



Price Mechanism and its Applications Part 2

Elasticities of Demand & Supply

Section A: Short Excerpts from Case Studies

Question 1 [2016 MI H2 Prelim]

Extract 1: Tougher times for Amazon

As Amazon marks its 20th anniversary this year, it is also facing fiercer competition in the market of e-readers in Britain.

First, traditional players such as John Lewis and Dixons raised their game – particularly with “click and collect” services. John Lewis uses its sister food chain, Waitrose, as a “physical” collection point for web purchases of their e-readers as an example of how established chains are finally starting to act smarter. Amazon lacks its own network of physical stores, although it has begun offering a click-and-collect service by opening “lockers” in selected sites.

Second, Tesco’s successful launch of its own-brand, low-cost Hudl tablet and the expansion of its TV-and-film streaming service Blinkbox are aimed at Amazon’s Kindle Fire tablet and LoveFilm movie service.

Source: *The Straits Times*, 23 October 2013

Questions

- (i)** Explain how the value of price elasticity of demand for Amazon’s electronic reader has changed with the entry of new rivals such as Tesco. **[2]**
- (ii)** With reference to the concept of price elasticity of demand and the extract, explain the expected impact of a price fall on Amazon’s total revenue from the sale of electronic readers. **[3]**

Question 2 [Adapted from 2023 TMJC H1 Prelim]

Extract 4: Water pricing in Singapore

There are three components to the water price in the monthly bill: water tariff, water conservation tax and waterborne fee.

The Water Tariff covers the costs incurred in various stages of water production process and is charged based on the volume of water consumed.

The Water Conservation Tax (WCT) was introduced in 1991 to encourage water conservation and to reflect its scarcity value. WCT is imposed as a percentage of the water tariff to reinforce the message that water is precious from the very first drop.

The Waterborne Fee goes towards meeting the cost of treating used water and maintaining the used water network. It is charged based on the volume of water usage.

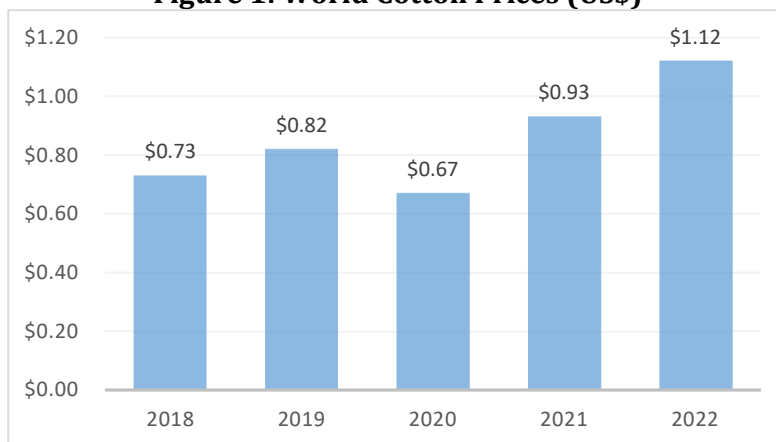
Source: *pub.gov.sg/watersupply/waterprice*, accessed 26 July 2023

Questions

- (a)** Explain the impact of the price elasticity demand for water on the extent of [5]
the tax revenue earned from the imposition of a 'water conservation tax'.

Question 3 [Adapted from 2023 RI H1 Prelim]

Figure 1: World Cotton Prices (US\$)



Source: Macrotrends, March 2023

Extract 1: Cotton Farmers in India and Pakistan Bear the Brunt of Extreme Heat, Unpredictable Rainfall

Farmers have been growing cotton in India and Pakistan for thousands of years. Both countries' economies are thriving because they have been part of the top 10 cotton exporters along with the US, China, and Brazil. India alone contributes over 26% of the global cotton production.

But that shared history and benefit is under threat because of weather volatility. The year 2021 will remain etched in the memory of Anantha Kumar Pichaipillai, a cotton farmer from Tamil Nadu. For the first time in eight years, he did not grow cotton. Extreme rainfall wreaked havoc on his cotton farm.

Source: The Wire, 11 Feb 2023

Questions

- (a) (i) With reference to Figure 1, describe the trend in cotton prices during the period 2018 to 2022. [2]
- (ii) With reference to Extract 1, explain how 'extreme rainfall in India' may affect the extent of change in price of cotton in 2021. [3]

Question 4 [Adapted from 1991 H1 A Level]

The data below shows the estimates of the price elasticity of demand for selected foods in the U.K:

Price elasticity of demand

Beef	-0.74
Bread	-0.25
Fresh potatoes	-0.14
Fruit juices	-0.65
Margarine	-1.27

Price elasticity of supply

	<u>Short Run</u>	<u>Long Run</u>
Fresh potatoes	0.65	1.34

With reference to the table above,

- a) Explain why all the price elasticities of demand are negative.
- b) How would total revenue for a fruit juice producer change when there is an increase in the price of fruit juice?
- c) How would consumer expenditure on margarine change when the price of margarine increases?
- d) Explain why beef has a lower price elasticity of demand compared to margarine.
- e) Explain why there is a difference in the short run and long run values of price elasticity of supply for fresh potatoes.

Question 5 [2015 JJC H1 Prelim]

Figure 1: Steel and Iron Prices



Questions

- (i) Compare the patterns of price changes for Chinese domestic steel prices and iron ore prices from December 2010 to August 2014. [2]
- (ii) Explain the difference in value of the price elasticity of supply of a manufactured good such as cars with that of a primary product such as iron ore. [3]

Question 6 [2023 NYJC H1 Prelim]

Extract 1: Global prices of Cannabis are expected to fall

Cannabis is a plant, that may take up to 8 months to grow, has been used for various purposes mainly recreational and medicinal purpose. Cannabis is often used recreationally as it can produce feelings of euphoria, relaxation, and altered perception. Common medical applications of cannabis include management for chronic pain, reducing nausea and vomiting in patients undergoing chemotherapy and reducing seizures in certain forms of epilepsy.

The legality of cannabis varies from country to country and even within different regions or states. Some countries have legalised cannabis for both recreational and medicinal use, while others still have strict laws against its use, possession and production. Legalisation of cannabis, enables firms to grow the plant and removes all legal prohibitions against it such that it would be available to the adult general population for purchase and use at will, similar to tobacco and alcohol. Across the globe several countries, for example Canada, Thailand, Mexico and some states in the US, have legalised cannabis.



Figure 1: Forecasted Global price and revenue of cannabis

With more countries expected to legalise cannabis, a global collapse in the price of cannabis is inevitable. The industry's revenue is forecast to rise swiftly from \$9 billion in 2018 to \$42 billion in 2027. That makes cannabis one of the fastest-growing industries in America, and, in fact, among the fastest-growing industries in history.

Adapted from <https://www.linkedin.com/pulse/global-cannabis-price-collapse-jim-plamondon> (2018)

Questions

- (a) Using Extract 1, identify and explain two factors that would determine the price elasticity of supply of cannabis. [4]
- (b) Using a diagram and information in Figure 1, explain the price elasticity of demand for cannabis. [4]

Question 7 [2023 YIJC H1 Prelim]

Extract 2: China intervenes to manage commodity prices

Chinese policymakers have been trying to tame surging commodity prices - from coal to copper - that have squeezed manufacturers' profits in the world's second biggest economy. The government has been releasing stockpiles of coal and metals such as copper and zinc to fabricators and manufacturers to ease the rapid rise in prices.

China's premier Li Ke Qiang said the country will strengthen control of commodities prices that have hurt businesses. He stressed the need to strengthen market regulation of raw materials to ease the cost pressure of enterprises amid rising global commodities prices.

Source: *Reuters*, 4 August 2021 & *Hellenic Shipping News*, 12 April 2021

Question

Using the concept of price elasticity of supply, explain how having [3]
stockpiles of metals (Extract 2) might help to ease the rapid rise in metal
prices, when there is a surge in demand for metals.

Section B: Case Study Questions

Question 1: Organic Foods [2019 SAJC JC1 H1 CA1]

Extract 1: Organic foods getting more popular in Singapore

Grown without the use of artificial fertilisers and pesticides, and through sustainable farming practices, organic food used to be the purview of small, independent operators catering to an upscale clientele. Now, you can find an abundance of such products in supermarket chains, shops and even wet markets. Supermarket chain FairPrice carries more than 800 organic items, from fresh produce to household items, up from 200 in 1998. Sales at FairPrice stores have grown steadily with a more than 30 per cent increase registered so far this year compared with the same period last year. As people become more affluent, they are better able to choose what they eat.

Zenxin Organic Food, a major Malaysia-based producer of organic fresh produce sold mainly through Cold Storage and Market Place, has registered a year-on-year growth of more than 10 per cent since 2010.

Though director Tai Seng Yee says the organic market is still a niche one despite having existed for more than two decades, he feels this will change. "We believe that more people will adopt healthier lifestyles in the near future and consuming produce free from chemicals, toxins and pesticides is one step towards a more health-conscious lifestyle," he said.

With organic food campaigns boosting the popularity of organic food, people from all walks of life are now aware of the difference between organic and non-organic food and about the benefits of eating food without residues of agricultural chemicals. Whether they will make the switch, depends very much on the price difference, which is still significant.

A recent analysis by researchers from Stanford University of results of various studies did indeed find that organic food products were 30 per cent less likely to have pesticide residue though they were not 100 per cent free of the chemicals. However, the analysis found there were no obvious health advantages to eating organic food, including organic meat. They said organic food was no more nutritious than conventional food.

Dietitians agree there is no need to eat only organic food as there is no strong evidence that its consumption is beneficial to health in relation to nutrient content or that the level of pesticide residue in food causes harmful outcomes. The nutritional quality depends on the type of food, their freshness, storing methods and cooking methods. It is not whether you are eating organic produce, but whether you are enjoying a healthy, balanced diet.

Adapted from www.asiaone.com

Extract 2: Panasonic's first indoor farm can grow over 80 tons of greens per year

Panasonic may be known for its consumer electronics, but the Japanese company is also venturing into indoor agriculture. In 2014, Panasonic started growing leafy greens inside a warehouse in Singapore and selling them to local grocers and restaurants. At the time, the 2,670-square-foot farm produced just 3.6 tons of produce per year. The farm's square

footage and output have both more than quadrupled since then, Alfred Tham, the assistant general manager of Panasonic's Agriculture Business Division, tells Business Insider.

Panasonic's greens are all grown indoors year-round, with LEDs replacing sunlight. The growing beds are stacked to the ceiling in order to achieve a higher yield in the limited space. The farm potentially produces 81 tons of greens per year at full capacity — 0.015% of all produce grown in Singapore. The hopes to eventually raise that percentage to 5%. Everything grows under LEDs instead of sunlight. The lights come from a local company and waste less energy than typical light bulbs.

Panasonic's farm likely still has high energy costs since the LEDs are on 24-7. Even the best LEDs have only a 50% efficiency rate, meaning half the electricity is turned to heat, not light, The New York Times reports. The farm's goal is to increase the amount of produce grown in Singapore, which imports over 90% of its food. The island nation has a shortage of arable land, so indoor farming could become a viable way to grow more greens, Tham says.

Panasonic's indoor agriculture project is part of its Factory Solutions division, which creates industrial machines and systems. Given the division's experience with engineering and manufacturing, Panasonic sees indoor agriculture as a profitable extension of its business, Tham says. "We foresee this business to be a potential growth portfolio, given the global shortage of arable land, increasing populations, climate change, and demand for high quality and stable food supply," Tham says.

Source: www.businessinsider.sg, Leanna Garfield, 8 February 2017

Questions

- (a) (i) Using a demand and supply diagram, explain the growth of organic produce in Singapore. [5]
- (ii) Comment on whether the change in supply is more important than the change in demand in determining the price of organic produce. [3]
- (b) (i) Define price elasticity of supply (PES). [1]
- (ii) With reference to Extract 2, explain the likely value of PES of Panasonic Agriculture Business Division's organic produce in Singapore, [3]
- (c) Discuss whether organic farmers such as Panasonic's Agriculture Business Division should use only the concept of price elasticity of demand to increase sales revenue. [8]

[Total: 20 marks]

Question 2: Changes in household expenditure [H1 2012 A Level CSQ 2]

Extract 1: UK families spending more during recession

UK households spent an average of £471 per week in 2008, an increase of 2.6% from £459 in 2007, despite the credit crunch, rising unemployment and the widespread pay freeze. Household spending is analysed according to an internationally-agreed classification system, shown in Figure 1 below.

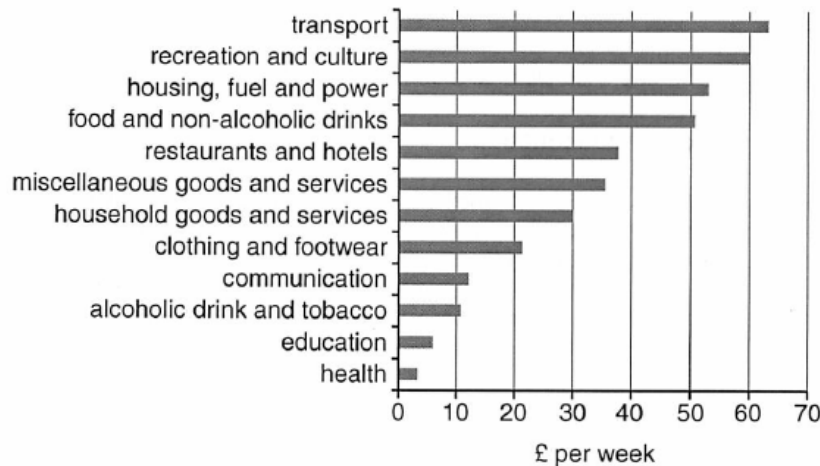


Figure 1 Spending by UK households, 2008

Source: www.statistics.gov.uk, accessed 13 September 2010

While spending on non-essentials and clothing fell between 2007 and 2008, the cost of heating the family home and running a car increased, according to the figures produced by the Office for National Statistics' (ONS) Annual Family Spending Review. Transport remained the largest single area of expenditure, with people on average spending over £63 per week on travelling – and petrol accounted for as much as £21 of that (up by 15% since 2007). One retail analyst said 'There was a huge rise in fuel prices in the middle of 2008, and this seems to be reflected in the figures.'

To try to balance the rise in the cost of essentials, families have made cutbacks in other areas such as clothing, alcohol and tobacco consumption and computer games – though, in the case of alcohol, this may merely reflect discounted prices in supermarkets. However, families do not seem to have been prepared to sacrifice spending on leisure activities; spending on recreation and culture – which includes such categories as package holidays, sport, gambling and admission to the cinema – was the second largest category of spending, and up by 4.7% on 2007.

The divide between rich and poor was illustrated by the fact that average weekly spending by the 10% of households in the highest income group was £1045, while those in the lowest 10% spent just £154 per week.

Source: www.telegraph.co.uk, accessed 11 September 2010

Table 1

Year	2002	2003	2004	2005	2006	2007	2008
Admissions (millions)	175.9	167.2	171.2	164.6	156.6	162.5	164.2
Total spending (£ millions)	755.0	742.0	769.6	776.3	762.1	821.0	854.4

Sources: Film Distributors' Association Ltd; Cinema Exhibitors' Association Ltd

Extract 2: UK cinema takings at record high

Figures published today by the UK Film Council show that, despite the recession, 2009 was the best ever in terms of cinema box office takings, at over £944 million, and the second best since 1971 in terms of admissions at 174 million. This was not quite up to the 2002 figure, but still up by 6% on 2008. The chief executive of the Film Council said that, in terms of jobs, inward investment and contribution of cinema to the UK economy, 'there is absolutely no doubt that the film sector is booming. The figures prove that film really matters to people; it's an absolutely integral part of their leisure time.'

The Council also examined the correlation between recessions and cinema admissions over the past 40 years. Its spokesman said 'It does appear that, over time, cinema admissions are recession-resistant.' One reason for this, he argued, was that when people did start to cut back on luxuries and cancel foreign holidays, they were then even less willing to give up going to the cinema.

Source: www.guardian.co.uk, accessed 25 August 2010

Table 2 Cinema admissions per head in different countries, 2004 to 2008

	2004	2005	2006	2007	2008
Iceland	4.9	4.8	5.2	5.1	5.4
Ireland	4.3	3.9	4.2	4.3	4.2
Singapore	4.5	4.2	3.6	3.8	4.2
Australia	4.6	4.0	4.1	4.1	4.1
US	5.2	4.7	4.8	4.3	4.1

Source: www.screenaustralia.gov.au, accessed 26 August 2010

Extract 3: Factors influencing cinema-going

Australia saw A\$895.5 million spent on cinema tickets in 2007, the second-highest ever, with 84.7 million admissions at an average price of A\$10.57. However, both the proportion of people over 14 years old visiting a cinema at least once and the average frequency of such visits showed long-term falls, which continued in 2007. Even so, cinema-going continues to be very high in Australia, both compared to other cultural pursuits and to other countries.

One factor that has contributed to the success of cinemas in recent decades has been the growth in the number of cinema screens available – 712 in 1988, 1941 by the end of 2007; this, of course, reflects the development of multiplexes, particularly in suburban areas.

Many diverse factors fundamentally affect peoples' demand to go to the cinema, from the appeal of individual films to how much the sun shines over summer to how high interest rates climb. Potential audiences respond to what is on offer – both at the cinema and elsewhere – and how much disposable income they have.

Such developments as the installation of home entertainment systems, illegal DVD piracy and the growth of internet-based activities such as social networking are understandably having a negative impact on cinema attendance. However, cinemas have been adapting to such challenges, and will no doubt continue to do so. They have the great attraction that viewing in cinemas is an essentially social experience, and improved technology has been improving the quality of it – big screens, big sound, digital projection, 3-D, etc. Cinemas will no doubt find new ways of competing for people's leisure spending for many years to come.

Source: www.screenaustralia.gov.au, accessed 14 September 2010

Extract 4: Australian film industry hits crisis

Despite DVDs, the internet and the rise of digital television, people still love going to the cinema. And in the past, some of the blockbuster films people flocked to see were actually made in Australia. But it might be some time before this is the case again. In fact problems have been developing for more than a year for the already struggling Australian film industry, largely because of the rising Australian dollar. This has made it too expensive for foreign film studio executives to consider making their films in Australia as they did in the past. A senior Australian film industry spokesperson recently claimed that the industry was already beginning to downsize because of the fall-off in demand, and that the problem could only be addressed by the urgent introduction of some sort of tax incentives, grants or other form of protectionism.

[Source: Australian Broadcasting Corporation, The 7.30 Report, 31 January 2011, reporter Sarah Dingle, accessed 20.02.11., www.abc.net.au]

Questions

- (a) With reference to Extract 1:
- (i) Compare how weekly spending by UK households both on petrol and on recreation and culture increased between 2007 and 2008, relative to overall spending. [2]
 - (ii) Using supply and demand analysis, identify and explain two possible reasons why spending on alcohol fell in the UK between 2007 and 2008. [6]
- (b) How far does Table 2 confirm the view in the first sentence of Extract 4? [3]
- (c) With reference to Extracts 2 and 3, analyse the likely impact on the market for cinema admissions of :
- (i) The change in the number of cinema screens available since 1988; [3]
 - (ii) a recession. [3]
- (d) According to Table 1, between 2004 and 2005 the number of admissions to UK cinemas fell but the total spending on cinema visits rose. Comment on what might this imply for the price elasticity of demand for admissions to cinema. [5]

[Total: 22 marks]

Question 3: Smartphones and electronic waste (Adapted from ACJC 2021 H1 Prelims)

Table 1: Global Smartphone Sales

Year	2016	2017	2018	2019	2020
Sales (in million of units)	1,495	1,536	1,556	1,540	1,378

Source: *Statista*, 31 March 2021

Extract 1: Global smartphone market suffers largest decline

Global smartphone sales decreased by 11.7 per cent in 2020. The drop comes as no surprise as the first quarter of 2020 marked the beginning of the COVID-19 pandemic and the peak of the lockdowns in China, which extended to the rest of the world by the end of the quarter. Since China manufactures almost a quarter of global smartphones, the lockdown in China caused mass disruptions to its production lines and a stalling of related supply chains caused by labour shortages and inactive logistics. At the same time, as the major economies around the world went into complete lockdown, consumers get increasingly cautious about their spending in such uncertain times. It is not clear what the full extent or lasting effect that COVID-19 will have on the mobile device ecosystem.

Source: *International Data Corporation*, 30 April 2020

Extract 2: Apple and Huawei's brand image

Apple sees itself as a premium brand where there is no other smartphone brand with an average selling price that is well over USD 700. The firm has perfected the art of pushing up the price points of its flagship phones, but without any significant impact on demand. Apple's success comes from its understanding that smartphones are the most essential commodity for a lot of its users. These customers will buy it at a higher price as they are convinced of the value it brings to them. In recent years, Apple has also developed a range of products — like Apple Arcade, Apple Music, AirPods, and the Apple Watch. The iPhone serves as a catalyst to lure people into its ecosystem and keep them hooked for whatever may be next.

Huawei's new flagship smartphone shows it has the technological know-how to compete with the best Apple and Samsung products on the market but to really take on the top two it needs to work on building its brand. Success in the smartphone market is not all about the product. Brand and marketing also plays a big role and it is here that Huawei cannot yet compete. According to YouGov BrandIndex, Apple has an Index score (which measures a range of metrics including quality, value and reputation) of 22.7 while Huawei's score is just 6.4. Part of the reason is the lack of trust in Huawei's products among consumers across the western markets.

Source: *Marketing Week*, 17 October 2018 and *Business Insider*, 27 April 2020

Questions

- (a)** Using Table 1, describe the trend of global smartphone sales from 2016-2020. **[2]**
- (b)** With reference to Extract 1 and using a demand and supply diagram, account for the fall in global smartphone sales in 2020 and comment on whether this fall in sales is likely to continue in the future. **[6]**
- (c)** With reference to Extract 1 and 2 and using the concept of price elasticity of demand, explain and comment on the effect of the disruptions to smartphone's supply chains due to the COVID-19 pandemic on the producers' total revenue. **[8]**

[Total: 16 marks]

Question 4: Prospects for Beef Exports to Japan [Adapted from 2018 RVHS H1 Prelims]

Table 1: Price elasticity of demand of Japanese consumers for chilled beef imported from different countries

Australia	(-) 0.92
United States	(-) 1.13
Rest of the World	(-) 1.18

Source: *Economic Research Service/USDA*

Extract 1: Changes in the Japanese diet

In the last 60 years, almost every corner of the globe has experienced a change in lifestyle. One such example is the significant shift towards diets containing more meat and animal products. This has been branded as 'diet westernisation' and is occurring throughout the world. Such a change in food habits has resulted not just in massive increases in livestock production globally, but has also contributed to an 'obesity epidemic'. Obesity has resulted in an increase in the number of people seeking treatment for a range of health problems such as heart disease and diabetes and has affected productivity at work.

Since 1961, the production and consumption of many types of meat have increased significantly. Japan is the nation that has experienced the most dramatic shift in the diets of its citizens during the past decades from the consumption of fish to meat. This is due to a number of factors like rising incomes, changes in food supply chains (e.g. increase in the number of supermarkets and convenience stores) and also the Westernisation of Japanese diets.

This shift in the diets has resulted in Japan having to increase its import of beef consumed and cattle feed to meet its domestic beef production. And this low self-sufficiency has become a major concern for the Japanese government. The notion of self-sufficiency (a self-sufficient country is able to produce everything it needs by itself) has been featured as a top policy objective and the Japanese government is attempting to implement policies that aim to increase food self-sufficiency above the relatively low current rate of 40% (compared to other developed countries).

Therefore, Japan's changing diets and the associated food self-sufficiency challenge are not only critical for Japan but also for countries like Australia, Brazil and the United States (US). These countries are shouldering the environmental burden of supplying directly and indirectly to meet Japan's growing appetite for meat.

Source: *Our World United Nations University*

Extract 2: The market for beef Imports into Japan

With its large population and limited agricultural land, Japan has consistently been one of the world's largest importers of food products, including beef. The primary sources for these imports are the US and Australia, which together represented approximately 90% of Japan's 2014 beef imports in terms of value.

Japan's beef consumption has exceeded 1 million tonnes every year since 1989. However, declining population and weak economic growth are expected to constrain Japan's

demand for beef in the future. Japan's population growth has been negative every year since 2009. However, this may be offset by the fact that Japan's population is ageing and typically meat consumption increases as its population ages. Recent research suggests that demand for meat per person may increase in future counteracting the impact of population decline in Japan.

There is tendency for Japanese consumers to import more Australian beef products when US beef prices rise and vice versa. The results show a particularly strong competitive relationship for chilled beef across all sources, where a price increase in beef from one source leads to increased imports from other two sources, *ceteris paribus*. A 1% increase in the price of Australian chilled beef for example, would cause imports of US chilled beef to increase by 0.74% and chilled beef from the rest of the world to increase by 1.34%

In 2014, the Australian and Japanese governments signed the Japan-Australia Economic Partnership Agreement (JAEPA), which allows Australia to export¹ more beef into Japan.

Source: *USDA*, January 2016

Questions

- (a) With reference to Table 2, state what is meant by the value of PED for chilled beef imported from the United States being -1.13. **[1]**
- (b) Suppose the price of imported chilled beef rises. Explain what would happen to total spending by Japanese consumers on imported chilled beef from (i) Australia and (ii) the Rest of the World. **[4]**
- (c) Using Extract 1, explain **one** demand factor and **one** supply factor that have affected the market for beef in Japan and with the aid of a diagram, comment on the change in the price and quantity of beef. **[8]**

[Total: 13 marks]

¹ Exports are the goods and services produced in one country and purchased by citizens of another country.

Question 5: The Market for Cotton [2015 SAJC H2 CA1]

Extract 1: Brazil's cotton growers seek to boost output as India restricts exports

Cotton prices have soared 73% in the past year and reached a 15-year high of US\$1.064 on 28 September 2010 after India, the world's second-biggest exporter after the United States, said it would limit exports. The Indian government will limit exports to 5.5 million bales in 2011, compared to 2010 when exports were 8.3 million bales. The price of cotton is expected to stay above US\$1 until June 2011.

Cotton growers in Brazil, the world's fifth-largest exporter of the fibre, plan to increase output in 2011 after the rise in world prices. Planting for the 2011 harvest may rise to 1.1 million hectares from 830 000 hectares in 2010.

Brazil's government may consider increased financial support for cotton growers to encourage them to raise output in 2011, according to the Brazilian Agriculture Ministry. A four-month drought hurt the quality of the crop this year in Brazil, causing output to fall. To help ease the rising pressure on cotton prices, in September, the government temporarily eliminated the imposition of tax on cotton production.

Adapted from *Bloomberg*, 1 October 2010

Extract 2: Cotton still king but alternatives abound

Without enough cotton, particularly for the Chinese industry, textile and apparel manufacturers drove demand towards alternatives such as regenerated cellulose fibres (acetates and rayons) and synthetic fibres, with fibres across the board rising in price. Only in the past two years have global fibre prices and cotton supplies stabilised, he says. Still, with synthetic fibres, key issues involve their dependency on petrochemicals, which carries a risk of price volatility depending on global oil supplies.

And cotton still remains an industry favourite. "Although there are some remarkable artificial and synthetic fibres, cotton is still preferred in many sectors and there is a tremendous demand for cotton generally speaking," Riccio, President of Danforth Group, explains.

Source: *just-style.com*, 5 November 2013

Extract 3: UK retail clothing firms far from cheerful about future of cheap fashion

It was a sign of the times: fashion so cheap it became 'disposable' as globalisation brought container loads of low-cost clothes to the UK. But clothes retailers are now predicting that the era of constantly falling prices is coming to an end and that prices could rise in 2011. A huge rise in the price of cotton to a 15-year high could not be ignored, they said.

The chief executive clothes retailer Next predicted the prices of Next's clothes were going to rise by up to 8% in 2011. He said that he suspected that shoppers would have to cut back on the number of new outfits they buy: "Our best guess is that if prices do rise by 8%, then volume of sales will be down by 10%. The clothing retail industry hasn't experienced price increases for 15 years and the truth is we don't really know what the response will be."

Some have argued that the increase in the cotton price has its roots in the financial crisis of 2008, when farmers stopped planting low-value cotton and switched to higher-value crops such as corn and soya. When retail sales picked up, demand for cotton also rose and prices shot up – just at a time when major cotton-producing regions such as China and Pakistan were suffering devastating floods and India, the second largest producers, was limiting exports. Also, due to increase in world population and recovery of consumers' confidence, clothing retail sales has gone up as well.

The deputy chief executive of a well-known department store explains that 60% of the cost of clothing is fabric and about 40% of the fabric cost is in the raw materials: 'The approach we are taking is to pass it on to customers and we think most other retailers will have to do the same.' He says its prices will rise, like Next's by up to 8%. He also points to 'increased labour costs all around the world', less spare capacity in Chinese factories and rising freight costs.

Adapted from *The Observer*, 19 September 2010

Questions

- (a) (i) With reference to Extract 1, what can you deduce about the price elasticity of supply of cotton in Brazil? [2]
- (ii) With reference to the data given, account for the sharp increase in cotton prices. [5]
- (b) (i) Discuss the usefulness of price elasticity of demand in helping Next to increase profits. [8]

[Total: 15 marks]

Question 6: The Olympics: The London Model [adapted from 2017 H1 MJC FE]
(Additional)

Extract 1: Pricing Strategy by London Organising Committee of the Olympic Games

The London Organising Committee of the Olympic Games (LOCOG) has revealed the ticket pricing structure across the 26 sports of the Olympic Games. There will be a range of prices.

“Spectators are a vital part of every Olympic Games, providing the atmosphere that inspires athletes to perform, with the range of tickets on offer, people of different ages and preferences will have the chance to attend London 2012.” said Hugh Robertson, Olympics Minister.

Demand was greatest for the Opening Ceremony as well as the popular sports of track, swimming and artistic gymnastics. LOCOG had provided a world-class hub to hold various sport events. One of the sporting venues, the Aquatics Centre, offered two 50-meter pools and a diving pool. Given the large size and the huge turnout for swimming events at the Aquatic Centre, the cost of maintaining the facilities and security were expected to be particularly high.

Pricing of the tickets also depended on allocation of tickets. Some seats were allocated to selected group of people such as the accredited press and broadcast working at the event. They were entitled to seating privileges and hence they did not need to pay. This reduced the number of seats for sale to the public. This applied to some sessions, which include the Finals.

Adapted from gov.uk, 15 Oct 2010, and *The ticketing arrangements for the London 2012 Olympic Games and Paralympic Games*, www.london.gov.uk/, Mar 2011

Table 1: London Olympic Ticket Price to Fencing and Swimming

Sport Event	Venue	Session Type	Premium Seats	Standard Seats	Senior Citizens ^[1]
Fencing	ExCeL London	Preliminary	£65	£20	£16
		Final	£95	£30	Not applicable
Swimming	Olympic Park Aquatic Centre	Preliminary	£150	£40	£16
		Final	£450	£95	Not applicable

Note:

- 1 Senior citizens (aged 60 and over) will be charged a concessionary rate across selected sport events and sessions.

Source: Extracted from Ticketmaster.com – London Olympic Ticket prices

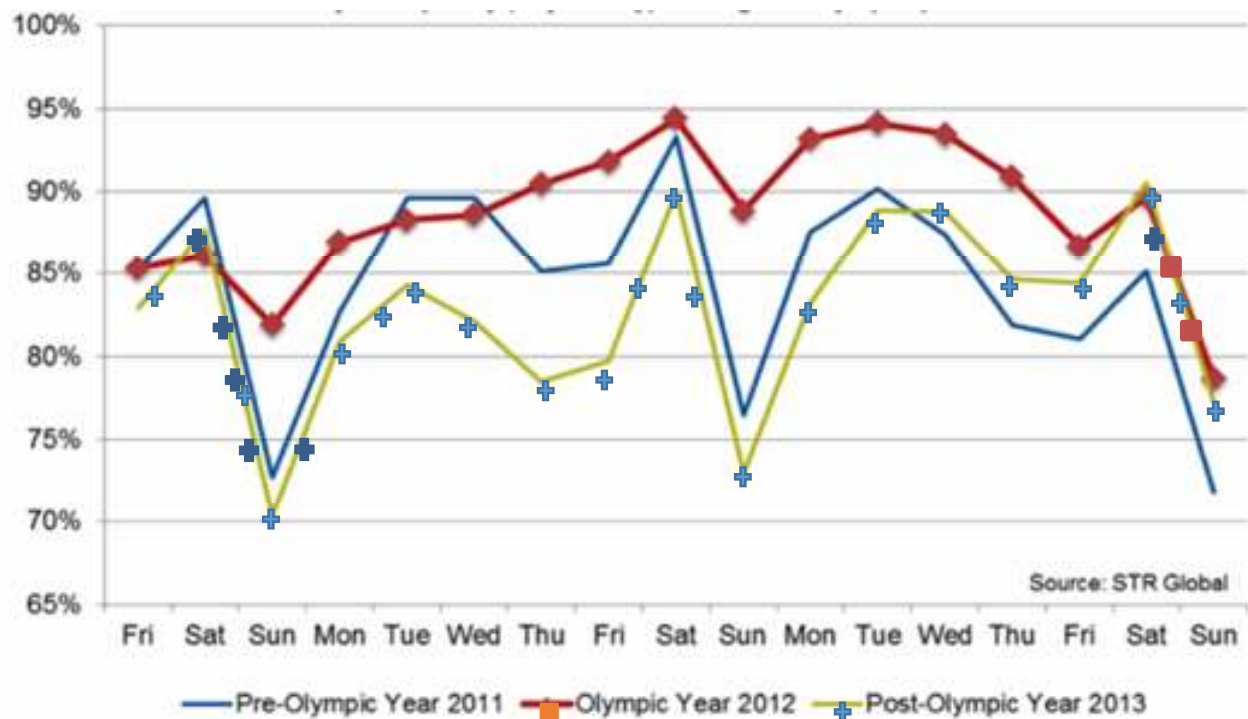
Extract 2: Olympics 2012 - A golden opportunity for London

Over the seven week period, international visitors are expected to spend a total of £709 million in the UK, an 18% increase on what would be expected if the Olympics Games were not taking place. Domestically, a £41 million spending boost is expected from UK Visa cardholders during the seven week period of the Games. This is a first for an Olympic Games host market, which usually experience a domestic spending slump during the Games. This will be driven by the public's enthusiasm for the Games, demonstrated by the high demand for Olympic tickets. British residents are likely to switch from traditional patterns of summer spending to getting into the Olympic spirit by stocking up on supplies and entertaining at home.

Overall, the retail, hotel and travel industry look set to be the biggest winners from the Games, benefiting from a combined spending injection of £508.4 million in seven weeks.

Source: *Visa Europe's London 2012 Olympic Expenditure and Economic Report*, 11 July 2011

Figure 1: London daily hotel occupancy (day to day) for the same weeks in the Pre-Olympic year, Olympic year and Post-Olympic Year



Source: *STR Global*

Questions

- (a) (i) With reference to **Table 1**, compare the prices of Premium tickets for Fencing and Swimming. [2]
- (ii) Using supply and demand analysis, suggest and explain two possible reasons for your observations in (a)(i). [6]
- (b) What can you conclude from the information contained in **Figure 1** about the impact of the 2012 London Olympic Games on London's daily hotel occupancy rate? [2]
- (c) (i) Explain what is meant by the price elasticity of demand. [2]
- (ii) With reference to **Table 1**, explain the value of price elasticity of demand of Premium Seats compared to that of Standard Seats. [3]
- (d) Evaluate the view that the only way London Olympic Game Organising Committee (LOCOG) can raise its revenue is by reducing the price of a sport event ticket. [12]

[Total: 27 marks]

Question 7: Transport: private and public [8819 H1 2014 A Level CSQ 1]
(Additional)

Extract 1: Jakarta's daunting traffic a recipe for stress

Jakarta is awash with vehicles, causing massive congestion, and stress for city residents. Rush hour in the Indonesian capital, with bumper-to-bumper traffic under the scorching heat, can be a nightmarish experience. Yet as they complain about the gridlock, delays and pollution, more and more city dwellers are opting to use personal rather than public transport, thus contributing to the flood of vehicles.

In the past, cars and motorcycles were associated with the rich, but now many people see them as necessities. But experts caution that Jakarta's worsening gridlock is lowering residents' quality of life, and in some cases posing a threat to mental health. 'Jakarta residents are prone to depression triggered by recurring stress linked to traffic jams, such as sleep deprivation, panic attacks and recurring physical illness,' said the capital's chief psychiatrist.

Source: Khabarsoutheastasia.com, accessed 6 May 2012

Extract 2: Urban transport management strategies: a tale of two South-East Asian cities

Over the last two decades, many South-East Asian cities have undergone unprecedented economic growth that has caused worsening traffic congestion and pollution. Greater real incomes have resulted in increases in the ownership and use of motor vehicles. This in turn has led to massive road building programmes, adding to the deterioration in the quality of life within major cities. A case study on Manila and Kuala Lumpur found that both cities have attempted to manage the challenge by implementing a public transport system that could help satisfy increased travel demand and reduce congestion in the cities. Unfortunately, the goal of decreasing traffic congestion by enhancing the public transport modes has not been very successful, largely because of the strong preferences for private car ownership. The study concluded that a change in attitudes is vital.

Source: Based on <http://www.ukm.my/geografia>, accessed 2 September 2012

Extract 3: Changes in transport usage in the UK over time

The UK too has seen huge increases in the popularity of car transport in recent decades. Table 1 (below) shows passenger transport usage by mode of transport within the UK between 1952 and 2010. One possible reason for changes in transport usage might be changes in prices. Table 2 shows some relevant price information, 2007 to 2010. 'Items needed to run a car' include petrol, insurance, tax, depreciation, repairs and replacement parts.

Table 1: UK passenger transport by mode, 1952–2010
(billions of kilometres travelled by passengers)

	Buses	Rail	Cars	Motorcycles	Bicycles	Air
1952	92	38	58	7	23	0
1960	79	40	139	11	12	1
1980	52	35	388	8	5	3
2000	47	47	640	5	4	8
2007	45	59	685	6	4	10
2008	44	61	678	5	5	9
2009	45	61	680	6	5	8
2010	45	64	654	5	5	8

'Buses' include coaches. 'Cars' include vans and taxis.

Source: UK Department for Transport Statistics, Table 0101, 15 December 2011

Table 2: Prices of different modes of transport in real terms, 2007 to 2010
(index numbers, 2007 = 100)

	Bus fares	Rail fares	Prices of items needed to run a car
2007	100	100	100
2008	102.1	100.4	105.2
2009	108.8	106.3	105.0
2010	108.8	109.8	117.4

Source: based on UK Department for Transport Statistics, Tables 0122 and 0123, 15 December 2011, adapted

Extract 4: Externalities and economic policies in road transport

Road transport imposes negative externalities on society, the cost of which to society is generally not reflected in current market prices in the road transport sector. Economics offers two types of instruments for dealing with these externalities: command-and-control policies and incentive-based policies.

Command-and-control policies are government regulations that force consumers and producers to change their behaviour. Examples include vehicle emission and fuel standards in the US and driving or parking restrictions in Singapore. Although such policies may fail to achieve an efficient market outcome, they are often the preferred option because they are relatively low-cost to the government to implement, and both feasible and effective politically.

Incentive-based policies may focus on capping the total amount of the externality and allocating permits to polluters, which they are then free to trade among themselves. They also include fiscal instruments such as taxes on car registration, on car ownership, on fuel, on emissions or on usage, and parking or congestion charges. On the other hand, subsidies for scrapping old vehicles or buying fuel-efficient ones can be applied. In principle, such instruments aim to bridge the gap between private and social

costs, and can theoretically lead to an efficient market solution. However, the government that decides the sizes of such taxes or subsidies inevitably has imperfect knowledge, so that the outcome is still likely to be inefficient.

Source: article in *Research in Transportation Economics*, 2010

Extract 5: Public transport

Given that private transport has negative externalities, there is a strong case for subsidising modes of public transport such as bus, coach, tram and rail. The result will be an extension of demand for the now lower-priced public transport.

However, it is not always quite so straightforward as this suggests. For one thing, travellers may simply prefer the convenience of private transport; research suggests that the demand for public transport in the UK has quite a low price elasticity, with values of (-0.4) for bus travel, (-0.3) for underground train travel and (-0.6) for suburban rail. In addition, evidence also suggests that public transport may have the characteristics of inferior goods, with demand falling when real incomes rise. Furthermore, state subsidies may merely have the effect of protecting inefficient practices – so diverting scarce resources from more efficient uses – with no guarantee that all of the state subsidy will be passed on to the passenger in terms of lower fares.

Source: www.economicsonline.co.uk, accessed 2 September 2012

Questions

- (a) Using Extract 2, identify and explain two reasons why there has been high demand for private car use in many South-East Asian cities. [4]
- (b) (i) Using Table 1, compare the relative changes in the UK passenger transport use of cars, rail and buses for the period shown. [2]
- (ii) Analyse and comment on the suggestion that the information in Tables 1 and 2 provides evidence that changes in relative prices were the main factor influencing changes in passenger transport usage in the UK during the period 2007-2010. [6]
- (c) With reference to Extract 5,
- (i) Explain what is meant by the statement that the price elasticity of demand for bus travel in the UK may be as low as $(-) 0.4$. [2]
- (ii) Explain briefly two arguments against a policy of subsidising public transport. [4]

[Total: 18 marks]