

Questions on Supply and Demand interaction

1)

- a) It could be argued that the following pairs of products are both complements and substitutes. Explain why.
- i) Electricity and gas
 - ii) Tea and milk
 - iii) Bus journeys and train journeys
 - iv) Chocolate bars and crisps
- b) (i) For each pair of products, explain whether you think they are more likely to be complements or substitutes
(ii) Show on a demand and supply diagram the effect on the price of the first product of a rise in price of the second product.

2)

The price of bauxite was depressed in 1998 and 1999 by the depressed demand for aluminium. Bauxite is the main raw material used to manufacture aluminium. The problem was part of a larger pattern of depressed demand for metals resulting from the Asian crisis which hit the world in 1998. Financial problems in countries such as Thailand, South Korea and Indonesia led to a sharp fall in lending, with a knock on effect on demand. Output in the countries worst affected fell by up to 10 %. These countries had been the powerhouse of growth in Asia in the 1980s and 1990s and their economic crises led to sharp falls in their demand for imports. Hence, sales of raw materials such as aluminium to these countries, used in their industries to manufacture everything from card to disposable food containers to window frames, fell. In the longer term, the future for the bauxite industry is uncertain. Aluminium is increasingly coming under threat from glass as a raw material for drinks containers. On the other hand, aluminium could replace steel in the manufacture of car bodies because of its lightness.

- a) Explain, with the help of diagrams and the concept of derived demand, the effect of the Asian crisis of 1998 on demand for bauxite.
- c) What might happen to the demand for bauxite in the future?

Demand

Question 1 Anderton

Stagecoach operates both bus and train services. It charges different prices to different passengers for the same journeys depending, for instance, on when they travel, their age, whether they are making a single or return journey or whether they have a season ticket. Using a demand curve diagram, explain what happens when:

- a) children are charged half price for a bus journey instead of being charged full price:

- b) old age pensioners are given a free bus pass paid for by the local authority rather than having to pay the full fare. Draw separate demand curve for pensioners only.
- c) Stagecoach increases its prices on a route by 5 percent:
- d) Passengers can get a 60 percent reduction by buying a day return if they travel after 9:30 compared to having to pay the full fare.

Question 2 Anderton

<i>Quantity demanded (million tyres)</i>	<i>Price (£)</i>
10	20
20	16
30	12
40	8
50	4

The above table shows the demand curve facing a tyre manufacturer.

- a) Draw a demand curve for tyres from the above data.
- b) An increase in income results in an increase in quantity demanded of tyres of: (i) 5 million; (ii) 10 million; (iii) 15 million; (iv) 25 million. For each of these, draw a new demand curve on your diagram.
- c) Draw a demand curve for tyres which would show the effect of a fall in incomes on the original demand for tyres.
- d) Draw a demand curve for tyres which would show that no products were demanded when their price was £8.

Question 3 Anderton

Between 1973 and 1975, the US dollar price of crude oil quadrupled from approximately \$3 to \$12 a barrel provoking what came to be called ‘the energy crisis’. Businesses and consumers expected oil prices to remain high after 1975. Explain using demand diagrams, what effect you would expect this to have had on the demand in the UK for:

- a) oil tankers
 - b) coal
 - c) ice cream
 - d) gas fired central heating systems
 - e) luxury cars with low mileage petrol consumption
 - f) rail travel
- d)