

BREAK-EVEN POINT ANALYSIS OF BAKSO BAKAR BU DEDE, A MICRO CULINARY ENTERPRISE IN MEDAN, INDONESIA**Cio Yohana Dhea Angie¹, Rafi Abrar², Muhammad Aidil Rizki³, Iskandar Muda⁴**¹²³*Department of Business Administration, Faculty of Social and Political Sciences, Universitas Sumatera Utara, Medan, Indonesia*⁴*Department of Accounting, Faculty of Business Economy, Universitas Sumatera Utara, Medan, Indonesia*Email: cioyohana25@gmail.com¹, rafiabrar04@gmail.com², aidilrizki@students.usu.ac.id³, iskandar1@usu.ac.id⁴**Abstract**

Break-even point analysis can help micro and small enterprises identify the sales level required to cover operating costs. This study analyzes the break-even point of Bakso Bakar Bu Dede, a small culinary business located in Medan, Indonesia. The study uses a descriptive qualitative approach, with cost and selling-price information obtained directly from the business owner. The information was organized into fixed costs, variable costs, and selling price, and then analyzed using contribution margin and break-even point calculations. The recorded fixed cost was IDR 300,000, while variable costs amounted to IDR 60,000 for 100 skewers, equivalent to IDR 600 per skewer. At a selling price of IDR 1,000 per skewer, the contribution margin was IDR 400 per skewer, or 40% of sales. The calculation indicates a break-even point of 750 skewers, equivalent to sales revenue of IDR 750,000. At this level, revenue equals total costs and the business neither earns a profit nor incurs a loss. A sales scenario of 1,000 skewers produces estimated revenue of IDR 1,000,000 and a profit of IDR 100,000, provided that the selling price and unit variable cost remain unchanged. These results can serve as a practical reference for setting minimum sales targets and reviewing the relationship between price, costs, and sales volume.

Keywords: *break-even point; contribution margin; fixed costs; variable costs; microenterprise; sales planning*

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1. INTRODUCTION

Micro, small, and medium enterprises often make day-to-day decisions about selling prices, purchasing inputs, and sales targets with limited financial records. A simple cost analysis can help business owners understand how many products must be sold before sales revenue covers the costs of producing and selling them. Break-even point (BEP) analysis identifies the sales volume or revenue at which total revenue equals total costs. At this point, the business neither earns a profit nor incurs a loss.

The theoretical basis for this study is managerial accounting, particularly cost behavior and cost-volume-profit (CVP) analysis. Brewer, Garrison, and Noreen (2019) explain managerial accounting as information used by managers for planning, control, and decision-making, and discuss fixed and variable cost classifications as part of cost analysis. In a CVP framework, the contribution margin represents the amount remaining from sales after variable costs are deducted; it is used to cover fixed costs and then contribute to profit. BEP is reached when total revenue equals total costs. These concepts provide the basis for classifying the costs reported by the owner and calculating the break-even point for Bakso Bakar Bu Dede.

Previous studies have applied BEP and related cost-volume-profit analysis to different types of small businesses. Simamora and Mulyani (2022) used a descriptive qualitative approach to analyze Warkop Bangsa, a culinary microenterprise in Medan, and calculated break-even points for several menu items. Husna et al. (2024) examined BEP and margin of safety as tools for profit planning in an MSME, while Gandi and Kusumastuti (2025) calculated BEP and sales requirements for a target profit in a brick-producing enterprise. Studies on culinary businesses have also examined CVP analysis, including Mie Time KOPMA (Lamo et al., 2025) and a simulated culinary MSME model (Silitonga et al., 2026). Rahmi et al. (2024) discussed BEP as a tool for setting profit targets in a small cake business. Taken together, these studies demonstrate the practical use of BEP for sales planning across different business settings. The present study applies the same core concepts to Bakso Bakar Bu Dede using cost and selling-price information obtained directly from the owner. Its focus is to calculate the contribution margin and break-even point in units and sales revenue for this specific micro culinary enterprise.

This study applies break-even point analysis to Bakso Bakar Bu Dede using cost and selling-price information obtained directly from the owner. Its practical contribution is a business-specific estimate of the minimum sales volume and revenue needed to cover the costs recorded for this micro culinary enterprise. The study does not claim that break-even point analysis itself is new; rather, it provides a focused application to the selected business.

2. METHODS

This study uses a descriptive qualitative approach. Primary information about the business and its costs was obtained directly from the owner of Bakso Bakar Bu Dede through an interview. The information used in the analysis includes the recorded fixed costs, variable costs for a production batch, and selling price per skewer. The figures were organized into cost categories and analyzed through arithmetic calculations of unit variable cost, contribution margin, contribution margin ratio, and BEP. The descriptive approach was used to explain the meaning of the calculated results for the business.

Following the cost-volume-profit framework discussed by Brewer et al. (2019), the contribution margin per unit was calculated by subtracting variable cost per unit from the selling price per unit. The contribution margin ratio was calculated by dividing the contribution margin per unit by the selling price per unit. BEP in units was calculated by dividing fixed costs by the contribution margin per unit, while BEP in sales revenue was calculated by dividing fixed costs by the contribution margin ratio.

Contribution margin per unit = Selling price per unit – Variable cost per unit

Contribution margin ratio = Contribution margin per unit ÷ Selling price per unit

BEP (units) = Fixed costs ÷ Contribution margin per unit

BEP (sales revenue) = Fixed costs ÷ Contribution margin ratio

3. RESULTS AND DISCUSSION

3.1. Business Profile and Cost Information

Bakso Bakar Bu Dede is a micro culinary enterprise owned by Bu Dede and located on Jalan Bahagia, Sukaraja, Medan. Its product consists of meatballs placed on skewers, grilled, and served with sauce or seasoning. The owner-reported initial capital was IDR 500,000. For the BEP calculation, the cost figures used were fixed costs of IDR 300,000 and variable costs of IDR 60,000 for 100 skewers.

Business information	Details
Business name	Bakso Bakar Bu Dede
Owner	Bu Dede
Business type	Micro culinary enterprise
Product	Grilled meatballs per skewer
Location	Jalan Bahagia, Sukaraja, Medan, Indonesia
Initial capital reported	IDR 500,000
Selling price	IDR 1,000 per skewer

Table 1. Business profile of Bakso Bakar Bu Dede.

Fixed-cost component	Amount (IDR)
Simple grilling equipment	150,000
Stove and supporting equipment	75,000
Containers and tongs	40,000
Other small equipment	35,000
Total fixed costs	300,000

Table 2. Fixed costs recorded for the analysis.

Variable-cost component	Amount for 100 skewers (IDR)
Meatballs	45,000
Sauce and seasoning	5,000
Skewers	2,000
Margarine/oil for brushing	2,000
Simple packaging	6,000
Total variable costs	60,000

Table 3. Variable costs for a batch of 100 skewers.

The variable cost per skewer is IDR 60,000 divided by 100 skewers, or IDR 600 per skewer. This unit cost is used together with the selling price and fixed costs to calculate the contribution margin and BEP. The initial capital figure is reported separately from the cost figures used in the calculation because the reported capital amount is not identical to the fixed costs plus the variable cost of one 100-skewer batch.

3.2. Contribution Margin

The contribution margin is the amount remaining from each unit's selling price after variable costs are deducted. With a selling price of IDR 1,000 per skewer and variable cost of IDR 600 per skewer, the contribution margin is IDR 400 per skewer.

Contribution margin = IDR 1,000 – IDR 600 = IDR 400 per skewer

The contribution margin ratio is 40%, calculated as IDR 400 divided by IDR 1,000. This means that 40% of sales revenue is available to cover fixed costs and, after fixed costs have been covered, contribute to profit.

Contribution margin ratio = $\text{IDR } 400 \div \text{IDR } 1,000 \times 100\% = 40\%$

3.3. Break-Even Point Calculation

BEP in units indicates the number of skewers that must be sold for total revenue to equal total costs. Using fixed costs of IDR 300,000 and a contribution margin of IDR 400 per skewer, the calculation is:

$$\text{BEP (units)} = \text{IDR } 300,000 \div \text{IDR } 400 = 750 \text{ skewers}$$

BEP in sales revenue can be calculated by dividing fixed costs by the contribution margin ratio. The result is IDR 300,000 divided by 40%, or IDR 750,000. This is consistent with 750 skewers multiplied by the selling price of IDR 1,000 per skewer.

$$\text{BEP (sales revenue)} = \text{IDR } 300,000 \div 0.40 = \text{IDR } 750,000$$

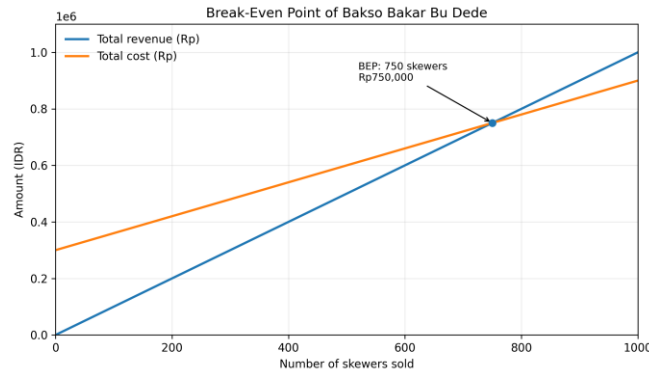


Fig. 1. Revenue and total cost intersect at 750 skewers and IDR 750,000.

At the break-even point, sales revenue is IDR 750,000. Variable costs for 750 skewers are IDR 450,000, and fixed costs are IDR 300,000. Total costs therefore equal IDR 750,000, leaving a profit of zero. Sales below 750 skewers would not cover all costs under the same price and cost structure, while sales above 750 skewers would produce a positive estimated profit.

3.4. Sales Scenario and Interpretation

To illustrate the relationship between sales volume and profit, a scenario of 1,000 skewers is considered. At IDR 1,000 per skewer, total revenue would be IDR 1,000,000. Variable costs would be IDR 600,000, and total costs, including fixed costs of IDR 300,000, would be IDR 900,000. The resulting estimated profit would be IDR 100,000.

Item	Calculation	Amount (IDR)
Sales revenue	$1,000 \times 1,000$	1,000,000
Variable costs	$1,000 \times 600$	600,000
Fixed costs	As recorded	300,000
Total costs	$600,000 + 300,000$	900,000
Estimated profit	$1,000,000 - 900,000$	100,000

Table 4. Estimated financial result at a sales volume of 1,000 skewers.

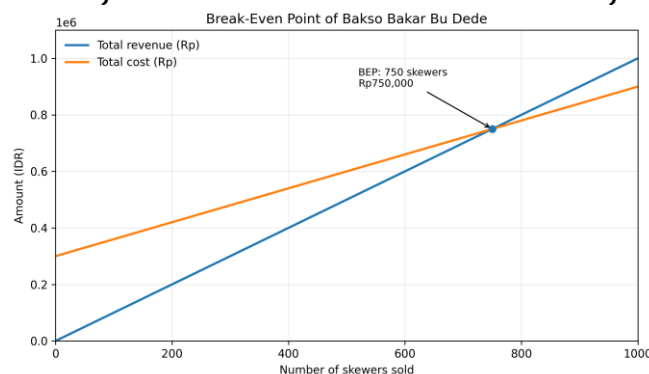


Fig. 2. Break-even point based on fixed costs of IDR 300,000, variable costs of IDR 600 per skewer, and a selling price of IDR 1,000 per skewer.

3.5. Comparison with Previous Studies and Study Limitations

The findings align with the practical purpose of BEP analysis described in prior studies. Simamora and Mulyani (2022) applied BEP to menu items at a culinary microenterprise in Medan, while Husna et al. (2024) discussed BEP and margin of safety in relation to profit planning. Gandi and Kusumastuti (2025) demonstrated how BEP calculations can be combined with sales targets for planned profit. Lamo et al. (2025) used CVP analysis to examine sales, costs, contribution margins, and BEP at a culinary enterprise, while Silitonga et al. (2026) presented a simulated application of BEP for a culinary MSME. Rahmi et al. (2024) likewise considered BEP in setting profit targets for a small cake business. The present study contributes a business-specific calculation for Bakso Bakar Bu Dede, based on cost and selling-price information obtained directly from the owner.

The findings should be interpreted within the limits of the available data. The calculation assumes that the selling price, variable cost per skewer, and fixed costs remain unchanged as sales volume changes. The profit scenario is therefore an estimate, not a record of actual profit. The study also uses the cost categories and amounts available from the owner; additional recurring expenses, if any, should be recorded in future analyses to improve the completeness of the cost structure.

4. CONCLUSIONS

This study calculated the break-even point for Bakso Bakar Bu Dede using cost and selling-price information obtained directly from the owner. With fixed costs of IDR 300,000, variable costs of IDR 600 per skewer, and a selling price of IDR 1,000 per skewer, the contribution margin is IDR 400 per skewer and the contribution margin ratio is 40%. The resulting break-even point is 750 skewers, equivalent to sales revenue of IDR 750,000.

At the break-even point, revenue equals total costs and estimated profit is zero. Under the same cost and price conditions, selling 1,000 skewers would produce estimated revenue of IDR 1,000,000 and estimated profit of IDR 100,000. The results can help the owner set a minimum sales target and assess the relationship between costs, selling price, and sales volume. Future analysis should include any additional recurring expenses and actual sales records when available.

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CREDIT AUTHOR CONTRIBUTION STATEMENT

Cio Yohana Dhea Angie: Conceptualization, Methodology, Data Curation, Formal Analysis, Writing - Original Draft, and Visualization.

Rafi Abrar: Investigation, Data Curation, Formal Analysis, Writing - Original Draft, and Writing - Review & Editing.

Muhammad Aidil Rizki: Methodology, Investigation, Validation, Writing - Review & Editing, and Visualization.

Iskandar Muda: Supervision, Methodology, Validation, and Writing - Review & Editing.

CONFLICT OF INTEREST

The author declares no conflict of interest.

SUPPORTING INFORMATION

Not applicable.

USE OF AI-ASSISTED TECHNOLOGY FOR MANUSCRIPT PREPARATION

The authors confirm that there was no use of artificial intelligence (AI)-assisted technology for assisting in the writing or editing of the manuscript and no images were manipulated using AI.

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