Income Elasticity of Demand

Income elasticity of demand measures the relationship between a change in quantity demanded for good X and a change in real income. The formula for calculating income elasticity is:

% change in demand divided by the % change in income

Normal Goods

Normal goods have a **positive income elasticity of demand** so as consumers' income rises more is demanded at each price i.e. there is an outward shift of the demand curve

1. **Normal necessities** have an income elasticity of demand of **between 0 and +1** for example, if income increases by 10% and the demand for fresh fruit increases by 4% then the income elasticity is +0.4. Demand is rising less than proportionately to income.
2. **Luxury goods and services** have an income elasticity of demand **> +1** i.e. demand rises more than proportionate to a change in income – for example a 8% increase in income might lead to a 10% rise in the demand for new kitchens. The income elasticity of demand in this example is +1.25.

Inferior Goods

Inferior goods have a **negative income elasticity of demand** meaning that demand falls as income rises. Typically inferior goods or services exist where **superior goods are available** if the consumer has the money to be able to buy it. Examples include the demand for cigarettes, low-priced own label foods in supermarkets and the demand for council-owned properties.

The income elasticity of demand is usually strongly positive for

- Fine wines and spirits, high quality chocolates and luxury holidays overseas.
- Sports cars
- Consumer durables - audio visual equipment, smart-phones

- Sports and leisure facilities (including gym membership and exclusive sports clubs).

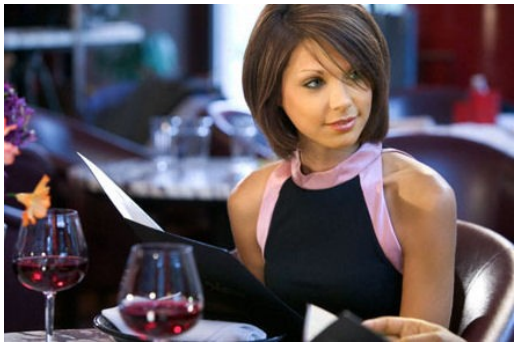
In contrast, income elasticity of demand is lower for

- Staple food products such as bread, vegetables and frozen foods.
- Mass transport (bus and rail).
- Beer and takeaway pizza!
- Income elasticity of demand is negative (inferior) for cigarettes and urban bus services.

Product ranges and longer term trends.

- Income elasticity of demand will vary ***within*** a product range. For example the Yed for **own-label foods** in supermarkets is less for the high-value "finest" food ranges.

- There is a general downward trend in the income elasticity of demand for many basic products, particularly foodstuffs. One reason is that as a society becomes richer, there are **changes in tastes and preferences**. What might have been considered a luxury good several years ago might now be regarded as a necessity? How many of you regard a Sky sports subscription or an iPhone4, an iPad or a new Blackberry as a necessity?



How high is the income elasticity for fine wines?

Income elasticity for baked beans? Likely to be low but positive as beans are a staple food

Income elasticity for cigarettes? According to some estimates, cigarettes are inferior goods

What of the income elasticity of demand for private executive air travel?

The table below shows estimated price and income elasticity of demand for a selection of foods:

PRODUCT	SHARE OF BUDGET (% OF HOUSEHOLD INCOME)	PRICE ELASTICITY OF DEMAND (PED)	INCOME ELASTICITY OF DEMAND (YED)
All Foods	15.1	n/a	0.2
Fruit juices	0.19	-0.55	0.45

Tea	0.19	-0.37	-0.02
Instant coffee	0.17	-0.45	0.16

Source: DEFRA www.defra.gov.uk

The income elasticity of demand for most types of food is low – occasionally negative (e.g. for margarine) and likewise the own price elasticity of demand for most foodstuffs is also inelastic.

Sales of organic food drop in the recession

Sales of organic foods in the UK slumped by more than 12% in 2009 as cost-conscious consumers cut back on their purchases of premium-priced organic fruit, vegetables and meats. The recession seems to have had a big impact. Real incomes have been falling and organic food's reputation for being expensive has caused many consumers to rein back on spending. The three biggest categories of organic food – dairy; fruit and vegetables; and fresh meat – saw supermarket sales fall by 6.5%, 14.8% and 22.7% respectively. Demand may also have been influenced by a recent Food Standards Agency report last year which found that there were "'no important differences in nutritional content, or any additional health benefits, of organic food when compared with conventionally prepared food."

Tutor2u Economics Blog, November 2009

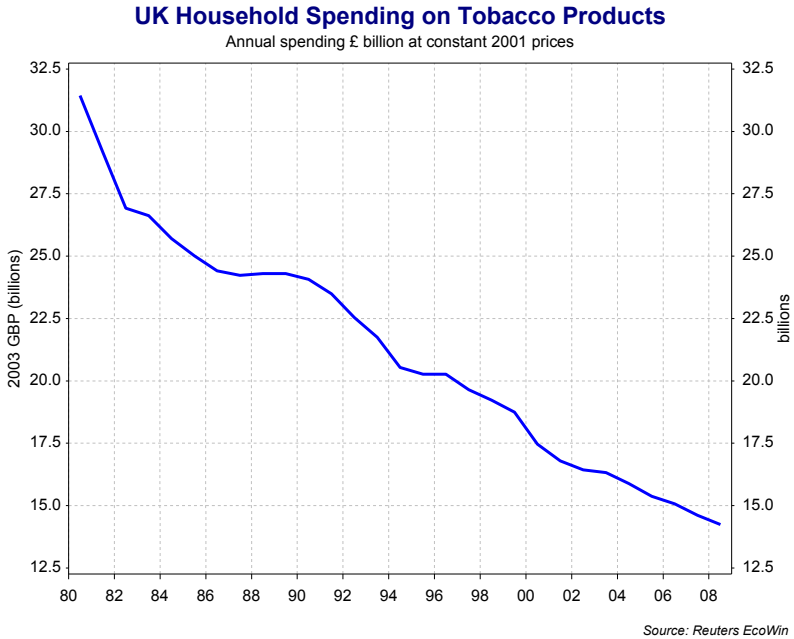
How do businesses make use of estimates of income elasticity of demand?

Knowledge of income elasticity of demand helps firms predict the effect of an economic cycle on sales. **Luxury products** with high income elasticity see greater sales volatility over the business cycle than **necessities** where demand from consumers is less sensitive to changes in the cycle.

Income elasticity and the pattern of consumer demand

As we become better off, we can afford to increase our spending on different goods and services. The income elasticity of demand will also affect the pattern of demand over time.

- For **normal luxury goods** - income elasticity of demand exceeds +1, so as incomes rise, the proportion of a consumer's income spent on that product will go up.
- For **normal necessities** (income elasticity of demand is positive but less than 1) and for inferior goods (where the income elasticity of demand is negative) – then as income rises, the share or proportion of their budget on these products will fall
- For inferior goods as income rise, demand will decline and so too will the share of income spent on inferior products.



A good example of a product with a negative income elasticity of demand is tobacco products. Many factors affect demand for cigarettes and related products – not least the level of indirect tax placed on them by the government and also the effects of health campaigns and bans on smoking in public places.

Even allowing for this, as the chart above shows, real spending on tobacco has fallen in nearly every year since 1980 and is now less than half the level at the start of the 1980s.

Demand in a recession – counter-cyclical products

At first thought, most people assume that recession can only spell bad things for businesses. However, there are a good number of examples of industries that thrive when times are hard. Some produce inferior goods; some goods that are cheap substitutes for more luxury items; some equip households with the ability to repair rather than replace. Inferior goods are those for which demand rises when income falls. The typical examples discussed in class are usually things such as bus tickets and supermarket value ranges. Demand for inferior goods is, by its nature, counter-cyclical. A recent article in The Times analysed the effects of recession on the sale of McDonald's' "Extra Value Meals" (EMVs):

"As the effects of recession continued to be felt...the lure of fast food at McDonald's, as an alternative to more expensive eating out, proved irresistible to many consumers...in Britain, McDonald's attracted 8% more customers in its third quarter".

Other fast-food companies that have seen similar rises in demand include KFC and Pizza Hut. In a similar vein, sales of caravans have soared in the UK, as people have chosen to 'staycation' rather than travel abroad. Demand for second hand caravans has been high, and surprisingly, many of the consumers are young, first-time caravan-buyers. The Camping and Caravanning Club saw a record 53,000 new members in 2008 with a 21% rise in bookings, and The Caravan Club (a competitor) saw its bookings rise by 17%.

Demand for a number of other goods rises in recessions, yet these goods are not really 'inferior'. Take lipstick sales, for example. Recent analysis suggests that sales of lipstick rise in times of recession or low consumer confidence, the reason being that women substitute more expensive purchases (clothes, handbags, shoes etc) for lipstick which is relatively cheaper yet can provide a morale boost.

Condom sales are another example. An article in USA Today earlier in the year stated that sales of condoms rose by 5% in the last quarter of 2008 compared with the previous year, and nearly 3% in the first quarter of 2009 compared with the same time in 2008. The effect was even more pronounced in the UK, with one report suggesting that sales of Durex have so far risen by 22% over the course of the recession! Two reasons for the link with recession have been given; firstly, staying in is cheaper than going out, and secondly, households are more concerned with the potential cost of having children.

As well as these more 'active' pursuits, many more people are staying in and enjoying a night on the sofa with takeaway pizza. Domino's Pizza, the UK's largest pizza delivery chain, has seen market growth of 8.3% over the past year according to their own figures. Their sales growth has been further boosted by increased advertising, since advertising fees have fallen dramatically as advertising companies have lowered prices to retain business.

Demand has also risen for 'DIY' related goods. Households are choosing to repair broken items such as cars or household equipment rather than replace. Sales of fruit and vegetable seeds also increased in the early part of 2009 as more people took advantage of the growing season. A number of examples of 'counter-cyclical' sales have been given here. There are many more. Use of these examples is a great way of introducing evaluation into exam answers relating to the effects of recession.

Source: Ruth Tarrant, EconoMax, December 2009