

Calculation Analysis Break Even Point on Profit Planning Case Study At Ladang Online 2022

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Abstract – Ladang Online is a business in the home industry that produces various types of shoes. This study aims to find out how to calculate the Break Even Point as well as further studies to find out what the operating breakeven point is, the amount of contribution margin, Margin of Safety, to further studies related to cost sensitivity analysis. This research is necessary considering the very dynamic conditions of the business world which require business actors to know how the business conditions they are running, whether they are in a profitable condition or are in a loss condition. The data analysis method used in this research is descriptive analysis method with a quantitative approach. The data analyzed and used in this study are in the form of interview results and documentation which will be processed first.

The results of the research in the Break Even Point analysis at the Toko Sepatu Ladang Online have been able to optimize their performance so that they have been able to obtain sales above the Break Even Point, which means that the Ladang Online Shoe Store has been able to achieve maximum profits every year with predetermined profit target.

Keywords – Break Even Point, Profit Planning.

I. INTRODUCTION

The ultimate goal that every business person wants to achieve is to maintain and maximize profit (profit), where the ultimate goal is in line with the definition of the business itself. According to Kumala, Destiana et al. (2022:1), says that business is one or a series of business activities carried out by one person or in groups that offer goods and services to gain profit or profit.

In this case the factors that can affect a company's profits includes 3 main factors, including production volume, selling price, and cost each of these factors has a relevant relationship with earnings. Cost determine the setting of the selling price to achieve the targeted profit, the selling price will be affect sales volume, sales volume affects production volume while the volume of production will affect the costs incurred. Vivin Ulfathu Choiriah (2016) Analysis Break Even Point is one of the analytical techniques that can used by management to review the relationship between costs, volume, and profit in the company's sales planning.

Ladang Online is a business in the field home industry which produces various types of shoes, ranging from casual, kets, to flat shoes which was founded in 2016 conventionally and changed the focus of sales to the media Online in 2019 until now using the e-commerce platform Lazada, shopee, and Tokopedia. Which is to maintain performance as well as profits at the Ladang Online then the management must know in advance where the company's breakeven position. Break Even Point is one of the methods that can be used by management for decision making and as an illustration of how the production volume level is, which of these production volumes the company is at the breakeven point, or not making a profit and also not experiencing a loss. In accordance with the background described above, the author is interested in conducting research by taking the title Calculation Analysis Break Even Point on Profit Planning at Ladang Online Year 2022.

II. RESEARCH PURPOSES

The purpose of this study is to analyze related to the application of Calculations Break Even Point Against Profit Planning targeted by Ladang Online Shoe Store with related additional studies Margin of Safety and cost sensitivity.

III. REVIEW OF LITERATURE

Carter (in Putri, 2017) profit planning or profit planning is a development of an operating plan for a company, where the goal is to direct the achievement of company goals and objectives. In this case, profit is closely related to costs, where costs are a deduction from expected profits and it is important for business people to know each cost classification according to their behavior.

According to Garrison and Brewer (in Muanas et. al, 2015) explained that cost behavior can mean that costs will react or respond to changes that occur in the activities of a business. If business activity increases or decreases, a certain cost may also experience an increase or decrease, or it may also be that the cost will have a fixed value. Which as a whole these costs are classified into variable costs, fixed costs, and semi-variable costs and in terms of cost classification according to Bustami and Nurlela (in choiriyah et.al., 2016) costs are classified into production and non-production costs. Which there are business analysis methods related to all of these components that can be used by companies to plan better profits, namely Break Even Point methods.

According to Bastian and Nurlela (in Malik, 2019) explained that breakeven analysis or Break Even Point is an analytical method used by a company, with the manager as the main user to find out at what point or the total sales volume and production volume during the company's current period, in which from these two aspects the company does not experience losses and does not gain profits or profits.

In general, the Break Even Point calculation method can be calculated using 3 methods, namely the equation method, the contribution margin, and the graphical method. The following is an explanation of the three methods:

1. Equation Method

The equation method is a method based on the profit and loss approach. According to Halim (in Maruta, Heru. 2017) the similarities include:

$$\text{Income} = \text{Total Cost}$$

$$\text{Income} = \text{Variable Cost} + \text{Fixed Cost}$$

The formulation can be described in the formula, namely:

$$px = a + bx$$

Information:

$$p = \text{Selling price per unit of product}$$

$$x = \text{Units of product sold/produced}$$

$$a = \text{Total fixed costs}$$

$$b = \text{Variable cost per unit of product}$$

So that from the equation, it can be described further in the equation Break Even Point namely as follows:

$$1) \text{ BEP RP} = \frac{a}{1 - \left[\frac{bx}{px} \right]}$$

$$2) \text{ BEP unit Product} = \frac{a}{p - b}$$

2. Unit Contribution Method

Henry Simamora (2012) said that the unit contribution method is a variation of the equation method. Where each unit or unit of the number of products sold will generate a contribution margin amount that will cover its fixed costs.

$$\text{BEP unit produk} = \frac{\text{Fixed Cost}}{\text{Contribution Margin per Unit}}$$

$$\text{BEP rupiah} = \frac{\text{Fixed Cost}}{\text{Contribution Margin Ratio}}$$

3. Graphical Method

The breakeven graphic will show sales volume on the x-axis or horizontal line and the cost section will be on the y-axis or vertical line. Meanwhile, the breakeven point itself will be at the intersection of the revenue line and the cost line. The line to the left of the breakeven point shows the loss side, while the line to the right of the breakeven point shows the profit side.

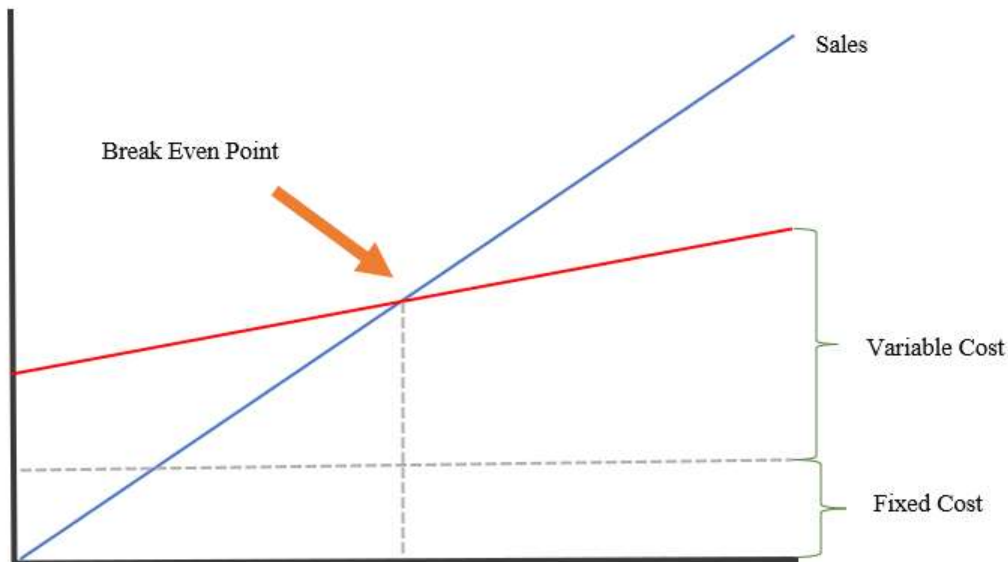


Figure 1 Break Even Analysis Graphic

1. Margin of Safety

Kamarudin (in datakoe.com, 2021) said that Margin of Safety is a safe percentage decrease in sales, or simply a decrease in sales and the company is not in a loss-making condition.

$$\text{Sales Limit} = \frac{\text{Actual Total Sales} - \text{Sales at Break Even Point}}{\text{Actual Total Sales}}$$

2. Sensitivity Analysis

According to Mastuti, Sri et al. (2021) sensitivity analysis is an analytical method that is intended to see the level of sensitivity to feasibility that occurs as a result of changes in cost and revenue elements or components.

IV. RESEARCH METHODS

This type of research is qualitative. According to Effendi (2018) qualitative research is data obtained orally or in writing which contains a brief description of an activity. The object of this research is "Analysis of Calculation of Break Even Point on Profit Planning (Case Study at Ladang Online 2022)". And the subject of this research is called an informant, namely a person who provides information regarding the data needed by researchers who are related or have a relationship with the research being carried out. The subject of this research is the key informant, namely Oki Irfan Iriyandi who acts as the owner of the Ladang Online Shoe Store. In this study, the authors collected data using several techniques including field studies, documentation, literature studies, and internet browsing which the authors did to produce concrete and correct data.

The research method used is descriptive method with a quantitative approach. According to Bungin (2015: 48) the descriptive method of analysis using a quantitative approach is a method used to describe, explain, or summarize various conditions systematically and factually with various variables obtained based on obtaining information by conducting interviews, observations, and other activities that reported as documentary materials.

V. RESULT AND DISCUSSION

Analysis Break Even Point begins by classifying costs into fixed costs and variable costs. The following is a table of cost classifications into variable costs and fixed costs along with the total costs:

Table 1 Classification and Total Cost

Information	Cost Classification	Total Expenses for One Year (RP)
1. Production Costs		
A. Direct Material Costs		
- Kain Mes	Variable	Rp240.240.000,00
- Sponge	Variable	Rp158.400.000,00
- Chicken Eyes	Variable	Rp47.520.000,00
- Sun	Variable	Rp1.657.920.000,00
- AC	Variable	Rp194.832.000,00
- PU glue	Variable	Rp469.333.333,33
- Shoelace	Variable	Rp95.040.000,00
- Sticker	Variable	Rp1.056.000,00
- So Peri	Variable	Rp52.800.000,00
- Thread	Variable	Rp84.480.000,00
- Base Cardboard and Ati	Variable	Rp46.431.000,00
- Canvas	Variable	Rp231.000.000,00
- Livina cloth	Variable	Rp26.928.000,00
- Purce	Variable	Rp12.672.000,00
- Shirt	Variable	Rp16.896.000,00
- Accessories	Variable	Rp33.792.000,00

Total Direct Material Costs		Rp3.369.340.333,33
B. Direct Labor Costs		
- Production staff	Variable	Rp580.800.000,00
Total Direct Labor Cost		Rp580.800.000,00
C. Factory Overhead		
1) Auxiliary Raw Materials		
- So	Variable	Rp232.320.000,00
- Duct tape	Variable	Rp11.664.000,00
- Big Plastic	Variable	Rp31.680.000,00
- Little Plastic	Variable	Rp17.424.000,00
- Toner powder	Variable	Rp3.120.000,00
- Electricity	Semi Variable	Rp4.363.636,36
- A80 paper	Variable	Rp5.760.000,00
Total Factory Overhead Cost Variable		Rp306.331.636,36
2) Depreciation Cost		
- 7 Units of Sewing Machines	Fixed	Rp700.000,00
Total Fixed Factory Overhead		Rp700.000,00
2. Non Production Costs		
1) 1) Fixed Non Production Costs		
- Head of production	Fixed	Rp39.600.000,00
- Assistant Head of Production	Fixed	Rp34.320.000,00
- Supervisor	Fixed	Rp36.000.000,00
- Admin	Fixed	Rp48.000.000,00
- Warehouse	Fixed	Rp28.800.000,00
- Packing	Fixed	Rp52.800.000,00
- Picking	Fixed	Rp90.000.000,00
- Admin Computer Depreciation	Fixed	Rp450.000,00
- Depreciation of Computer Master Data	Fixed	Rp275.000,00
- Computer depreciation Processing	Fixed	Rp312.500,00

- Printer shrinkage Lasser Z Cannon	Fixed	Rp175.000,00
- Printer Lasser HP	Fixed	Rp200.000,00
- Mobil Pickup	Fixed	Rp11.250.000,00
- Honda Beat	Fixed	Rp14.875.000,00
- Xenia's car	Fixed	Rp2.100.000,00
- Great Barcode Scanner	Fixed	Rp187.500,00
- Small Barcode Scanner	Fixed	Rp62.500,00
- Holiday allowance	Fixed	Rp4.500.000,00
- Internet fees	Fixed	Rp4.800.000,00
Total Fixed Non-Production Costs		Rp368.707.500,00
2) Variable Non-Production Costs		
- Consumption Costs	Fixed	Rp6.000.000,00
Total Variable Non-Production Costs		Rp6.000.000,00
Total cost		Rp4.631.879.469,70

Source: Ladang Online Data Processed (2022)

Then it can be presented data on the company's sales volume obtained from the Ladang Online Shoe Store namely as follows:

Table 2 Sales Volume

Information	Selling price	Sales (Units)	Total Sales (Rp)
Model A shoes	33.000,00	63.360	Rp2.090.880.000,00
Model B shoes	35.900,00	52.800	Rp1.895.520.000,00
Model C shoes	31.900,00	42.240	Rp1.347.456.000,00
Model D shoes	23.100,00	31.680	Rp731.808.000,00
Model E shoes	26.900,00	21.120	Rp568.128.000,00
Total		211.200	Rp6.633.792.000,00

Source: Ladang Online Data Processed (2022)

After knowing the number of sales and costs in making koi batik motifs, then a classification of fixed costs and variable costs will be presented based on sales and costs for shoe production:

Table 3 Recapitulation Total Cost

Keterangan	Model A	Model B	Model C	Model D	Model E	Subtotal (Rp)
	63.360 unit	52.800 unit	42.240 unit	31.680 unit	21.120 unit	211.200 unit
	(a)	(b)	(c)	(d)	(e)	(f) = (a) + (b) + (c) + (d) + (e)
Variable Cost						
Direct Raw Material Cost	Rp955.094.800,00	Rp1.099.017.333,33	Rp636.729.866,67	Rp477.547.400,00	Rp200.950.933,33	Rp3.369.340.333,33
Direct Labor Cost						
a. Staff Production	Rp116.160.000,00	Rp116.160.000,00	Rp116.160.000,00	Rp116.160.000,00	Rp116.160.000,00	Rp580.800.000,00
Variable Factory Overhead	Rp91.899.490,91	Rp76.582.909,09	Rp61.266.327,27	Rp45.949.745,45	Rp30.633.163,64	Rp306.331.636,36
Total cost	Rp1.163.154.290,91	Rp1.291.760.242,42	Rp814.156.193,94	Rp639.657.145,45	Rp347.744.096,97	Rp4.256.471.969,70
Fixed Cost						
Fixed Factory Overhead	Rp210.000,00	Rp175.000,00	Rp140.000,00	Rp105.000,00	Rp70.000,00	Rp700.000,00
Non-cost	Rp110.612.250,00	Rp92.176.875,00	Rp73.741.500,00	Rp55.306.125,00	Rp36.870.750,00	Rp368.707.500,00
Fixed Production	Rp110.822.250,00	Rp92.351.875,00	Rp73.881.500,00	Rp55.411.125,00	Rp36.940.750,00	Rp369.407.500,00
Total cost	Rp1.273.976.540,91	Rp1.384.112.117,42	Rp888.037.693,94	Rp695.068.270,45	Rp384.684.846,97	Rp4.625.879.469,70

Source: Ladang Online Data Processed (2022)

After knowing the total costs based on each classification, Ladang Shoe StoreOnline can calculate the amount of the contribution margin which can then be used as a basis for calculating profits for a one-year period, which the author will present in the following table:

Table 4 Calculation of Profit and Contribution Margins

Information	Shoe Model A	Shoe Model B	Shoe Model C	Shoe Model D	Shoe Model E	Total
	(a)	(b)	(c)	(d)	(e)	
Volume Sale	63.360	52.800	42.240	31.680	21.120	211.200
Selling Price Per Pair	Rp 33.000,00	Rp 35.900,00	Rp 31.900,00	Rp 23.100,00	Rp 26.900,00	Rp 150.800,00
Income = 1 x 2	Rp2.090.880.000,00	Rp1.895.520.000,00	Rp1.347.456.000,00	Rp731.808.000,00	Rp568.128.000,00	Rp6.633.792.000,00
Total cost Variable	Rp1.163.154.290,91	Rp1.291.760.242,42	Rp814.156.193,94	Rp639.657.145,45	Rp347.744.096,97	Rp4.256.471.969,70
Margin Contribution = 3 - 4	Rp927.725.709,09	Rp603.759.757,58	Rp533.299.806,06	Rp92.150.854,55	Rp220.383.903,03	Rp10.890.625.969,70
Total fixed cost	Rp110.822.250,00	Rp92.351.875,00	Rp73.881.500,00	Rp55.411.125,00	Rp36.940.750,00	Rp369.407.500,00
Profit = 5 - 6	Rp816.903.459,09	Rp511.407.882,58	Rp459.418.306,06	Rp36.739.729,55	Rp183.443.153,03	Rp2.007.912.530,30

Source: Ladang Online Data Processed (2022)

Next, the author will present a table related to the calculation of the weighted contribution margin for each shoe model. Which is the weighted contribution margin required as the basis for calculating the breakeven point or Break Even Point, namely as follows:

Table 5 Weighted Average Contribution Margin

No	Information	Model A	Model B	Model C	Model D	Model E	Total
		(a)	(b)	(c)	(d)	(e)	
1.	Sales (Units)	63.360	52.800	42.240	31.680	21.120	211.200
2.	Comparison Sale	30%	25%	20%	15%	10%	100%
3.	Margin Contribution per unit (Pair)	Rp14.642,14	Rp11.434,84	Rp12.625,47	Rp2.908,80	Rp10.434,84	Rp52.046,09
4.	Margin Contribution				Rp436,32		Rp11.256,25

No	Information	Model A	Model B	Model C	Model D	Model E	Total
		(a)	(b)	(c)	(d)	(e)	(f) = (a) + (b) + (c) + (d) + (e)
	Weighted = 2 x 3	Rp4.392,64	Rp2.858,71	Rp2.525,09		Rp1.043,48	

Source: Ladang Online Data Processed (2022)

After knowing the weighted contribution margin of each shoe product, then the writer can calculate the break-even point or Break Even Point per shoe model, as follows:

$$\begin{aligned}
 \text{BEP Mix (Unit)} &= \frac{\text{Total Fixed Cost}}{\text{Weighted Average Contribution Margin}} \\
 &= \frac{\text{Rp}369.407.500,00}{\text{Rp}11.256,25} \\
 &= 32.817,99 \text{ pairs} \\
 &= 32.818 \text{ pairs (rounded)}
 \end{aligned}$$

Based on the calculation above, it can be seen that the breakeven point or Break Even Point Ladang Online can be achieved if the number of sales is 32,818 pairs of shoes. Next to find out about the number of units (pairs) of shoes in a breakeven state or Break Even Point of each shoe produced, the following is the calculation for each type of shoe produced:

Table 6 Break Even Point Calculation

No	Information	Sales Mix	BEP Mix (Unit)	BEP (Unit)	BEP (Rp)
		(a)	(b)	(c) = (a) x (b)	(d) = (c) x Harga Jual
1.	Sepatu Model A	30%	32.818	9.845	Rp324.898.096,91
2.	Sepatu Model B	25%	32.818	8.204	Rp294.541.456,55
3.	Sepatu Model C	20%	32.818	6.564	Rp209.378.773,57
4.	Sepatu Model D	15%	32.818	4.923	Rp113.714.333,92
5.	Sepatu Model E	10%	32.818	3.282	Rp88.280.391,99
Total				32.818	Rp1.030.813.052,94

Source: Ladang Online Data Processed (2022)

Based on the calculation above, it can be seen that the sales realization of the Ladang Online is above its breakeven point and it can be seen also the sales mix needed to reach its production breakeven point.

Furthermore, the author will describe Margin of Safety on Ladang Online. The magnitude Margin of Safety of each type of shoe in 2022 are as follows:

Table 7 Margin of Safety Calculation

No	Information	Sales	BEP Multi Product	MOS (%)	MOS (Rp)	MOS (Unit)
		(a)	(b)	$(c) = ((a) - (b)) \times 100 / (a)$	$(d) = (a) \times (c)$	$(e) = (d) / \text{Harga Jual}$
1.	Sepatu Model A	Rp2.090.880.000,00	Rp324.898.096,91	0,84	Rp1.765.981.903,09	53.515
2.	Sepatu Model B	Rp1.895.520.000,00	Rp294.541.456,55	0,84	Rp1.600.978.543,45	44.596
3.	Sepatu Model C	Rp1.347.456.000,00	Rp209.378.773,57	0,84	Rp1.138.077.226,43	35.676
4.	Sepatu Model D	Rp731.808.000,00	Rp113.714.333,92	0,84	Rp618.093.666,08	26.757
5.	Sepatu Model E	Rp568.128.000,00	Rp88.280.391,99	0,84	Rp479.847.608,01	17.838
Total					Rp5.602.978.947,06	178.382

Source: Ladang Online Data Processed (2022)

The calculation results Margin of Safety shows that the maximum sales limit that can decrease is 84.46% for each sales mix of Ladang Online so as not to suffer a loss.

For profit planning for the next period itself, Ladang Online planning a profit of 20% greater than the previous period, then the calculation is as follows:

$$\begin{aligned}
 \text{2023 Profit Target} &= \text{2022 Profit} \times 120\% \\
 &= \text{Rp}2.007.912.530,30 \times 120\% \\
 &= \text{Rp}2.409.495.036,36
 \end{aligned}$$

Based on these calculations it can be seen that the profit target set and wanted to be achieved by the Ladang Online in 2023 which is Rp 2,409,495,036.36. To find out the target sales volume needed to achieve this profit, the calculation of the sales target that must be achieved is:

$$\begin{aligned}
 \text{Sales Target} &= \text{Fixed Cost 2023} + \text{Profit Target 2023} \\
 \text{Tahun 2023 (Unit)} &= \frac{\text{Rp}369.407.500,00 + \text{Rp}2.409.322.236,36}{\text{Rp}11.256,25} \\
 &= \frac{\text{Rp}2.778.729.736,36}{\text{Rp}11.256,25} \\
 &= 246.876,40 \text{ unit (pairs)} \\
 &= 246.876 \text{ unit (rounded)}
 \end{aligned}$$

The calculation above shows that to achieve the expected profit planning in 2023 Ladang Online must be able to obtain a total shoe sales volume of 246,876 units (pairs). In this regard, to find out the sales target for each type of shoe a calculation will be displayed based on the sales mix in 2022, which is as follows:

Table 8 Calculation of Sales Target Mix

No	Information	Sales Mix	Total Sales Target (Unit)	Sales Mix Target (Unit)	Sales Mix Target (Rp)
		(a)	(b)	(c) = (a) x (b)	(d) = (c) x Harga Jual
1.	Model A shoes	30%	246.876	74.063	Rp2.444.076.380,62
2.	Model B shoes	25%	246.876	61.719	Rp2.215.715.708,69
3.	Model C shoes	20%	246.876	49.375	Rp1.575.071.445,29
4.	Model D shoes	15%	246.876	37.031	Rp855.426.733,22
5.	Model E shoes	10%	246.876	24.688	Rp664.097.521,60
Total				246.876	Rp7.754.387.789,42

Sumber: Ladang Online Data Processed (2022)

Based on the calculation above, it can be seen that in order to achieve the expected profit target in 2023, the Ladang Online Shoe Store must achieve total sales of 246,876 units (pairs) with each Model A shoe selling of 74,062.92 units (pairs) or Rp 2.444,076,380.62 and for the type of Model B shoes, namely 61,719.10 units (pairs) or the equivalent of Rp 575,071,445.29, then for the type of Model D shoes, namely 37,031.46 units (pairs) or the equivalent of Rp 097521.60

Furthermore, the author provides additional discussion related to sensitivity analysis. In this sensitivity analysis, the author provides a calculation where in the ongoing operations in 2023 it is assumed that there will be fluctuations in operating costs, namely:

Table 9 Increase in Direct Material Costs

No	Information	Cost per Unit	Percentage Ascension	Ascension (RP)	Cost per Unit
		(a)	(b)	(c) = (a) x (b)	(d) = (a) + (c)
1.	Model A shoes	Rp15.074,10	10%	Rp1.507,41	Rp16.581,51
2.	Model B shoes	Rp20.814,72	10%	Rp2.081,47	Rp22.896,19
3.	Model C shoes	Rp15.074,10	10%	Rp1.507,41	Rp16.581,51
4.	Model D shoes	Rp15.074,10	10%	Rp1.507,41	Rp16.581,51
5.	Model E shoes	Rp9.514,72	10%	Rp951,47	Rp10.466,19
Total				Rp7.555,17	Rp83.106,91

Source: Ladang Online Data Processed (2022)

Table 10 Addition of Direct Labor

No.	Information	Shoe Model A	Shoe Model B	Shoe Model C	Shoe Model D	Shoe Model E
1.	Production Units	240	200	160	120	80
2.	Wages per Day	Rp 220.000	Rp 220.000	Rp 220.000	Rp 220.000	Rp 220.000
Total		Rp2.200,00	Rp2.640,00	Rp3.300,00	Rp4.400,00	Rp6.600,00

Source: Ladang Online Data Processed (2022)

Table 11 Increase in Administrative and General Costs

No	Information	Department	Salary (Rp)	Salary increment (%)	Subtotal (Rp)
1.	Yahya	Supervisor	Rp3.000.000,00	10%	Rp3.300.000,00
2.	Yuyun	Admin	Rp2.000.000,00	10%	Rp2.200.000,00
3.	Intan	Admin	Rp2.000.000,00	10%	Rp2.200.000,00
4.	Kamal	Warehouse	Rp2.400.000,00	10%	Rp2.640.000,00
5.	Robi	Packing	Rp2.200.000,00	5%	Rp2.310.000,00
6.	Irfan	Packing	Rp2.200.000,00	5%	Rp2.310.000,00
7.	Dian	Picking	Rp2.500.000,00	0%	Rp2.500.000,00
8.	Rpis	Picking	Rp2.500.000,00	0%	Rp2.500.000,00
9.	Melanie	Picking	Rp2.500.000,00	0%	Rp2.500.000,00
10.	Oki	Head Production	Rp3.300.000,00	5%	Rp3.465.000,00
11.	Dian	Assistant Head Production	Rp2.860.000,00	5%	Rp3.003.000,00
Total			Rp27.460.000,00	60%	Rp28.928.000,00

Source: Ladang Online Data Processed (2022)

Table 12 Addition of Selling Price

No	Information	Selling price	Ascension	Subtotal
1.	Model A shoes	Rp33.000,00	0%	Rp33.000,00
2.	Model B shoes	Rp35.900,00	10%	Rp39.490,00
3.	Model C shoes	Rp31.900,00	0%	Rp31.900,00
4.	Model D shoes	Rp23.100,00	15%	Rp26.565,00
5.	Model E shoes	Rp26.900,00	0%	Rp26.900,00

Source: Ladang Online Data Processed (2022)

Table 13 Recapitulation of Total Variable Costs and Fixed Costs After Cost Changes

Information	Model A	Model B	Model C	Model D	Model E	Subtotal (Rp)
	63.360 Unit	52.800 Unit	42.240 Unit	31.680 Unit	21.120 Unit	211.200 Unit
	(a)	(b)	(c)	(d)	(e)	(f) = (a) + (b) + (c) + (d) + (e)
Variable Cost						
Direct Raw Material Cost	Rp1.050.6 04.280,00	Rp1.208.9 19.066,67	Rp700.402 .853,33	Rp525.302 .140,00	Rp221.0 46.026,6 7	Rp3.706.274. 366,67
Direct Labor Cost						
a. Staff Production	Rp139.392 .000,00	Rp139.392 .000,00	Rp139.392 .000,00	Rp139.392 .000,00	Rp139.3 92.000,0 0	Rp696.960.00 0,00
Variable FactoryOverhe d	Rp91.899. 490,91	Rp76.582. 909,09	Rp61.266. 327,27	Rp45.949. 745,45	Rp30.63 3.163,64	Rp306.331.63 6,36
Total cost Variable	Rp1.281.8 95.770,91	Rp1.424.8 93.975,76	Rp901.061 .180,61	Rp710.643 .885,45	Rp391.0 71.190,3 0	Rp4.709.566. 003,03
Fixed Cost						
Fixed Factory Overhead	Rp210.000 ,00	Rp175.000 ,00	Rp140.000 ,00	Rp105.000 ,00	Rp70.00 0,00	Rp700.000,00
Non-cost Fixed Production	Rp114.637 .050,00	Rp95.530. 875,00	Rp76.424. 700,00	Rp57.318. 525,00	Rp38.21 2.350,00	Rp382.123.50 0,00
Total Fixed Cost	Rp114.847 .050,00	Rp95.530. 875,00	Rp76.424. 700,00	Rp57.318. 525,00	Rp38.21 2.350,00	Rp382.823.50 0,00
Total Variable and Fixed Cost	Rp1.396.7 42.820,91	Rp1.520.4 24.850,76	Rp977.485 .880,61	Rp767.962 .410,45	Rp429.2 83.540,3 0	Rp5.091.899. 503,03

Source: Ladang Online Data Processed (2022)

After knowing the total variable and fixed costs after the addition of these costs, the Contribution Margin table will then be displayed after a change in costs to find out the profit obtained after a change in costs:

Table 14 Contribution Margin and Profit for Ladang Online After Changes

Information	Shoe Model A	Shoe Model B	Shoe Model C	Shoe Model D	Shoe Model E	Total
	(a)	(b)	(c)	(d)	(e)	(f) = (a) + (b) + (c) + (d) + (e)
Sales Volume	63.360	52.800	42.240	31.680	21.120	211.200
Selling Price Per Pair	Rp33.000,00	Rp39.490,00	Rp31.900,00	Rp26.565,00	Rp26.900,00	Rp157.855,00
Income = 1 x 2	Rp2.090.880.000,00	Rp2.085.072.000,00	Rp1.347.456.000,00	Rp841.579.200,00	Rp568.128.000,00	Rp6.933.115.200,00
Total Variable Cost	Rp1.281.938.970,91	Rp1.424.929.975,76	Rp901.089.980,61	Rp710.665.485,45	Rp391.085.590,30	Rp4.709.710.003,03
Margin Contribution = 3 - 4	Rp808.941.029,09	Rp660.142.024,24	Rp446.366.019,39	Rp130.913.714,55	Rp177.042.409,70	Rp11.643.194.258,03
Total Fixed Cost	Rp114.847.050,00	Rp95.530.875,00	Rp76.424.700,00	Rp57.318.525,00	Rp38.212.350,00	Rp382.333.500,00
Profit = 5 - 6	Rp694.093.979,09	Rp564.611.149,24	Rp369.941.319,39	Rp73.595.189,55	Rp138.830.059,70	Rp1.841.071.696,97

Source: Ladang Online Data Processed (2022)

Table 15 Weighted Average Contribution Margin After Cost Changes

No	Information	Model A	Model B	Model C	Model D	Model E	Total
		(a)	(b)	(c)	(d)	(e)	(f) = (a) + (b) + (c) + (d) + (e)
1.	Sales (Unit)	63.360	52.800	42.240	31.680	21.120	211.200
2.	Sales Comparison	30%	25%	20%	15%	10%	100%
3.	Margin Contribution per unit (Pair)	Rp12.768,06	Rp12.503,37	Rp10.568,06	Rp4.133,06	Rp8.383,37	Rp48.355,92
4.	Margin Contribution Weighted = 2 x 3	Rp3.830,42	Rp3.125,84	Rp2.113,61	Rp619,96	Rp838,34	Rp10.528,17

Source: Ladang Online Data Processed (2022)

After calculating the contribution margin per unit (pairs) as well as the weighted contribution margin contained in table 15, the author can only calculate the Break Even Point mix, the calculations are as follows:

$$\begin{aligned} \text{BEP Mix (Unit)} &= \frac{\text{Total Fixed Cost}}{\text{Weighted Average Contributin Margin}} \\ &= \frac{\text{Rp382.823.500}}{\text{Rp14.188,38}} \\ &= 36.361,83 \text{ pairs} \\ &= 36.362 \text{ pairs (rounded)} \end{aligned}$$

Based on the calculation above, it can be seen that the breakeven point or Break Even Point Ladang Online can be achieved if the number of sales is 36,362 pairs of shoes with a sales mix as follows:

Table 16 Calculation of Break Even Point After Cost Changes

No	Information	Sales Mix	BEP Mix (Unit)	BEP Unit	Rupiah BEP
		(a)	(b)	(c) = (a) x (b)	(d) = (c) x Harga Jual
1.	Model A shoes	30%	36.362	10.909	Rp359.982.157,71
2.	Model B shoes	25%	36.362	9.090	Rp358.982.207,27
3.	Model C shoes	20%	36.362	7.272	Rp231.988.501,63
4.	Model D shoes	15%	36.362	5.454	Rp144.892.818,48
5.	Model E shoes	10%	36.362	3.636	Rp97.813.333,76
Total				36.362	Rp1.193.659.018,85

Source: Ladang Online Data Processed (2022)

Furthermore, the author will describe Margin of Safety Ladang Online after the price change. The magnitude Margin of Safety of each type of shoe in Ladang Online 2022 are as follows:

Tabel 17 Calculation of Margin of Safety After Cost Changes

No	Information	Sale	BEP Multi Products	MOS (%)	MOS (Rp)	MOS (Unit)
		(a)	(b)	(c) = ((a)-(b))x100%/(a)	(d) = (a) x (c)	(e) = (d) / Harga Jual
1.	Model A shoes	Rp2.090.880.000,00	Rp359.982.157,71	0,83	Rp1.730.897.842,29	52.451
2.	Model B shoes	Rp1.895.520.000,00	Rp358.982.207,27	0,81	Rp1.536.537.792,73	38.910
3.	Model C shoes	Rp1.347.456.000,00	Rp231.988.501,63	0,83	Rp1.115.467.498,37	34.968

4.	Model D shoes	Rp731.808.000,00	Rp144.892.818,48	0,80	Rp586.915.181,52	22.094
5.	Model E shoes	Rp568.128.000,00	Rp97.813.333,76	0,83	Rp470.314.666,24	17.484
Total					Rp5.440.132.981,15	165.907

Source: Ladang Online Data Processed (2022)

The calculation Margin of Safety result shows that the maximum sales limit that can decrease is 82.78% for each sales mix of Ladang Online products so as not to suffer a loss.

For profit planning for the next period itself, Ladang Online planning a profit of 20% greater than the previous period, then the calculation is as follows:

$$\begin{aligned}
 \text{2023 Profit Target} &= \text{2022 Profit} \times 120\% \\
 &= \text{Rp1.841.215.696,97} \times 120\% \\
 &= \text{Rp2.209.458.836,36}
 \end{aligned}$$

Which is to find out the target sales volume needed to achieve this profit, then the calculation of the sales target that must be achieved is:

$$\begin{aligned}
 \text{Sales Target} &= \frac{\text{2023 Fixed Cost} + \text{2023 Profit Target}}{\text{2023 (Unit) Weighted Average Contribution Margin}} \\
 &= \frac{\text{Rp382.333.500,00} + \text{Rp2.209.458.836,36}}{\text{Rp14.188,38}} \\
 &= \frac{\text{Rp2.591.792.336,36}}{\text{Rp10.528,17}} \\
 &= 246.176,95 \text{ unit (pairs)} \\
 &= 246.177 \text{ unit (rounded)}
 \end{aligned}$$

Furthermore, to find out the sales target for each type of shoe, a calculation will be displayed based on the sales mix in 2022, which is as follows:

Table 18 Sales Mix Target Profit After Cost Changes

No	Information	Sales Mix	Total Target Sales	Target Sales Mix (Unit)	Sales Mix Target (Rp)
		(a)	(b)	(c) = (a) x (b)	(d) = (c) x Harga Jual
1.	Model A shoes	30%	246.177	73.853,09	Rp2.437.151.840,40
2.	Model B shoes	25%	246.177	61.544,24	Rp2.430.381.974,18
3.	Model C shoes	20%	246.177	49.235,39	Rp1.570.608.963,81
4.	Model D shoes	15%	246.177	36.926,54	Rp980.953.615,76
5.	Model E shoes	10%	246.177	24.617,70	Rp662.216.005,12
Total				246.176,96	Rp8.081.312.399,27

Source: Ladang Online Data Processed (2022)

Based on the calculation above, it can be seen that in order to achieve the expected profit target in 2023, the Ladang Online Shoe Store must achieve a total sales of 246,177 units (pairs) with each sale of Model A shoes of 73,853.09 units (pairs) or Rp 2.437,151,840.40 and for the type of shoes Model B which is 61,544.24 units (pairs) or equivalent to Rp 963.81, then for the

type of Model D shoes, there were 36,926.54 units (pairs) or the equivalent of Rp. 980,953,615.76, and for the type of Model E shoes, there were 24,617.70 units (pairs) or the equivalent of Rp 662,216,005,12.

VI. CONCLUSION AND RECOMMENDATION

Conclusion:

Based on the results of research and discussion that has been done about the calculation Break Even Point on profit planning at the Ladang Online has not been implemented or enforced. In this study, Calculation analysis Break Even Point can be a tool for Ladang Online to avoid loss conditions and to obtain and plan as much profit as possible. Realization of sales generated by the Ladang Online in 2022 it will be above the Break Even Point or above the Break Even Point. Margin of Safety at the Ladang Online during one year of operation in 2022 it can be seen that it is equal to 84.46% which can be interpreted that in one year of operation, a decrease in actual sales that can be tolerated or accepted until it reaches a breakeven point at the Ladang Online that is equal to 84.46%.

Ladang Online can produce a very large quantity of shoes for scale Home Industry. Ladang Online in one year its production managed to produce a total of 211,200 units or as many as 10,560 scores, with a production mix of 63,360 units for model A, 52,800 units for model B, then for model C as many as 42,240 units, for model D as many as 31,680 units, and for model E as many as 21,120 units. Ladang Online has a profit increase target for 2023, which is 20% of 2022 profits. The profit generated in 2022 is Rp 1,841,215,696.97. Therefore, the profit planning calculation for the coming period, namely in 2023, is Rp. 2,209,458,836.36, with a sales mix of model A shoes of 73,853.09 or Rp. 2,437,151,840.40, model B shoes of 61,544.24 or Rp 2,430,381,974.18, then model C shoes were 49,235.39 or RP 1,570,608,963.81, then model D shoes were 36,926.54 or Rp 980,953,615.76, and model D shoes E as much as 24,617.70 or RP 662,216,005.12 so that the profit target can be achieved.

Recommendation:

With the calculation analysis research Break Even Point on profit planning at the Ladang Online, It is hoped that this will help understand the classification of costs according to their cost behavior, which can then be used in the use of business methods, one of which is Break Even Point and or other business methods that can help the operation process of Ladang Online to get the best calculation and can provide consideration for management in making the most ideal decision.

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