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Application of Cost Volume Profit as a Profit Planning Effort in Lopilipi Cake MSMEs

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Abstract

This research aims to analyze the application of Cost Volume Profit (CVP) analysis in profit planning efforts for micro, small and medium enterprises (MSMEs) Lopilipi Cakes. This research uses a descriptive research approach. Data collection was carried out through interviews with MSME owners of lopilipi cakes. Apart from that, data collection was also carried out by documenting data on sales of Lopilipi cakes. The analysis carried out includes Contribution Margin analysis and Break Even Point analysis. The results of the Contribution Margin analysis show that the Contribution Margin in 2022 will be IDR. 275,790,000 with a Contribution Margin per unit of Rp. 7,660.9. This analysis helps in understanding the company's operational profitability. Break-Even Analysis reveals that the company reached its break-even point when it managed to sell 18,989 units. This means the company needs to sell at least 18,989 units to cover costs and avoid losses. These findings demonstrate the importance of understanding the relationship between costs, volume, and profits to make decisions and plan for desired future profits.

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Introduction

Economic activity is one of the cores of human life and social development. This includes a series of activities involved in the production, distribution and consumption of goods and services. Human resources are by far the most important asset for an organization. (Safrizal et al. 2020). Economic activity covers various aspects, from farmers cultivating crops in their fields to multinational companies operating in global markets. This includes various economic sectors such as agriculture,

service industry, trade and finance. The era of globalization is always marked by rapid changes in overall economic conditions which cause a number of demands to emerge in response to the changes that occur. (Safrizal et al. 2020) MSMEs hold a valuable position in domestic trade. There is coverage in MSMEs with various types of businesses, ranging from grocery stores, restaurants and cafes, to small technology companies.

In economic activities of course there is competition, especially in the business world such as MSMEs, like it or not, The current sources of competitive advantage are innovation and creativity(Safrizal, 2023). businesses face it and there must be good handling and management. Focus on technologies that enable MCS to be implemented in smart cities, such as task management, data collection, incentive systems, monitoring, and cost-saving tools. (Wildan et al., 2023)Management must be able to make tactical decisions that support achieving company targets. During the decision making stage, managers must consider all financial and non-financial aspects and must also be supported by planning guidelines which cover all stages of action needed to achieve company goals. The overall goal of the company is to obtain optimal profits. Based on(Wibowo 2012) in (Ulfah Setia Iswara and Susanti 2017) managers are able to use the following actions to obtain optimal profits: 1) minimizing costs by maintaining price levels and sales volume, 2) determining the selling price level so that it is in line with the desired profit, and 3) providing an increase in sales volume to the maximum.

One of the goals of a business unit is to obtain optimal profits, so an example of a plan developed by management is profit planning. Human Activity Recognition has been researched for the past few years. (Victoria, et al., 2022) The profit plan contains actions that the business unit should take to achieve the expected profit targets. One of the strategic issues in the competitive business world is finding internal and external competencies that are difficult to imitate and can support valuable products and services, especially in the Indonesian batik industry.(Hasanah wt al., 2023). Because profit is the difference between the income earned (sales income) and the costs incurred. Therefore, profits are influenced by sales plans (seller estimates) as well as cost plans (cost estimates). In preparing a good profit plan, tools such as Cost-Volume-Profit (CVP) analysis are needed.(Wibowo 2012)

In business, Cost-Volume-Profit (CVP) Analysis is an important tool in understanding and managing the relationship between costs, volume and profits. CVP analysis helps companies in various industries make tactical decisions, plan business actions, and understand how these factors interact in the financial environment.

Lopilipi Cake is a trading business involved in the cake production sector which is located in Diwek District, Jombang Regency. High Quality of Service and client-based communication with AI-enabled services is determined by Quality of Experience (QoE). (Padmapriya et al., 2023)This trading business can make quite a lot of profit. In order to get the desired profit from the company, Lopilipi Cake business management must understand planning Previous research found that CSR can increase company value. (tarjo et al., 2022), control, and when making decisions regarding profit income during sales. Optimization of the supply chain network can be carried out with the aim of minimizing the distribution costs of agricultural commodities.(Marita et al., 2021).

Therefore, Lopilipi Cake management must review the elements of planning that are in line with the company's circumstances. As a financial institution that has an intermediary function, the role of banks is very important in the economic activities of a country, where banks become institutions that distribute funds and as a place for financial transactions, this makes banks unchanged like the pulse in the human body which is very much needed to support the smooth running of a country's economy. (Ryandono et al., 2022) One of the approaches used when planning profits is Cost Volume Profit analysis which is used by management as a method of planning, controlling and making decisions in company activities to obtain profits and overcome opportunities for changes in sales volume, selling prices and costs incurred.

LITERATURE REVIEW

Accounting Concepts

Accounting according to Soemarso (2009:14) in(Atika Pelawiten 2014)It is a scientific discipline that provides important information for the effective implementation and evaluation of company operations. Accounting can also be defined as the process of identifying, measuring and reporting economic information to provide clear and firm assessments and decision making for those who use the information. Reeve et al (2013: 10) state that in general accounting can be explained as an information system that provides activity reports to stakeholders. and the company's economic condition.

Management Accounting

(Santi Rahma Dewi, Fitriyah Prize, 2008)in the book "Management Accounting" explains that Management Accounting is a process which includes measuring, recording, summarizing, reporting and presenting cost data as a basis for making decisions for internal company parties, namely management.

Cost accounting

According to(Assegaff Syarief 2018)Cost accounting is an information system that carries out a series of calculations on the costs incurred by a unit during a certain period, then provides reports containing the costs incurred by the unit to parties who need information regarding the costs incurred. issued by the unit.

Cost Classification

Costs according to Carter and Usry (2009) in(Atika Pelawiten 2014)usually classified into fixed costs, variable costs, or semi-variable costs on a cost basis.

1. Fixed cost

   Fixed costs are costs that generally do not change as business activities increase or decrease.

   For example: Factory overhead costs include several items including maintenance, depreciation, rent, property insurance, property taxes, as well as all items that are usually considered to be fixed costs.
2. Variable costs

   Variable costs are costs that increase as activity increases and decrease as activity decreases. Costs included in variable costs include the costs of direct raw materials, direct labor, certain equipment, certain indirect labor, small tools, rework, and damaged spare parts.
3. Semi variable costs

   Semi-variable costs refer to costs that exhibit characteristics of fixed costs as well as variable costs.

   For example, costs for electricity, water, natural gas, gasoline, coal, certain equipment, maintenance, certain indirect labor, employee group life insurance, pension costs, income tax, official travel costs and representation costs.

Profit Planning

According to(Ulfah Setia Iswara and Susanti 2017)Profit planning is very important for companies, because the size of profits is a benchmark, and its continuity affects the life of the company. Profit planning includes the actions that the company will take to achieve the desired profit goals. In order to obtain the desired profit from management, there must be optimal profit planning, one of which is profit target analysis, this is able to describe the level of sales that the company must budget for in order to obtain a certain profit.

Cost-Volume-Profit Analysis

Cost-volume profit analysis (cost-volume profit analysis) is a method of analyzing how operating and marketing decisions affect profits based on an understanding of the relationship to variable costs, fixed costs, unit selling prices, and output levels. (Blocher et al, 2011: 504) in(Assa 2011).

RESEARCH METHODS

In this research, researchers used descriptive techniques which describe actual events in the field (Rahmi et al. 2023). This research took place at Lopilipi Cake in Diwek District, Jombang Regency. Data collection in this research used interview techniques. Researchers prepare information that needs to be explored and later asked to the owner of Lopilipi Cake. Apart from that, data collection was carried out with documentation for collecting sales data at Lopilipi Cake as . The following are the formulas used during the research.

1. Contribution Margin Analysis (Contribution Margin)

Contribution Margin analysis is the amount found in sales minus variable costs (Ulfah Setia Iswara & Susanti, 2017). This amount will be used to cover fixed costs and profits for that period, according to(Rosianna, Winanda, and Kurnia 2019)Contribution Margin ratio analysis can be calculated using the formula:

$$\frac{Margin\ Kontribusi\ Per\ Unit}{Harga\ Jual\ Per\ Unit}$$

2. Break Event Point Analysis (Break Even Point)

Break Event Point is a BEP, a condition where in the company's operations, it does not make a profit and does not suffer a loss (Luntung & Tinangon, 2021). Break Event Point analysis can be calculated using the formula:

Break-even point in units:

$$\frac{Total\ Biaya\ Tetap}{Harga\ Jual\ Per\ Unit - Biaya\ Variabel\ Per\ Unit}$$

Break-even point in rupiah:

$$\frac{Total\ Biaya\ Tetap}{Rasio\ Margin\ Kontribusi}$$

3. Margin Of Safety Analysis (Security Cost)

Margin of Safety is a layer of security that a company has to protect itself from the impact of a decline in sales. In any situation, as long as the decline in sales is within these limits, the company will not experience financial losses (Sakti, 2013). Margin of Safety analysis can be estimated using the formula:

$$Penjualan\ saat\ ini - penjualan\ mencapai\ BEP$$

4. Operating Leverage Analysis

Operating Leverage is the use of fixed costs in an effort to increase the response to changes in profit levels when sales activities experience changes (Triani et al., 2020). Degree of Operating Leverage analysis can be calculated using the formula:

$$\frac{Margin\ kontribusi}{Laba\ Operasi}$$

RESULT

Table 1. Lopilipi Cake Sales Data

Month	Units	Sale
January	3,166	Rp. 47,502,000
February	3,335	Rp. 50,036,000
March	3,270	Rp. 49,051,000
April	3,081	Rp. 46,225,000
May	2,989	Rp. 44,841,000
June	2,708	Rp. 40,622,000
July	2,135	Rp. 32,034,000
August	3,610	Rp. 54,158,000
September	2,495	Rp. 37,433,000
October	2,887	Rp. 43,306,000
November	3,079	Rp. 46,199,000
December	3,234	Rp. 48,511,000
Total Sales	**35,989**	**Rp. 539,918,000**

Source: Lopilipi Cake

Based on the data above, it can be seen that the number of product sales from the Lopilipi Cake business during the 2022 period, where the highest sales were in August and the lowest sales were in July.

Details of Costs for the Lopilipi Cake Business

Details of fixed costs and variable costs for the Lopilipi Cake business for the 2022 period will be presented in the following tables.

Table 2. Total Variable Costs for the January-December Lopilipi Cake period 2022

	Variable Costs (Rp)				
Month	**Electricity cost**	**Water Costs**	**Gas Fees**	**Raw Material Costs**	**Variable Costs/Month**
Jan	383,000	76,000	1,720,000	21,400,000	23,579,000
Feb	640,000	96,000	2,860,000	22,831,000	26,427,000
Mar	453,000	80,000	2,239,000	22,779,000	25,551,000

Apr	240,000	64,000	1,619,000	20,949,000	22,872,000
May	200,000	52,000	938,000	19,255,000	,20,445,000
Jun	180,000	52,000	894,000	18,349,000	19,475,000
Jul	100,000	52,000	772,000	12,535,000	13,459,000
Aug	660,000	96,000	3,000,000	24,634,000	28,390,000
Sept	110,000	52,000	809,000	17,513,000	18,484,000
Oct	180,000	52,000	909,000	18,494,000	19,635,000
Nov	210,000	60,000	1,266,000	20,505,000	22,041,000
Dec	400,000	76,000	1,822,000	21,472,000	23,770,000
Overall Total Variable Costs					**264,128,000**

Source: Lopilipi Cake Data Processed 2022

Based on the data above, the total variable costs used by Lopilipi Cake in producing during 2022 are IDR. 264,128,000.

Table 3. Total Fixed Costs for the January-December Lopilipi Cake period 2022

	Fixed cost (Rp)		
Month	**Rental costs**	**Labor costs**	**Total Fixed Costs**
Jan	550,667	7,516,000	8,066,667
Feb	550,667	7,516,000	8,066,667
Mar	550,667	7,516,000	8,066,667
Apr	550,667	7,516,000	8,066,667
May	550,667	7,516,000	8,066,667
Jun	550,667	7,516,000	8,066,667
Jul	550,667	7,516,000	8,066,667
Aug	550,667	7,516,000	8,066,667
Sept	550,667	7,516,000	8,066,667
Oct	550,667	7,516,000	8,066,667
Nov	550,667	7,516,000	8,066,667
Dec	550,667	7,516,000	8,066,667

Total Total Fixed Costs	**96,800,004**

Source: Lopilipi Cake 2022 Data Processed

Based on the data above, the total fixed costs used by Lopilipi Cake to produce during the 2022 period are IDR. 96,800,004.

Table 4. Profit Data Obtained by Lopilipi Cake in 2022

Month	Income (Rp)	Total cost (Rp)	Profit (Rp)
Jan	47,502,000	31,645,667	15,856,333
Feb	50,036,000	34,493,667	15,542,333
Mar	49,051,000	33,617,667	15,433,333
Apr	46,225,000	30,938,667	15,286,333
May	44,841,000	28,511,667	16,329,333
Jun	40,622,000	27,541,667	13,080,333
Jul	32,034,000	21,525,667	10,508,333
Aug	54,158,000	36,456,667	17,701,333
Sept	37,433,000	26,550,667	10,882,333
Oct	43,306,000	27,701,667	15,604,333
Nov	Rp. 46,199,000	30,107,667	16,091,333
Dec	48,511,000	31,836,667	16,674,333
Total	**539,918,000**	**360,928,004**	**178,989,996**

Source: Lopilipi Cake 2022 Data Processed

Based on the data above, the total net profit obtained by the Lopilipi Cake business for the 2022 period is IDR. 178,989,996.

Cost-Volume-Profit (CVP) Analysis of Lopilipi Cake

What is meant by CVP analysis itself is an analysis using a method of reviewing the relationship between the total costs incurred and the sales volume in a company. Apart from that, CVP analysis also looks at the amount of profit earned by a company in a certain period of time. company. So in short, the basics that must be considered when doing this analysis are costs, volume and profit of a company, namely the Lopilipi Cake company as a case study in this research.

1. Contribution Margin Analysis on Lopolipi Cake.

Talking about contribution margin, contribution margin itself is a CVP analysis

of the profit margin in sales per unit. This contribution margin analysis also influences the company's operations.

***Contribution margin*(money value)**

= Sales – Variable Costs

***Contribution margin*(units)**

= Selling price per unit – Variable costs per unit

Contribution Margin in 2022 can be calculated as follows:

	Total	**Each unit**
Sales (Rp. 15,000 x 35,989 units)	Rp. 539,918,000	Rp. 15,000
Variable Costs (Rp. 7,339.1 x 35,989 units)	IDR 264,128,000	Rp. 7,339.1
Contribution Margin	Rp. 275,790,000	Rp. 7,660.9
Fixed cost	Rp. 96,800,004	
Net profit	**Rp. 178,989,996**	

Contribution Margin Ratio

$$= \frac{\textit{Contribution margin per unit}}{\textit{Selling price per unit}}$$

Contribution Margin Ratio = Rp. 7,660.9 / Rp. 15,000

= 0.51 or 51 %

The contribution margin in 2022 is IDR. 275,790,000 and each unit is Rp. Rp. 7,660.9.

1. Break Even Point Analysis

The break even point calculation for Lopilipi Cake in 2022 is as follows.

Break Even Point (Units)

$$\frac{Total\ Biaya\ Tetap}{Harga\ Jual\ Per\ Unit - Biaya\ Variabel\ Per\ Unit}$$

$$\frac{Rp.96.800.000}{Rp.15.000 - Rp.7.339{,}1}$$

$$\frac{96.800.000}{7.660{,}9}$$

= 12,635.6 units

Break Even Point (Rupiah)

$$\frac{Total\ Biaya\ Tetap}{Rasio\ Margin\ Kontribusi}$$

$$\frac{Rp.\ 96.800.000}{0{,}51}$$

= IDR 189,803,922

Based on the calculations above, the break-even point for the Lopilipi Cake company in 2022 will be 12,636 units sold and total sales of IDR. 189,803,922. And in this situation the company does not make a profit because the net profit earned in that year is Rp. 178,989,996.

2. Margin of Safety Analysis on Lopilipi Cake

Margin of safety
= Budgeted income - Break-even income
= Rp. 539,918,000 - Rp. 189,803,922
= IDR 350,114,078

And the following presentation was obtained:
Rp. 350,114,078 / Rp. 539,918,000
= 0.648 = 65 %

The margin of safety is the distance between the break-even point and the expected sales volume. Based on the calculation above, it means that sales volume falls by 65% or Rp. 350,114,078 of the desired volume, so that sales will reach the break-even point or BEP. In other words, the decline in sales is still understandable so that the company does not suffer a loss of up to 65% or IDR 350,114,078.

3. **Analysis of Operating Leverage on Lopilipi Cake**
Operating Leverage

$$\frac{Margin\ Kontribusi}{Laba}$$

$$\frac{\text{Rp. } 275.790.000}{\text{Rp. } 178.989.996}$$

= 0.15

Company Profit Planning
One way a company's success is measured is the amount of profitability obtained. Companies usually make profit plans by looking at sales that occurred in the past to determine the desired profit target. With the expected profit target, the company usually calculates the minimum sales amount that must be obtained to obtain the planned profit.

For the next year, Lopilipi Cake expects an increase in sales until the end of

December of 20%. With the following calculations.

10% Profit Target = Rp.539,918,000+(Rp.539,918,000 x 10%)
10% Profit Target = IDR 539,918,000 + IDR. 539,191,800
Profit Target 10% = IDR 593,909,800

After knowing the profit target that you want to achieve, the next step for the company is to determine the minimum sales amount that must be achieved. The calculation in determining the minimum sales amount that must be achieved by Lopilipi Cake in accordance with the profit target of 10% in the coming year is as follows.

$$\textbf{Total Sales=} \frac{Biaya\ Tetap + Target\ Laba}{Laba}$$

$$\frac{96.800.004 + 593.909.800}{51\ \%}$$

$$\frac{690.709.804}{51\ \%}$$

= Rp. 1,354,332,949.019
= Rp. 1,354,332,950

Based on the calculation above, it can be interpreted that the sales level that Lopilipi Cake must achieve in order to make a profit of Rp. 647,901,600 in the coming year is IDR. 1,354,332,950 or 90,288 units at a price of IDR 15,000 per unit.

DISCUSSION

Break Even Point Analysis is an analysis carried out to determine the minimum sales level that a company must achieve so that it does not experience losses in the future. This analysis can be helped by knowing how much sales volume to plan so that you don't experience a loss. Therefore, in short, this break-even point analysis wants to know the volume planning and profit that you want to achieve, especially for Lopilipi Cake. This BEP analysis is of course a series of Cost Volume Profit analysis which is used to support cost planning so that it can be minimized, planning the sales volume to be achieved and of course planning the expected profit of the Lopilipi Cake business in the future. In a series of CVP analyzes using margin of safety analysis to determine sales risk because if the margin of safety is large on sales then the risk of loss if sales decrease is smaller than the safety margin because this can be taken into consideration by the company if the margin of safety is low on increasing sales and reducing costs. At Lopilipi Cake, in the profit planning process, it uses fixed cost and variable cost calculations to find out the level of Break Even Point, Margin of Safety, level of income earned and profit received so that in the future the company can calculate the profit target it wants to achieve.

CONCLUSION

The application of Cost Volume Profit (CVP) in this research is used as an effort to increase profits at Lopilipi Cake MSMEs. CVP is a method used to analyze the influence of operating and marketing decisions on profits based on an understanding of the relationship between variable costs, fixed costs, selling price per unit, and output levels.

The main findings from the Contribution Margin analysis show that the Contribution Margin in 2022 is IDR. 275,790,000 with a Contribution Margin per unit of Rp. 7,660.9. This analysis provides important insights in assessing the extent to which a company can achieve operational profitability. The results of the break-even analysis prove that the company reached its break-even point by selling 18,989 units of product. This means the company needs to sell at least 18,989 units to cover costs and avoid losses. These findings highlight the importance of understanding the relationship between costs, volumes and profits in making decisions and planning desired future profits

Managers can use several steps, for example reducing operational costs, determining selling prices that are appropriate to the desired profit, and increasing sales volume to obtain optimal profits. In economic activities, MSMEs have an important function in a country's economy. Thus, good profit planning using cost-volume-profit (CVP) analysis tools is very necessary.

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