GCE ‘A’ Level 2016

H1 Economics

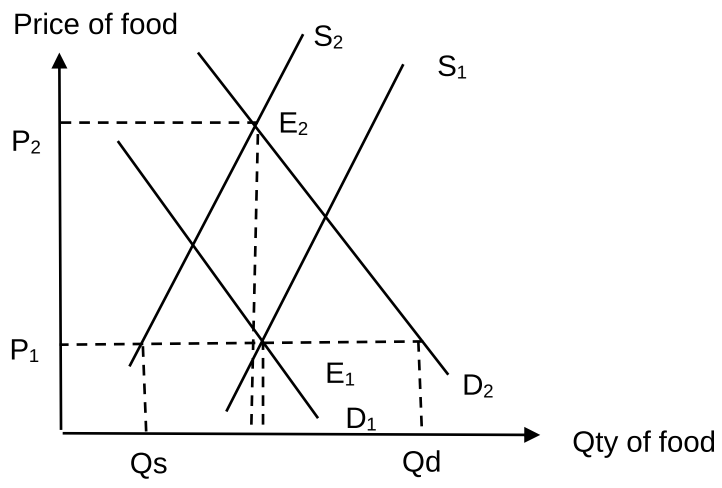
Case Study (Suggested Answers)

Question 2: Problems in commodity markets

(a)	**Using the data in Table 1, compare the changes in the prices of tropical beverages with those of food during the period 2000-2013.**		**[4]**
	Similarity: Both the prices of tropical beverages and prices of food generally increased Difference: Prices of tropical beverages increased 74% over the years while prices of food increased more significantly by 155%.		
(b)	**(i)**	**With reference to Extract 5, and using supply and demand analysis, explain how upward pressure on demand, combined with increased agricultural production costs, is likely to influence the world price of food.**	**[6]**

The upward pressure for demand is due to continued population and economic growth and greater use of biofuels (Ext 5). This leads to an increase in demand for food and a rightward shift of the demand curve from D_1 to D_2. At the same time, demand for food is price inelastic (PED<1) as the degree of necessity is high. Thus, the demand curve is steeper as shown in the diagram below.

The supply for food is likely to be price inelastic as it takes a longer time to grow and harvest agricultural crops. Since the production process is long and complex, it is harder for producers to respond to change in price. Increased agricultural production costs means that there is higher cost of producing food which leads to a fall in supply. This results in the leftward shift of the supply curve as shown from S_1 to S_2.



At the initial price, P1, there is a shortage of food, indicated by the distance QdQs. Consumers will compete for the limited quantities available and offer higher prices. Producers, recognising the shortage, will begin asking for higher prices. There will therefore be an upward pressure on price, causing a movement along the demand and supply curves until the new equilibrium price of P2 at new equilibrium E2 is reached.

	As a result, world price of food increases significantly.		
(b)	**(ii)**	**How might increased investment in agricultural technology affect your conclusion about the world price of food?**	**[2]**
	With increased investment, there could be an improvement in production techniques or technological progress. This will increase productivity (Ext 5) resulting in a lower cost of production per unit of output of agricultural product and increasing the supply of food The increase in productivity due to more investment also means that there is spare capacity in the industry. It is now easier to increase the production of agricultural products as prices increase. Therefore, the supply of the good is more price elastic. With the supply curve shifting to the right and becoming more gently-sloped, this partially offsets the initial significant increase in the world price of food, causing the final increase in price to be less significant/more gradual.		
(c)	**(i)**	**Use the concept of price elasticity of demand to explain the assertion in Extract 8 that a rapid growth in coffee supply would cause price falls that are 'severe'.**	**[2]**
	According to Extract 8, the price elasticity of demand for coffee is low which suggests that demand is price inelastic. Demand for coffee may be price inelastic due to the low proportion of income spent on the beverage as well as its addictive nature. Given an increase in supply, price will decrease more significantly relative to the rise in quantity, hence explaining the assertion.		
(c)	**(ii)**	**Explain the impact of a severe price fall for the incomes of coffee producers in these circumstances.**	**[2]**
	As demand for coffee is price inelastic, price would fall more significantly relative to the rise in quantity. Hence, the fall in revenue due to the fall in price of coffee is more than the rise in revenue due to the rise in quantity, thus total revenue fell. This reduces the incomes of coffee producers.		
(c)	**(iii)**	**Comment on two possible macroeconomic consequences of a severe fall in the price of coffee for coffee-producing economies.**	**[4]**
	Firstly, given an inelastic demand, the severe fall in price of coffee will cause the total revenue of coffee producers to decrease. With coffee accounting for almost half of total net exports (Extract 8), this will lead to the **current accounts** of these economies to worsen significantly and their currencies to fall in value. As long as these countries continue to rely on coffee as the single most important tropical commodity, they will be vulnerable to sudden changes in the price of coffee and it is unlikely that continued good export performance can be sustained. Secondly, investors will perceive the poor export performance of these economics as an unhealthy sign and reduce FDI. This leads to a fall in aggregate demand since AD = C + I + G + (X-M) and hence **actual growth** decreases and demand-deficient unemployment rises. This in turn will adversely affect the material standard of living of millions of families in Latin America, Asia and Africa (Extract 8). However, the extent of the impact on actual growth depends on the state of the economy. If the coffee-producing countries are initially facing high inflation, such a		

	fall in AD helps to alleviate demand pull inflation without reducing real national income by too much, hence lowering the cost of living for the people.			
(d)	**Extracts 5 to 8 emphasise the volatility over time in the price of commodities such as coffee.**			
	(i)	**State the principle of comparative advantage.**		**[2]**
	The theory of comparative advantage states that even where one country has absolute advantage over another in both industries, specialisation and trade can still benefit both countries in term of higher consumption level and world output, if each country has a comparative cost advantage.			
(d)	**(ii)**	**Discuss the view that countries that rely heavily for their export revenue on a crop such as coffee ought to be cautious about engaging in a policy of free trade.**		**[8]**
	Engaging in free trade policy means there is no restriction in the flow of imports and exports among countries. While free trade brings about various benefits, countries relying heavily on export revenue also need to be aware of the costs that free trade brings about. Countries that rely heavily on a crop such as coffee for their export revenue ought to be cautious due to the possible costs. Engaging in free trade may mean an increase in size of the export market. When demand for coffee increases, there will be increase in export revenue and hence aggregate demand (AD). If net export takes up a larger proportion of AD, the economy is vulnerable to **demand-pull inflation**, especially when the economy is near or at full employment level. Thus this would eventually worsen **price competitiveness of other exports in Brazil**. In addition, demand for coffee is likely to be price inelastic as the proportion of income spent on coffee is insignificant. Taking reference from Extract 8, when price falls are severe, there will be a less than proportionate increase in quantity demanded causing total revenue for coffee exports to also fall. This worsens the current account and in turn **BOP position deteriorates**. Moreover, this leads to a fall in investor confidence and hence investment expenditure. AD falls and hence worsen **actual growth**. For countries like Latin America and Africa who are heavily reliant on coffee as their main exports, this will ‘undermine the sustainability of the countries’ (Ext 8). Furthermore, the increase in the production of crop such as coffee due to the increased export market size will speed up the depletion of finite resources such as land and other natural resources, especially when land is the important factor of production for such production. This will result in rising cost of production for coffee as producers compete for the increasing limited resources which may cause the comparative advantage to be lost over time, leading to **economic growth driven by export revenue to be unsustainable in the long run**. However, these countries would also benefit from free trade as **trade serves as an engine of growth** and also due to the **gains from specialisation**. Therefore, depending on the nature of their economy, they need not be cautious about engaging in the policy of free trade. Engaging in policy of free trade, countries can leverage on each other’s comparative advantage and gain access to cheaper and better inputs such as			

machinery and fertilizers from other countries instead of sourcing them domestically. This helps to reduce cost of production of coffee production or increase the efficiency and productivity of coffee production which will increase the short-run aggregate supply and long-run aggregate supply, stimulating **sustained growth**.

In addition, according to the theory of CA, as countries increase their scale of production to export to the rest of the world, there will be **significant economies of scale** to be reaped as they supply for an enlarged market. Firms need to increase their production to meet the higher demand for exports. Consequently, they will need to hire more workers, reducing demand-deficient unemployment. Also, via the multiplier effect, there will be a multiplied increase in real national income, leading to actual growth. As coffee producers improve on their productivity through more investment in production techniques, the country will also enjoy higher **productivity growth**. All these increase the **material standard of living** for developing countries as they benefit from the policy of free trade.

On evaluation, whether countries that rely heavily for their export revenue on a crop ought to be cautious about free trade or not depends on the **time period**. In the short run, there could be gains from the export earnings since it is the main source of growth. However, in the long run, the country needs to be mindful of changes in term of trade acting against the country and loss of CA over time. For example, terms of trade may worsen in the long term as developing countries continue to export low-end agricultural crops but import high-end capital and consumer goods.

While free trade brings about significant benefits to help developing countries to achieve their macroeconomic aims, they should also consider diversifying **and developing new areas of CA** in exports which have high income elasticity. This will help to alleviate the vulnerability brought about by the volatility in commodity markets.

Mark Scheme

Knowledge, Application, Understanding and Analysis		
L3	For a balanced answer that shows thorough analysis on the costs and benefits of free trade for countries that rely heavily on crop for their export revenue	5-6 m
L2	For a balanced answer that shows some analysis on the costs and benefits of free trade for countries that rely heavily on crop for their export revenue	3-4 m
L1	For an undeveloped answer that shows little analysis on the costs and benefits of free trade for countries that rely heavily on crop for their export revenue	1-2 m
Allow up to 2 additional marks for Evaluation		
E2	Evaluative comments with justification.	2m
E1	Evaluative comments, unexplained.	1m