ECO111 : Lecture 28

21 October 2024

Profit Margin & Price Markup

- The difference between the price and the marginal cost is called the *profit margin*.
- When the profit margin is high, the deadweight loss is high.
- Deadweight loss is determined by price markup.
- $Price\ markup = \frac{P - MC}{P}$
- This price markup is affected by how consumers' WTP change with changes in its prices, which in turn is affected by consumers' preferences and their incomes.
- A consumer's WTP in a market of differentiated products depends on the characteristics and prices of similar types of goods sold by other firms.
- When consumers can choose between several similar but not identical products, the demand for each of the differentiated product is likely to be highly responsive to prices.

Price Elasticity of Demand

- ***Price elasticity of demand*** is the percentage change in demand that would occur in response to a 1% change in price.
- $\epsilon_p = \left|\frac{dQ/Q}{dP/P}\right|$
- If $\epsilon_p > 1 \implies$ elastic demand.
- If $\epsilon_p < 1 \implies$ inelastic demand.
- If $\epsilon_p = 1 \implies$ unit elastic demand.
- Flatter the demand curve, the higher the price elasticity of demand.
- A producer with monopoly power, has a lower price elasticity of demand.
- Therefore, monopolies can set a price well above the marginal cost without having a major reduction in demand.
- It is said that such firms earn *monopoly rents*.
- Monopoly rents is the profit earned by the firm over and above the its production costs.

Market Power & Competition Policy

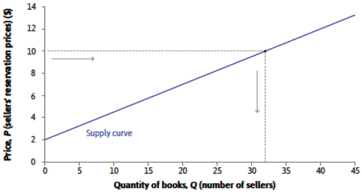
- A firm facing such a low price elasticity of demand owing to its monopoly nature, is said to have market power.
- The market power arises from the unavailability of substitutes for what the firm produces.
- Market power is an attribute of a firm that can sell its products at a range of feasible prices, so that it can benefit by acting as a **price-setter**.
- In comparison a monopolistic firm has a higher price elasticity of demand.
- Policy makers are concerned when firms have few competitors because market powers allow firms to set high prices at the expense of the consumers.
- Although the individual firm earns a higher profit margin, potential consumer surplus is lost and hence there is an overall deadweight loss.
- A few firms colluding to increase their joint profits is called a *cartel* (eg., OPEC countries). They behave together as a monopoly instead of competing against one another.
- Competition policy or antitrust policy are policies to limit market power and cartel formation within a country (the USA anti-trust law, Competition Commission of India)

Product Selection, Innovation, & Advertising

- Firms may be able to move the demand curve to increase profits by numerous ways, such as changing its selection of goods, or through advertising.
- Technological innovation might enable the producer to get ahead of the competitors.
- This gives an incentive for firms to invest in research and development.
- Advertising and marketing are other ways in which firms can create brand loyalty and hence increase their profit margins.

Demand & Supply in a Competitive Market

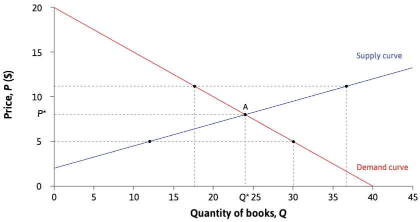
- The demand curve depends on the WTP.
- Similarly, the supply curve depends on the willingness to accept (WTA). WTA is the reservation price of a potential seller, who will be willing to sell a unit only for a price as high as their WTA.
- Lining up suppliers along the X-axis in order of their WTA, one can arrive at the supply curve.
- The supply curves shows the number of units of output that would be produced at any given price.
- For a market, the supply curve represents the total quantity that all firms together would produce at any given price.
- We have considered linear demand & supply curve for simplicity.



The Equilibrium Price

- The buyers would like to find a seller with a low WTA, and each seller would like to find a buyer with a high WTP.
- **Equilibrium price** is the price at which supply and demand for the good is equal.
- This concept of equilibrium when there is identical products sold.
- If the market price was greater than the equilibrium price, there would be excess supply of the commodity in the market.
- If the market price was lower than the equilibrium price, there would be excess demand of the commodity in the market.

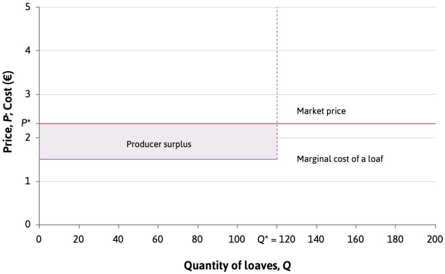
Market Clearing Prices



- The product sold by all sellers are identical.
- There is perfect information about prices.
- ***Market clearing price*** is the price at which market demand is equal to market supply.
- At this price, all buyers who want to buy and all sellers who can sell, do so.

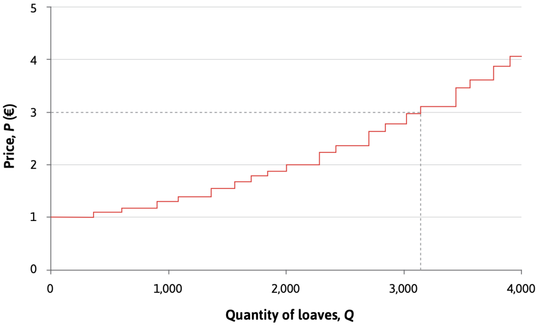
Price taking behavior & competition

- All producers and consumers are price takers under perfect competition.
- Due to perfect competition, neither parties have bargaining power over the other.
- However, under monopolistic competition (differentiated markets) the seller can set prices, and buyers are price takers.
- Firms keep producing as long as $Price > MC$ in the market. Why? Fixed cost are anyway borne by the firm irrespective of production or not. As long as $P > MC$ there is positive profit to be earned.

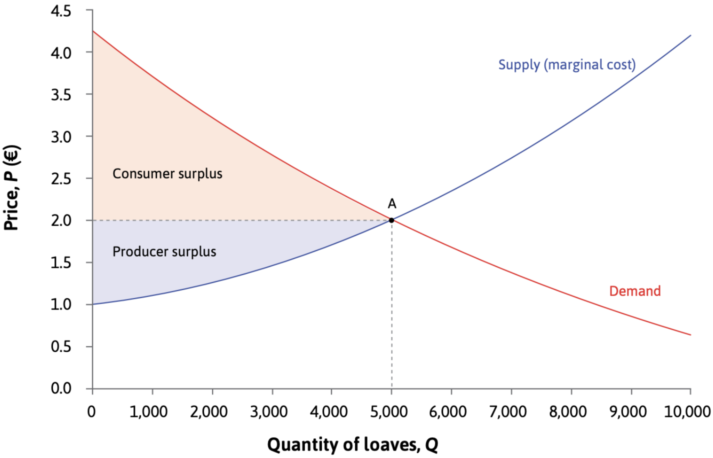


Market Supply Curve

- When $P > MC$ produce the profit maximizing quantity.
- When $P < MC$ produce nothing.
- At each given price, add up the individual supply by each firm in the market to arrive at the market supply.
- Approximate market supply with a smooth curve.
- Market supply curve is marginal cost curve for all the quantity produced.



Economic Surplus



Total Surplus & Pareto Efficiency

- The total surplus is maximized at the equilibrium quantity and price in perfect competition.
- The surplus would be lower if less than Q*(equilibrium quantity is produced.
- If more than Q* is produced the additional units produced have negative surplus thus reducing the total surplus.
- All potential gains from trade are exploited.
- The allocation here is Pareto efficient. It follows from three assumption we have made regarding perfect competition.
  1. Price taking: competition prevents an individual firm from raising their price unlike in monopolistic competition.
  2. Complete contract and information.
  3. No effect on others or no externalities.