

Managing Money: Breakeven

“Whoever can be trusted with very little can also be trusted with much, and whoever is dishonest with very little will also be dishonest with much”

Breakeven Analysis

Calculating your break-even point can be used to tell you a number of things about your sales and can also be used to set sales targets. This type of analysis can be used to calculate the sales income required to cover your fixed cost obligations. This is really asking: “How much income do I need before I start making any profit?” This point – where your income is equal to your total costs is called your **Breakeven Point**. Remember that *Variable Costs* are only incurred when you actually sell but *Fixed Costs* are there whether you sell or not.

The activity of understanding your Breakeven Point, under various scenarios is called **Breakeven Analysis**. For a specific selling price, you can work out how many items you need to sell in order to cover your total costs (fixed costs plus variable costs). You can also use this analysis to work out what your selling price needs to be for a specific quantity you can sell. Sometimes there may be other competition and so you may not be able to raise prices in which case you have to be sure that there is enough demand for your product or service. Other times there may only be so much demand for your product or service and so you will want to know what price you have to sell that quantity for in order to make a profit. You may want to know things like - how many more products do I need to sell if I want to employ a 2nd staff member or rent a bigger shop? This type of analysis can assist you to make all of these decisions.

Before we look at an example, we need some additional definitions:

Cost of Sales: The calculation of Cost of Sales is different for each type of business

- **Retail:** Cost of Sales is the amount paid for the products which are going to be sold plus the cost of getting them to your business premises.
- **Manufacture:** Cost of Sales is the amount paid for the raw materials used in making the product plus the amount paid for the labour which went into the making of the product.
- **Services:** Cost of Sales is the amount paid for the labour which went into performing the service plus the cost of any materials used plus (if applicable) the cost of getting to the customer’s premises.

Gross Profit and Gross Margin:

- **Gross Profit:** Total Sales Income *less* Cost of Sales
- **Gross Margin:** Gross Profit / Number of units Sold (Unit Margin)

Breakeven (BE):

- **BE Income:** = Fixed Cost + Variable Cost = Total Cost
- **BE Selling Price:** = BE Income / Units Sold (Unit Price)
- **BE Quantity:** = Fixed Cost / Contribution Margin (Number of Units)

Contribution Margin:

➤ **Contribution Margin:** Total Sales Income *less* Variable Costs (Unit Margin)

- *Note: The Variable Costs here include the Cost of Sales*

Group Exercise 2

Using the same information as exercise 1, let's do some breakeven analysis. To do this we will need to make some assumptions about the market selling prices. You would usually get this through some form of market research and checking the prices of your competition.

1. If you want to sell 1000 litres of milk per month, what does your selling price per litre need to be in order to breakeven? (In other words to cover your total costs).
2. If you can sell at R8 / litre, how many litres do you need to sell in order to breakeven? (In other words to cover your total costs).
3. To employ another staff member will cost you an additional R3500 per month. With their help, you can increase your sales to 4000 litres per month. If you continue to sell at R8 / litre, can you afford this new employee?

Question 1:

Item	Unit	Calculations	Amount (Rands)
Fixed Costs (FC)	R/month	<i>from before</i>	5 250
Variable Costs (VC)	R/Litre	<i>from before</i>	5.50
Variable Costs (1000 Litres)	R/month	= 5.5 x 1000	5 500
Total Cost (Rands)			10 750
BE Income	R/month		10 750
BE Selling Price	R/Litre	= BE Income / 1000	10.75

Question 2:

Item	Unit	Calculations	Amount (Rands)
Selling Price (SP)	R/Litre		8.00
Contribution Margin (CM)	R/Litre	= SP - VC	2.50
BE Quantity (@ R8 / Litre)	Litres / mth	= FC / CM = 5 250 / 2.50	2 100

Question 3:

Item	Unit	Calculations	Amount (Rands)
Fixed Costs (FC)	R/month	=5250 + 3500	8 750
Variable Costs (VC)	R/Litre	<i>from before</i>	5.50
Variable Costs (4000 Litres)	R/month	= 5.5 x 4000	22 000
Total Cost (Rands)			30 750
BE Income	R/month		30 750
BE Selling Price	R/Litre	= BE Income / 4000	7.6875

Item	Unit	Calculations	Amount (Rands)
Selling Price (SP)	R/Litre		8.00
Contribution Margin (CM)	R/Litre	= SP - VC	2.50
BE Quantity (@ R8 / Litre)	Litres / mth	= FC / CM = 8 750 / 2.50	3 500

The cost of this new employee will breakeven at 3 500 litres per month. So if they can increase your sale volume to 4000 litres, then employing the additional staff member adds value to the business and so is a wise and decision and makes financial sense.