

### **Elasticity of demand**

When you raise the price of most items, people will buy less of them. For example, when one airline raises its price, air passengers may switch to a rival airline.

When you reduce the price of most items, people will buy more of them. For example, when supermarkets make special offers with reduced prices, they expect a sharp increase in corresponding sales.

Common sense tells us that when prices change, so too will the quantities bought. However, businesses need to have more precise information than this - they need to have a clear measure of how the quantity demanded will change as a result of a price change.

The relationship between price and quantity demanded is measured by 'price elasticity of demand' (PED). This is calculated as: change in sales/% change in price

#### **Example 1**

Suppose that a supermarket reduces the price of a packaged cake from £1.00 to 80p. Say sales per week then rise from 500 to 700.

$$\% \text{ change in sales} = 200/500 = 40\%$$

$$\% \text{ change in price} = 20\text{p}/100\text{p} = 20\%$$

$$\text{So PED} = 40\%/20\% = 2.0$$

This tells us that demand for cakes is price elastic. Any change in price is magnified two-fold in its effect on sales.

#### **Example 2**

Now suppose that the supermarket increases the price of washing up liquid from £1.00 to £1.20. Weekly sales drop only from 1,000 to 900 bottles.

$$\% \text{ change in sales} = 100/1000 = 10\%$$

$$\% \text{ change in price} = 20\text{p}/100\text{p} = 20\%$$

$$\text{So PED} = 10\%/20\% = 0.5$$

This tells us that the demand for washing up liquid is price inelastic. Any change in price in only half the proportional effect on sales.

Price elasticity data is very useful in making pricing decisions. Generally, the more the customer has good substitutes available, the more demand will be price elastic.

Where there are few if any alternatives, price is usually inelastic. This principle leads to, for example, fierce price competition among airlines flying to the USA (price elastic) but frequent fare increases for commuters travelling by rail to London.