



Skoolumy

**CAMBRIDGE A LEVEL ECONOMICS TOPICAL ESSAY
QUESTIONS**

PRICE DETERMINATION AND PRICE SYSTEM

PAST QUESTIONS

1. The International Oil Market

Fig. 1 shows how the price of oil has varied greatly over the last thirty years.

World Price of Oil 1970-1999

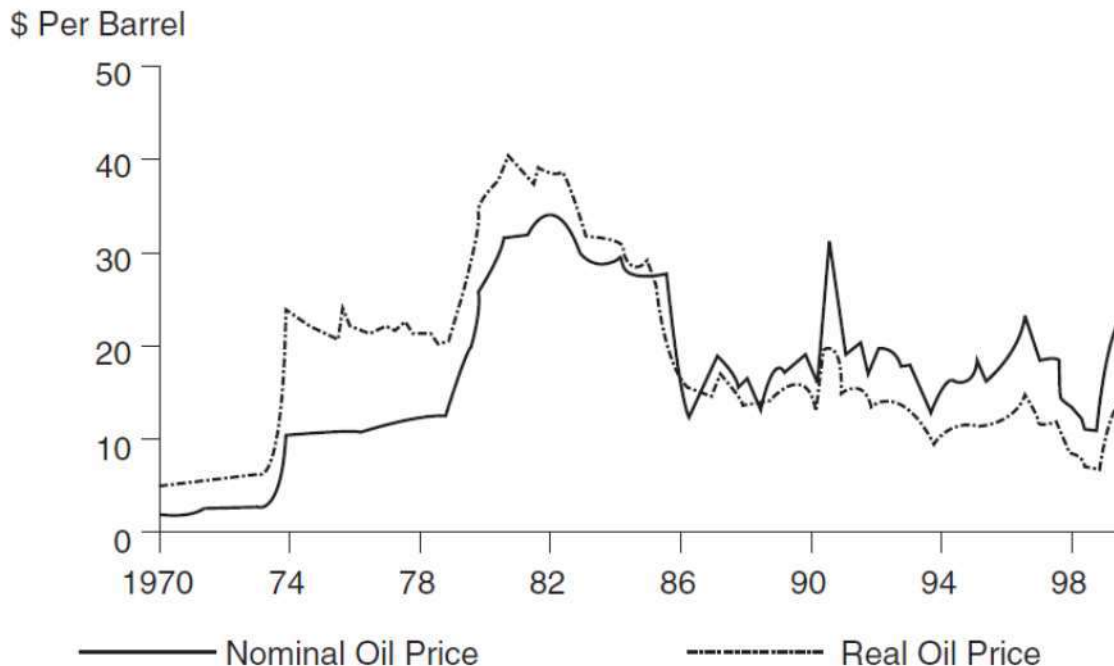


Fig. 1

Oil prices at the end of 1999 were averaging \$25 per barrel. This compared with less than \$10 per barrel a year earlier. This change was influenced by two main factors. First the Organisation of Petroleum Exporting Countries (OPEC), excluding Iraq, cut production by 4.3 million barrels per day from the level prevailing in 1998. Secondly, after slowing markedly in 1998, world demand grew by about 1 million barrels in 1999 as a result of the upturn in world economic activity.

Explain, with the aid of a diagram, how the article accounts for the sharp oil price rise in 1999.

2. United States reduces dependence on foreign oil

In 2001, a United States (US) energy report warned that by 2020 the US could be importing two-thirds of its oil. If US oil consumption continued rising and production continued falling, imports would increase from 10 million barrels per day to about 17.5 million per day.

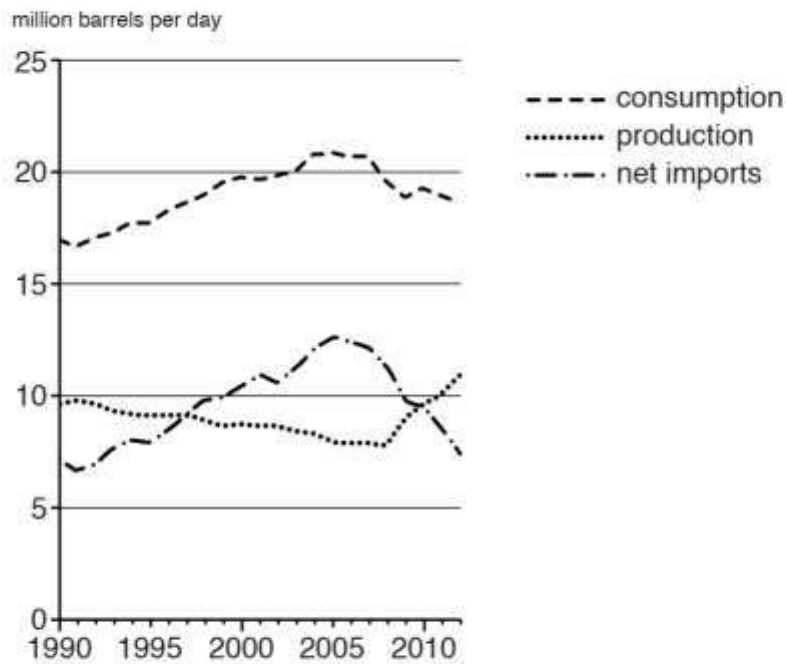
The forecasts were both wrong. US oil production has soared while consumption has fallen. It now looks more likely that the US will have only limited, if any, net oil imports by the end of the decade. China has now replaced the US as the world's largest oil importing economy.

A new technique, known as hydraulic fracturing (fracking), has allowed access to new sources of oil in the US. As a result, US crude oil production has risen by 50% since 2008. In addition, the US now produces significant quantities of biofuel from corn ethanol. This is a substitute for gasoline (petrol) obtained from crude oil and its production has increased by more than 300% in recent years.

In addition to new US oil supplies, what has been happening to demand is just as important. Falling enthusiasm for cars among younger Americans has reduced the country's need for oil.

Fewer young people are learning to drive and there have been declines in vehicle ownership per household and the total distance driven. At the same time, US cars are now more fuel-efficient.

Fig. 1: US oil consumption, production and net imports (1990–2012)



Source: Adapted from the US Energy Information Administration 'Energy Review'

Table 1: Annual average price of gasoline (petrol) in US

Year	US\$ per gallon including taxes
2007	2.85
2008	3.32
2009	2.40
2010	2.84
2011	3.58
2012	3.70
2013 (March)	3.79

Source: US Energy Information Administration

(a) With the help of a diagram(s), explain how the new sources of crude oil from hydraulic fracturing and the 'falling enthusiasm for cars among younger Americans' might be expected to cause a fall in the price of gasoline (petrol) in the US. [4]

(b) Suggest and explain one factor that might have caused the price of gasoline (petrol) to rise in the US after 2009 despite these changes. [3]

3. The Fiji economy: a positive outlook

Fiji is a small island country in the Pacific with a population of 860 000. In 2014 its economy was reported to be continuing to grow steadily. It remained on course for a fifth consecutive year of expansion, boosted by high tourist arrivals and visible export earnings, particularly from sugar. The factors that were expected to restrict growth in 2015 included ongoing dry weather conditions causing lower output of agricultural goods, with the exception of sugar.

Table 1: Selected economic indicators for Fiji

	2014 estimate	2015 forecast
Economic growth rate %	3.3	3.0
Inflation rate %	3.0	3.5
Current account balance as % share of GDP	−6.0	−7.0

Source: Asian Development Bank, 2014

Consumption remained strong in the first five months of 2014, and imports of consumer goods, mainly vehicles, rose by 15.6%. Personal remittances increased, boosting consumption expenditure.

The tourism sector – Fiji's main source of foreign exchange – continued to perform strongly. Visitor arrivals increased by 4.0% year-on-year, with 4.6% more visitors from Australia and 11.6% more from New Zealand, but there was a significant fall in visitor arrivals from Japan.

Sugar production increased, aided by government investments in new technology that improved efficiency of production and reduced price.

Despite higher growth, inflationary pressures were eased by declining international commodity prices. However, annual average inflation in 2014 was not expected to fall below 3.0%, as economic activity was expected to revive. In addition, continuing dry weather was affecting the food supply.

Despite the positive growth outlook, increased investment is needed to improve productivity and address supply-side capacity constraints.

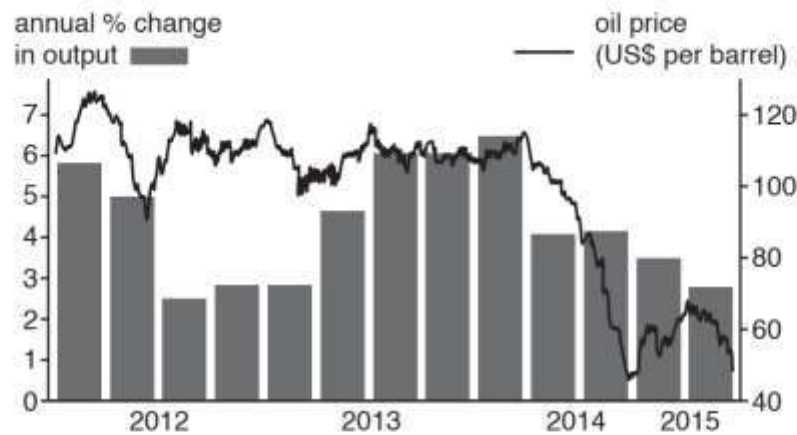
Source: Asian Development Outlook 2014 Update

Use a supply and demand diagram to show how the government investment referred to in the article affected the price of sugar produced in Fiji. [2]

4. Explain the meaning of the term 'equilibrium price and quantity' in the market for a good or service, and show how a new equilibrium position is established when there is a decrease in demand. [8]

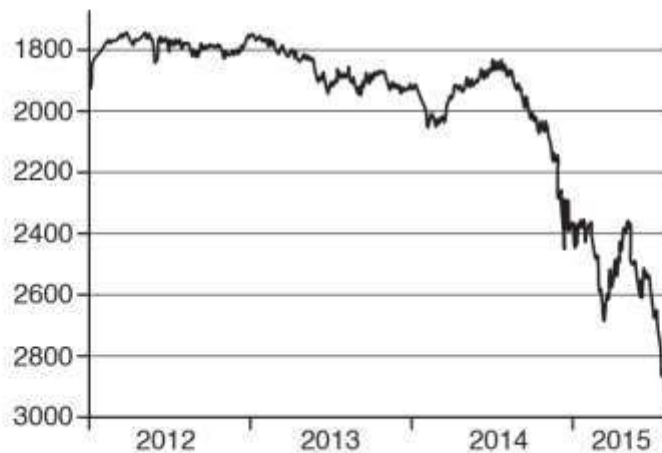
5. Fall in price of oil but Colombia can look forward to growth

Fig. 1: Colombia's growth and the oil price



Source: Thomson Reuters Datastream

Fig. 2: Colombian peso against the US dollar (peso per US\$), inverted scale



Source: Thomson Reuters Datastream

Over the past year, the halving of crude oil prices has hit Colombia and much of South America hard. Venezuela's economy, for example, is expected to shrink by 7% this year. Colombia's national oil production was running at 1 million barrels a year, accounting for half of its exports and a fifth of government revenues. In Puerto Gaitan, which only a year ago was the centre of Colombia's oil industry, the town's population had tripled to 45000 in just a few years. Property prices had soared and hotels overflowed. Today, though, business profits have fallen, leading to a fall in spending by entrepreneurs. "For Sale" signs now hang over Puerto

Gaitan's closed stores, car parks in shopping malls are empty and 10000 people have left the town. Towns throughout Colombia are experiencing similar problems.

Colombia's government is feeling the effects as well. Every US\$1 drop in the oil price per barrel cuts an estimated US\$200 million from government revenues. As a result, the government has cut spending and raised taxes to keep its budget deficit down. More worryingly, the collapse in the price of oil has opened a large current account deficit equivalent to 7% of national income. Yet not all is bleak. Colombia's economy is forecast to grow this year. And unlike in neighbouring Venezuela, where oil accounts for more than 90% of exports, there is concern but no panic.

Firstly, the peso's depreciation could reverse Colombia's current account problems, boosting traditional exports such as coffee, textiles, car parts and flowers — if not to its immediate neighbours, then to the United States. Colombia produces oil, but it is not only an oil-producing country. Secondly, Colombia's government is having peace talks with Marxist rebels to end the country's five decades of unrest. The government's military expenditure will be reduced and estimates suggest that this 'peace dividend' could add as much as 2 percentage points to growth.

Source: The Financial Times, 2015

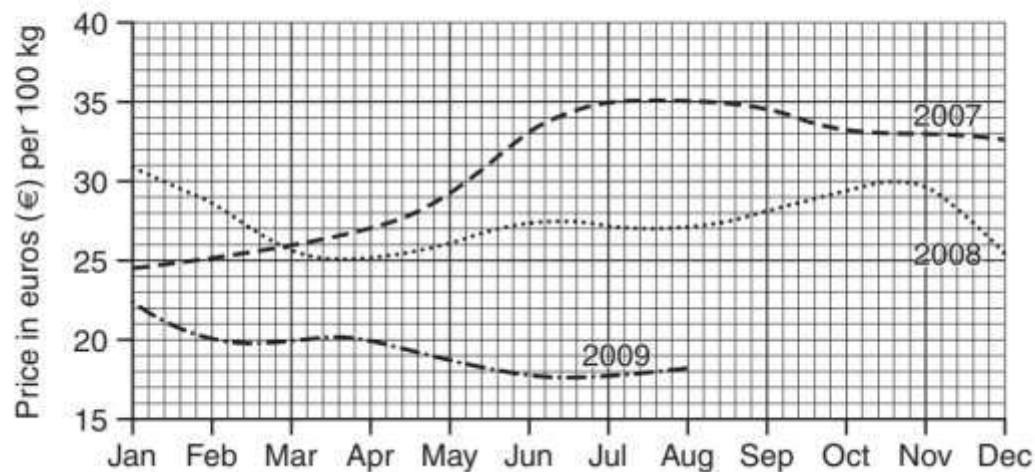
With the help of a diagram, explain one possible cause of the fall in the price of oil shown in Fig. 1. [2]

6. Explain how equilibrium price and equilibrium quantity change to allocate resources when there is a successful advertising campaign for a normal good. [8]

7. Problems for Dairy Farmers in the United States

Milk is used to make a range of products, including butter, cheese and ice cream, as well as serving as a drink. This was of no help to US dairy farmers in 2009 when they faced a falling price for their milk. Fig. 1 shows the extent of the price change in recent years. While consumers purchase milk by volume (litres), farmers are paid by weight (kilograms).

Fig. 1: Average milk price paid to farmers in the US, Jan 2007 to August 2009



A price fall was also experienced by New Zealand as shown in Table 1.

Table 1: Average annual milk price (€ per 100 kg) in the US and New Zealand, 2007–2009

	2007	2008	2009
US	30.69	27.49	19.30
New Zealand	22.48	25.17	16.21

US farmers blamed their problems on the global recession, the strength of the US\$ and high cattle feed prices. At the same time, New Zealand and Australia increased their exports and the European Union (EU) reintroduced its export subsidies on milk products.

The world milk industry has often had support from governments that have paid

subsidies to farmers and supplied free milk to young children. US farmers were hoping for extra government intervention.

(a) (i) Compare the average milk price paid to farmers in the US in August 2008 with that in August 2009. [2]

(ii) How far does Fig. 1 suggest that the price of milk is subject to regular seasonal influences? [2]

(b) (i) Compare the changes in milk prices in the US and in New Zealand between 2007 and 2009. [2]

(ii) Explain two possible reasons for the different level of milk prices in the US and New Zealand. [4]

(c) Explain how one group, other than dairy farmers, would lose from lower milk prices and how another group would gain from lower milk prices. [4]

8. Explain the functions of price in a market economy. [10]

9. 'A free market price operates as a rationing and allocating mechanism.' Explain how it does this. [8]

MARK SCHEME

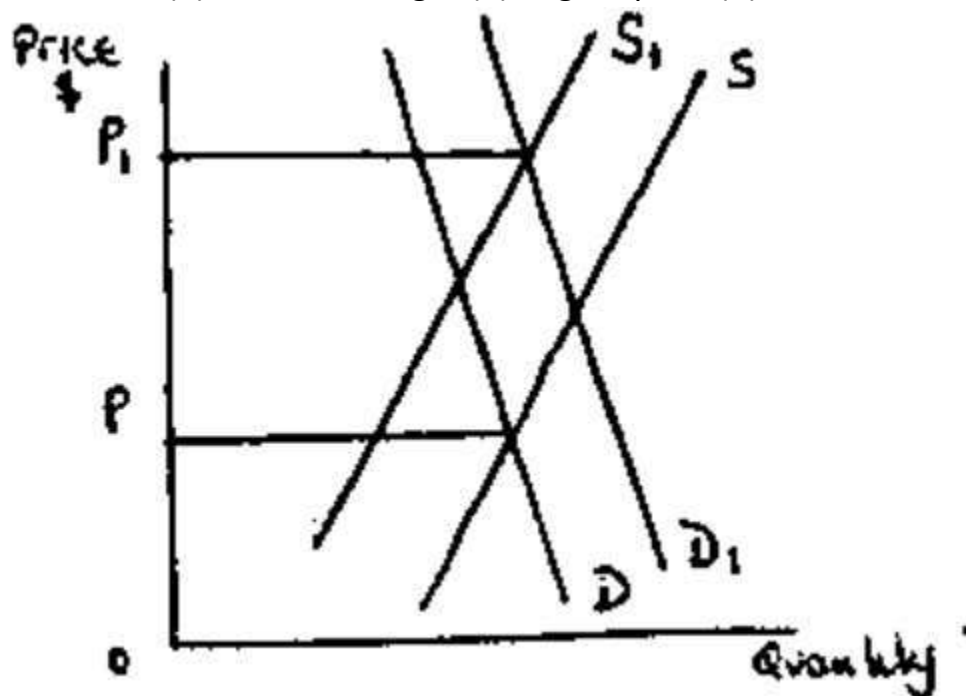
Table A: AO1 Knowledge and understanding and AO2 Analysis

Level	Description	Marks
3	- A detailed knowledge and understanding of relevant economic concepts is included, using relevant explanations. Explanations are supported by examples, where appropriate. - The response clearly addresses the requirements of the question and explains economic issues, and fully develops these explanations. - Analysis is developed and detailed and makes accurate and relevant use of economic concepts and theories. Where necessary, there is accurate and relevant use of analytical tools such as diagrams and formulae, and these are fully explained. - Responses are well-organised, well-focused and presented in a logical and coherent manner.	6–8
2	- Knowledge and understanding of some relevant economic concepts is included, using explanations and examples that are limited, over-generalised or contain inaccuracies. - The response addresses the general theme of the question and the relevant economic issues, with limited development. - Analysis is generally accurate with some development but little detail. Uses analytical tools such as diagrams and formulae where necessary. Use of these tools is partially accurate or not fully explained. - Responses are generally logical and coherent but are sometimes lacking in focus or organisation.	3–5
1	- A small number of relevant knowledge points are included and the response is limited by significant errors or omissions. - The response has little relevance to the question. - Analysis where provided is largely descriptive. Use of analytical tools such as diagrams and formulae, where necessary, may contain significant errors or be omitted completely. - Responses show limited organisation of economic ideas.	1–2
0	No creditable response.	0

Table B: AO3 Evaluation

Level	Description	Marks
2	- Provides a justified conclusion or judgement that addresses the specific requirements of the question. - Makes developed, reasoned and well-supported evaluative comment(s).	3-4
1	- Provides a vague or general conclusion or judgement in relation to the question. - Makes simple evaluative comment(s) with no development and little supporting evidence.	1-2
0	No creditable response.	0

1. OPEC reduction of supply (1), increase in world demand (1), diagram showing S curve to left (1), D curve to right (1), higher price (1).



2. (a) For a diagram with an explanation showing the increased supply of crude oil and the fall in equilibrium price of gasoline. (Up to 2 marks)

For a diagram with an explanation showing the decreased demand for gasoline as a result of the falling enthusiasm for cars and the fall in the price of gasoline. (Up to 2 marks)

Accept one diagram showing both changes. (Up to 4 marks)

Use the text box to show the mark out of 2 in each case, i.e. each part should be marked out of 2.

If the candidate has not included a diagram, or diagrams, then there is a maximum mark of 1 out of 2 for each part, i.e. a maximum mark of 2/4.

(b) Accept any valid suggestion. This could be contained in the data or be independent of the data, such as an increase in the price of oil on world markets.

E.G. 'Suggest': A rise in tax on gasoline or an increase in the costs of production (1 mark).

'Explanation': Example of a shift in the supply curve to the left and the resulting rise in price. (Up to 2 marks)

Or 'Suggest': A rise in incomes or an increase in advertising campaigns for cars (1 mark).

'Explanation': Example of a shift in the demand curve to the right and the resulting rise in price. (Up to 2 marks)

There needs to be an explicit reference to demand and/or supply in order to gain all 3 marks.

Diagrams are NOT essential in order to gain full marks, as long as the explanation is good.

3. For a supply and demand diagram showing a shift in the supply curve to the right [1 mark] and the subsequent fall in price [1 mark]. [Up to 2 marks]

4. Candidates need to show good understanding that equilibrium price and quantity is a position in the market where there is 'no tendency to change'. This can be illustrated and explained with the use of a supply and demand diagram.

For application showing the process through which equilibrium is established when there is a decrease in demand. (Up to 4 marks)

Candidates are expected to provide a supply and demand diagram showing a shift in the demand curve to the left, the consequent excess supply that this will cause together with the downward movement of price and quantity to re-establish equilibrium.

5. For a diagram showing an increase in supply or a decrease in demand. (1 mark)

For an accompanying explanation giving possible reasons for the shift in supply or demand. (1 mark)

Guidance:

The fall in price could be caused by either an increase in supply or a decrease in demand.

6. For knowledge and understanding
- of the term equilibrium (Up to 3 marks)
 - and where it occurs in the context of the market for a normal good. (Up to 3 marks).
- (4 marks maximum)

For application

- showing how price allocates resources when there is an increase in demand.

(4 marks maximum)

Guidance:

Equilibrium in a market occurs where there is 'no tendency for price or quantity to change'.

In the market for a normal good, it occurs where the demand and supply curves intersect. If there is an increase in demand the demand curve will shift to the right causing an excess demand for the normal good. This will cause market forces to raise equilibrium price and quantity.

7. (a) (i) Fell (1), by €9 or 33% approx (1)

Allow range of figures €8.7–9.5 or 32%–35%

- (ii) No / Very little (1), supporting reference to data (1)

- (b) (i) Both fell overall (1), US price fell continuously, NZ price rose then fell (1), US price fell more in % and absolute terms. NZ prices fell more rapidly 2008–9.

Any two points

- (ii) Allow two interpretations of the question

- Why US prices are higher than those in NZ
The price difference may reflect productivity, costs of production / efficiency, government action, € exchange rate, comparative advantage, demand and supply conditions etc.

Identified reason (1), explained reason (2).

- Why are prices falling in US and NZ, as above.

- (c) Losers: Government (increased farm support expenditure, reduced tax income); associated activities e.g. farm suppliers (lower sales); local retailers (less demand from farmers); banks (loan defaults); farm workers (wages, employment), producers of substitutes.

Gainers: Consumers (lower prices); producers of milk-based goods (lower costs)

8. Market economy involves minimal government intervention. Price is central to the allocation of resources when demand and supply operates. Rising prices signal to producers to supply more, indicate where factors should be employed and ration out goods between consumers. Agents react automatically in a maximising manner. When the market works perfectly this should produce an optimum outcome.

For recognising place of price in market economy up to 3 marks

For identifying the functions of price up to 4 marks

For explaining the function of price in a market economy up to 3 marks

9. A free market sets price by the operation of demand and supply. The price of a product determines who has the purchasing power to afford the good. A higher income means greater ability to purchase so the price system favours the richer in society. It rations the restricted quantity available between those who might wish to buy. The price also allocates resources between competing uses. The higher the price the greater the potential reward to factor owners. This will attract resources to those activities which pay the highest price so determining the employment of factors.

For understanding of free market price 2 marks

For explanation of the rationing function 3 marks

For explanation of the allocating function 3 marks