Chapter 6-4

Price Elasticity of Supply

Price Elasticity

- The ***price elasticity of supply*** is the proportional change in quantity demanded relative to the proportional change in price.

$$E_S = \frac{\text{Percentage change in quantity supplied}}{\text{Percentage change in price}}$$

The Price Elasticity of Supply

- The price elasticity of supply is the percentage change in the quantity supplied divided by the percentage change in price.

$$e_s = \frac{\%\Delta Q^S}{\%\Delta P}$$

Elastic Supply

- Elastic supply means that quantity changes by a greater percentage than the percentage change in price.

Inelastic Supply

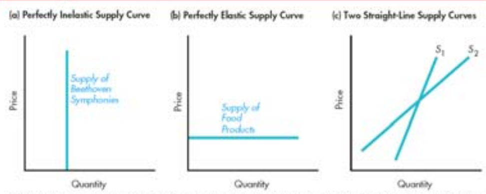
- Inelastic supply means that quantity doesn't change much with a change in price.

Price Elasticity of Supply and Shape of Supply Curve

- The price elasticity of supply is either zero or a positive number.
- A zero price elasticity of supply means that the quantity supplied will not vary as the price varies.
- A positive price elasticity of supply means that as the price of an item rises, the quantity supplied rises.

Supply Curve
Shapes and Elasticity

FIGURE 3 The Price Elasticity of Supply



There are some special types of goods for which supply cannot change no matter what the length of time allowed for change. For such goods, the price elasticity of supply is zero and the supply curve is vertical, as shown in Figure 3(a). Figure 3(b) is a perfectly elastic supply curve, a horizontal line. A perfectly elastic supply curve says that the quantity supplied at the given price is unlimited; a small—infinitesimal—price change would lead to an infinite change in quantity supplied. For most goods, the supply curve lies between the perfectly inelastic and perfectly elastic extremes. In Figure 3(c), two supply curves are drawn. Curve S_1 is less elastic than curve S_2.

Supply Elasticities in the Long and Short Runs

- The shape of the supply curve depends primarily on the length of time being considered.
  - In the **short run**, at least one of the resources used in production cannot be changed.
  - In the **long run**, the firm has long enough to change any aspect of production, and therefore can more fully respond.

Interaction of Price Elasticities of Demand and Supply

- Both the price elasticity of demand and the price elasticity of supply determine the full effect of a price change.

Interaction of Elasticities

- If the price elasticity of supply of an item is large and the demand for it is price inelastic, then the firm can raise the price without losing revenue.

Interaction of Elasticities

- Conversely, if the price elasticity of supply is small and the price elasticity of demand is large, then the firm is unable to raise the price because the consumer will switch to another firm or product

Incidence and Taxes

- Incidence is the measure of who actually pays for a cost increase or a tax.
- In general, the more elastic the demand and the less elastic the supply the more the incidence of a tax falls on businesses and the less it falls on consumers.

If interested there are more detailed lecture notes available at
http://faculty.riohondo.edu/mjavanmard/microlectures1.htm

Elasticity and Shifting Supply and Demand

- The more elastic the demand (supply), the greater the effect of a supply (demand) shift on quantity, and the smaller the effect on price.

$$\%\Delta P = \frac{\%\Delta S}{E_D + E_S}$$

$$\%\Delta P = \frac{\%\Delta D}{E_D + E_S}$$

Effects of Shifts in Supply on Price and Quantity