Part IV

Section 2

The Concept of Elasticity

a) Price Elasticity of Demand (PEoD)

Price Elasticity of Demand (PEoD):

a measure of how much the quantity demanded of a good responds to a change in the price of that good

$$\text{Price elasticity of demand} = \frac{\text{\% change in quantity demanded}}{\text{\% change in price}}$$

Revenue = price x quantity

Determinants of PEoD

1. Necessities versus Luxuries
2. Availability of Close Substitutes
3. Definition of the Market
4. Time Horizon

a) Price Elasticity of Demand (PEoD)

Calculating Elasticities: The Midpoint Method

$$\text{Price elasticity of demand} = \frac{(Q_2 - Q_1) / [(Q_1 + Q_2) / 2]}{(P_2 - P_1) / [(P_1 + P_2) / 2]}$$

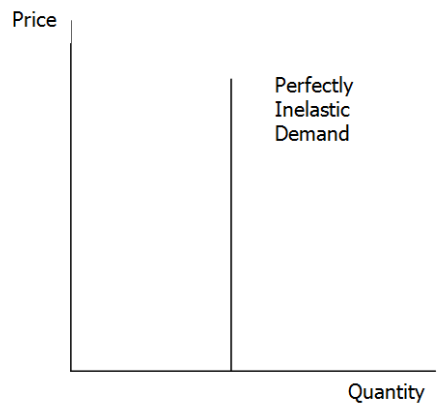
Example:

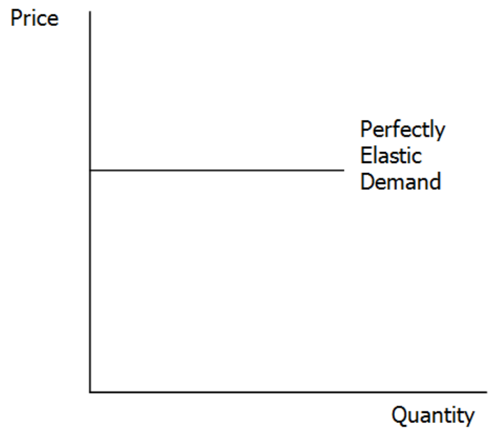
Point A:	Price = 4,00 €	Quantity = 120
Point B:	Price = 6,00 €	Quantity = 80
Midpoint:	Price = 5,00 €	Quantity = 100

a) Price Elasticity of Demand (PEoD)

The Variety of Demand Curves:

1. If PEoD = 0 => perfectly inelastic
2. If PEoD < 1 => inelastic
3. If PEoD = 1 => unit elastic
4. If PEoD > 1 => elastic
5. If PEoD = infinity => perfectly elastic





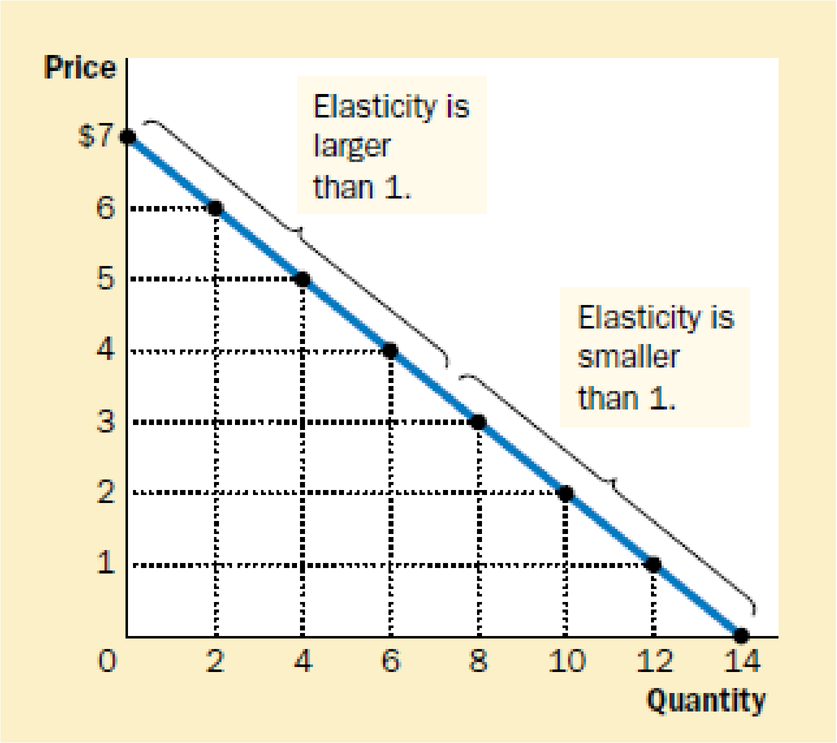
a) Price Elasticity of Demand (PEoD)

A Linear Demand Curve:

The slope of a linear demand curve is constant,

but its elasticity is not!

in der mitte der Demand Kurve = immer Elastizität = 1



b) Income Elasticity of Demand (IEoD)

Income Elasticity of Demand (IEoD):

a measure of how much the quantity demanded of a good responds to a change in consumers' income

$$\text{Income elasticity of demand} = \frac{\text{\% change in quantity demanded}}{\text{\% change in income}}$$

Positive and negative income elasticities:

1. If IEoD < 0 => inferior good
2. If IEoD > 0 => normal good

c) Cross-Price Elasticity of Demand (CPEoD)

Cross-Price Elasticity of Demand (CPEoD):

a measure of how much the quantity demanded of one good responds to a change in the price of another good

$$\text{Cross-price elasticity of demand} = \frac{\text{\% change in quantity demanded of good 1}}{\text{\% change in price of good 2}}$$

Positive and negative cross-price elasticities:

1. If CPEoD < 0 => complements
2. If CPEoD > 0 => substitutes

d) Price Elasticity of Supply (PEoS)

<u>Price Elasticity of Supply (PEoS):</u>

a measure of how much the quantity supplied of a good responds to a change in the price of that good

$$\text{Price elasticity of supply} = \frac{\text{\% change in quantity supplied}}{\text{\% change in price}}$$

Determinants of PEoS:

1. Flexibility of Sellers
2. Time Horizon