

Cost-Benefit Analysis

How can businesses and individuals make good economic decisions?

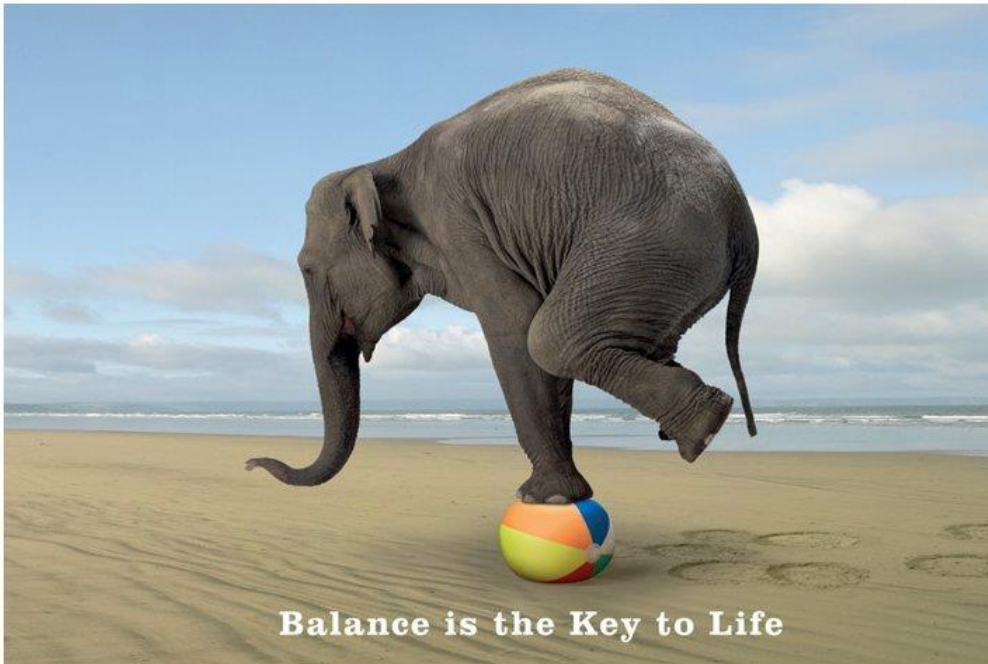
Cost-Benefit Analysis

- All people and producers of goods and services must consider how they will spend their time or how many units of a good or service to produce. The best way to do this is to consider the costs and benefits of each possibility.
- Production Costs:
 - Fixed Cost: money that must be paid no matter how many units are produced. Ex: you must pay the rent on your factory whether you produce 500 units or 0 units.
 - Variable Cost: The additional money (on top of fixed cost) that must be paid to produce. The amount changes as the number of units produced change.
 - Total Cost (TC): Fixed Cost (FC) + Variable Cost (VC).
Businesses often focus on the Average Total Cost → Total Cost divided by the number of units produced.
 - Marginal Cost: The additional money that must be paid in order to produce one more. Marginal Cost (MC) = TC producing two units – TC producing one unit

C-B Analysis of Widget Factory

# of Units	Fixed Cost	Variable Cost	Total Cost	Marginal Cost	Total Revenue	Marginal Revenue
0	100	0				
1		500				
2		800				
3		1,000				
4		1,160				
5		1,340				
6		1,540				
7		1,780				

C-B Analysis continued...



Balance is the Key to Life

- Revenue/Benefit: the money brought in by a business by selling their goods and services.
 - Total Revenue: all revenue brought in from sales → $TR = \text{Price} \times \# \text{ of units sold}$
 - Marginal Revenue: additional revenue brought in by selling one more unit. MR always equals price
- Analysis: compare Marginal Cost to Marginal Revenue to determine the number of units to produce. Businesses produce and sell goods to make a profit. You make a profit by bringing in more revenue than money spent to produce
 - If MC is less than MR, always produce at least one more unit.
 - If MC is greater than or equal to MR, don't produce that # of units.

C-B Analysis of Widget Factory:

Assume widgets sell for \$180 each

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Individual C-B Analysis

- When you make decisions about how to spend your time and money, it is smart to consider costs and benefits as well.
- Look at your possible decisions and determine the total cost of each. Consider not only the monetary cost of a decision, but also time and activities given up.
- Determine the benefits of each decisions as well. An easy way to do this is to ask yourself how much someone would have to pay you to not make the purchase/activity.
- Good economic decision makers only choose options where the benefits outweigh the costs.