



TEST YOURSELF: COST

Pricing is actually a pretty simple and straight forward thing. Customers will not pay literally a penny more than the true value of the product.

Ron Johnson



On what two things is an output decision based?



An output decision is based on the capacity to produce (the production function) and on the costs of production (the cost function).



What is total cost?



Total cost is the sum of total fixed cost and total variable cost at each level of output.

$$TC = TFC + TVC$$

total fixed cost – the total of all costs that do not vary as output varies and that must be paid even if output is zero

total variable cost – the total of all costs that are zero when output is zero and vary as output varies



What is
average total cost?



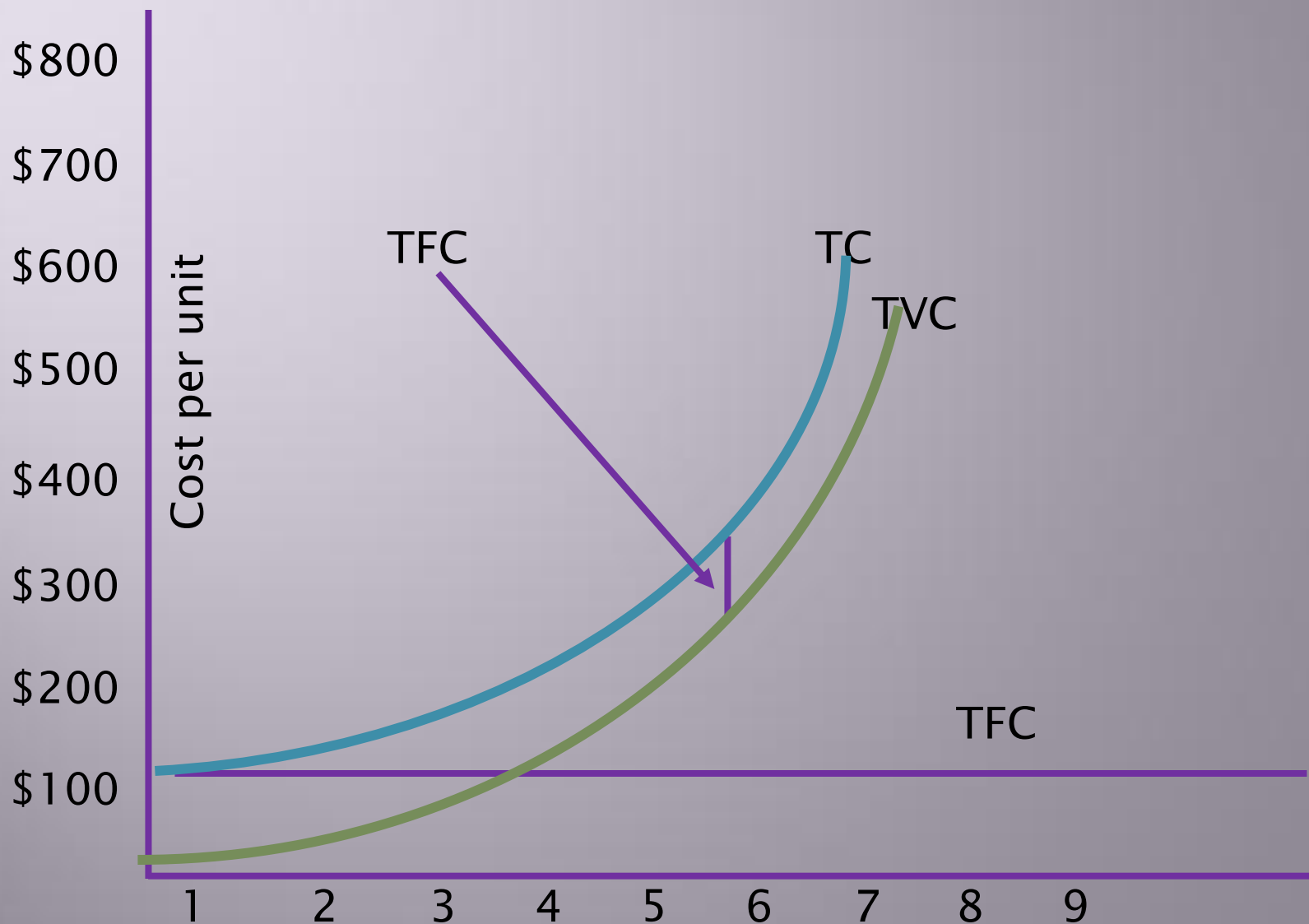
Average total cost is total cost divided by the quantity of output produced.

$$AFC + AVC = TC$$

$$ATC = TC \div Q$$



Chart: Short-Run Cost Curves





What is fixed cost?



**FIXED
COSTS**



Fixed cost is the dollars you give up by being in business, even if you produce nothing.



What is
average fixed cost?



Average fixed cost is total fixed cost divided by the quantity of output produced.

$$AFC = TFC \div Q$$



What is variable cost?



Variable cost is the dollars you give up to produce at your current rate, over and above your fixed cost.



What is average variable cost?



Average variable cost is total variable cost divided by the quantity of output produced.

$$AVC = TVC \div Q$$



What is marginal cost?

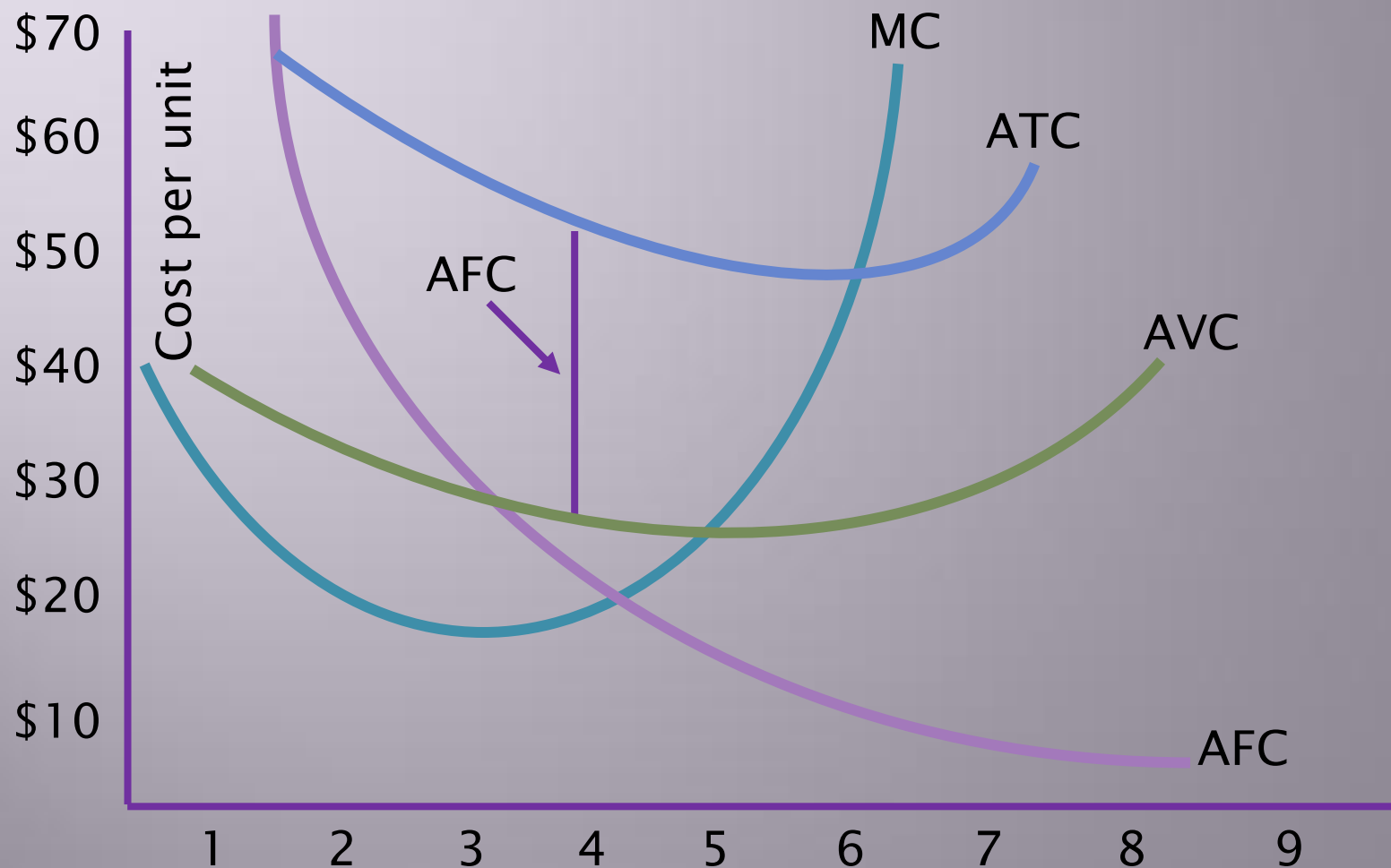


Marginal cost is the change in total cost (or total variable cost) when one more unit of output is produced, the cost of producing one more unit of a good.

$$MC = \Delta TC \div \Delta Q$$



Chart: Short-Run Cost Curves





What is the
marginal–average rule?



The Marginal–Average Rule

When $MC < AC$, AC falls

When $MC > AC$, AC rises

If $MC = AC$, AC is at minimum



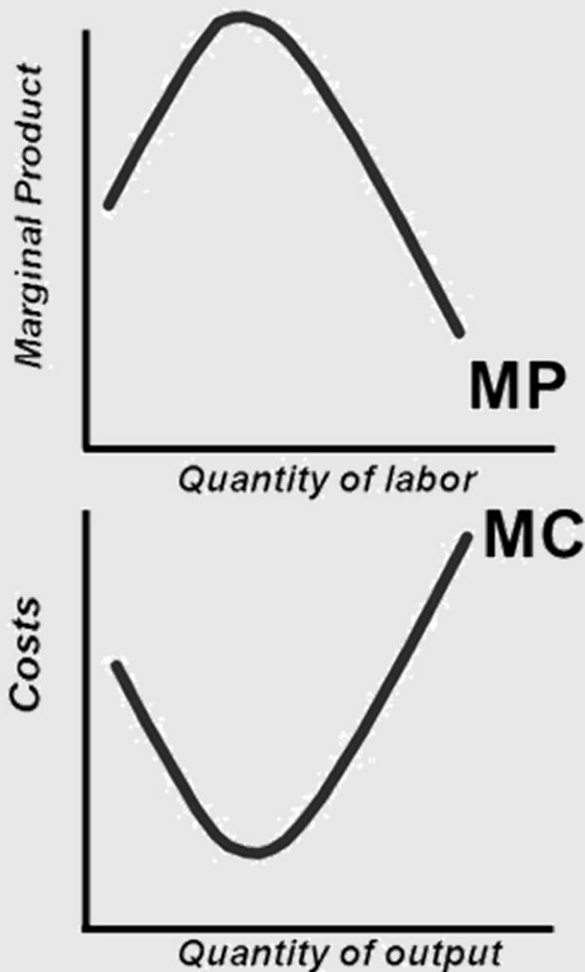
What is the relationship between the slopes of the MC curve and the MP curve?



The rising portion of the MP curve corresponds to the declining portion of the MC curve, and vice versa.



Relationship between Production and Cost



Why is the MC curve U-shaped?

- When marginal product is increasing, marginal cost falls.
- When marginal product falls, marginal costs increase.

MP and MC are mirror images of each other.



What is the relationship between the minimum and maximum points of the MP curve and the MC curve?



The maximum point of the MP curve corresponds to the minimum point of the MC curve.

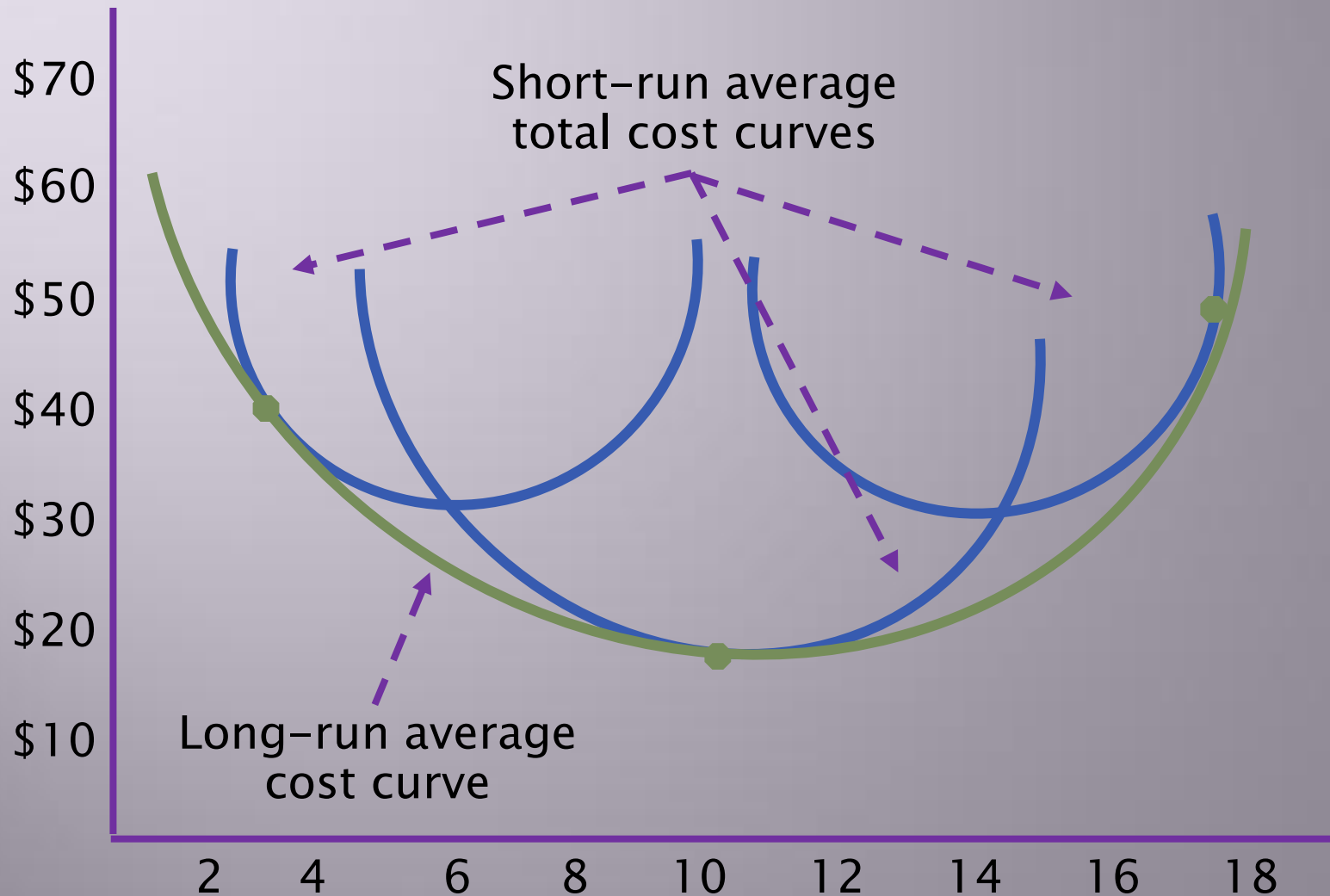


What is the long-run average cost curve?



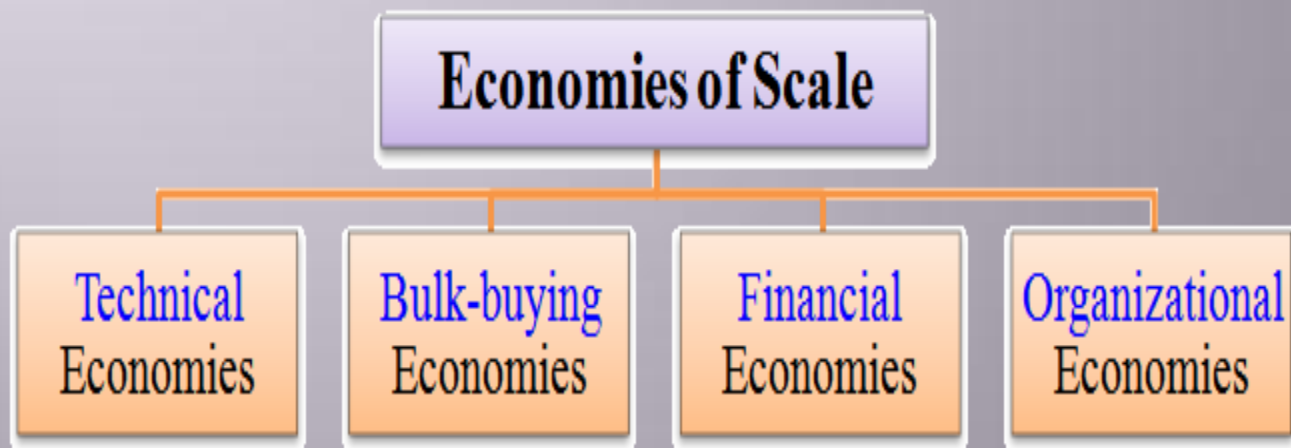
The **long-run average cost curve** is the curve that traces the lowest cost per unit at which a firm can produce any level of output and can build any desired plant size.

Chart: Short- and Long-Run Average Cost Curves





What are economies of scale?





Economies of scale is a situation in which the long-run average cost curve declines as the firm increases output.



What are constant returns to scale?



Constant returns to scale is a situation in which the long-run average cost curve does not change as the firm increases output.



What are diseconomies of scale?



Their offices started to become crowded.



So, Noah decided to open new offices around the UK.

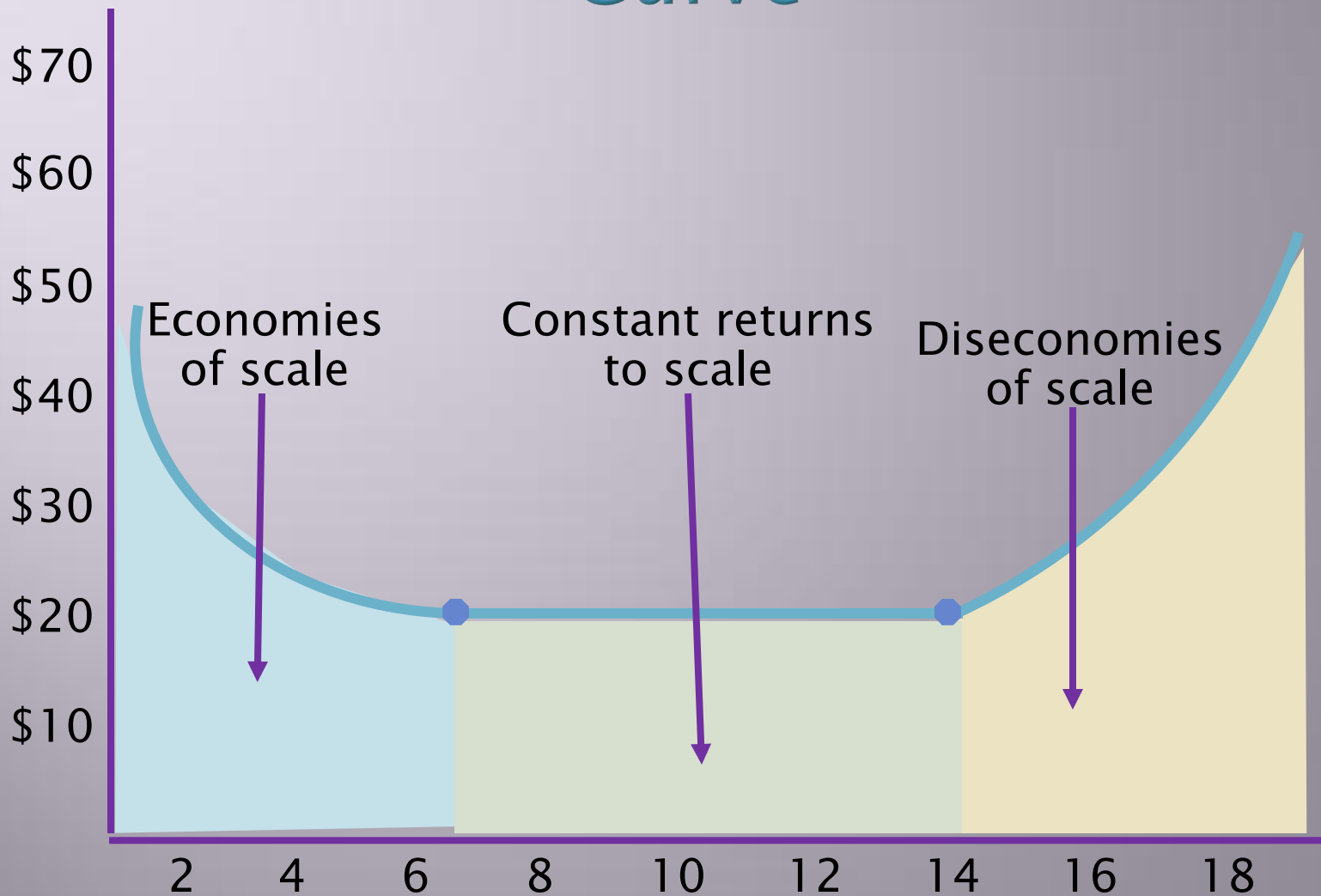


They had to resort to other, less effective forms of communication which hindered decision making and increased expenses.



Diseconomies of scale is a situation in which the long-run average cost curve rises as the firm increases output.

Chart: Long-Run Average Cost Curve



How did you do?! If you didn't do as well as you'd like, review the margin notes and presentations and test yourself again.



THE END