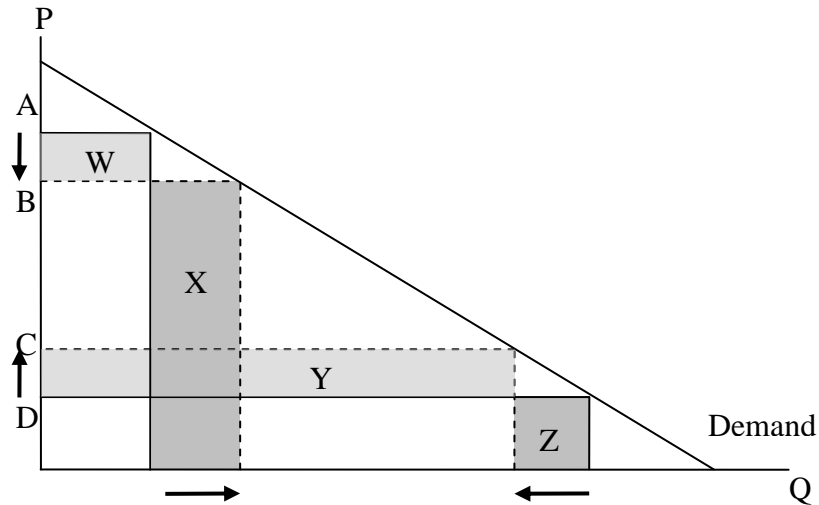


## LECTURE 10: ELASTICITY I

- I. Price elasticity of demand
  - a. We've discussed that people buy less or more of something as the price changes but how much more or less? That depends on the elasticity of the good.
    - i. When a good is elastic, a change in price drastically changes the quantity demanded (such as fast food).
    - ii. When a good is unit-elastic, a change in the price equally changes the quantity demanded.
    - iii. When a good is inelastic, a change in price slightly changes the quantity demanded (such as gasoline).
  - b. The elasticity changes based on where you are on the demand curve. It is not the same thing as the slope as the demand curve.
  - c. Determinants
    - i. *Availability of Substitutes*. More available alternatives offer options to consumers when the price rises and more places for new consumers to come from when the price falls. Overseas travel has very few substitutes—air travel and the occasional cruise. City travel has several substitutes—metro, taxis, driving, buses, and walking.
    - ii. *Proportion of budget/Importance*. Goods that consume a larger size of a budget tend to be more elastic than goods that are much smaller. People will shop around a great deal more when buying a car than a frozen dinner. At the same time, goods that are more critical to a particular desire tend to be less elastic than goods that are merely a casual interest because those are easier to simply walk away from. Both of these notions speak to the willingness to find substitutes.
    - iii. *Time/Search costs*. The more time a consumer has to adjust to price changes, the more elastic the good becomes. Time offers more chances to find substitutes—such as learning about a cruise ship that travels to Europe—or decrease in the good's importance—such as kicking a smoking habit. Methods of making it easier to, say, compare prices also generate greater elasticity. Books are more elastic thanks to Amazon. Both of these notions speak to the ease of finding substitutes.

## II. Elasticity and Revenue

- a. Firms fundamentally care about elasticity because it impacts revenue, or the price of a good multiplied by the quantity sold.
- b. Elasticity implies that a decrease a price increases total revenue.
- c. Unit-elasticity implied a decrease in price does not change total revenue.
- d. Inelasticity implies that a decrease in price decreases total revenue.
- e. Consider the graph showing when goods are elastic and inelastic.



- f. If a firm lowers its price from point A to point B, it loses **W** in revenue but gains **X**—overall its revenue increases. If a firm increases its price from point D to point C, it loses **Z** in revenue but gains **Y**—overall its revenue increases.