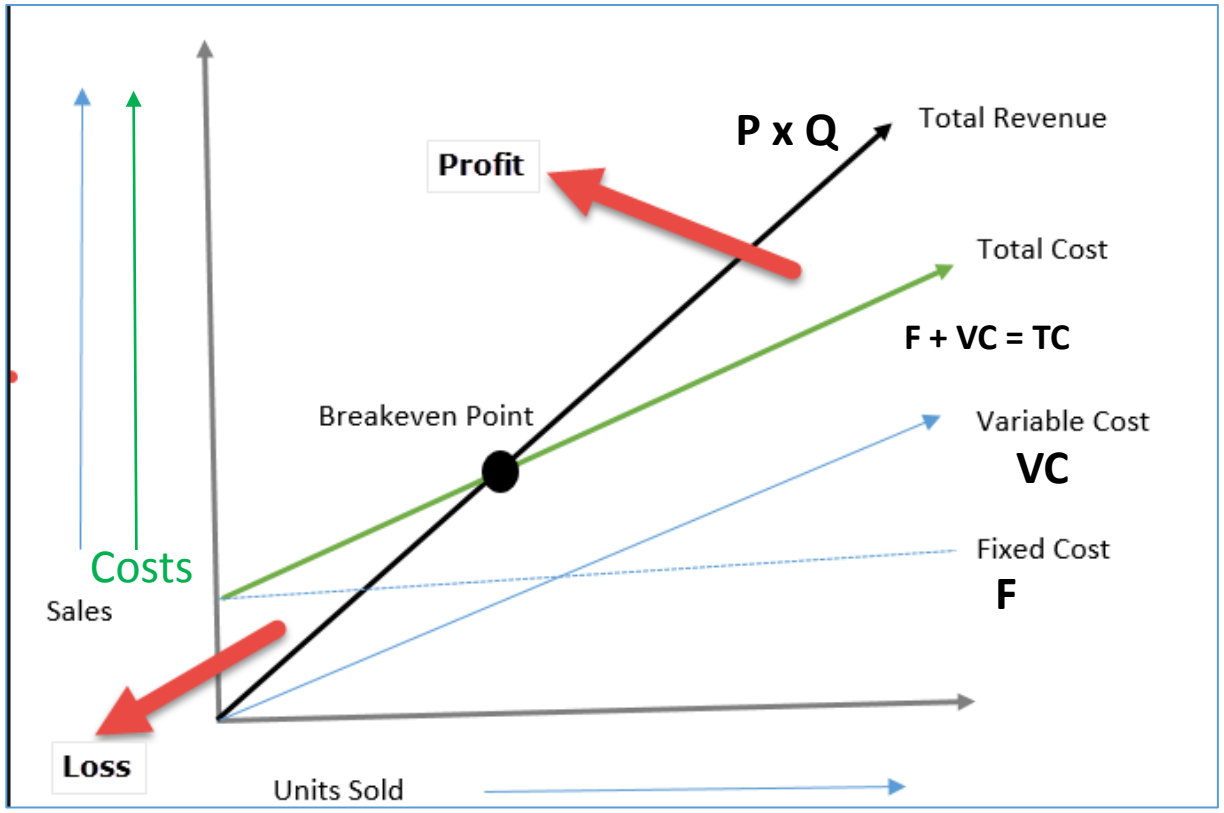
Break-even point analysis

Jaromír Skorkovský

Department of corporate economy

Graphical representation

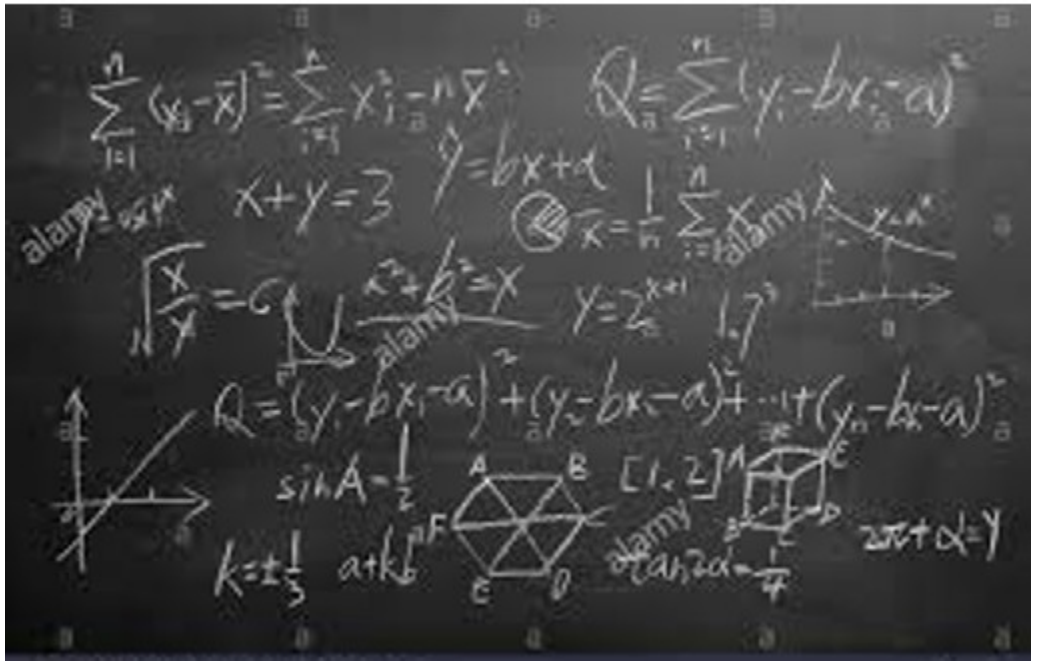


BEP- Basic Statements

- Break-Even Point is the amount of product at which total costs are equal to total returns. From this point, the company or project begins to generate profit.
- The break-even point, in its classic form, tells you how much product to sell to generate profit. It is a volume indicator.
- The break-even point in related currency thus basically means 0.
- In the next slides, we present a formula, where it is also possible to incorporate the required rate of profit (in related currency) into the calculation.
- As a result, we will shift to the right along the X-axis (sales volume) in the graph and the resulting Q (X pieces) will be higher than at the "classic" break-even point, where the profit is zero.

Calculation I

- The basic calculation of the **break-even point** is not complicated. All you have to do is put together the Price, Costs and possibly the Required profit.
- However, the challenge is to get to these aggregated variables. The data for partial calculations are obtained utilizing financial analysis, using data from accounting. Good financial management considers the break-even point analysis to be an absolute must. It is not just a “lesson from microeconomics” or “theoretical exercise”



Calculation II

Profit = Price x Quantity of Sold Products - Total Costs

Total Costs = F+VC x Q

Profit = P x Q - F- VC x Q

If BEP then Profit=0

Profit = Q x (P-VC) - F = 0

Q= F/(P-VC)

VC- cost for one product unit

F= Fixed costs
VC=Variable costs
Q=Quantity
P=Price

Simple example

- What is the turning point in practice can be shown in a model example?
- Let's imagine that you want to start confectionery production. How do you know how many cakes you have to sell to make a profit?

- **Real capacity consideration**
- **Price conditions analysis**
- **List of all costs**
- **Calculations and modeling**

Q= F/(P-VC)

BEP = 555 cakes [calculation: 250000 / (750 – 300)].

Let's assume that the total input costs (fixed costs) will be 250000 CZK.
Set the selling price of one cake = 750, - CZK
Variable costs for 1 cake = 300, - CZK

CZK=Czech Crown