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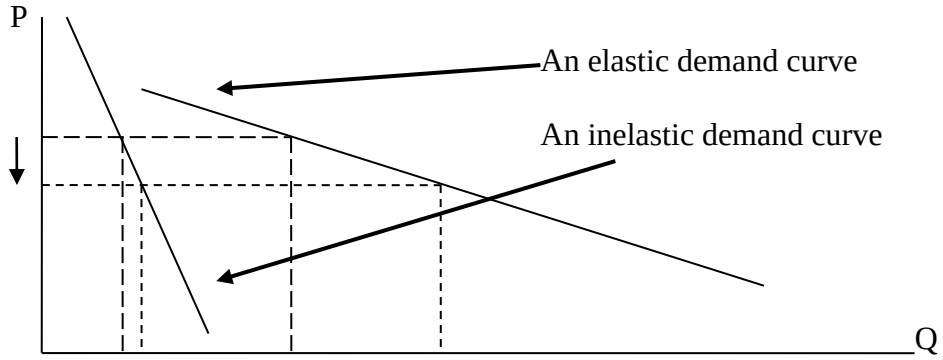
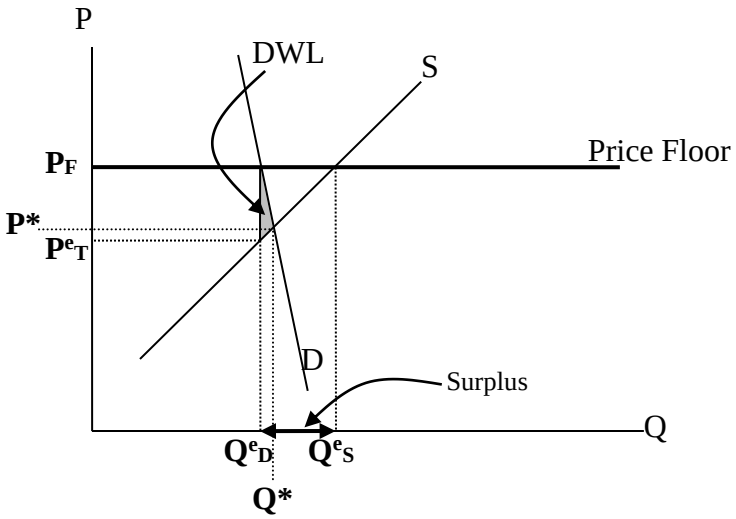
LECTURE 15: ELASTICITY II

I. Demand curves
   a. When we call a good or service "elastic," it's more of a shorthand conveying that a good or service is *in general* elastic or *on average* elastic. Flatter demand curves convey a typically elastic product. Steeper demand curves convey a typically inelastic product.



      i. Note the same decrease in price decreases total revenue for inelastic demand curve but increases for the elastic demand curve. Elasticity may not be the same thing as slope, but it's certainly correlated with it.
      ii. A good can have a perfectly elastic demand. Everywhere on the demand curve the calculation reveals an elastic demand. Perfectly elastic demand curves are horizontal lines. An example would be the demand for a single vendor's popcorn at a fair (when he has several identical competitors).
      iii. A good can have a perfectly inelastic demand. Everywhere on the demand curve the calculation reveals an inelastic demand. Perfectly inelastic demand curves are vertical lines. Antibiotics get very close.

II. Policy implications
   a. Some economic research suggests there's little to no effect of increasing the minimum wage. This is partly due to the elasticity of the demand for labor. In the short-run, it's very inelastic.



b. Note we have a relatively small surplus effect and very little deadweight loss (both of which would shrink even more if supply was more elastic, which is very well might be). But, as time passes, elasticity will increase and thus both the deadweight loss and the surplus.

III. Calculating elasticity of demand

a. In general, elasticity for good x is calculated using the formula:

$$\epsilon_d = \frac{\%\Delta Q_x}{\%\Delta P_x}$$

i. If $|\epsilon_d| > 1$, the good is elastic.
ii. If $|\epsilon_d| = 1$, the good is unit elastic.
iii. If $|\epsilon_d| < 1$, the good is inelastic.

b. The arc price elasticity of demand for good x (or, the midpoint method) is:

$$\epsilon_d = \frac{\Delta Q_x / \overline{Q_x}}{\Delta P_x / \overline{P_x}}$$

i. *Example*: Suppose fruit sells for $1 each with 1400 pieces sold. Also suppose the price falls to $0.90 and sales increase to 1500. Elasticity is $\frac{1500-1400/1450}{0.90-1.00/0.95}$, or -0.655, an inelastic good.