



ANGLO-CHINESE JUNIOR COLLEGE

JC1 Economics

H2

PRICE MECHANISM & ITS APPLICATION

Tutorial Worksheet 2

Section A: Discussion Questions

Question 1: Market for bubble tea in Singapore

With the aid of a diagram, explain the effects of the following events on the market for bubble tea in Singapore:

- a) Increase in workers' productivity after attending training courses
- b) Increased spending on advertisements by bubble tea shops
- c) Singapore experiencing negative economic growth and a higher Goods and Services Tax

Question 2: Supermarkets offer drivers higher pay amidst shortage

UK's 3 largest supermarkets, Asda, Tesco and Sainsbury's reported increased delivery costs after having to raise wages of their driver. Big supermarket chains, desperate to ensure their food products such as ice-cream, salad and canned drinks get to their stores, these supermarkets are offering drivers of heavy goods vehicles (HGV) nearly double the market rate. Industry insiders say HGV drivers' wages have already risen by between 10% and 20% as a result of the shortage HGV drivers.

Logistics UK, which represents freight owners including supermarkets, has estimated a shortage of 90,000 HGV drivers. It can take more than six months to train a new HGV driver.

A surge in demand for home delivery during the pandemic has offered a whole range of alternative employment for drivers, especially for drivers capable of driving long-distances in HGVs. The situation is exacerbated by EU workers leaving the UK following Brexit.

Source: The Guardian, 27 July 2021

- a) Using demand and supply diagram, account for the increase in UK's HGV drivers' wages.
- b) Do you think it is possible for the earnings of the Grab driver or food delivery rider to increase as high as that of the HGV driver? Explain your reason.
- c) Consider the effect of the increase in drivers' wage on prices of supermarkets' food items.

Question 3: Apple and Huawei's brand image

Apple has perfected the art of pushing up the price of its flagship phones, but without any significant impact on demand. However, the best thing for Apple is that, with this strategy, even a drop in volumes will ensure high revenue. Its 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.

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

- Do you think Huawei should follow Apple's pricing strategy to increase its total revenue from its smartphone sales?
- How can Huawei increase its total revenue for its smartphone sales?

Question 4: Cross elasticity of demand and income elasticity of demand

	Cross-price elasticity of:			Income elasticity of demand
With Respect to a change in price of:	Chicken	Beef	Fish	
Chicken	-1.64	0.28	0.29	1.07
Beef	1.10	-2.61	-0.23	2.19
Fish	1.57	-0.19	-2.48	1.44

Source: Khoiriyah Nikmatul Et. Al., *Animal Food Demand In Jakarta, Indonesia*, *Russian Journal Of Agricultural And Socio-Economic Sciences*, April 2019

- Explain the relationship between fish and chicken from the data above.
- Explain the likely XED value and relationship between fish and fries.
- Why is the XED of chicken to a change in price of beef much higher than the XED of beef to the change in price of chicken?
- How can the supermarket operator use the above information on elasticities of demand in planning its sales strategies to increase its revenue?

Question 5: (2019 H2 CA1)

Extract 2: Sugar tax on pre-packaged drinks

The Ministry of Health (MOH) is considering imposing sugar tax on manufacturers and importers of high-sugar pre-packaged drinks, which includes not only soda drinks but also juices and pre-packaged dry drinks, such as three-in-one coffee, tea and chocolate drinks that people just need to add water to.

Countries that have already implemented such a tax are happy despite collecting very little tax revenue, as the tax is doing its job of reducing the amount of sugar in these drinks in their fight against obesity and diabetes. The higher cost would push the producers to reduce the amount of sugar in their products and motivate them to move towards producing healthier drinks to remain competitive. The tax will also encourage consumers to shift their consumption patterns towards the healthier options.

However, large industry players such as Nestle, Coca-cola, PepsiCo and Food Industry Asia (FIA) said that many scientific studies have suggested the limited effectiveness of a sugar tax on reducing consumption of sugar-sweetened beverages. Consumers could easily substitute the pre-packed sugary drinks with other sugary food and drinks that are not taxed, such as bubble tea and coffees and teas made on the spot.

Source: CNA, 4 December 2018

- a) Using a diagram, explain the effect of a sugar tax on consumers and producers of sugary drinks.
- b) Identify and explain possible unintended consequences the government may encounter in imposing the sugar tax on pre-packaged drinks?

Section B: Data Response Questions

Question 6

Table 2: Annual Car Population in Singapore

	2012	2013	2014	2015	2016	2017	2018	2019
No. of cars	605,149	607,292	600,176	575,353	552,427	546,706	551,575	555,540

Source: LTA

Using Table 2, describe the trend of car population between 2012 and 2019.

[2]

Question 7

Figure 2: Global price of palm oil

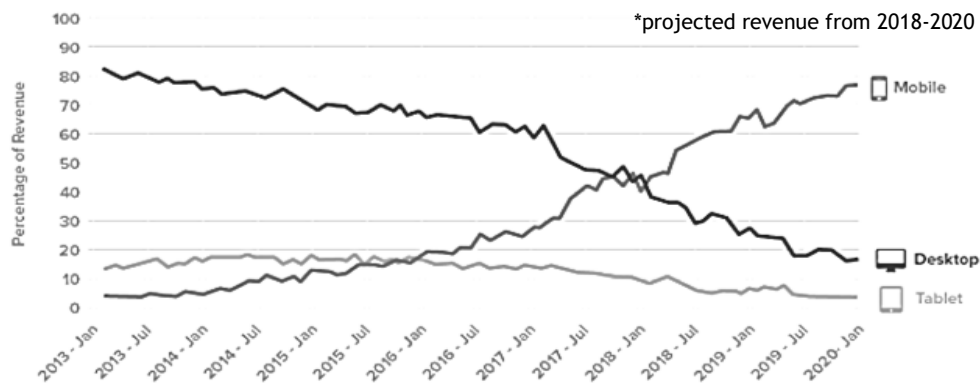


Using Figure 2, compare the overall change in global palm oil prices from Jan-2009 to Jan-2011 with that of mid-2012 to mid-2015.

[1]

Question 8

Figure 3: Percentage of Ecommerce Revenue by Device



Using Figure 3, compare the trend in the percentages of ecommerce revenue by tablet and desktop between Jan 2015 and Jan 2020.

[2]

Section C: Case Study Questions

Question 9: Fashion at What Cost (Adopted from VJC 2019 Promo Exam)

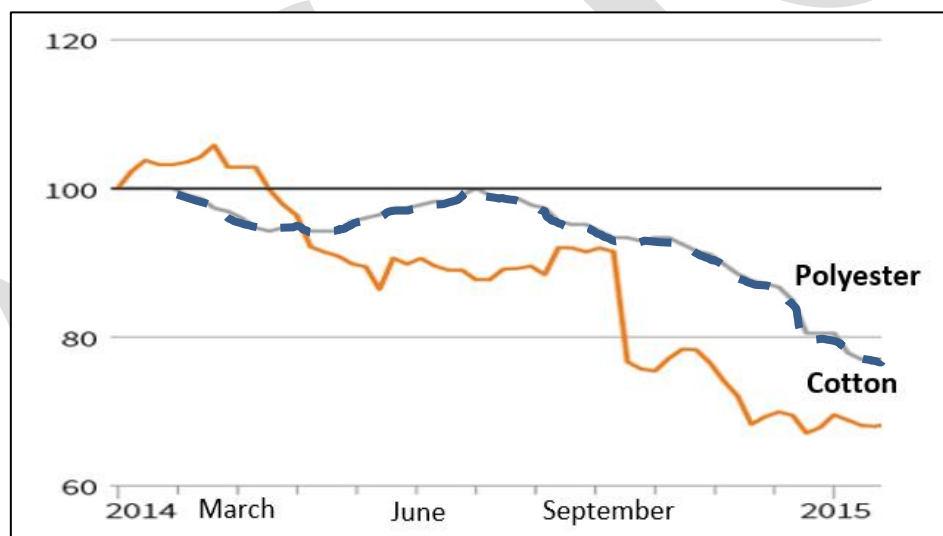
Extract 1: The Rise of Polyester

The popularity of cotton is no accident. Cotton textile has a long history with man, and it has endured because its unique properties make it ideal for clothing. Cotton textile is attractive, durable, comfortable, takes to dyes and most importantly its' fibre is naturally occurring. However, as production of cotton has plateaued, polyester has stepped in to fill the void. Polyester is a generalised term for any fabric or textile, which is made using polyester yarns or fibres. It is a shortened name for a synthetic, man-made polymer, most commonly made from crude oil. Because polyester is easy to blend with other materials, remarkably improved in its look and feel, it has allowed clothing manufacturers to keep churning out more and more cheap clothes.

Polyester accounts for roughly half of the overall textile market and around 80 per cent of synthetic textile, according to the Textile Exchange Preferred Fibre Material Report. In 2016, polyester production is estimated at 52 million metric tons. The price slide for polyester began in 2014 when oil prices fell by more than half. The explosion of polyester production has also put downward pressure on cotton prices.

Source: Adapted from Quartz June 2015

Figure 1: Cotton and Polyester Price Index (Jan 2014 = 100)



Source: Reuters

Extract 2: Steep Hike in Cotton Minimum Support Price

The steep hike of 28% in the minimum support price (MSP) on cotton produce by the Indian central government has come as a surprise after five consecutive years of single-digit increases. However, given the recent pest attacks and reduction in crop production, MSPs will work well to keep Indian farmers committed to cotton cultivation, in spite of adversities. Given that India is now the largest producer of cotton after it overtook US and China in 2015-2016, it pays to support farmers in cotton growing. Besides, the MSP will mitigate the risk of price volatility too.

“The increase in MSP will have a big impact on the prices of textile. In the run up to the upcoming festive season, we foresee a 8-10 percent rise in the cost of cotton textile,” said Vijay Purohit, president of Gujarat Garment Textile Association, a body that manages 5,000 garment units in the state.

Cotton is the key material for textile production in India, extensively used to develop casual, formal and festive apparels. A 10 percent rise in price only resulted in a 5 percent fall in the sales volume of cotton textile. Experts believe the price of cotton produce will continue to move northward.

Adapted from various sources

- (a) (i) Compare the price changes of cotton and polyester from April 2014 to January 2015. [2]
- (ii) Explain one possible reason for the difference in the change in price of cotton and polyester between September 2014 and January 2015. [2]
- (b) (i) Using information in Extract 1, explain the likely relationship between polyester fibre and crude oil. [2]
- (ii) How might the relationship identified in b(i) account for the price changes of cotton from April 2014 to January 2015. [4]
- (c) With reference to Extract 2,
 - (i) What is a “minimum support price”? [2]
 - (ii) How will the minimum support price keep rational Indian “farmers committed to cotton cultivation”? [5]
- (d) Using the concept of price elasticity of demand, discuss the likely impact of increased cotton fibre prices on the revenue of India’s textile firms. [8]

Section D: Essay Questions

Question 10

Hens tend to go into a slow egg laying mode during the cooler winter months. Meanwhile, increased meat prices have also resulted in consumers switching to eggs as a cheaper source of protein.

- (a) Using demand and supply analysis, explain the likely effects of these changes on the market for eggs and a related market such as the pastries market. [10]

Question 11 (2016 A Level Essay Question 1)

The price of a pair of jeans can be as little as S\$20 or as much as S\$500.

- (a) Explain what might cause the price elasticity of demand and cross elasticity of demand to be different for different products. [10]
- (b) Assess the likely effects of a rise in price of one brand of jeans on the revenue earned by both retailers of that brand of jeans and those who sell other related goods. [15]

Question 12 (2020 A Level Essay Question 2)

Concerns about future shortages of water resulted in Singapore's national water agency, PUB, increasing the price of water by 30% from 2017. By 2060, Singapore's total water demand could almost double.

- (a) Explain why a shortage of water might still exist after the rise in the price of water. [10]
- (b) Discuss whether the government policy of increasing the price of water is the only effective way to overcome future water shortages. [15]

Question 13 (adapted from 2019 Promo Exam)

In recent years, young working parents have been complaining of a sharp increase in fees for childcare centres in Singapore. Operators of childcare centres attributed this sharp increase to manpower constraints and growing demand. To keep prices for childcare services affordable, the Singapore government has announced higher subsidies for families as well as lower monthly fee caps for all government-operated childcare centres.

- (a) Explain why there is a "sharp increase" in fees for childcare centres in Singapore. [10]
- (b) Discuss whether increasing subsidies is better than setting a cap on school fees in keeping prices for childcare services affordable in Singapore. [15]

Section E: Independent Learning

Additional Learning Resources on SLS:

Follow the sequence of steps.

1. Please login to the Student Learning Space (SLS) via your student login and password.
2. Go to MOE Library
3. Click on All Subjects
4. Click on Pre-U Economics (H2)
5. Click on Theme 2: Markets
6. Click on Theme 2.1 Price Mechanism and its Application
7. Click Theme 2.1 Cases
8. Complete all the questions in each of the case modules that are entitled as follows:
 - a. “Case: Why oil prices have been falling”
 - b. “Case: Costlier raw materials and hawker food prices”
 - c. “Case: Analyzing the market for beverages”.