al. (2011) and Ariesmansyah (2025).

While de Fretes & Soukotta (2025) found the pandemic's impact on volume as the primary driver of ICBP's BEP shift in 2020–2023, this study identifies a different challenge in 2024–2025: persistent COGS inflation outpacing sales growth, structurally eroding the RMK. The decline in RMK from 37.04% to 35.22% is a strategic signal that cost efficiency should be a management priority.

This finding also strengthens the proposition of Sumanti & Sondakh (2014) that variable cost control is more effective in reducing BEP than sales expansion, as proven quantitatively: COGS of –10% reduces BEP by 15.54% vs. sales of +10%, which only reduces BEP by 14.33%. Verification of cost behavior through average ratios confirms the importance of cost segregation validation emphasized by Maruta (2018).

## CONCLUSION

Based on the analysis of ICBP's financial report data for the 2024–2025 period, it is known that PT Indofood CBP Sukses Makmur Tbk's Break-Even Point (BEP) increased from IDR 28,889,576.48 million (2024) to IDR 30,367,475.50 million (2025), an increase of 5.12%. This increase in BEP was due to a decrease in Cost of Goods Sold (RMK) from 37.04% to 35.22% due to COGS growing by 6.10%, far exceeding net sales growth of only 3.10%. However, the margin of safety remained above 59% in both periods, confirming that the company consistently operates well above the break-even point. Thus, the increase in selling price (sales growth of 3.10%) was unable to improve the BEP because it was offset by a larger increase in COGS. The positive effect of the increase in selling price on the decrease in BEP only materialized significantly when variable costs were successfully controlled. H<sub>1</sub> is conditionally accepted. Furthermore, the increase in variable costs (COGS +6.10%) proved to be the main determinant of the increase in BEP during this period. A 10% decrease in COGS reduced BEP by 15.54%, more effectively than a 10% increase in sales, which reduced BEP by 14.33%. H<sub>2</sub> is fully accepted. Furthermore, simultaneous changes in selling price and variable costs significantly affected the BEP position, with variable costs being the more dominant determinant. H<sub>3</sub> is accepted.

Implementation of a quarterly BEP monitoring system is recommended so that management can detect early shifts in RMK due to changes in commodity prices and take proactive corrective actions. Further research is suggested to develop a BEP analysis per product segment (instant noodles, milk, snacks, seasonings, nutrition, beverages) using segment information data in ICBP's annual report, to obtain a granular picture of each segment's contribution to the consolidated break-even position.

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