Jurnal Semesta Ilmu Manajemen dan Ekonomi (J-SIME)
Vol. 3 No. 2 Tahun 2026
Licenced CC BY-SA, E-ISSN: 3064-2264 , Hal 968-977
DOI: https://doi.org/10.71417/j-sime.v3i2.2390
https://e-journal.lppmpustakacendekia.or.id/index.php/J-SIME/index

Break-Even Point Analysis as a Profit Planning Tool for a Cheese-Filled Fried Dim Sum Microenterprise: A Simulation-Based Cost–Volume–Profit Study

Alifah Rahmah[1], Anasthasya Abigail Chelsea Angelina S[2], Sabrina Maranatha Sidabutar[3], Iskandar Muda[4]
[1,2,3,4] Department of Business Administration, Faculty of Social and Political Sciences, Universitas Sumatera Utara, Medan, Indonesia

Alamat Universitas: Jl. Tri Dharma No.9, Padang Bulan, Kec. Medan Baru, Kota Medan, Sumatera Utara 20222
E-mail Seluruh Penulis: rahmahalifah.ar@gmail.com[1], gowiththaa@gmail.com[2], sabrinasidabutar26@gmail.com[3], iskandar1@usu.ac.id[4]

Abstract : *Micro-enterprises in Indonesia's street food sector frequently set prices and sales targets by intuition rather than by a clear understanding of their cost structure. This study analyses the break-even point (BEP) of a fried dim sum micro-enterprise whose product is filled only with mozzarella cheese, in order to show how cost–volume–profit (CVP) analysis can support profit planning in a small culinary business. A descriptive quantitative design was applied to a simulated booth-based business operating 26 days per month, with cost and price assumptions constructed to resemble a typical small-scale street food stall. Costs were classified into fixed and variable components, after which the contribution margin, BEP in units and in rupiah, margin of safety (MOS), degree of operating leverage (DOL), the sales volume required for a target profit, and six sensitivity scenarios were calculated. With a selling price of Rp15,000 per four-piece portion, a variable cost of Rp7,600 per portion and monthly fixed costs of Rp3,150,000, the business breaks even at 426 portions or Rp6,385,135 per month, equivalent to about 17 portions per day. At a planned volume of 910 portions, the business earns a monthly operating profit of Rp3,584,000 with an MOS of 53.2% and a DOL of 1.88. Mozzarella cheese accounts for more than half of the variable cost, and the sensitivity analysis shows that higher fixed costs, price cuts and cheese price increases raise the BEP the most. The findings suggest that BEP analysis is a simple yet informative tool for pricing, cost control and sales target setting in culinary micro-enterprises.*

Keywords*: Break-Even Poin, Contribution Margin, Cost–Volume–Profit Analysis, Margin Of Safety, Culinary Micro-Enterprise.*

Abstrak : Usaha mikro di sektor makanan kaki lima di Indonesia sering kali menetapkan harga jual dan target penjualan berdasarkan intuisi tanpa pemahaman yang memadai mengenai struktur biaya yang dimiliki. Penelitian ini menganalisis titik impas (*Break-Even Point*/BEP) pada usaha mikro dim sum goreng dengan isian tunggal berupa keju mozzarella, dengan tujuan menunjukkan bagaimana analisis *Cost–Volume–Profit* (CVP) dapat digunakan untuk mendukung perencanaan laba pada usaha kuliner skala kecil. Penelitian ini menggunakan desain kuantitatif deskriptif pada usaha simulasi berbasis gerai yang beroperasi selama 26 hari per bulan, dengan asumsi biaya dan harga yang disusun untuk merepresentasikan kondisi usaha makanan kaki lima skala kecil. Biaya diklasifikasikan menjadi biaya tetap dan biaya variabel, kemudian dilakukan perhitungan *contribution margin*, BEP dalam unit dan rupiah, *Margin of Safety* (MOS), *Degree of Operating Leverage* (DOL), volume penjualan yang diperlukan untuk mencapai target laba, serta enam skenario analisis sensitivitas. Dengan harga jual sebesar Rp15.000 per porsi yang terdiri atas empat buah dim sum, biaya variabel sebesar Rp7.600 per porsi, dan biaya tetap bulanan sebesar Rp3.150.000, usaha mencapai titik impas pada penjualan sebanyak 426 porsi atau sebesar Rp6.385.135 per bulan, yang setara dengan sekitar 17 porsi per hari. Pada volume penjualan yang direncanakan sebanyak 910 porsi, usaha menghasilkan laba operasi bulanan sebesar Rp3.584.000 dengan *Margin of Safety* (MOS) sebesar 53,2% dan *Degree of Operating Leverage* (DOL) sebesar 1,88. Keju mozzarella merupakan komponen yang menyumbang lebih dari separuh biaya variabel, sedangkan hasil analisis sensitivitas menunjukkan bahwa peningkatan biaya tetap, penurunan harga jual, dan kenaikan harga keju merupakan faktor yang paling besar meningkatkan nilai BEP. Temuan penelitian menunjukkan bahwa analisis BEP merupakan alat yang sederhana tetapi informatif untuk mendukung penetapan harga, pengendalian biaya, dan penentuan target penjualan pada usaha mikro di sektor kuliner.

Kata Kunci: *Break-Even Point*, *Contribution Margin*, *Cost–Volume–Profit Analysis*, *Margin of Safety*, Usaha Mikro Kuliner.

Received: Oktober 26, 2026; Revised: Oktober 28, 2026; Accepted: Oktober 29, 2026;
*Alifah Rahmah, rahmahalifah.ar@gmail.com

1. INTRODUCTION

Micro, small and medium enterprises (MSMEs) form the backbone of the Indonesian economy, and the food and beverage segment is one of the most accessible entry points for new entrepreneurs because it requires relatively little capital and simple technology. Street snacks sold from carts, small booths and online food delivery platforms have multiplied in recent years, particularly around university campuses and residential areas where demand for affordable, ready-to-eat food is high. Among these snacks, fried dim sum filled with melted mozzarella cheese has become popular because it combines a familiar Chinese-Indonesian food with an indulgent filling that appeals to students and young consumers. Because the product relies on a single main ingredient, its profitability is closely tied to the price of cheese. (Saputra et al., 2023; Rosyidiana & Narsa, 2024)

Despite the ease of entry, many culinary micro-enterprises struggle to survive beyond their first years of operation. A recurring explanation in the literature is weak financial management. Owners often do not keep systematic records, mix personal and business money, and assume that bookkeeping is only necessary for large firms (Jedeot et al., 2025). Limited financial literacy has also been associated with tighter financing constraints and weaker business performance among Indonesian MSMEs (Suidarma et al., 2024). Food businesses in particular often set their selling price by looking at competitors or guessing what customers are willing to pay, without checking whether that price can cover all operating costs. As a result, many owners do not know how many portions they must sell each day just to cover their costs, let alone how much they need to sell to reach a desired level of profit. (Lopung & Rulindo, 2023; Kusumawardhani et al., 2023)

Break-even point (BEP) analysis, which is part of the broader cost–volume–profit (CVP) framework, offers a straightforward answer to this problem. By separating fixed costs from variable costs and comparing them with the selling price, the owner can determine the minimum sales volume at which the business neither gains nor loses money. Recent studies have confirmed the usefulness of BEP and CVP analysis for culinary MSMEs, including a noodle restaurant (Oktavia et al., 2024), a fried meatball seller (Amelia et al., 2026) and a fried chicken business (Sriwedari et al., 2026), as well as for non-food producers such as traditional textile makers (Rukman et al., 2025). In the fried chicken case, the analysis was used not only to find the break-even volume but also to evaluate the selling price and set a profit target (Sriwedari et al., 2026), which shows that the method can support everyday pricing decisions. (Ardana et al., 2022; Hidayat & Burhany, 2025)

However, most existing studies focus on a single, static calculation based on one period of data. Fewer studies examine how the BEP of a culinary product responds to changes in raw material prices, selling prices or fixed costs, even though such changes are common in the food sector. Mariadi et al. (2026) showed that raw material price movements can push a food producer to its break-even condition, which underlines the value of testing several scenarios rather than relying on one figure. In addition, no study was found that specifically analyses cheese-filled fried dim sum, a product whose cost structure is dominated by a single imported-type ingredient. To fill this gap, the present study uses a simulation of a cheese-filled fried dim sum micro-enterprise to illustrate not only the basic BEP calculation but also its sensitivity to realistic changes in business conditions. (Mariadi et al., 2026; Hidayat & Burhany, 2025)

Accordingly, this study has four objectives: (1) to classify the costs of a cheese-filled fried dim sum micro-enterprise into fixed and variable components; (2) to calculate the contribution margin, BEP in units and rupiah, margin of safety and degree of operating leverage; (3) to determine the sales volume required to reach a target profit and translate it into a daily target; and (4) to assess how the BEP and profit change under several sensitivity scenarios. Practically, the study is expected to provide a simple calculation model that culinary micro-entrepreneurs can adapt using their own data. Academically, it adds a product-specific illustration of CVP analysis to the literature on MSME financial management.

Cost–Volume–Profit Analysis

Cost–volume–profit analysis is a management accounting technique that examines how changes in selling price, sales volume, variable cost and fixed cost affect operating profit. Its value lies in its simplicity: by expressing profit as a function of a small number of variables, managers can answer "what if" questions quickly without preparing a full set of financial statements. Sriwedari et al. (2026) used CVP analysis to evaluate the pricing and profit target of a fried chicken micro-enterprise and recommended that owners review their cost structure periodically. This example indicates that CVP is

not merely a classroom concept but a practical decision tool for smaller firms. (Ardana et al., 2022; Triyana & Kusumastuti, 2024)

Cost Behaviour: Fixed and Variable Costs

The foundation of CVP analysis is the classification of costs according to their behaviour. Fixed costs remain constant in total within a relevant range of activity, regardless of how many units are sold; examples in a food stall include rent, the wage of a permanent helper and the depreciation of equipment. Variable costs change in direct proportion to the number of units produced or sold, such as ingredients, frying oil and packaging. Some costs are semi-variable, containing both a fixed and a variable element; electricity, for example, may include a fixed connection charge and a usage-based component. Such costs must be separated consistently before the analysis is carried out. Rukman et al. (2025), for instance, classified the costs of a textile MSME into fixed, variable and semi-variable groups before calculating the BEP. Accurate classification is important because an error in assigning a cost to the wrong category will distort every subsequent result. (Hidayat & Burhany, 2025; Rukman et al., 2025)

Break-Even Point and Contribution Margin

The break-even point is the level of sales at which total revenue equals total cost, so that operating profit is zero. It can be expressed in units or in monetary value. The key to calculating the BEP is the contribution margin, which is the difference between the selling price and the variable cost per unit. The contribution margin represents the amount each unit contributes first to covering fixed costs and, once these are covered, to profit. The contribution margin ratio expresses this amount as a percentage of the selling price and is used to calculate the BEP in rupiah. Because many small business owners plan profit based on rough estimates without distinguishing between fixed and variable costs, the contribution margin concept is particularly relevant for MSMEs. When a business sells more than one product, a weighted-average contribution margin based on the sales mix is required. (Ardana et al., 2022; Oktavia et al., 2024)

Margin of Safety, Operating Leverage and Target Profit

The margin of safety measures how far actual or planned sales can fall before the business reaches its break-even point. It is usually expressed as a percentage of planned sales, and a higher value indicates a stronger buffer against declining demand. Oktavia et al. (2024) reported a very high margin of safety of 93.03% for a noodle MSME, while Rukman et al. (2025) found a margin of safety of 53% for a textile MSME. The degree of operating leverage, calculated as total contribution margin divided by operating profit, complements the margin of safety by showing how sensitive profit is to changes in sales. A higher degree of operating leverage means that a given percentage change in sales leads to a larger percentage change in profit, in both directions. Finally, the same contribution margin logic can be extended beyond break-even: by adding a desired profit to fixed costs and dividing the total by the contribution margin, the owner obtains the sales volume needed to reach a specific profit target. (Triyana & Kusumastuti, 2024; Hidayat & Burhany, 2025)

Previous Studies

Table 1 summarises several recent studies that applied BEP or CVP analysis to MSMEs. These studies consistently show that BEP analysis helps owners judge feasibility and plan sales, but they also reveal that results depend heavily on the accuracy of cost data and on the stability of prices.

Table 1. Summary of previous studies on BEP and CVP analysis in MSMEs

Author (Year)	Object of Study	Main Findings
Oktavia et al. (2024)	Noodle restaurant MSME, Karawang	Total BEP of about Rp94.27 million; margin of safety of 93.03%, showing a large buffer against falling sales.
Rukman et al. (2025)	Sasirangan fabric MSME, Banjarmasin	BEP of 1,633 units; contribution margin ratio of 47% and margin of safety of 53%.
Amelia et al. (2026)	Fried meatball MSME, Ketapang	BEP of 607 pieces per day with a benefit–cost ratio of 1.87; business judged feasible.

Source: compiled by the authors from the cited studies.

Conceptual Framework

Based on the literature above, this study follows a simple analytical framework. Cost data are first classified into fixed and variable costs. The variable cost per unit is then compared with the selling

price to obtain the contribution margin, which, combined with total fixed costs, produces the BEP. Planned sales are compared with the BEP to obtain the margin of safety and the degree of operating leverage, and a target profit is converted into a required sales volume. Finally, the main inputs are changed one at a time in a sensitivity analysis to examine how robust the business is to changes in its environment. The output of the framework is a set of practical indicators that the owner can use for pricing, cost control and sales target setting.

2. METHODS

This study employed a descriptive quantitative design using a simulation-based case. Instead of collecting data from one specific enterprise, the authors constructed a hypothetical cheese-filled fried dim sum micro-enterprise operating from a small booth in Medan, North Sumatra. The simulation approach was chosen because the purpose of the study is to demonstrate the application and interpretation of BEP analysis, a purpose that does not require confidential financial records from a real business. The values used in the simulation were set to resemble the scale of a typical street food stall; they are illustrative assumptions and do not represent the actual financial position of any particular business. (Ardana et al., 2022)

The main assumptions of the simulation are as follows. The business sells one product, namely one portion of four fried dim sum pieces filled only with mozzarella cheese (about 7.5 grams per piece, or 30 grams per portion) and served with a dipping sauce, at a price of Rp15,000 per portion. The product contains no chicken, shrimp or sausage filling. The stall operates 26 days per month with one owner and one paid helper. Planned sales are 35 portions per day, or 910 portions per month. Equipment worth Rp7,200,000 is depreciated using the straight-line method over 36 months with no residual value. All prices and costs are assumed to be constant within one month, all portions produced are assumed to be sold, and taxes, financing costs and online delivery platform commissions are excluded.

The analysis was carried out in several steps. First, all costs were classified into fixed and variable components. Second, the contribution margin per unit and the contribution margin ratio were calculated. Third, the BEP was computed in units and in rupiah. Fourth, the margin of safety and degree of operating leverage were calculated at the planned sales volume. Fifth, the sales volume required to reach a target profit of Rp4,000,000 per month was determined. The formulas used are presented below, where P is the selling price per portion, VC is the variable cost per portion, FC is total fixed cost per month and Q is the number of portions sold per month.

$$\mathbf{CM = P - VC} \quad \mathbf{(1)}$$

$$\mathbf{CMR = CM \div P \times 100\%} \quad \mathbf{(2)}$$

$$\mathbf{BEP\ (units) = FC \div CM} \quad \mathbf{(3)}$$

$$\mathbf{BEP\ (Rp) = FC \div CMR} \quad \mathbf{(4)}$$

$$\mathbf{MOS = (Planned\ Sales - BEP\ Sales) \div Planned\ Sales \times 100\%} \quad \mathbf{(5)}$$

$$\mathbf{DOL = Total\ CM \div Operating\ Profit} \quad \mathbf{(6)}$$

$$\mathbf{Q\ (target) = (FC + Target\ Profit) \div CM} \quad \mathbf{(7)}$$

Finally, a sensitivity analysis was conducted using six scenarios: (A) the baseline condition; (B) a 20% increase in the price of mozzarella cheese, the most expensive ingredient;
(C) a price increase to Rp17,000 per portion accompanied by a 10% decline in sales volume;
(D) an increase of Rp1,000,000 in monthly fixed costs, for example because of higher rent or an additional helper; (E) a 20% decline in sales volume with all other variables unchanged; and
(F) a 10% price reduction to Rp13,500 with sales volume unchanged. In each scenario, only the stated variables were changed so that their effect could be isolated. Calculations were performed in a spreadsheet and BEP figures in units were rounded up to the next whole portion, because a business cannot sell a fraction of a portion.

3. RESULT AND DISCUSSION

This section first presents the cost structure and the results of the BEP calculation for the simulated cheese-filled fried dim sum business, followed by the target profit calculation and the sensitivity analysis. The discussion then interprets these results, compares them with previous studies and outlines their managerial implications.

Result

Variable costs. Table 2 shows the variable cost of producing one portion of four fried cheese dim sum pieces. The total variable cost is Rp7,600 per portion. Mozzarella cheese alone costs Rp3,900 per portion and accounts for 51.3% of the variable cost, which makes the business highly exposed to changes in cheese prices. Packaging is the second largest item at Rp1,000 per portion, reflecting the box, fork and plastic bag required for take-away sales, while the dim sum wrappers, frying oil and dipping sauce each account for less than 8%.

Table 2. Variable cost per portion (4 pieces)

No.	Cost Item	Cost (Rp)	Share (%)
1	Dim sum wrappers (4 sheets)	600	7.9
2	Mozzarella cheese (30 g)	3,900	51.3
3	Tapioca, flour and seasoning for coating	500	6.6
4	Frying oil	600	7.9
5	Dipping sauce	600	7.9
6	Packaging (box, fork, bag)	1,000	13.2
7	LPG gas	400	5.3
	Total variable cost per portion	7,600	100.0

Note: percentages may not add exactly to 100 because of rounding. Source: simulation data constructed by the authors (2026).

Fixed Costs

Table 3 lists the monthly fixed costs. The largest fixed cost is the helper's wage of Rp1,500,000, followed by booth rent of Rp1,000,000. Equipment, consisting of a frying stove and wok, a steamer, a chest freezer for storing frozen dim sum and a booth cart, is valued at Rp7,200,000 and depreciated over 36 months, giving a depreciation expense of Rp200,000 per month. Total fixed costs amount to Rp3,150,000 per month.

Table 3. Monthly fixed costs

No.	Cost Item	Cost per Month (Rp)
1	Booth rent	1,000,000
2	Helper wage (1 person)	1,500,000
3	Electricity and water	200,000
4	Depreciation of equipment (Rp7,200,000 ÷ 36 months)	200,000
5	Social media promotion	150,000
6	Telephone, internet and miscellaneous	100,000
	Total fixed costs	3,150,000

Source: simulation data constructed by the authors (2026).

Break-Even Point

Using Equations 1 to 4, the contribution margin per portion is Rp15,000 − Rp7,600 = Rp7,400, and the contribution margin ratio is Rp7,400 ÷ Rp15,000 = 49.33%. The BEP in units is Rp3,150,000 ÷ Rp7,400 = 425.68, which is rounded up to 426 portions per month. With 26 operating days, this equals about 16.4 portions, so the practical daily threshold is 17 portions. The BEP in rupiah is Rp3,150,000 ÷ 49.33% = Rp6,385,135 per month. The complete results, including the margin of safety, degree of operating leverage and target profit volume, are summarised in Table 4.

Table 4. Summary of BEP analysis results (baseline scenario)

Indicator	Result
Selling price per portion	Rp15,000

Variable cost per portion	Rp7,600
Contribution margin per portion	Rp7,400
Contribution margin ratio	49.33%
Total fixed costs per month	Rp3,150,000
BEP in units per month	426 portions
BEP in units per day (26 days)	17 portions
BEP in rupiah per month	Rp6,385,135
Planned sales (35 portions × 26 days)	910 portions / Rp13,650,000
Operating profit at planned sales	Rp3,584,000
Margin of safety	53.2%
Degree of operating leverage	1.88
Sales required for target profit of Rp4,000,000	967 portions (38 per day)

Source: calculated by the authors (2026).

At the planned volume of 910 portions, total revenue is Rp13,650,000, total variable cost is Rp6,916,000 and total contribution margin is Rp6,734,000. After deducting fixed costs, the operating profit is Rp3,584,000 per month. The margin of safety is (Rp13,650,000 − Rp6,385,135) ÷ Rp13,650,000 = 53.2%, meaning that sales could fall by slightly more than half before the business starts to lose money. The degree of operating leverage is Rp6,734,000 ÷ Rp3,584,000 = 1.88, indicating that a 10% change in sales would change operating profit by about 18.8%.

Table 5 presents revenue, cost and profit at different sales volumes. It shows that the business incurs a loss at every volume below 426 portions and earns a growing profit above that level, because each additional portion adds Rp7,400 to profit once fixed costs have been covered. Readers who wish to visualise the break-even chart can create a line chart in Microsoft Word or Excel directly from the data in this table.

Table 5. Revenue, cost and profit at different monthly sales volumes (Rp)

Portions	Total Revenue	Total Variable Cost	Total Cost	Operating Profit
0	0	0	3,150,000	−3,150,000
200	3,000,000	1,520,000	4,670,000	−1,670,000
400	6,000,000	3,040,000	6,190,000	−190,000
426 (BEP)	6,390,000	3,237,600	6,387,600	2,400
600	9,000,000	4,560,000	7,710,000	1,290,000
800	12,000,000	6,080,000	9,230,000	2,770,000
910 (plan)	13,650,000	6,916,000	10,066,000	3,584,000
1,000	15,000,000	7,600,000	10,750,000	4,250,000

Note: the small profit at 426 portions arises because the exact BEP of 425.68 portions is rounded up.
Source: calculated by the authors (2026).

Target Profit

Using Equation 7, a target operating profit of Rp4,000,000 per month requires (Rp3,150,000 + Rp4,000,000) ÷ Rp7,400 = 966.2, or 967 portions per month. Divided over 26 operating days, this equals 37.2 portions, so the practical daily target is 38 portions, only three portions above the planned daily volume of 35. At 967 portions, revenue would be Rp14,505,000 and operating profit would be Rp4,005,800.

Sensitivity analysis

Table 6 reports the results of the six scenarios. A 20% increase in the price of mozzarella cheese (Scenario B) raises the variable cost to Rp8,380 per portion and lowers the contribution margin to Rp6,620. As a result, the BEP increases by 50 portions to 476 portions per month, and monthly profit falls by 19.8% to Rp2,874,200. Raising the selling price to Rp17,000 (Scenario C) has the opposite effect: even with a 10% decline in volume to 819 portions, the BEP drops to 336 portions and profit rises to Rp4,548,600. An additional Rp1,000,000 in fixed costs (Scenario D) produces the highest BEP of 561 portions and reduces the margin of safety to 38.4%. A 20% fall in sales (Scenario E) leaves the BEP unchanged but cuts profit by 37.6% to Rp2,237,200, which matches the degree of operating leverage of 1.88. Finally, cutting the price by 10% to Rp13,500 without any increase in volume (Scenario F) lowers the contribution margin to Rp5,900, raises the BEP to 534 portions and reduces profit to Rp2,219,000.

Table 6. Sensitivity analysis of BEP and profit

Scenario	CM per Portion (Rp)	BEP (Portions)	BEP (Rp)	Monthly Profit (Rp)	MOS (%)
A. Baseline	7,400	426	6,385,135	3,584,000	53.2
B. Cheese price +20%	6,620	476	7,137,462	2,874,200	47.7
C. Price Rp17,000; volume −10%	9,400	336	5,696,809	4,548,600	59.1
D. Fixed costs +Rp1,000,000	7,400	561	8,412,162	2,584,000	38.4
E. Sales volume −20%	7,400	426	6,385,135	2,237,200	41.5
F. Price Rp13,500; volume unchanged	5,900	534	7,207,627	2,219,000	41.3

Source: calculated by the authors (2026).

Discussion

The results show that, under the simulated conditions, the cheese-filled fried dim sum business is financially viable. A BEP of 17 portions per day is a realistic threshold for a booth located near a campus or a busy residential area, and the planned volume of 35 portions per day is roughly twice that level. The margin of safety of 53.2% is almost identical to the 53% reported for a textile MSME by Rukman et al. (2025), although it is lower than the 93.03% reported for a noodle restaurant by Oktavia et al. (2024). The difference with the latter can be explained by the relatively high share of fixed costs in a small booth that employs a paid helper and pays monthly rent. The monthly BEP of 426 portions is also of a similar order to the 544 portions reported for a fried chicken micro-enterprise in Medan (Sriwedari et al., 2026), whose selling price and variable cost per portion were Rp12,000 and Rp7,500 respectively.

The contribution margin ratio of 49.33% is higher than the 37.5% implied by the fried chicken case and close to the 47% found by Rukman et al. (2025). This relatively high ratio comes from the simplicity of the product: a cheese-only filling avoids the cost of meat and the labour of preparing a meat mixture. The other side of this simplicity is concentration of risk. Because mozzarella cheese makes up more than half of the variable cost, a 20% rise in cheese prices removes about one fifth of monthly profit. This pattern is consistent with Mariadi et al. (2026), who showed that a food producer can be pushed to its break-even condition once the price of its main raw material passes a critical level, and therefore recommended linking production decisions to raw material prices. For a cheese dim sum seller, monitoring the price of one key ingredient is therefore at least as important as monitoring sales.

The degree of operating leverage of 1.88 has two sides. On the positive side, every additional portion sold above the BEP contributes Rp7,400 directly to profit, so modest growth in sales produces a proportionally larger increase in profit. On the negative side, the business is vulnerable to falling demand, as Scenario E shows. This is relevant for a campus-oriented business, because sales are likely to drop during semester breaks. An owner who understands this relationship can prepare in advance,

for example by reducing the helper's working days during holidays, which turns part of a fixed cost into a variable one and lowers the BEP during the slow period.

Scenarios C and F together show that pricing decisions have a strong effect on this business. A moderate price increase raises profit even if 10% of customers are lost, while a 10% price cut lowers profit by 38% unless it attracts substantially more buyers. Under Scenario F, sales would need to rise to 1,141 portions, an increase of about 25%, just to restore the baseline profit. This finding is in line with Sriwedari et al. (2026), who used CVP analysis as a basis for evaluating the selling price of a fried chicken business. In practice, the owner should not rely on the formula alone, because customer response to price changes is uncertain. A safer approach is to test price changes on a small scale, for example by introducing a larger "double cheese" portion at a higher price while keeping the standard portion affordable for price-sensitive student customers, and then comparing actual sales before and after the change. (Hidayat & Burhany, 2025)

Scenario D shows that fixed cost decisions have long-lasting effects. Moving to a more expensive location or hiring a second helper raises the BEP from 426 to 561 portions per month, an increase of almost 32%. Such a decision is only justified if the new location or extra staff can realistically increase sales by more than this amount. BEP analysis allows the owner to evaluate this trade-off before making the commitment, instead of discovering the problem after several months of losses.

The target profit calculation adds a forward-looking dimension. Whereas the BEP only tells the owner how to avoid a loss, the required volume of 38 portions per day for a profit of Rp4,000,000 gives a concrete goal that can be checked every evening. Such a target is only useful if it is realistic in relation to frying capacity, freezer space, working hours and local demand. If daily production capacity is limited, the monthly target must be translated into a daily or weekly target, and purchasing must be adjusted so that excess frozen stock does not turn into waste.

From a managerial perspective, the study yields several practical recommendations for cheese dim sum and similar snack businesses. First, owners should separate business and personal finances and keep a simple daily log that records portions prepared, portions sold, portions given away or discounted, and portions left unsold, because, as Jedeot et al. (2025) observed, the absence of such records is a major obstacle to sound financial management in micro-enterprises. The log also distinguishes production volume from sales volume, which matters because unsold portions generate costs without generating revenue. Second, the amount of cheese per piece should be weighed rather than estimated visually, since small differences in filling weight have a large effect on the variable cost. Third, the owner should recalculate the BEP whenever the price of cheese or packaging changes significantly, and compare quotations from several suppliers or buy cheese in larger quantities to stabilise the largest variable cost. Any cost reduction, however, must preserve food safety and the melted-cheese quality that customers expect. Fourth, the daily BEP of 17 portions and the profit target of 38 portions can be used as simple operational targets that are easy for both the owner and the helper to understand. These steps also reflect the broader finding that stronger financial literacy and bookkeeping are associated with better access to financing for MSMEs (Suidarma et al., 2024). (Lopung & Rulindo, 2023; Kusumawardhani et al., 2023)

This study has several limitations. Because the data are simulated, the figures illustrate the method rather than describe a real business, and actual results would vary by location, supplier and scale. The model also excludes costs that a real seller may face, such as commissions from online delivery platforms, promotional discounts, spoiled stock and the owner's own wage; including them would raise the BEP. In addition, the analysis relies on the standard CVP assumptions of a constant selling price, constant variable cost per unit and a single product, assumptions that may limit the accuracy of BEP in short-term planning when prices change frequently. In reality, a dim sum seller may offer several variants with different margins, which would require a weighted-average contribution margin. Future research could therefore apply the same framework to actual purchase receipts and sales records from several dim sum businesses and extend it to a multi-product setting. (Hidayat & Burhany, 2025; Triyana & Kusumastuti, 2024)

4. CONCLUSIONS

This study applied break-even point analysis to a simulated cheese-filled fried dim sum micro-enterprise to demonstrate how cost–volume–profit analysis can support profit planning in a small

culinary business. With a selling price of Rp15,000, a variable cost of Rp7,600 per portion and fixed costs of Rp3,150,000 per month, the business breaks even at 426 portions or Rp6,385,135 per month, which corresponds to 17 portions per day. At the planned volume of 910 portions, the business earns a monthly operating profit of Rp3,584,000, has a margin of safety of 53.2% and a degree of operating leverage of 1.88. A target profit of Rp4,000,000 requires sales of 967 portions per month, or 38 portions per day.

The sensitivity analysis shows that the business is most exposed to increases in fixed costs, to price reductions that are not followed by higher sales, and to increases in the price of mozzarella cheese, which accounts for more than half of the variable cost. A carefully tested price increase, on the other hand, can strengthen profitability. Overall, the study concludes that BEP analysis is a simple, low-cost and informative tool that culinary micro-entrepreneurs can use to set prices, control costs and establish realistic daily sales targets. Owners are encouraged to keep basic financial and sales records and to update their BEP calculations whenever prices or costs change, while future studies are encouraged to test the model with real data from multiple enterprises and multiple product variants.

REFERENCE

Amelia, K., Cholid, I., Assrorudin, A., Permatahati, A. D. P., & Indriawan, R. (2026). Analisis break-even point (BEP) UMKM bakso goreng A.M. di Kabupaten Ketapang. Journal of Applied Accounting, 5(1), 52–56. https://doi.org/10.52158/jaa.v5i1.1551

Ardana, G., Kusumastuti, E. D., & Suryani, A. (2022). Analisis perhitungan Cost-Volume-Profit (CVP) sebagai dasar perencanaan laba pada UMKM Obot Fried Chicken. Indonesian Accounting Literacy Journal, 2(1), 190–201. https://doi.org/10.35313/ialj.v2i1.3348

Hidayat, A. G., & Burhany, D. I. (2025). Analisis Cost-Volume-Profit berbantuan aplikasi Microsoft Excel sebagai alat perencanaan laba pada Konveksi Manz Jaya Abadi. Indonesian Accounting Research Journal, 5(1), 55–72. https://doi.org/10.35313/iarj.v5i1.6187

Jedeot, A., Santi, F., Trisna June, C. G., & Anggraeni, A. Y. (2025). Integrasi akuntansi sebagai pondasi keuangan dalam manajemen kas usaha mikro. Jurnal Ilmiah Bisnis dan Perpajakan (Bijak), 7(1), 20–27. https://doi.org/10.26905/j.bijak.v7i1.15088

Kusumawardhani, R., Ningrum, N. K., & Rinofah, R. (2023). Investigating digital financial literacy and its impact on SMEs' performance: Evidence from Indonesia. International Journal of Professional Business Review, 8(12), e04097. https://doi.org/10.26668/businessreview/2023.v8i12.4097

Lopung, T. M., & Rulindo, R. (2023). Accounting information system and SMEs' financial performance in Indonesia. Jurnal Akuntansi, 15(2), 200–214. https://doi.org/10.28932/jam.v15i2.6607

Mariadi, T. Y. P., Fatimah, F., & Akmal, S. (2026). Pengembangan model keputusan produksi pasta cabai di Rumah Produksi Bersama Kabupaten Batu Bara menggunakan analisis sensitivitas terhadap harga bahan baku. SENTRI: Jurnal Riset Ilmiah, 5(8), 4026–4039. https://doi.org/10.55681/sentri.v5i8.7051

Oktavia, D., Sihabudin, & Fauji, R. (2024). Analisis break even point dan margin of safety sebagai alat perencanaan laba pada UMKM Bakmie Sultan Karawang. Al-Kharaj: Jurnal Ekonomi, Keuangan & Bisnis Syariah, 6(7), 5329–5342. https://doi.org/10.47467/alkharaj.v6i7.2616

Rosyidiana, R. N., & Narsa, I. M. (2024). Micro, small, and medium-sized enterprises (MSMEs) during the post-pandemic economic recovery period: Digitalization, literation, innovation, and its impact on financial performance. Cogent Business & Management, 11(1), 2342488. https://doi.org/10.1080/23311975.2024.2342488

Rukman, R., Bintari, E. S., Sucidha, I., & Nirwana, R. (2025). Break-even point analysis of micro, small, and medium enterprises (MSMEs) producing Sasirangan fabric in Sasirangan Village, Banjarmasin. Journal of Business and Applied Management, 18(2), 145–154. https://doi.org/10.30813/jbam.v18i2.9006

Saputra, A. E., Zulpahmi, Z., & Fitriyanto, A. (2023). The influence of MSMEs, inflation, and sharia bank finance on economic growth. Jurnal Ilmiah Ekonomi Islam, 9(2), 2575–2590. https://doi.org/10.29040/jiei.v9i2.8552

Sriwedari, T., Adella, R., Gysela, D., Fadillah, U., & Sihombing, M. (2026). Strategi penetapan harga dan target laba melalui analisis biaya-volume-laba pada UMKM Anugrah Fried Chicken. Accounting Research Unit (ARU Journal), 7(1), 78–86. https://doi.org/10.30598/arujournalvol7iss1pp78-86

Suidarma, I. M., Widiantari, K. S., Masno, M., Sukarnasih, D. M., Armanid, A., & Marsudiana, I. D. N. (2024). Financial literacy can overcome barriers to MSME financing: Evidence from Indonesia. JAS (Jurnal Akuntansi Syariah), 8(2), 160–183. https://doi.org/10.46367/jas.v8i2.2050

Triyana, E., & Kusumastuti, E. D. (2024). Perhitungan Break Even Point (BEP) dan Margin of Safety (MOS) sebagai alat perencanaan laba pada Usaha Mikro Kecil Menengah Sugi Donat. Indonesian Accounting Literacy Journal, 4(2), 99–115. https://doi.org/10.35313/ialj.v4i2.5103