Title slide

The context for this unit

This unit

Cost functions

Average cost

Marginal cost

The marginal cost represents the change to total cost from producing one additional unit of output. Mathematical, you can derive the marginal cost by finding the slope of the cost function; either approximate it using rise over run or if you have made it through calc 1, take the derivative of the cost function.

Why is the MC an upward sloping line?

…

To answer this question, recall that the MC represents the slope of the cost function which gets steeper as Q increases.

Relationship between MC and AC

There is a relationship between MC and AC. In fact, the two statements made on the bottom of the slide are always true. Why?

I am not giving you the answer, but I will remind you that the marginal cost is the effect on total costs from producing an additional unit and average cost is the total cost divided by the total quantity.

Hint button on slide for relationship between AC and MC

Ok here is a hint. Imagine you have 3 pencils that are all 6 inches long. If you add a fourth pencil which is only 3 inches long, what happens to the average length of the pencils.

What if the fourth pencil was 9 inches long, what happens to the average length of the pencils?

What if the fourth pencil was 6 inches long, what happens to the average length of the pencils?

Demand curve

Isoprofit curve

Profit maximization

Price elasticity of demand

Price elasticity and profits

Elasticity of demand is closely related to the degree to which the firm can capture profit- the share of the surplus obtained by the firm

In fact, elasticity is going to serve as a proxy for firm's market power. A more powerful firm faces a more inelastic demand curve. And as you can see here in the image on the right, the more inelastic demand curve is associated with a greater profit margin. While in the image on the left, the more elastic demand is associated with a smaller profit margin.

Lower elasticity can be conceived of as the power of the firm to raise prices without losing many customers.

The profit margin as a share of the price gives us the markup. The profit margin is price minus marginal cost which is then converted to the markup by dividing it by the price. The markup is $\frac{p-MC}{p}$

Price elasticity and market power

This slide is rather self-explanatory and there is nothing else that I have to say, so peace out.

Summary

In the next unit