

2014 Y6 H1 Prelim CSQ1 -- Suggested Answers

(ai) Compare the US price of sugar and the world price of sugar between 2010 and 2013. [2]

Similarity [1]

- Both prices **decreased generally** OR
- US price of sugar **moved in tandem** with world sugar price OR
- Both US and world price of sugar share a positive relationship

Difference [1]

- However, the **US price of sugar is consistently higher than the world price** of sugar OR
- The US price of sugar decreased by more compared to the decrease in world price of sugar in the same time period

(aii) Explain any difference that you have observed. [3]

- **The US price of sugar is consistently higher than the world price of sugar** because US **imposes a quota on sugar imports**.
- This **restricts the amount of sugar** entering the US market. With **supply kept within a certain limit**, this helps to keep price in US at a certain level
- On the other hand, **imports above the quota are likely to end up in world markets, thus leading to a much larger supply of sugar** in world markets.
- As such, this leads to a world price of sugar which will be lower than that in US

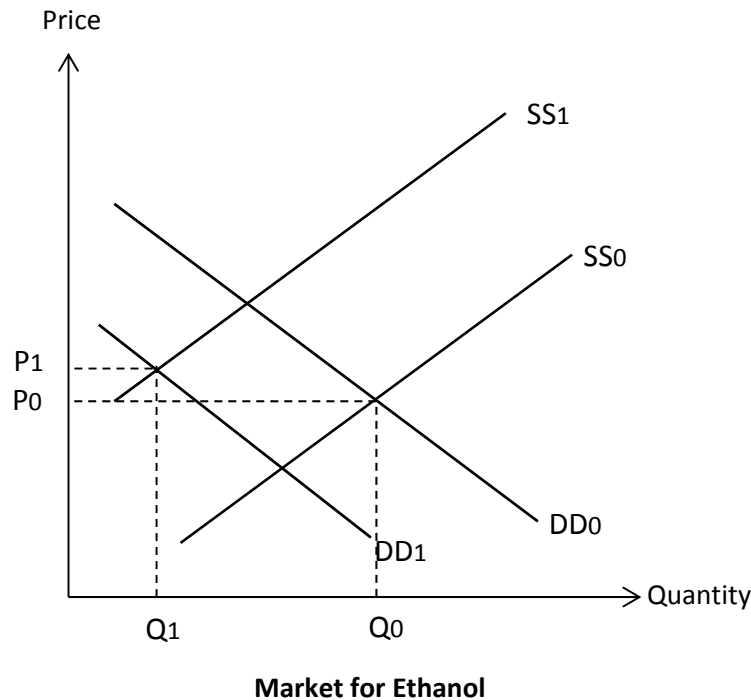
Alternative (if students give the other difference)

- **The decrease in the price of US sugar is greater than the decrease in the world price of sugar** because there may be **more imports of sugar entering the US market during 2011 to 2013**. [1]
- Although US imposes a quota on imports, Mexico is exempted from it because of the NAFTA (Extract 2)
- This may lead Mexico to export an unlimited amount of sugar to the US, rather than sell in world markets.
- Given this substantial *increase* in supply of sugar in US rather than in the world, perhaps the price of sugar in US is likely to fall by a greater extent, compared to that of world price.

(b) Using a supply and demand diagram, explain why the sales volume of ethanol fell despite rocketing car sales in Brazil [5]

- Extract 4 notes that cars in Brazil can run on ethanol or gasoline, which means **ethanol and gasoline are substitutes in consumption**.
- Since the Brazilian government has given generous subsidies for gasoline to mitigate the rising cost of living, this makes **gasoline cheaper than ethanol** in Brazil, encouraging consumers to switch from ethanol to gasoline instead i.e. **Demand for ethanol falls**.
- Referring to Fig. 1, DD_0 shifts left to DD_1 .
- On the other hand, the **cost of producing ethanol has increased** due to the rising costs of labour and pesticides as noted in Extract 4.
- This leads to a **fall the supply of ethanol**, reflected by a leftward shift of supply curve from SS_0 to SS_1 .

- In this case, the **quantity of ethanol will definitely decrease** from Q_0 to Q_1 , indicating a fall in sales of ethanol.



- (c) **What can you conclude from the evidence in Extract 3 about the price elasticity of supply of sugar in Brazil?** [2]

- Price elasticity of Supply (PES) of sugar in Brazil is likely to be **less than one**.
- This is because Extract 3 notes that **sugar cane mills cannot just leave the canes in the fields**, given that sugar cane is a perishable good.
- Furthermore, mills are also unable to store the sugar. As such, the **lack of storage space** for sugar means that the **producers cannot decrease/ increase output quickly** without a substantial rise in costs. i.e. **producers are less responsive to changes in price**.

- (di) **State the theory of comparative advantage.** [2]

- The theory of comparative advantage suggests that countries should specialise in producing and export the good which they have comparative advantage i.e. incur lower opportunity cost in producing.
- They should then trade to obtain goods which they have comparative disadvantage. Doing so will enable both countries to be better off in terms of an increase in consumption of all goods and services.
- *Note to markers: Students need to state that the theory entails specialising and exporting the good which countries have comparative advantage in producing [1] and subsequently, trading will lead to an increase in consumption for countries [1] i.e. those who simply stop at stating comparative advantage leads to lower opportunity cost will not be awarded full credit

(dii) Explain what the US and the Caribbean countries should be doing, based on the theory of comparative advantage [3]

- Extract 1 notes that the **Caribbean countries are endowed with naturally fertile land and perfect weather conditions suitable for growing sugar**. This suggests that these countries face lower opportunity costs and thus should **specialise in growing sugar and export it**.
- In contrast, the US protects her sugar industry with subsidies and quotas, which means they are unlikely to have comparative advantage in growing sugar.
- Moreover, **US seems to incur much higher opportunity costs in producing sugar**, judging from the fact that three jobs are lost in confectionary manufacturing when there is a hike in sugar costs.
- In view of these, **US should be importing sugar** instead of producing it herself.

(e) The extracts refer to the use of fuel subsidies by governments. Comment on whether such government intervention should be removed. [5]

Thesis: Yes, fuel subsidies should be removed. Why? What benefits result from this?

① Long term sustainability of resources

- Removal of subsidies **exposes consumers to the true cost of using fuel** (e.g. gasoline)
- Higher price of petrol **encourages consumers to find ways to economize on their use of scarce resources** e.g. they might switch to cheaper substitutes such as bio-fuels or even cut down on use of cars altogether (reduce over-consumption)
- Removal of subsidies might also spur R&D in alternative energy sources which are beneficial in the long term as cleaner energy will be developed and this will reduce the negative externality released into the environment when fossil fuels are burnt
- Long term sustainability of the world is also ensured as the rate of depletion of non-renewable resources slows

Anti-thesis: No, fuel subsidies should not be removed. Why?

① Negative Impact of rising cost of living

- As fossil fuels are regarded as necessity to power vehicles, the removal of fuel subsidies will lead to higher cost of living (e.g. higher transport cost) for countries, especially in those where there is a lack of close substitutes for fuel
- For countries which already have fuel subsidies in place for quite some time, the removal might possibly lead to widespread social discontent or worse, may escalate into conflict and war between countries as they fight for limited resources.

(f) How far does the use of protectionist measures achieve the aim of helping US sugar farmers? [8]

Thesis: Yes. Protectionist measures do help to achieve the aim of helping farmers. How?

- ① **Subsidies** provided to the sugar farmers partially helps to **reduce their costs of production** e.g. farmers can use it to offset some of their operating costs or buy fertilizers etc.
- Theoretically this enables farmers to **produce more sugar** given the same amount of resources that they have
- Alternatively, the reduction in cost may **leave them with excess cash as profits**, assuming no change in total revenue received

- ② **Tariffs** imposed on the imports above the quota limit will **raise the price of sugar imports**
- This implies that the **price of sugar sold in US would correspondingly also be higher.**
 - Although the higher price leads to US consumers buying less sugar, it is likely that less is imported and consumers buy more domestically produced sugar compared to before
 - If so, then US farmers get to produce more and capture a larger share of the market now, which is likely to increase their revenue

Anti-Thesis: No. Protectionist measures do not exactly help sugar farmers. Why?

- ① Extract 1 notes that subsidies to farmers are transmitted via loans but these are usually **granted directly to sugar processors instead of farmers.**
- If **processors choose not to pass on the gains from the loans to farmers** (e.g. by offering them better prices for their sugar), then **farmers may still struggle to pay for the raw materials and labour costs** without the financial help.
 - As hinted in Extract 1, there is **little wealth transfer from top to bottom**, suggesting a high chance that the farmers do not receive the monetary help despite the protectionist measures
- ② Another reason why protectionist measures might not work is evident in Extract 2 where **Mexico seems to be dumping cheap sugar in US.**
- Due to the NAFTA, Mexican sugar can be imported into US at tariff-free rates.
 - This means that even though the price of sugar in US should theoretically be high due to the protectionist measures, the **influx of Mexican sugar may still increase the supply in US** and thereby **limit any increase in price**
 - If so, **US farmers are still not receiving a higher price** despite the protectionist measures

L3	Developed discussion on how the use of protectionist measures may or may not necessarily help US farmers. *If students do not give a reasoned conclusion – capped at 7m	7-8
L2	Undeveloped discussion on how the use of protectionist measure may or may not necessarily help US sugar farmers in the end. (discusses both thesis and anti-thesis superficially) OR Developed explanation on how the use of protectionist measures may or may not necessarily help US sugar farmers. (One-sided; either thesis or anti-thesis is explained.) 'Developed'- Makes reference to context, explicitly explains how farmers gain (in the form of increased income and total revenue/ lower COP etc.) or lose out (depressed prices/ no transfer of wealth) 'Undeveloped'- Lifts off from extracts without elaborating on specific areas gained or lost by farmers; little use of economic concepts to explain	4-6
L1	Smattering of valid points	1-3