Lesson 7: Competitive Markets
Reading: Chapter 21

In this lesson we will:
- Explain how the market supply curve is derived from marginal cost
- Discuss how firms operate in a competitive market in the short and long runs

In this chapter we assume that market are perfectly competitive:
- There are many atomic (small and identical) buyers and sellers
- Goods are perfectly homogenous in each market. Think of an example
- There is perfect and costless information. What makes information costly to inquire?
- There is free exit and entry. What can create obstacles for entry (example: airlines)?

Since firms are too small to influence price, they are price takers (they must accept the market price). For an individual firm the demand for the good is perfectly elastic. What will happen if the firm charges above the market price or below it?
- Realistically, most firms are price searchers; they sell more by lowering their price.
- In a perfectly competitive market, the market price is the marginal revenue for firms.

Marginal Revenue (MR): Change in revenue resulting from one additional unit sold.

A firm will continue to increase the production of a good as long as its MR exceeds MC.
- Firms will produce the quantity where MC equals MR, which equals Average Revenue or market price. This is the profit maximizing (or loss minimizing) quantity.
- Average profit equals the difference between AR and ATC. Define average profit.

Four possible scenarios at the profit maximizing quantity:
- If price (AR) is above ATC, firms will make economic profit and more firms will enter the market. What will happen to the market price as a result?
- If price equals ATC the firm will break even (break-even quantity)
- If price (AR) is below ATC firms will loose money and some of them will leave the market, which will raise the market price. Why would this raise the market price?
- If price (AR) equals or is below AVC the firms will have to shut-down Why?

**Figure 7-1: A Competitive Market**

<table>
<thead>
<tr>
<th>Costs &amp; Price</th>
<th>ATC</th>
<th>AVC</th>
<th>Economic Profit</th>
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<tbody>
<tr>
<td>AFC</td>
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MR = P

S1 S2

D

Quantity/Time
Several things can change the quantity the a firm produces:
- An increase (decrease) in the market price will increase (decrease) quantity. *What happens if the demand for a good increases or decreases? Example: Hotels in Winter*
- Technological improvements drive down costs an increase production. *Graph this*
- An improvement in human capital or capital will increase labor productivity and decrease AVC and MC. *How will firms respond?*

**Short v. Long Run Adjustments:**
- The short run supply curve equals the sum of the firms’ marginal costs above AVC.
- In the long run: (1) firms will enter or exit the market driving economic profit to zero; (2) firms will adjust their fixed factors to minimize cost per output.
- The Long run Supply Curve will be the industry long run average total cost curve.

**The shape of the long run supply curve or the LRAC:**
- If the industry experiences *economies of scale* the LRAC will be downward sloping
- If the industry experiences *diseconomies of scale* the LRAC will by upward sloping
- If the industry experiences a constant average cost the LRAC will be flat

If the LRAC is flat (because of constant cost) price will increase in the short run in response to an increase in demand, but it will return to the original price in the long run. *What would happen to price in the short and long run if the LRAC is upward sloping or downward sloping? Show this on a graph.*

*Figure 7-2: Long run adjustments*

In the short run the price will increase in response to an increase in demand. However, in the long run the supply will increase to Q₂ as firms enter the market and increase to Q₃ as firms adjust all their factors.

*What would happen if demand for a good increases, but the good has a price ceiling?*