

COST-VOLUME-PROFIT CALCULATION ANALYSIS AS A PROFIT PLANNING APPROACH IN “MARKISA MANIS MAMPANG” MICRO BUSINESS DEPOK CITY, WEST JAVA PROVINCE

Dyah Mieta Setyawati¹, Susanti Usman², Feny Fidyah³
Universitas Gunadarma, Jakarta

ARTICLE INFO

Keywords:

Cost-Volume-Profit (CVP).

E-mail:

mietasetyawati@gmail.com

ABSTRACT

Analysis of the calculation of Cost-Volume-Profit (CVP) aims to identify problems related to sales at the business planning stage using the Contribution Margin, Break-Even Point (BEP), Margin of Safety (MOS), Degree of Operating Leverage (DOL) and planning approaches. profits targeted by business actors. The research method used is a quantitative descriptive method. The data used is primary data in the form of business reports "Markisa Manis Mampang" for the months September, October and November 2022. Data analysis uses five CVP calculation formulas. The results of the research show that unit sales have a contribution to cover fixed costs and generate operating profit. The business achieves a BEP of IDR 1,549,948 or when product sales reach 155 units within three months; the MOS value as the budgeted sales security limit has a maximum decrease and does not suffer a loss of IDR 3,928,552 or 71.71% ; The DOL value shows that every 1% increase in sales revenue will result in a 1.39% increase in net profit. Profit planning to achieve a targeted profit of 15% in the next 3 months will occur if sales of passion fruit juice products have reached 607 units or in rupiah sales amounting to IDR 6,070,000

Copyright © 2023 Jurnal Ekonomi. All rights reserved.

It is licensed under a [Creative Commons Attribution-NonCommercial 4.0 International License \(CC BY-NC 4.0\)](https://creativecommons.org/licenses/by-nc/4.0/)

1. INTRODUCTION

Local resources through passion fruit cultivation with purple passion fruit (*Passiflora edulis* L) and yellow passion fruit (*Passiflora edulis* var *flavircarfa*) varieties in Pancoran Mas District, Depok City, West Java Province with a planting area of 50 m², have resulted in fruit juice cultivation. passion fruit as a beverage product by the entrepreneurial group "Markisa Manis Mampang" which is packaged in a plastic bottle-shaped container with a volume of 250 ml and is a pioneer in the Depok City area. Research by Cahyono (2017) states that passion fruit or passion fruit is produced by plants from the Passifloraceae family. The hallmark of the passion fruit plant is that it spreads or spreads up to 20 meters and is chronic. Passion fruit plants at the cultivation site have regenerated once with a planting period of 3 years, and the productive age of fruiting plants for 2 years. By the end of 2021, the second generation of passion fruit plants had spread throughout the vines or platforms and were producing fruit as production material until the time this study was conducted.

Business actors carry out the selection of passion fruit, the production process, packaging, shipping and product marketing. Beverage production has been carried out since 2022 based on orders received by business actors from consumers. Preliminary study is that the business group obtains passion fruit from planting fields or propagation poles measuring 10 meters x 5 meters with a height of 3 meters. The yield from the vines is 30-40 passion fruit in one month or equivalent to 3.5 kg - 5 kg of passion fruit juice with a harvest period of September to February. The product market is around the City of Depok and several areas outside Depok City such as Medan, Semarang and Batam. This means that the development of a passion fruit juice product business can be an alternative source of income for members of the entrepreneurial group by taking into account the production costs that arise from the processing of passion fruit juice. To become a potential business opportunity, Sunarya, Sudaryono and A.Syaefullah (2011) stated that products must create value for customers. Business groups need to observe consumer behavior in the market by paying attention to the demand for goods, the time of delivery and the time of requesting goods.

Management Accounting Concept

The definition of accounting (accounting) is a series of processes of identification, recording and reporting of economic events from a form of business, organization. Reporting communications are

provided to information users. According to Weygandt et al., (2022: 4) mentions as three stages of activity in accounting. Information users make use of financial information in the form of numbers. Suwardjono (2015: 10) concludes that this information is the basis for thinking about making economic decisions. While the definition of management accounting (management accounting) has a series of processes that are longer than the accounting process. Blocher, et al., (2019: 5) mentions it as a process of identification, measurement, accumulation, preparation, analysis, interpretation and communication. The series of processes provide information aimed at company management as a basis for planning, making important decisions and assessing overall and specific organizational performance.

Cost Management Information Concept

In business activities, cost management information has a main focus on usability and timeliness for internal parties in carrying out business operations starting from the planning stage to decision making. The yardstick for all business activities that usually occurs is in the form of a certain monetary unit, namely costs. Increasing pressure on the business environment with the COVID-19 pandemic, global competition and changes in business processes has an impact on the need for cost management information as a basis for thinking for decision makers to use strategies in the form of pricing, strategies for offering products or services to increase profits. organization, updating production facilities, marketing methods and distribution channels that are appropriate to the conditions of the company in order to achieve business goals.

Cost management information for companies engaged in processing or manufacturing is used to provide direction to business actors in managing production costs. Meanwhile, cost information for companies engaged in wholesale trade is used to manage inventory, distribution or delivery and customer service. In contrast to service companies that require cost management information to identify the types of services that provide the most benefits and control the costs of providing services.

Cost Concept

Every activity of business activities requires the calculation of profits and sacrifices so as to achieve the profit that is the business goal. The definition of cost stated by Prawironegoro, Ari Purwanto (2009:19) is the sacrifice of an organization or company originating from economic sources to obtain or produce goods or services that are the goals of the organization or company. Proper cost management will bring business benefits in the future. Mulyadi (2009:23), states that the sacrifice of economic resources for certain purposes has occurred or is likely to occur and is measured in units of money which is in line with Ishak The and Arief Sugiono (2015:18) which mentions the linkage of the statement to future benefits. which will come.

A. Cost classification.

There are four types of cost classifications according to business activity, namely cost traceability, cost behavior, the main function of the company and elements of production costs. Classification of costs is intended to obtain information about all costs incurred according to their classification.

There are three types of behavior or patterns or cost activities that describe changing directions or tendencies, as a result of business activities (Bustami and Nurlala (2013: 23), namely first, variable costs, namely the tendency of these costs to change in line with changes in business activities such as costs of raw materials and costs of direct labor. The second is fixed costs which have a tendency not to change with the level of activity in a certain period. The third is mixed costs (mixed costs) which has the characteristic of tending to combine variable costs and fixed costs at the same time. The cost of electricity usage is an example that represents a variable cost and the electricity subscription fee is a fixed cost. Mixed costs that occur due to cost drivers, such as machine hours, use a mixed cost separation method or technique (mixed costs) into variable costs and fixed costs according to Siregar, et al. (2019:88) can use three approaches, namely the scatterplot method, the highest and lowest point method and the least squares regression method.

Classification of costs according to existing departments in the company can be divided into production costs, product development costs, personnel costs, marketing costs and administrative and general costs. In general, there are three classifications of related costs in the analysis of profit planning, namely the first is production costs, namely sacrifices expressed as costs for the production department to use in processing inputs (materials) into outputs (finished products). Generally understood production costs are grouped into raw material costs which are the value of purchasing production inputs, direct labor costs from the expertise of workers used in the production process and overhead costs from factories or where production is carried out.

Cost-Volume-Profit Calculation Analysis As A Profit Planning Approach In "Markisa Manis Mampang" Micro Business Depok City, West Java Province. Dyah Mieta Setyawati, et al

Cost classification based on production cost elements has 3 types of costs, namely material costs, direct labor costs and overhead costs. Raw material costs can be defined as the overall value of raw materials or inputs in the production process to be converted into finished products or production output. There are two types of materials, namely raw and auxiliary materials, depending on management decisions. While labor costs are directly related to the total value given by the employer to the workforce involved in the general form of designation, namely salary or wages. Based on the expertise of the workforce involved, it can be divided into two types, namely workers who are directly related to the product and workers who are not directly related to the product. The definition of overhead costs is the overall value of production support other than those that are grouped as material costs and direct labor costs, but the benefits for subsequent products are differentiated according to the pattern or direction of the tendency of these overhead costs to move.

B. Cost object

The output produced by the company reflects cost objects which are grouped as tangible products called goods and intangible products or referred to as services. Apart from products or services, Prawironegoro, Ari P. (2009:20) states that customers, departments, projects and activities can be categorized as cost objects. The cost object for customers is the amount of sacrifice for product introduction activities, product delivery, product research and development, management activities in determining prices and providing after-sales service (after-sales). The company's sacrifice of inputs in a department is called production department costs. The company's sacrifice of inputs in business activities with project objects such as building roads, bridges, school buildings, facilities is referred to as project costs. While the definition of activities within their scope according to cost objects is management activities which are reflected in the description of the actions of business operations, such as the action of setting up machines, preparing materials and packaging products so that the cost objects in an activity can be traced based on the activities that occur.

C. Product Cost.

The definition of product costs can be distinguished according to three types of product costs, namely value chain product costs, operating product costs and traditional product costs. The definition of value chain product costs are product costs that occur because they are interrelated in the production process, support from management in the form of product research and development, until the product is sold to the market and provides after-sales service. The purpose of the information derived from value chain product costs can be used by management, including determining product selling prices and profit planning. Operational product cost is a number of cost values of a product which includes several activities that provide benefits to the product, namely the production process, marketing to providing services to customers. Operational costs have the characteristics of not considering research and development costs. Information on operational product costs can be used by management as a basis for making product design decisions and analyzing product profitability. While the cost of traditional products is the cost of producing a product that is sourced from the sum of all costs incurred, namely materials, labor and overhead. (Siregar, et.al, (2019:52)

Cost-Volume-Profit Analysis

CVP analysis is a simple analysis that should be applied in the company planning process to determine how many volumes of goods must be sold to achieve a certain level of profit (IAI, (2022:66).

The analysis model which is the relationship between cost variables, volume variables and profit variables in a product or service is to identify problems related to management planning for sales. The relationship between all costs incurred, volume in the form of sales quantity and selling price in the model is analyzed to solve problems in the company. The analysis model is often referred to as CVP analysis or cost-volume-profit. This model can provide information related to good planning on sales that occur when the company is not in a profit or loss (break-even) condition and decision making by management or business owners such as recalling products that have been marketed or making decisions to further develop new products. provide value added products so that the product market expands to achieve the expected benefits. According to Hansen and Mowen (2009) calculating CVP to achieve the profit target desired by the company is an important part of the company.

The decision-making process in a business or business, according to Kenneth and Jane P. Laudon (2019) is based on business value as measured in monetary units which consists of 4 different steps in making decisions, namely intelligence, design, choice.) and implementation (implementation).

A. Short Term Profit Planning

CVP analysis focuses on cost variables, volume variables and profit variables that have an impact on cost movements, unit sales quantity on company profits (Weigrandt, (2018: 510)). The BEP value can make it easier for a business organization to make profit plans and financial predictions if business conditions get worse. Profit planning in the short term means that business management has a work program within one month to one year. Several calculation methods can be performed to obtain short-term profit values, namely the break even point, margin of safety, shut down point, degree of operating leverage and contribution margin per unit. (Prawironegoro, Ari Purwanto. (2009:346)

B. Break-even point in units for one product.

In the profit planning stage, the satisfaction level of business or business owners is when the business performance results exceed the break-even point. The definition of a break-even point condition which is termed a Break Even Point (BEP) is a condition of business activity when the business actor does not make a profit and does not suffer a loss. Siregar, et.al., (2019: 318) states that there are two approaches to the break-even calculation, namely the break-even point expressed in the number of sales units and the break-even point expressed in the number of rupiah sales. According to IAI (2022: 67) business profit targets are generally absolute and behave like fixed costs, for example IDR 100 million as a business profit target. If a business actor uses CVP analysis to obtain information on the number of sales units in a break-even condition, then the steps taken by the business actor are determining sales revenue, the total fixed costs and variable costs of production or services and calculating the operating profit of the business. The next step is to use the CVP analysis model to obtain breakeven conditions. If the CVP analysis model for products or services uses the operating profit approach, namely $Lo = Pj - bV - bT$, where Lo is operating profit, Pj is sales, bV is variable costs and bT is fixed costs and Q is the number of sales units, and Hj is the selling price, so the calculation formula to determine the value at the breakeven point is: $Lo = (Hj \text{ per unit} \times Q) - (bV \text{ per unit} \times Q) - bV$

C. Contribution Margin Approach

The contribution margin approach for the purpose of obtaining a business balance point that does not make a profit or loss is reflected in the BEP value of a number of units. According to Siregar, et.al., (2019: 320), the formula for the equation for the break-even condition uses the value of the contribution margin per unit, namely:

$$\text{Number of units} = \frac{bT}{(Hj / \text{unit} - bV / \text{unit})}$$

$$\text{Number of units} = \frac{MK / \text{unit}}{MK / \text{unit}}$$

Description of the equation formula above:

bT = fixed cost

bV = variable cost

Hj = selling price

MK = Contribution Margin

D. Unit Sales to Achieve Targeted Profit

Every business person wants to get profit from the business he runs. The calculation of the break-even point in units and sales Rupiah will be able to assist businesses in planning to earn operating profit in Rupiah so that the number of units as a sales target can be achieved. The targeted profit is expressed as a percentage. When using the contribution margin, the equation formula is:

$$\text{Units on targeted Profit} = \frac{bT + \text{Target profit (\%)}}{(Hj / \text{unit} - bV / \text{unit})}$$

E. Break Even Point in Rupiah Sales

Business players can find out the amount of Rupiah sales at the break-even point by using the variable selling price and break-even value per unit that has been set. The equation formula in breakeven conditions (BEP) in Rupiah sales or breakeven sales is:

$$\text{Amount (Rp)} = \frac{bT}{1 - (bV / Pj)}$$

Description of the equation formula above:
Amount (Rp) = break even sales value (BEP)
 bT = fixed cost
 bV = variable cost
 P_j = Sales

F. Sensitivity Analysis of CVP Results

If there is a risk that the next level of sales will be below the projected level, management will be more careful and will invest less in fixed costs. The sensitivity analysis expressed by Blocher, et al., (2019: 524) can be a method for identifying and at the same time analyzing changes in the number of product or service units if the interrelated variables to project the number of units will change. When there are many risks of uncertainty, a sensitivity analysis can be used by applying one of three methods, namely, First, an analysis of the use of the contribution margin and contribution margin ratio, Second, the margin of safety, as information on the maximum allowable reduction of the amount planned sales up to the break-even point or the number of planned sales above the break-even point and the third is operating leverage, namely the sensitivity that occurs due to changes in sales value in a certain percentage which is the contribution margin ratio to the percentage change in operating profit. The equation for the margin of safety and operating levers is:

Safety margin = Q units of planned sales – Q units of sales at breakeven.

Operating leverage = $MK / \text{Operating Profit}$

Definition of Micro Business

According to Law Number 20 of 2008, Micro Enterprises are individuals and/or individual business entities that meet the Micro Enterprise standards regulated in this law. The criteria for micro businesses according to the Ministry of Cooperatives and SMEs (2015) are to have assets of a maximum of IDR 50 million and a maximum turnover of IDR 300 million.

2. METHOD

The research conducted aims to answer the problem in a systematic way to achieve predetermined goals. This type of research is a research that has the characteristics of a quantitative approach. Mulyadi (2011) states that quantitative research is a research approach that represents positivism and has fulfilled scientific principles which in principle are to answer the problems in this study. The type of quantitative research method in this research is descriptive method, which is a research method that conveys facts by describing the information that has been seen and obtained.

Source of data is information about related research. This study uses primary data. According to Sugiyono (2018: 456) primary data is a data source that directly provides data to data collectors. This study uses quantitative data types in the form of costs incurred, the selling price of goods per unit, and the sales volume that has been carried out by the Entrepreneurial Group in Micro Enterprises "Markisa Manis Mampang".

The research method is carried out by the author to obtain data related to analysis and solutions. The research methods in this study were interviews, observation, documentation and data analysis techniques. Interviews were conducted to obtain information about problems that occurred in the business unit, observations were made by the author to learn how to determine the number of products to be sold while documentation was carried out to obtain information from records of past events in the form of writing such as transaction records and images such as photos and videos.

The method of analysis at this writing in the first stage is to calculate the preparation of fixed assets. According to PSAK No.17, depreciation is calculating the allocation of a depreciable amount of a business asset over its estimated useful life. Depreciation charges made during the accounting period are divided into two, namely directly or indirectly to turnover. This means, the value of assets used in business operations will decrease over time. Law Number 36 of 2008 states that tangible assets or assets can be grouped as follows:

a. Not Building

1. Group I: useful life of 4 years, straight-line depreciation rate is 25% and declining balance is 50%.
2. Group II: useful life of 8 years, straight-line depreciation rate is 12.5% and declining balance is 25%.
3. Group III: useful life of 16 years, straight-line depreciation rate is 6.25% and declining balance is 12.25%.
4. Group IV: useful life of 20 years, straight-line depreciation rate is 5% and declining balance is 10%.

b. Building

1. Non-permanent: useful life of 10 years, straight-line depreciation rate is 10%
2. Permanent: useful life of 20 years, straight-line depreciation rate is 5%

The stages in carrying out CVP analysis in the “Markisa Manis Mampang” micro business group consist of five stages by calculating the value of the formula model as follows.

A. Contribution Margins

Based on the definition disclosed in Chapter 2, the formula for calculating the contribution margin and the contribution margin ratio is as follows:

$$MK = P_j - bV$$

$$MK \text{ Ratio (\%)} = MK / \text{Acting}$$

Where MK is contribution margin, P_j is sales and bV is variable cost. According to Garisson and Noreen (2009: 324) contribution margin is the remaining amount of sales revenue minus variable costs.

B. Break Even Point in Units and Rupiah

The break-even calculation formula (BEP) in this study is to obtain break-even information in sales units and Rupiah. The calculation formula has been included in Chapter 2.

C. Margin of Safety (Margin of Savety)

The Margin of Safety formula according to Blocher, et al., (2019: 524) is:

$$MOS (Rp) = \sum P_j - P_j \text{ at breakeven point}$$

The formula for the margin of safety to get the percentage of MOS is:

$$MOS (\%) = \frac{MOS (Rp)}{\sum P_j}$$

D. Operating Leverage

Is a form of sensitivity analysis of CVP results. The operating leverage calculation formula is as follows

$$DOL = \frac{\text{Contribution margin}}{\text{Profit before tax}}$$

E. Profit Planning

In this study, profit planning analysis is to use the formula model that has been mentioned in Chapter 2. This stage can be carried out if the business actor has a number of targeted profit percentages, resulting in the amount of sales from a number of productions that are targeted to be sold in full so that they can achieve profits. which are expected.

The results of the CVP calculation analysis obtained through the five series of stages above cannot be directly applied as the company's sales target for next year. According to IAI (2022: 68), the calculated figures will be compared with the company's production capacity and the level of market demand which can change the initial assumptions of business actors. This can result in reduced fixed costs, additional advertising costs, increased selling prices and increased production.

Short description of “Marquisa Manis Mampang” Micro Business

“Markisa Manis Mampang” is a micro business with business actors from Depok City, West Java. This business operates in the beverage sector by processing passion fruit seeds into passion fruit flavored juice. The passion fruit drink product produced by the entrepreneurial group has bottles with a volume of 250 ml and the selling price per bottle is IDR 10,000. The characteristics of this business are the processing of drinks without preservatives with a recommended consumption limit of 14 days, the taste of the drink resembles fruit juice oranges and has a variety of customer ages from 4 years old to 72 years old.

Micro Business Data “Marquisa Manis Mampang”

Business actors, namely business groups, make sales by utilizing social media Whatsapp and Instagram. Buyers can place orders directly with business actors by calling the seller's telephone number.

Cost-Volume-Profit Calculation Analysis As A Profit Planning Approach In “Markisa Manis Mampang” Micro Business Depok City, West Java Province. Dyah Mieta Setyawati, et.al

In business management, business actors have recorded simple financial data regarding income and expenses and sales reports, business actors have so far not carried out profit planning related to minimum production quantities that do not result in profit or loss. Table 2 below is the results of business sales during the period September - November 2022.

Table 1. Business Sales Data for September – November 2022

Period	Sale (Rp)
September	2.080.500
October	1.743.000
November	1.655.000
total number	5.478.500

In Table 1 above, business actors obtain the highest sales value in September 2022. While doing business, use the assets that appear on. At present, business actors have not carried out depreciation costs. In Perdana, Endah, Anny's research (2021), depreciation calculations can be carried out as shown in Table 2.

Table 2. Business Fixed Asset Data

Types of Fixed Assets	Fixed Asset Acquisition Price	Acquisition Year Fixed assets	The useful life	Fixed Asset Depreciation / Year	Depreciation of Fixed Assets / Month
Table	-	-			
Stove	1.250.000	2022	4 Thn	312.500	26.042
Hose + Regulator	225.000	2022	4 Thn	56.250	4.688
Gallon	40.000	2022	4 Thn	10.000	833
Gas	250.000	2022	4 Thn	62.500	5.208
Cooking tools	500.000	2022	4 Thn	125.000	10.417
Cooler Box and ice blanket	800.000	2022	4 Thn	200.000	16.667
Total Depreciation Cost					63.855

Based on Table 2 above, the total depreciation expense for business equipment per month using the straight-line method is IDR 63,855 of all fixed assets owned by business actors. Thus depreciation costs will affect the value of assets and profits, namely reducing the value of assets and reducing the net profit of the business.

Data on the production costs of the “Marquisa Manis Mampang” micro business are shown in Table 3. From September to November, business actors purchased raw materials for sweet passion fruit because the crop yields were insufficient.

Table 3. Business Production Costs

Cost Category	Production cost (Rp)	Cost Behavior	Variable Cost (Rp)	Fixed cost (Rp)
Cost of Raw Materials (Passion Fruit)	892.000	Variable	892.000	
Cost of BB Helper (Mineral water)	142.000	Variable	142.000	
BB Helper Fee (250ml Bottle)	505.000	Variable	505.000	
Labor costs	850.000	Still		850.000
Overheads :				
Gas Fees	43.000	Variable	43.000	
Label Sticker Fee	215.000	Variable	215.000	
Cost of Pen. Equipment	191.565	Still		191.565
Amount	2.838.565		1.797.000	1.041.565

Based on Table 4, business production costs from September to November amounted to Rp. 2,838,565 and the calculation results for the grouping of costs according to behavior, namely variable costs amounted to Rp. 1,797,000 and fixed costs amounted to Rp. 1,041,565. The classification of production costs in the “Markisa Manis Mampang” micro business is based on the results of interviews with business

actors, does not use machine hours as a cost driver and processes production in a simple manner so that business production costs are more easily grouped into two types, namely variable costs and fixed costs.

3. RESULT AND DISCUSSION

Pelawiten and Ventje (2014) mentioned four procedures carried out in their research, namely collecting cost data, obtaining a company description, conducting cost analysis, number of products and profits using BEP, MOS, DOL and Contribution Margin and drawing research conclusions. Rahmayani and Mardiyantika's research (2020) conducted a profit target analysis in their research apart from the CVP analysis which was carried out using five stages of analysis, namely determining the values of BEP, MOS, Contribution Margin, and DOL. Perdana, Endah, Anny (2021) carried out five stages of CVP analysis in their research by first calculating the Contribution Margin, then BEP, MOS, DOL and profit planning analysis.

This study uses five stages of CVP analysis. The first stage is to calculate the contribution margin and operating profit according to the production data of the "Marquisa Manis" business in Table 4. from the entrepreneurial group which is then processed as in Table 5.

Table 5. Business Production Data September – November 2022

Information	Total Number (Rp)
Sale	5.478.500
Variable Cost	1.797.000
Margin Contributions	3.681.500
Fixed cost	1.041.565
Operating profit	2.639.935

Based on Table 5, operating profit is IDR 2,639,935, indicating that the business contribution margin of "Markisa Manis Mampang" has the ability to cover fixed costs so as to generate operating profit. If the fixed costs of the business are constant, it can happen that the operating profit of "Markisa Manis Mampang" will tend to increase in line with the increase in the contribution margin.

The next step is to calculate the contribution margin ratio for the "Markisa Manis Mampang" micro business, which is as follows:

$$\text{MK ratio} = (3,681,500 / 5,478,500) \times 100\%$$

$$\text{MK ratio} = 67.2\%$$

The business contribution margin ratio in the calculation above is 67.2% indicating that the sales unit has a contribution of 67.2% to the fixed costs of the business. If the percentage of fixed costs is below the contribution margin contribution ratio, then the difference is referred to as the net profit before tax generated by the business, while the percentage of variable business costs is 32.8%. Based on the MK ratio, the micro business "Markisa Manis Mampang" has an advantage in choosing costs incurred or has strong competitiveness.

CVP_ Breakeven Analysis (BEP)

The value of the contribution margin in Rupiah and the percentage in the second stage will be the basis for carrying out the third stage of the CVP analysis on the "Marquisa Manis Mampang" business. The second stage is to calculate the break-even point to obtain information on the value in Rupiah and the sales units of the business that are not profitable and not losing.

Based on the stages of analysis using the calculation formula in Chapter 3 for BEP (Rp) are as follows:

$$\text{BEP (Rp)} = \text{Fixed Cost} / (1 - (\text{Variable Cost}/\text{Sales}))$$

$$\text{BEP (Rp)} = 1,041,565 / (1 - (1,797,000/5,478,000))$$

$$\text{BEP (Rp)} = 1,041,565 / (1 - 0,328)$$

$$\text{BEP (Rp)} = 1,041,565 / 0,672$$

$$\text{BEP (Rp)} = 1,549,948$$

The calculation above shows the breakeven point in Rupiah for this business is IDR 1,549,948. Based on the results of interviews with business actors, this sweet passion fruit juice has a selling price per unit of IDR 10,000 with a volume of 250 ml. Thus the number of units in the breakeven point is 154.99 units or 155 units. Calculating the break-even point with the Operating Profit Equation will give the result that the total variable costs in a break-even condition are IDR 508,383 so that the variable cost per unit with a total unit in a break-even of 154.99 units is IDR 3,280.

Calculation of the break-even point in units can be done after calculating the BEP (Rp), this calculation is to confirm the calculation of the number of units previously that the business break-even point (BEP) is 154.99 units, shown in the calculation below:

$$\text{BEP (unit)} = \text{Fixed Cost} / (\text{Selling Price per unit} - \text{Variable Cost per unit})$$

$$\text{BEP (units)} = 1,041,565 / (10,000 - 3,280)$$

$$\text{BEP (units)} = 1,041,565 / (6,720)$$

$$\text{BEP (unit)} = 154.99 \text{ bottles of sweet passion fruit juice}$$

Based on the above calculations, it strengthens the result that the break-even point (BEP) in the "Markisa Manis Mampang" business unit in the period September to November 2022 is 154.99 with a round-up of 155 units and the business has reached a break-even point of IDR 1,549,948.

Analysis of CVP_ Margin of Safety (Margin of Safety) or MOS

The third step in the CVP analysis for the "Marquisa Manis Mampang" business is to calculate the MOS in Rupiah and in percentage, which is as follows

$$\text{MOS (Rp)} = \text{Total Sales} - \text{BEP Sales}$$

$$\text{MOS (Rp)} = 5,478,500 - 1,549,948$$

$$\text{MOS (Rp)} = 3,928,552$$

$$\text{MOS (\%)} = (\text{MOS (Rp)} / \text{Sales}) \times 100\%$$

$$\text{MOS (\%)} = (3,928,552 / 5,478,500) \times 100\%$$

$$\text{MOS (\%)} = 71.71\%$$

Based on the calculation above, the "Marquisa Manis Mampang" business has a Margin of Safety (MOS) value of IDR 3,928,552 or 71.71%. This gives meaning, the value of the safety limit or opportunity limit is how far the budgeted sales have decreased to the maximum and the company does not suffer a loss or the breakeven point is IDR 3,928,552 or 71.71%. This means, based on the results of the MOS calculation, it is a way for the "Marquisa Manis Mampang" business actor to anticipate business uncertainties that appear in the MOS value (Rp) which exceeds the BEP value (Rp) with MOS (%) or a MOS ratio of 71.71%. Research by Rosianna, Yola and Windy (2021) on MSMEs shows that if the business ratio value is close to 100%, the possibility of a business experiencing a loss is small.

Analysis of CVP_ Operation Leverage (Degree of Operating Leverage) or DOL.

The fourth stage in the CVP analysis of the "Markisa Manis Mampang" business is to calculate the Degree of Operating Leverage (DOL) which can show changes in net profit in percentage form as a result of a change in sales revenue in a certain percentage amount or an element of business uncertainty. The calculation of the DOL for the "Marquisa Manis Mampang" business is as follows:

$$\text{DOL} = \text{Contribution Margin (Rp)} / \text{Profit Before Tax (EBT)}$$

$$\text{DOL} = 3,681,500 - 2,639,935$$

$$\text{DOL} = 1.39$$

Based on the above calculations, this shows that every 1% increase in sales revenue will result in a 1.39% increase in net profit and conversely that every 1% decrease in sales will result in a 1.39% decrease in profits earned. In the calculation results, it appears that the proportion of business fixed costs does not have a risk of impact on operating profit.

Use of CVP Analysis in Profit Planning

The fifth stage in the "Marquisa Manis Mampang" business is calculating profit planning targeted by business actors, which in this study is for the next three months related to sales targets that must be realized by business actors. According to Nafarin (2013: 788) profit is the difference between income and the balance of costs and expenses for a certain period.

In the formulation of the problem it is stated that the operating profit is targeted to increase by 15% within the next three months, based on this the calculation for sales targets in Rupiah and units for an increase in operating profit of 15% is as follows:

$$\text{Target Profit 15\%} = \text{Current profit} + (15\% \times \text{Current profit})$$

$$= 2,639,935 + (15\% \times 2,639,935)$$

$$= 3,035,925.25$$

$$\text{Sales (Units)} = (3,035,925.25 + 1,041,565) / 6720$$

$$\text{Sales (Unit)} = 607 \text{ bottles of sweet passion fruit juice.}$$

$$\text{Sales (Rp)} = \text{Sales (Unit)} \times \text{Current Selling Price}$$

$$= 607 \times \text{IDR } 10,000$$

$$= \text{IDR } 6,070,000$$

Cost-Volume-Profit Calculation Analysis As A Profit Planning Approach In "Markisa Manis Mampang" Micro Business Depok City, West Java Province. Dyah Mieta Setyawati, et al

Based on the calculation above, it is the answer to the desire of business actors to earn a profit of 15% within 3 months. This means sales of passion fruit juice must reach 607 units within 3 months or a total of 202 bottles per month for two months, and in the third month there are 203 bottles.

4. CONCLUSION

Sweet passion fruit juice has the possibility of achieving the profitability expected by businesses because the business contribution margin is IDR 3,681,500 and the contribution margin ratio is 67.2% indicating that the sales unit has a contribution to cover fixed costs and generate operating profit. Profit planning in the "Marquisa Manis Mampang" business with CVP analysis shows that the business reaches a breakeven point of IDR 1,549,948 or when product sales within a period of three months reach 155 units; The Margin of Safety (MOS) or the value of the sales security limit that is budgeted to experience a maximum decrease and the company does not suffer a loss or a breakeven condition is IDR 3,928,552 or 71.71% and the Degree of Operating Leverage (DOL) of business is 1.39%, which means that every A 1% increase in sales revenue will result in a 1.39% increase in net profit. CVP analysis on profit planning for the next three months to achieve a profit target of 15% will occur if sales of passion fruit juice products have reached 607 units or in rupiah sales amounting to IDR 6,70,000.

REFERENCES

- [1] Bustami, B dan Nurlaela. 2013. Akuntansi Biaya. Edisi 5. Jakarta : Salemba Empat.
- [2] Blocher, E.J, David E.S, Gary C. 2019. Manajemen Biaya. Penekanan Strategis. Cetakan kelima. Jakarta: Salemba Empat.
- [3] Garrison dan Noreen. 2009. Akuntansi Manajerial. Buku 2. Edisi 8. Jakarta: Salemba Empat.
- [4] Ikatan Akuntan Indonesi. 2022. Modul Chartered Accountant: Akuntansi Manajemen Lanjutan. Jakarta : Ikatan Akuntan (IAI).
- [5] Ikatan Akuntan Indonesi. 2022. Modul Chartered Accountant: Manajemen Strategik & Kepemimpinan. Jakarta : Ikatan Akuntan (IAI).
- [6] Ishak The dan Arief Sugiono. 2015. Akuntansi Informasi dalam Pengambilan Keputusan. Jakarta : PT. Grasindo.
- [7] Kemenkop dan UMKM. 2015. Membangun Koperasi dan UMKM sebagai Ketahanan Ekonomi Nasional, Jakarta (ID): Kemenkop dan UMKM RI.
- [8] Kenneth, C.L dan Jane P. Laudon. Sistem Informasi Manajemen: Mengelola Perusahaan Digital. Edisi 13. Cetakan ke 4. Jakarta : Salemba Empat.
- [9] Mowen, H. 2009. Akuntansi Manajemen. Edisi 8. Jakarta : Salemba Empat
- [10] Mulyadi. 2009. Akuntansi Biaya, Aditya Media . Yogyakarta.
- [11] Mulyadi, M. 2011. Penelitian Kuantitatif Dan Kualitatif Serta Pemikiran Dasar Menggabungkannya. Jurnal Studi Komunikasi dan Media. Vol.15. No.1, Januari-Juni 2011.
- [12] Nafarin, M. 2013. Penganggaran Perusahaan. Edisi Ketiga. Cetakan Kedua, Buku 1. Jakarta. Salemba Empat.
- [13] Pelawiten, A, Venjte, I. 2014. Analisis Cost Volume Profit Untuk Perencanaan Laba Pada UD Gladys Bakery. Jurnal EMBA. Vol.2. No.2 Juni 2014, pp. 1670 – 1681.
- [14] Perdana, G.A.P, Endah D.K, Anny S. 2021. Analisis Perhitungan Cost-Volume-Profit (CVP) Sebagai Dasar Perencanaan Laba Pada UMKM Obot Fried Chicken. Indonesian Accounting Literacy Journal. Vol.02. No.01, November 2021, pp. 190 – 201.
- [15] Prawironegoro, D dan Ari Purwanti. 2009. Akuntansi Manajemen. Edisi ke tiga. Jakarta: Mitra Wacana Media.
- [16] Rahmayani, A.N, Mardiyantika, V. 2020. Penerapan Metode CVP Sebagai Alat Bantu Analisis Perencanaan Laba Dalam Mencapai Target Perusahaan (Studi Kasus Mebel Bocah Angon Di Dusun Kalianyar Deket, Lamongan). Jurnal Penelitian Teori dan Terapan Akuntansi (PETA). Vol.5 No.1(2020): Januari 2020.
- [17] Rosianna, C, Yola W, Windy, R.K. 2021. Analisis Cost Volume Profit Terhadap Perencanaan Laba UMKM Keripik Ibu. Research in Accounting Journal. RAJ, Vol.1(2), pp. 291-297
- [18] Siregar, B, Bambang S, Dody H, Eko W.Lo, Frastio B. 2019 Akuntansi Manajemen. Cetakan kelima. Jakarta: Salemba Empat.
- [19] Siregar, A.E.H, Tumiur.G. 2018. Karakterisasi Morfologi Markisa (Plasifora) di Kabupaten Karo, Sumatera Utara. Prosiding Seminar Nasional Biologi dan Pembelajarannya.Universitas Negeri Medan. ISSN 2656-1670.
- [20] Setyawati, D.M, Kartawan, Sudaryanto. 2019. The Level Of Urgency Of Community-Based Economic Development (CBED) Implementation: Determinant And Their Influence On The Performance Of Cost-Volume-Profit Calculation Analysis As A Profit Planning Approach In "Markisa Manis Mampang" Micro Business Depok City, West Java Province. *Dyah Mieta Setyawati, et al*

- Weaving Craft Microbusinesses On Lombok Island, West Nusa Tenggara. Prosiding. Journal Internasional, konferensi dan Prosiding (JICP). Vol.2, No.1.
- [21] Sugiyono. 2018. Metode Penelitian Kuantitatif, Kualitatif, dan R&D. Penerbit. Alfabeta, Bandung.
- [22] Sunarya, PO. Abas, Sudaryono, A. Syaefullah. 2011. Kewirausahaan. Yogyakarta: ANDI
- [23] Suwardjono. 2014. Teori Akuntansi Perekayasaan Pelaporan Keuangan, edisi ketiga cetakan kedelapanke 8, Yogyakarta: BPFE Yogyakarta.
- [24] Tran Kieu Trang. 2016. Key. Success Factors of SME Entrepreneurs: Empirical Study in Vietnam. International Journal of Business and Management. Vol.11, No.1.
- [25] Weygandt, J. J., Paul D. Kimmel, Donald E.Kieso. 2018. Managerial Accounting : Tools for Business Decision-Making (15th Canadian ed ed.). Mississauga: John Wiley & Sons Canada, Ltd.