**Price Elasticity of Demand (PED)**

Price elasticity of demand (PED) measures the responsiveness of demand after a change in price.



**Example of PED**

If price increases by 10% and demand for CDs fell by 20%

Then PED = -20/10 = **-2.0**

If the price of petrol increased from 130p to 140p and demand fell from 10,000 units to 9,900

% change in Q.D = (-100/10,000) \*100 =  – 1%

% change in price 10/130 ) \* 100=  7.7%

Therefore PED = – 1/7.7 =  **-0.13**

If price increases from £50 to £55 and PED was 0.5. How much did quantity demanded fall?

0.5 = % change in QD

Therefore % QD = -5

**Price Elastic Demand**

Definition: Demand is price elastic if a change in price leads to a bigger % change in demand; therefore the PED will therefore be greater than 1.

Goods which are elastic tend to have some or all of the following characteristics:

* They are luxury goods, e.g. sports cars
* They are expensive and a big % of income e.g. sports cars and holidays
* Goods with many substitutes and a very competitive market. E.g. if Sainsbury’s put up the price of its bread there are many alternatives, so people would be price sensitive.
* Bought frequently

**Price Inelastic Demand**

These are goods where a change in price leads to a smaller % change in demand; therefore PED <1 e.g. – 0.5

Inelastic demand PED <1 – Perfectly inelastic PED =0

Goods which are inelastic tend to have some or all of the following features:

* They have few or no close substitutes, e.g. petrol, cigarettes.
* They are necessities, e.g. if you have a car, you need to keep buying petrol, even if price of petrol increases
* They are addictive, e.g. cigarettes.
* They cost a small % of income or are bought infrequently.

In the short term demand is usually more inelastic because it takes time to find alternatives

If the price of chocolate increased demand would be inelastic because there are no alternatives, however if the price of Mars increased there are close substitutes in the form of other chocolate therefore demand will be more elastic.

**Using Knowledge of Elasticity**

If demand is inelastic then increasing the price can lead to an increase in revenue. This is why OPEC try to increase the price of oil.

If demand is elastic, firms would be unlikely to increase price as this could lead to a fall in revenue. Instead they could try advertising to increase brand loyalty and make demand more inelastic

[Price Discrimination](http://www.economicshelp.org/microessays/pd/price-discrimination/). Some people pay higher prices for tickets for trains because there demand is more inelastic.

[Tax incidence](http://www.economicshelp.org/concepts/tax-incidence/). If demand is price inelastic, then a higher tax will lead to higher prices for consumers (e.g. tobacco tax). The tax incidence will mainly be borne by consumers. If demand is price elastic, firms will face a bigger burden, and consumers will have a lower tax burden.

**PED > 1 = Elastic or relatively elastic – quantity demanded changes by a larger percentage than price**

**PED = 1 = Unitary elasticity – quantity demanded changes by the same percentage as the price**

**PED < 1 = Inelastic or relatively inelastic – quantity demanded changes by a smaller percentage than price**

**PED = 0 = Perfectly inelastic demand – quantity demanded remains the same in response to change in price**

# Income Elasticity of Demand (YED)

This measures the responsiveness of demand to a change in income.

e.g. if your income increase by 5 % and your demand for mobile phones increased 20% then the YED = 20/ 5  = 4.

**YED = % change in Q.D
            % change in Income**

**Definition of INFERIOR GOOD**

This occurs when an increase in income leads to a fall in demand, therefore YED<0.

E.g. clothes from charity shops, cheap bread
When your income increase you buy better quality goods

**Definition of NORMAL GOOD**

This occurs when an increase in income leads to an increase in demand for the good, Therefore YED>0

**Definition of LUXURY GOOD**

This occurs when an increase in income causes a bigger % increase in demand, therefore YED>1.

* Luxury goods will also be normal goods and we can say they will be income Elastic
* Income inelastic .This means an increase in income leads to a smaller % increase in demand. Therefore 0> YED <1
* Firms will make use of YED by producing more luxury goods during periods of economic growth, similarly there will be less demand for inferior goods.

**YED > 1 = Luxury good – An increase in income causes a bigger % increase in demand (elastic)**

**YED > 0 = Normal good – An increase in income leads to increase in demand (inelastic)**

**YED < 0 = Inferior good – An increase in income leads to a fall in demand (inelastic)**

**YED < -1 = Inferior good – An increase in income leads to a bigger % fall in demand (elastic)**

* 1. **Price elasticity of demand is? (2)**
	2. **What is the relationship between price and demand? (2)**
	3. **PED = -2. If price is lowered by 5%, what will demand do and revenue do? (2)**
	4. **PED = -0.7. If price is increased by 10%, what will demand and revenue do? (2)**
	5. **The PED for doughnuts in the UK is estimated to be -1.2. Explain what this means. (4)**
	6. **The YED for a luxury brand is 1.8. Explain what this means. (4)**

****

****